

Cover Page

Order ID : Q1744

Project ID : Amtrak Sawtooth Bridges 2025

Client : Portal Partners Tri-Venture

Lab Sample Number

Q1744-01
Q1744-02
Q1744-03
Q1744-04

Client Sample Number

B-158-SB01
B-158-SB01
B-158-SB02
B-158-SB02

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: 4/14/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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 #: Q1744

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 Castody

✓

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: NILESH PRAJAPATI

Date: 04/14/2025

LAB CHRONICLE

OrderID:	Q1744	OrderDate:	4/7/2025 11:34:00 AM
Client:	Portal Partners Tri-Venture	Project:	Amtrak Sawtooth Bridges 2025
Contact:	Joseph Krupansky	Location:	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1744-01	B-158-SB01	SOIL			04/05/25			04/07/25
			PCB	8082A		04/08/25	04/08/25	
			TPH GC	8015D		04/08/25	04/08/25	
			EPH	NJEPH		04/08/25	04/10/25	
			EPH	NJEPH		04/08/25	04/11/25	
Q1744-02	B-158-SB01	TCLP			04/05/25			04/07/25
			TCLP Herbicide	8151A		04/09/25	04/10/25	
Q1744-03	B-158-SB02	SOIL			04/05/25			04/07/25
			PCB	8082A		04/08/25	04/08/25	
			TPH GC	8015D		04/08/25	04/08/25	
			EPH	NJEPH		04/08/25	04/10/25	
			EPH	NJEPH		04/08/25	04/11/25	
Q1744-04	B-158-SB02	TCLP			04/05/25			04/07/25
			TCLP Herbicide	8151A		04/09/25	04/10/25	



QC SUMMARY

SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: PORT06
Lab Code: CHEM CASE No.: Q1744 SAS No.: Q1744 SDG No.: Q1744
Run Number: FC041125AL

Client SAMPLE NO.	1-chlorooctadecane (SURR)			TOT OUT
PB167513BL	72			0
PB167513BS	75			0
PB167513BSD	73			0
B-158-SB01	96			0
B-158-SB02	63			0
B-149-SB01MS	80			0
B-149-SB01MSD	81			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: PORT06
Lab Code: CHEM CASE No.: Q1744 SAS No.: Q1744 SDG No.: Q1744
Run Number: FD041025AR

Client SAMPLE NO.	2-Bromonaphthalene (SURR)	2-Flurobiphenyl (SURR)	ortho-Terphenyl (SURR)	TOT OUT
PB167513BL	97	92	83	0
PB167513BS	96	97	83	0
PB167513BSD	90	92	77	0
B-158-SB01	73	63	82	0
B-158-SB02	70	60	58	0
B-149-SB01MS	75	63	63	0
B-149-SB01MSD	73	61	61	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 (SURR)

(40-140)

2-Fluorobiphenyl (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

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : Q1746-01MS **Datafile:** FC068567.D
Client ID : B-149-SB01MS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C9-C12	11.2	0.39	5.46	45		(40-140)
Aliphatic C12-C16	7.5	1.86	7.54	76		(40-140)
Aliphatic C16-C21	11.2	4.07	10.3	56		(40-140)
Aliphatic C21-C28	14.9	0.79	13.2	83		(40-140)
Aliphatic C28-C40	22.4	2.09	20.9	84		(40-140)

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : Q1746-01MSD **Datafile:** FC068568.D
Client ID : B-149-SB01MSD

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	11.2	0.39	5.41	45		0.89 (40-140) 25
Aliphatic C12-C16	7.5	1.86	7.48	75		0.92 (40-140) 25
Aliphatic C16-C21	11.2	4.07	10.0	53		4.78 (40-140) 25
Aliphatic C21-C28	14.9	0.79	12.9	81		2.31 (40-140) 25
Aliphatic C28-C40	22.4	2.09	20.9	84		0.12 (40-140) 25

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : Q1746-01MS **Datafile:** FD049276.D
Client ID : B-149-SB01MS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aromatic C10-C12	7.5	0.48	3.09	35	*	(40-140)
Aromatic C12-C16	11.2	0.47	6.86	57		(40-140)
Aromatic C16-C21	18.6	3.58	18.3	79		(40-140)
Aromatic C21-C36	29.8	3.46	30.2	90		(40-140)

SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : Q1746-01MSD **Datafile:** FD049277.D
Client ID : B-149-SB01MSD

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	7.5	0.48	3.09	35	*	0.29 (40-140) 25
Aromatic C12-C16	11.2	0.47	6.69	56		2.48 (40-140) 25
Aromatic C16-C21	18.6	3.58	18.0	77		1.92 (40-140) 25
Aromatic C21-C36	29.8	3.46	30.0	89		0.67 (40-140) 25

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : PB167513BS **Datafile:** FC068561.D
Client ID : PB167513BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C9-C12	10	5.72	57		(40-140)
Aliphatic C12-C16	6.7	5.43	82		(40-140)
Aliphatic C16-C21	10	9.70	97		(40-140)
Aliphatic C21-C28	13.3	13.1	98		(40-140)
Aliphatic C28-C40	20.0	19.1	96		(40-140)

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : PB167513BSD **Datafile:** FC068562.D
Client ID : PB167513BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aliphatic C9-C12	10.0	5.89	59		2.8 (40-140)	50
Aliphatic C12-C16	6.7	5.49	82		1.1 (40-140)	50
Aliphatic C16-C21	10.0	9.61	96		1 (40-140)	50
Aliphatic C21-C28	13.3	12.9	97		1.6 (40-140)	50
Aliphatic C28-C40	20.0	19.4	97		1.5 (40-140)	50

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : PB167513BS **Datafile:** FD049270.D
Client ID : PB167513BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aromatic C10-C12	6.7	4.16	62		(40-140)
Aromatic C12-C16	10	7.05	71		(40-140)
Aromatic C16-C21	16.7	15.0	90		(40-140)
Aromatic C21-C36	26.6	26.7	100		(40-140)

SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Portal Partners Tri-Venture
Lab Code: CHEM **Cas No:** Q1744 **SAS No :** Q1744 **SDG No:** Q1744
Sample No : PB167513BSD **Datafile:** FD049271.D
Client ID : PB167513BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aromatic C10-C12	6.7	3.95	59		5.3 (40-140)	50
Aromatic C12-C16	10.0	6.67	67		5.7 (40-140)	50
Aromatic C16-C21	16.7	14.2	85		5.6 (40-140)	50
Aromatic C21-C36	26.7	25.8	97		3.3 (40-140)	50

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB167513BL

Lab Name: CHEMTECH

Contract: PORT06

Lab Code: CHEM Case No.: Q1744

SAS No.: Q1744 SDG NO.: Q1744

Instrument ID: FID_C

Lab Sample ID: PB167513BL

Matrix: (soil/water) Solid

Date Extracted: 4/8/2025 10:10:00 A

Level: (low/med) low

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

EPA SAMPLE NO.	LAB SAMPLE ID
PB167513BS	PB167513BS
PB167513BSD	PB167513BSD
B-158-SB01	Q1744-01
B-158-SB02	Q1744-03
B-149-SB01MS	Q1746-01MS
B-149-SB01MSD	Q1746-01MSD

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB01	SDG No.:	Q1744
Lab Sample ID:	Q1744-01	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	90
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
04/08/25 10:10	04/10/25 23:28	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	0.38	J	1	0.16	1.11	mg/kg	FC068563.D
Aliphatic C12-C16	Aliphatic C12-C16	1.61		1	0.12	0.74	mg/kg	FC068563.D
Aliphatic C16-C21	Aliphatic C16-C21	0.88	J	1	0.14	1.11	mg/kg	FC068563.D
Aliphatic C21-C28	Aliphatic C21-C28	0.59	U	1	0.59	1.48	mg/kg	FC068563.D
Aliphatic C28-C40	Aliphatic C28-C40	1.92	J	1	1.31	2.22	mg/kg	FC068563.D
Aromatic C10-C12	Aromatic C10-C12	0.45	J	1	0.13	0.74	mg/kg	FD049272.D
Aromatic C12-C16	Aromatic C12-C16	0.46	J	1	0.26	1.11	mg/kg	FD049272.D
Aromatic C16-C21	Aromatic C16-C21	3.47		1	0.44	1.85	mg/kg	FD049272.D
Aromatic C21-C36	Aromatic C21-C36	2.24	J	1	1.32	2.96	mg/kg	FD049272.D
Total AliphaticEPH	Total AliphaticEPH	4.79	J		2.32	6.66	mg/kg	
Total AromaticEPH	Total AromaticEPH	6.62	J		2.15	6.66	mg/kg	
Total EPH	Total EPH	11.4	J		4.47	13.3	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:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB01	SDG No.:	Q1744
Lab Sample ID:	Q1744-01	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	90
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
FC068563.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	0.38	J	0.16	1.11	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	1.61		0.12	0.74	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	0.88	J	0.14	1.11	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	0.59	U	0.59	1.48	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.92	J	1.31	2.22	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	48.0		40 - 140	96%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1744-01	Acq On:	10 Apr 2025 23:28
Client Sample ID:	B-158-SB01	Operator:	YP/AJ
Data file:	FC068563.D	Misc:	
Instrument:	FID_C	ALS Vial:	22
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.345	6.644	535805	5.089	300	ug/ml
Aliphatic C12-C16	6.645	10.043	2225498	21.75	200	ug/ml
Aliphatic C16-C21	10.044	13.409	1178768	11.929	300	ug/ml
Aliphatic C21-C28	13.410	17.073	698305	7.414	400	ug/ml
Aliphatic C28-C40	17.074	22.075	2332696	25.953	600	ug/ml
Aliphatic EPH	3.345	22.075	6971072	72.135		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.145	13.145	4456429	47.97		ug/ml
Aliphatic C9-C28	3.345	17.073	4638376	46.182	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068563.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 23:28
Operator : YP/AJ
Sample : Q1744-01
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-158-SB01

Integration File: autoint1.e
Quant Time: Apr 11 03:46:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
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...	13.145	4456429	47.973 ug/ml
Spiked Amount	50.000	Recovery	= 95.95%

Target Compounds

(f)=RT Delta > 1/2 Window

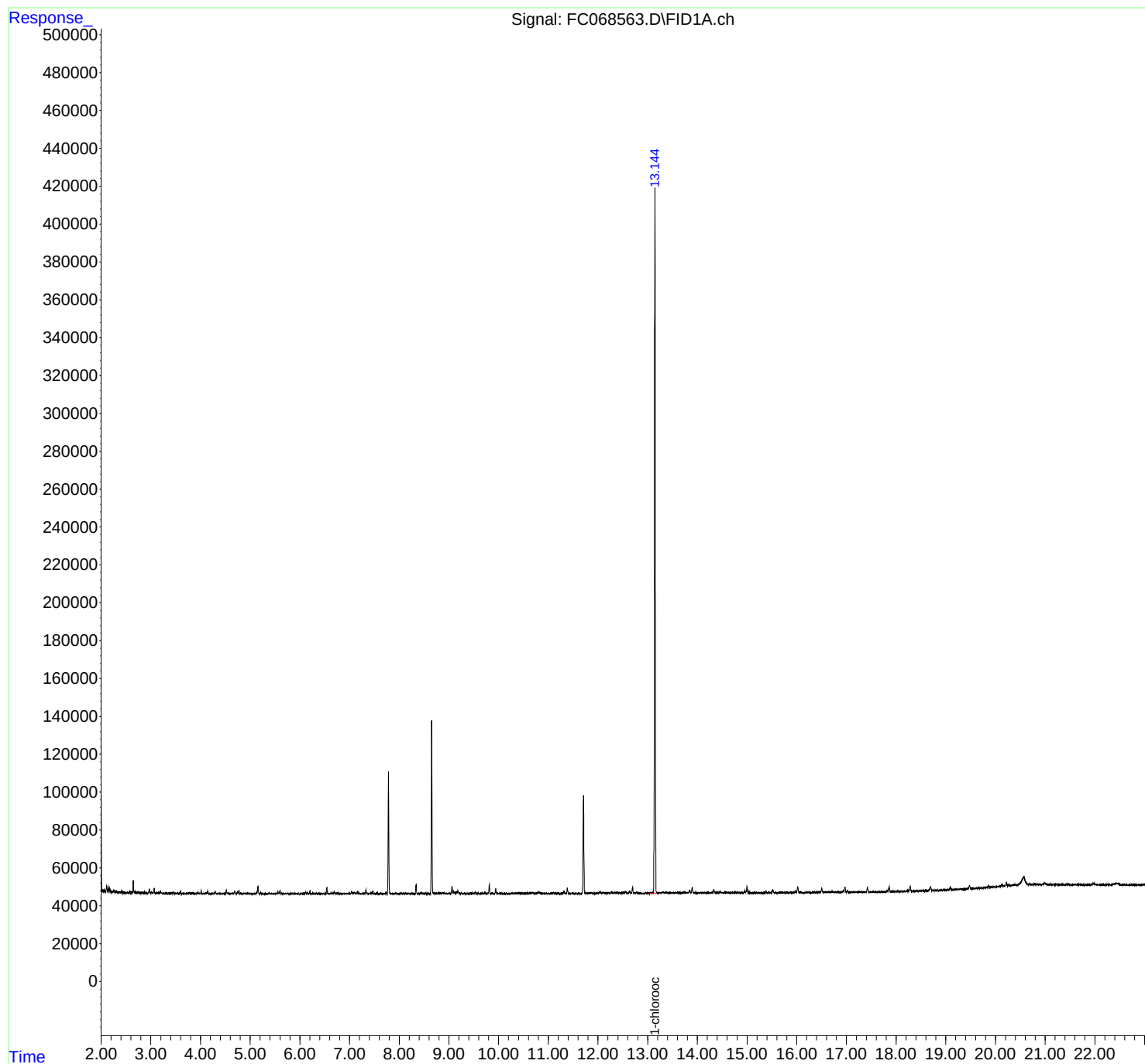
(m)=manual int.

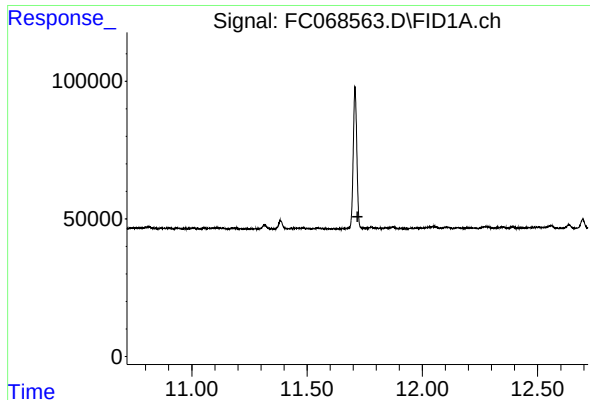
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068563.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 23:28
Operator : YP/AJ
Sample : Q1744-01
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-158-SB01

Integration File: autoint1.e
Quant Time: Apr 11 03:46:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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

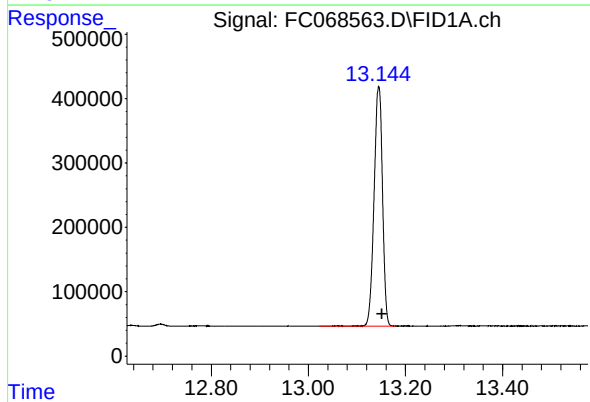




#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T.: 11.719 min
Response: 0
Conc: N.D.

Instrument :
FID_C
ClientSampleId :
B-158-SB01



#12 1-chlorooctadecane (SURR)

R.T.: 13.145 min
Delta R.T.: -0.007 min
Response: 4456429
Conc: 47.97 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068563.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 23:28
Sample : Q1744-01
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	2.417	2.371	2.444	BV	937	6705	0.15%	0.058%
2	2.454	2.444	2.506	PV	78	821	0.02%	0.007%
3	2.526	2.506	2.551	PV	73	984	0.02%	0.008%
4	2.570	2.551	2.595	VV	504	5887	0.13%	0.051%
5	2.603	2.595	2.621	PV	270	2631	0.06%	0.023%
6	2.647	2.621	2.671	VV	6548	53858	1.21%	0.463%
7	2.683	2.671	2.702	VV	629	7162	0.16%	0.062%
8	2.710	2.702	2.722	VV	194	1677	0.04%	0.014%
9	2.744	2.722	2.763	PV	150	2258	0.05%	0.019%
10	2.777	2.763	2.792	VV	261	2042	0.05%	0.018%
11	2.814	2.792	2.831	VV	249	3737	0.08%	0.032%
12	2.837	2.831	2.845	VV	97	775	0.02%	0.007%
13	2.879	2.845	2.928	VV	551	7611	0.17%	0.065%
14	2.969	2.928	3.001	PV	1912	24961	0.56%	0.215%
15	3.017	3.001	3.051	VV	851	9297	0.21%	0.080%
16	3.069	3.051	3.124	VV	2713	26394	0.59%	0.227%
17	3.148	3.124	3.176	VV	337	5222	0.12%	0.045%
18	3.197	3.176	3.258	VV	1307	14656	0.33%	0.126%
19	3.270	3.258	3.318	VV	164	2722	0.06%	0.023%
20	3.354	3.318	3.414	PV	181	4264	0.10%	0.037%
21	3.446	3.414	3.488	VV	978	11296	0.25%	0.097%
22	3.502	3.488	3.518	PV	121	1223	0.03%	0.011%
23	3.551	3.518	3.577	VV	190	4327	0.10%	0.037%
24	3.597	3.577	3.624	VV	1541	14063	0.31%	0.121%
25	3.645	3.624	3.705	PV	219	4695	0.11%	0.040%
26	3.725	3.705	3.745	VV	184	3356	0.08%	0.029%
27	3.774	3.745	3.799	VV	430	7926	0.18%	0.068%
28	3.832	3.799	3.888	VV	467	9505	0.21%	0.082%
29	3.899	3.888	3.915	VV	119	912	0.02%	0.008%
30	3.945	3.915	3.958	VV	334	4498	0.10%	0.039%
31	3.970	3.958	3.981	VV	186	1565	0.04%	0.013%
32	4.014	3.981	4.080	VV	1628	18901	0.42%	0.162%
33	4.119	4.080	4.131	PV	601	7841	0.18%	0.067%
34	4.147	4.131	4.171	VV	1397	14350	0.32%	0.123%
35	4.186	4.171	4.198	VV	177	2132	0.05%	0.018%
36	4.215	4.198	4.258	VV	308	4807	0.11%	0.041%

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37	4.293	4.258	4.316	VV	955	16576	0.37%	0.142%
38	4.330	4.316	4.382	VV	272	5766	0.13%	0.050%
39	4.390	4.382	4.401	VV	163	1203	0.03%	0.010%
40	4.434	4.401	4.458	VV	206	4791	0.11%	0.041%
41	4.520	4.458	4.545	VV	2033	24292	0.54%	0.209%
42	4.565	4.545	4.582	VV	307	4554	0.10%	0.039%
43	4.632	4.582	4.659	VV	381	7664	0.17%	0.066%
44	4.689	4.659	4.711	VV	1309	16915	0.38%	0.145%
45	4.745	4.711	4.761	VV	1273	16117	0.36%	0.139%
46	4.775	4.761	4.796	VV	1982	18827	0.42%	0.162%
47	4.806	4.796	4.818	VV	146	1800	0.04%	0.015%
48	4.827	4.818	4.843	VV	193	1813	0.04%	0.016%
49	4.904	4.843	4.923	VV	301	7884	0.18%	0.068%
50	4.938	4.923	4.954	VV	221	2958	0.07%	0.025%
51	4.964	4.954	4.991	VV	194	3317	0.07%	0.029%
52	4.999	4.991	5.045	VV	130	2141	0.05%	0.018%
53	5.079	5.045	5.106	VV	291	4992	0.11%	0.043%
54	5.157	5.106	5.186	VV	4041	53790	1.20%	0.462%
55	5.214	5.186	5.230	VV	791	9723	0.22%	0.084%
56	5.243	5.230	5.311	VV	326	7098	0.16%	0.061%
57	5.351	5.311	5.368	PV	232	3668	0.08%	0.032%
58	5.384	5.368	5.421	VV	561	6640	0.15%	0.057%
59	5.436	5.421	5.497	VV	185	4939	0.11%	0.042%
60	5.526	5.497	5.540	VV	237	4011	0.09%	0.034%
61	5.561	5.540	5.580	VV	1256	13089	0.29%	0.113%
62	5.602	5.580	5.643	VV	1764	20307	0.45%	0.175%
63	5.659	5.643	5.685	VV	401	3634	0.08%	0.031%
64	5.750	5.685	5.789	PV	420	11443	0.26%	0.098%
65	5.851	5.789	5.888	VV	371	10259	0.23%	0.088%
66	5.907	5.888	5.928	VV	368	4957	0.11%	0.043%
67	5.959	5.928	6.001	VV	171	4913	0.11%	0.042%
68	6.017	6.001	6.032	VV	209	2677	0.06%	0.023%
69	6.062	6.032	6.080	VV	291	4435	0.10%	0.038%
70	6.117	6.080	6.145	VV	1060	16427	0.37%	0.141%
71	6.160	6.145	6.185	VV	591	7859	0.18%	0.068%
72	6.202	6.185	6.235	VV	1265	15126	0.34%	0.130%
73	6.263	6.235	6.300	VV	744	10249	0.23%	0.088%
74	6.335	6.300	6.370	VV	341	9110	0.20%	0.078%
75	6.380	6.370	6.405	VV	191	3306	0.07%	0.028%
76	6.421	6.405	6.498	VV	195	6059	0.14%	0.052%
77	6.543	6.516	6.573	VV	3330	34529	0.77%	0.297%
78	6.586	6.573	6.598	VV	141	1782	0.04%	0.015%
79	6.629	6.598	6.647	VV	609	8504	0.19%	0.073%
80	6.664	6.647	6.678	VV	426	5571	0.12%	0.048%
81	6.693	6.678	6.714	VV	1353	14383	0.32%	0.124%
82	6.729	6.714	6.746	VV	403	5254	0.12%	0.045%
83	6.766	6.746	6.796	VV	591	8238	0.18%	0.071%
84	6.821	6.796	6.847	PV	187	3754	0.08%	0.032%
85	6.872	6.847	6.892	VV	249	3806	0.09%	0.033%
86	6.915	6.892	6.925	VV	172	2693	0.06%	0.023%
87	6.943	6.925	6.965	VV	241	3343	0.07%	0.029%
88	6.988	6.965	7.017	VV	581	8177	0.18%	0.070%
89	7.041	7.017	7.078	VV	1031	19601	0.44%	0.168%

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90	7.102	7.078	7.130	VV	801	15699	0.35%	0.135%
91	7.167	7.130	7.190	VV	1142	18975	0.42%	0.163%
92	7.203	7.190	7.232	VV	296	4549	0.10%	0.039%
93	7.247	7.232	7.260	VV	247	2839	0.06%	0.024%
94	7.275	7.260	7.291	VV	305	3191	0.07%	0.027%
95	7.330	7.291	7.370	VV	2070	26931	0.60%	0.231%
96	7.389	7.370	7.418	VV	337	6757	0.15%	0.058%
97	7.435	7.418	7.447	VV	524	5586	0.13%	0.048%
98	7.468	7.447	7.490	VV	1547	18204	0.41%	0.156%
99	7.505	7.490	7.515	VV	258	2692	0.06%	0.023%
100	7.559	7.515	7.605	VV	633	13753	0.31%	0.118%
101	7.617	7.605	7.664	VV	177	4385	0.10%	0.038%
102	7.678	7.664	7.710	PV	162	2963	0.07%	0.025%
103	7.731	7.710	7.758	VV	881	11305	0.25%	0.097%
104	7.785	7.758	7.857	VV	64510	623607	13.96%	5.360%
105	7.890	7.857	7.945	VV	279	10237	0.23%	0.088%
106	7.950	7.945	7.968	VV	236	2041	0.05%	0.018%
107	7.971	7.968	7.981	VV	130	775	0.02%	0.007%
108	7.993	7.981	8.015	VV	233	2470	0.06%	0.021%
109	8.035	8.015	8.075	VV	805	9811	0.22%	0.084%
110	8.092	8.075	8.112	VV	576	6463	0.14%	0.056%
111	8.128	8.112	8.148	VV	201	3016	0.07%	0.026%
112	8.161	8.148	8.181	VV	251	2389	0.05%	0.021%
113	8.201	8.181	8.224	VV	146	2404	0.05%	0.021%
114	8.246	8.224	8.265	VV	516	6741	0.15%	0.058%
115	8.273	8.265	8.315	VV	257	4143	0.09%	0.036%
116	8.340	8.315	8.418	VV	4849	56426	1.26%	0.485%
117	8.439	8.418	8.477	VV	465	10916	0.24%	0.094%
118	8.491	8.477	8.516	VV	301	4558	0.10%	0.039%
119	8.536	8.516	8.561	PV	274	4112	0.09%	0.035%
120	8.576	8.561	8.618	VV	462	5277	0.12%	0.045%
121	8.654	8.618	8.731	VV	90894	908577	20.34%	7.809%
122	8.756	8.731	8.774	VV	366	7070	0.16%	0.061%
123	8.802	8.774	8.817	VV	462	9516	0.21%	0.082%
124	8.831	8.817	8.845	VV	559	6809	0.15%	0.059%
125	8.854	8.845	8.861	VV	398	3501	0.08%	0.030%
126	8.879	8.861	8.921	VV	832	17943	0.40%	0.154%
127	8.945	8.921	8.967	VV	357	5847	0.13%	0.050%
128	8.997	8.967	9.021	VV	321	6410	0.14%	0.055%
129	9.064	9.021	9.082	VV	4109	46883	1.05%	0.403%
130	9.096	9.082	9.137	VV	1277	23259	0.52%	0.200%
131	9.182	9.137	9.210	VV	1575	37089	0.83%	0.319%
132	9.220	9.210	9.238	VV	405	3943	0.09%	0.034%
133	9.252	9.238	9.278	VV	486	6319	0.14%	0.054%
134	9.301	9.278	9.335	VV	360	6005	0.13%	0.052%
135	9.354	9.335	9.368	VV	250	3403	0.08%	0.029%
136	9.384	9.368	9.431	VV	317	6621	0.15%	0.057%
137	9.467	9.431	9.503	VV	477	10632	0.24%	0.091%
138	9.533	9.503	9.564	VV	958	15355	0.34%	0.132%
139	9.585	9.564	9.616	VV	325	6438	0.14%	0.055%
140	9.626	9.616	9.647	VV	209	2709	0.06%	0.023%
141	9.669	9.647	9.699	VV	484	7394	0.17%	0.064%

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142	9.722	9.699	9.761	VV	839	10059	0.23%	0.086%
143	9.784	9.761	9.794	VV	496	5299	0.12%	0.046%
144	9.814	9.794	9.839	VV	4959	50067	1.12%	0.430%
145	9.861	9.839	9.913	VV	585	8029	0.18%	0.069%
146	9.942	9.913	9.975	PV	2688	30777	0.69%	0.265%
147	9.985	9.975	9.993	VV	122	789	0.02%	0.007%
148	10.016	9.993	10.082	VV	315	10720	0.24%	0.092%
149	10.107	10.082	10.127	VV	158	3037	0.07%	0.026%
150	10.141	10.127	10.178	VV	122	1724	0.04%	0.015%
151	10.222	10.178	10.235	PV	232	3833	0.09%	0.033%
152	10.266	10.235	10.279	VV	316	5224	0.12%	0.045%
153	10.294	10.279	10.313	VV	246	4349	0.10%	0.037%
154	10.336	10.313	10.355	VV	491	7883	0.18%	0.068%
155	10.377	10.355	10.395	VV	436	7066	0.16%	0.061%
156	10.421	10.395	10.454	VV	381	9106	0.20%	0.078%
157	10.470	10.454	10.501	VV	357	6301	0.14%	0.054%
158	10.505	10.501	10.521	VV	218	1725	0.04%	0.015%
159	10.545	10.521	10.561	VV	409	6471	0.14%	0.056%
160	10.569	10.561	10.597	VV	399	6950	0.16%	0.060%
161	10.616	10.597	10.626	VV	480	6517	0.15%	0.056%
162	10.630	10.626	10.651	VV	424	5138	0.12%	0.044%
163	10.680	10.651	10.721	VV	839	18378	0.41%	0.158%
164	10.742	10.721	10.786	VV	392	12668	0.28%	0.109%
165	10.813	10.786	10.856	VV	852	18773	0.42%	0.161%
166	10.896	10.856	10.924	VV	348	9473	0.21%	0.081%
167	10.938	10.924	10.975	VV	301	5849	0.13%	0.050%
168	11.008	10.975	11.037	VV	353	8005	0.18%	0.069%
169	11.051	11.037	11.071	VV	257	4057	0.09%	0.035%
170	11.079	11.071	11.091	VV	298	2823	0.06%	0.024%
171	11.109	11.091	11.156	VV	463	11191	0.25%	0.096%
172	11.189	11.156	11.225	VV	300	6150	0.14%	0.053%
173	11.233	11.225	11.282	VV	110	2927	0.07%	0.025%
174	11.316	11.282	11.354	VV	1491	20594	0.46%	0.177%
175	11.385	11.354	11.418	VV	3063	37631	0.84%	0.323%
176	11.481	11.418	11.515	VV	407	12696	0.28%	0.109%
177	11.545	11.515	11.568	VV	334	5110	0.11%	0.044%
178	11.580	11.568	11.648	VV	180	5293	0.12%	0.045%
179	11.708	11.648	11.760	PV	51665	566178	12.67%	4.866%
180	11.780	11.760	11.822	VV	512	11216	0.25%	0.096%
181	11.842	11.822	11.854	VV	418	5949	0.13%	0.051%
182	11.871	11.854	11.916	VV	646	11501	0.26%	0.099%
183	11.932	11.916	11.945	VV	153	2305	0.05%	0.020%
184	11.979	11.945	11.995	VV	291	7143	0.16%	0.061%
185	12.050	11.995	12.088	VV	825	25862	0.58%	0.222%
186	12.105	12.088	12.129	VV	704	10824	0.24%	0.093%
187	12.154	12.129	12.174	VV	421	8146	0.18%	0.070%
188	12.193	12.174	12.241	VV	370	10853	0.24%	0.093%
189	12.275	12.241	12.311	VV	900	20392	0.46%	0.175%
190	12.348	12.311	12.371	VV	647	14931	0.33%	0.128%
191	12.391	12.371	12.410	VV	814	10638	0.24%	0.091%
192	12.433	12.410	12.442	VV	370	6227	0.14%	0.054%
193	12.449	12.442	12.455	VV	344	2524	0.06%	0.022%
194	12.508	12.455	12.535	VV	629	21769	0.49%	0.187%

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195	12.558	12.535	12.605	VV	1136	22155	0.50%	0.190%
196	12.635	12.605	12.662	VV	1408	21169	0.47%	0.182%
197	12.695	12.662	12.746	VV	3412	46726	1.05%	0.402%
198	12.781	12.746	12.805	VV	650	14778	0.33%	0.127%
199	12.814	12.805	12.891	VV	314	7666	0.17%	0.066%
200	12.904	12.891	12.921	VV	163	2040	0.05%	0.018%
201	12.967	12.921	12.975	VV	308	6362	0.14%	0.055%
202	12.981	12.975	13.007	VV	271	3690	0.08%	0.032%
203	13.019	13.007	13.040	VV	278	3402	0.08%	0.029%
204	13.060	13.040	13.078	VV	451	6654	0.15%	0.057%
205	13.145	13.078	13.181	VV	373032	4467046	100.00%	38.395%
206	13.202	13.181	13.228	VV	369	8124	0.18%	0.070%
207	13.308	13.228	13.345	VV	891	26532	0.59%	0.228%
208	13.362	13.345	13.415	VV	505	16070	0.36%	0.138%
209	13.432	13.415	13.460	VV	343	8234	0.18%	0.071%
210	13.519	13.460	13.555	VV	399	18334	0.41%	0.158%
211	13.584	13.555	13.625	VV	465	15374	0.34%	0.132%
212	13.649	13.625	13.671	VV	338	7691	0.17%	0.066%
213	13.746	13.671	13.788	VV	499	23674	0.53%	0.203%
214	13.843	13.788	13.866	VV	1676	29259	0.66%	0.251%
215	13.895	13.866	14.052	VV	3163	57436	1.29%	0.494%
216	14.063	14.052	14.089	VV	184	3161	0.07%	0.027%
217	14.115	14.089	14.181	VV	289	13076	0.29%	0.112%
218	14.189	14.181	14.258	VV	265	10086	0.23%	0.087%
219	14.331	14.258	14.378	VV	1800	37768	0.85%	0.325%
220	14.383	14.378	14.427	VV	366	7994	0.18%	0.069%
221	14.457	14.427	14.494	VV	746	15649	0.35%	0.135%
222	14.519	14.494	14.539	VV	267	6067	0.14%	0.052%
223	14.598	14.539	14.637	VV	372	17135	0.38%	0.147%
224	14.656	14.637	14.685	VV	299	6630	0.15%	0.057%
225	14.711	14.685	14.725	VV	298	5468	0.12%	0.047%
226	14.739	14.725	14.771	VV	283	7132	0.16%	0.061%
227	14.780	14.771	14.793	VV	320	3233	0.07%	0.028%
228	14.811	14.793	14.881	VV	348	11727	0.26%	0.101%
229	14.896	14.881	14.911	VV	155	2330	0.05%	0.020%
230	14.953	14.911	14.972	VV	1114	19599	0.44%	0.168%
231	14.998	14.972	15.034	VV	3408	47360	1.06%	0.407%
232	15.044	15.034	15.071	VV	357	4562	0.10%	0.039%
233	15.082	15.071	15.093	VV	127	1067	0.02%	0.009%
234	15.113	15.093	15.150	VV	97	1520	0.03%	0.013%
235	15.176	15.150	15.188	PV	186	2020	0.05%	0.017%
236	15.194	15.188	15.208	VV	130	1427	0.03%	0.012%
237	15.228	15.208	15.238	VV	150	2331	0.05%	0.020%
238	15.257	15.238	15.275	VV	201	2500	0.06%	0.021%
239	15.281	15.275	15.294	VV	114	1054	0.02%	0.009%
240	15.312	15.294	15.325	VV	96	1366	0.03%	0.012%
241	15.376	15.325	15.439	PV	605	16167	0.36%	0.139%
242	15.444	15.439	15.452	VV	175	1196	0.03%	0.010%
243	15.518	15.452	15.559	VV	1724	28675	0.64%	0.246%
244	15.568	15.559	15.610	VV	126	2999	0.07%	0.026%
245	15.637	15.610	15.681	VV	103	3514	0.08%	0.030%
246	15.699	15.681	15.712	VV	191	2633	0.06%	0.023%

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247	15.726	15.712	15.742	VV	148	2283	0.05%	0.020%
248	15.749	15.742	15.800	VV	149	3206	0.07%	0.028%
249	15.848	15.800	15.858	VV	213	5072	0.11%	0.044%
250	15.885	15.858	15.941	VV	229	6417	0.14%	0.055%
251	15.981	15.941	15.995	VV	917	12413	0.28%	0.107%
252	16.020	15.995	16.063	VV	3215	46264	1.04%	0.398%
253	16.082	16.063	16.141	VV	227	4648	0.10%	0.040%
254	16.166	16.141	16.174	PV	92	1044	0.02%	0.009%
255	16.194	16.174	16.215	VV	202	2748	0.06%	0.024%
256	16.234	16.215	16.269	VV	171	3592	0.08%	0.031%
257	16.278	16.269	16.286	VV	46	346	0.01%	0.003%
258	16.337	16.286	16.369	VV	206	5447	0.12%	0.047%
259	16.378	16.369	16.431	VV	153	4322	0.10%	0.037%
260	16.503	16.431	16.569	VV	2163	40352	0.90%	0.347%
261	16.588	16.569	16.628	VV	369	8290	0.19%	0.071%
262	16.705	16.628	16.745	VV	344	18468	0.41%	0.159%
263	16.751	16.745	16.839	VV	258	12037	0.27%	0.103%
264	16.859	16.839	16.894	VV	265	6824	0.15%	0.059%
265	16.937	16.894	16.947	VV	688	11802	0.26%	0.101%
266	16.970	16.947	16.998	VV	2997	42468	0.95%	0.365%
267	17.023	16.998	17.069	VV	570	12814	0.29%	0.110%
268	17.078	17.069	17.103	VV	162	2418	0.05%	0.021%
269	17.119	17.103	17.141	VV	125	2783	0.06%	0.024%
270	17.148	17.141	17.161	VV	219	1122	0.03%	0.010%
271	17.302	17.198	17.331	PV	400	10339	0.23%	0.089%
272	17.344	17.331	17.386	VV	131	2446	0.05%	0.021%
273	17.422	17.386	17.505	VV	2503	37227	0.83%	0.320%
274	17.515	17.505	17.526	VV	114	1119	0.03%	0.010%
275	17.568	17.526	17.583	VV	128	2614	0.06%	0.022%
276	17.593	17.583	17.618	PV	94	1513	0.03%	0.013%
277	17.645	17.618	17.673	VV	199	2752	0.06%	0.024%
278	17.695	17.673	17.730	VV	153	3225	0.07%	0.028%
279	17.860	17.730	17.921	VV	2741	49913	1.12%	0.429%
280	17.949	17.921	17.987	VV	367	6329	0.14%	0.054%
281	18.021	17.987	18.039	VV	186	3339	0.07%	0.029%
282	18.133	18.039	18.162	VV	163	5245	0.12%	0.045%
283	18.178	18.162	18.198	VV	147	2454	0.05%	0.021%
284	18.283	18.198	18.324	VV	2736	48140	1.08%	0.414%
285	18.388	18.324	18.449	VV	289	12318	0.28%	0.106%
286	18.476	18.449	18.488	PV	180	2634	0.06%	0.023%
287	18.551	18.488	18.570	VV	322	9677	0.22%	0.083%
288	18.596	18.570	18.618	VV	240	4694	0.11%	0.040%
289	18.633	18.618	18.646	VV	212	2684	0.06%	0.023%
290	18.693	18.646	18.764	VV	2325	46618	1.04%	0.401%
291	18.795	18.764	18.821	VV	331	7483	0.17%	0.064%
292	18.871	18.821	18.928	VV	220	11175	0.25%	0.096%
293	18.964	18.928	18.984	VV	242	5858	0.13%	0.050%
294	19.091	18.984	19.153	VV	1526	45222	1.01%	0.389%
295	19.202	19.153	19.211	VV	372	10862	0.24%	0.093%
296	19.246	19.211	19.254	VV	410	9193	0.21%	0.079%
297	19.266	19.254	19.302	VV	430	10852	0.24%	0.093%
298	19.335	19.302	19.348	VV	453	10359	0.23%	0.089%
299	19.386	19.348	19.395	VV	465	11672	0.26%	0.100%

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300	19.478	19.395	19.525	VV	2109	60211	1.35%	0.518%
301	19.535	19.525	19.548	VV	520	6807	0.15%	0.059%
302	19.585	19.548	19.608	VV	612	19406	0.43%	0.167%
303	19.723	19.608	19.742	VV	743	48832	1.09%	0.420%
304	19.765	19.742	19.803	VV	823	27082	0.61%	0.233%
305	19.854	19.803	19.879	VV	1472	45142	1.01%	0.388%
306	19.915	19.879	19.931	VV	884	26043	0.58%	0.224%
307	19.960	19.931	19.986	VV	992	31277	0.70%	0.269%
308	20.044	19.986	20.055	VV	1166	42292	0.95%	0.364%
309	20.129	20.055	20.165	VV	1908	90697	2.03%	0.780%
310	20.220	20.165	20.247	VV	2684	88107	1.97%	0.757%
311	20.267	20.247	20.295	VV	1586	43272	0.97%	0.372%
312	20.394	20.295	20.411	VV	1765	113150	2.53%	0.973%
313	20.422	20.411	20.430	VV	1686	19620	0.44%	0.169%
314	20.569	20.430	20.695	VV	5769	455876	10.21%	3.918%
315	20.706	20.695	20.728	VV	1673	33099	0.74%	0.284%
316	20.751	20.728	20.757	VV	1673	29602	0.66%	0.254%
317	20.786	20.757	20.816	VV	1939	61017	1.37%	0.524%
318	20.826	20.816	20.868	VV	1604	48292	1.08%	0.415%
319	20.878	20.868	20.886	VV	1532	15379	0.34%	0.132%
320	20.894	20.886	20.945	VV	1514	50446	1.13%	0.434%
321	20.992	20.945	21.031	VV	2113	86684	1.94%	0.745%
322	21.041	21.031	21.088	VV	1372	44964	1.01%	0.386%
323	21.117	21.088	21.128	VV	1320	29777	0.67%	0.256%
324	21.134	21.128	21.143	VV	1228	10384	0.23%	0.089%
325	21.162	21.143	21.205	VV	1181	42641	0.95%	0.367%
326	21.218	21.205	21.259	VV	1149	35808	0.80%	0.308%
327	21.276	21.259	21.335	VV	1061	45047	1.01%	0.387%
328	21.345	21.335	21.388	VV	1050	30621	0.69%	0.263%
329	21.457	21.388	21.509	VV	1041	64135	1.44%	0.551%
330	21.614	21.509	21.640	VV	811	57255	1.28%	0.492%
331	21.711	21.640	21.732	VV	705	36307	0.81%	0.312%
332	21.749	21.732	21.801	VV	585	22412	0.50%	0.193%
333	21.855	21.801	21.911	VV	536	30660	0.69%	0.264%
334	21.968	21.911	22.105	VV	924	56073	1.26%	0.482%
335	22.183	22.105	22.215	VV	225	11521	0.26%	0.099%
336	22.237	22.215	22.315	VV	193	5489	0.12%	0.047%
			Sum of corrected areas:			11634525		

Aliphatic EPH 040925.M Fri Apr 11 04:55:41 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB01	SDG No.:	Q1744
Lab Sample ID:	Q1744-01	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	90
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
FD049272.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	0.45	J	0.13	0.74	mg/kg
Aromatic C12-C16	Aromatic C12-C16	0.46	J	0.26	1.11	mg/kg
Aromatic C16-C21	Aromatic C16-C21	3.47		0.44	1.85	mg/kg
Aromatic C21-C36	Aromatic C21-C36	2.24	J	1.32	2.96	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	36.5		40 - 140	73%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	31.6		40 - 140	63%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	41.1		40 - 140	82%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	Q1744-01	Acq On:	10 Apr 2025 16:38
Client Sample ID:	B-158-SB01	Operator:	YP/AJ
Data file:	FD049272.D	Misc:	
Instrument:	FID_D	ALS Vial:	64
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	950821	6.064	200	ug/ml
Aromatic C12-C16	6.186	8.813	1061990	6.239	300	ug/ml
Aromatic C16-C21	8.814	13.102	7865902	46.904	500	ug/ml
Aromatic C21-C36	13.103	18.519	4183363	30.283	800	ug/ml
Aromatic EPH	4.440	18.519	14062076	89.491		ug/ml
2-Bromonaphthalene (SURRE)	7.749	7.749	5408441	36.51		ug/ml
2-Fluorobiphenyl (SURRE)	8.614	8.614	3221957	31.59		ug/ml
ortho-Terphenyl (SURRE)	11.658	11.658	7248338	41.14		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049272.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 16:38
 Operator : YP/AJ
 Sample : Q1744-01
 Misc :
 ALS Vial : 64 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 B-158-SB01

Integration File: autoint1.e
 Quant Time: Apr 11 01:03:51 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.749	5408441	36.511 ug/ml
Spiked Amount 50.000		Recovery =	73.02%
6) S 2-Fluorobiphenyl (SURR)	8.614	3221957	31.587 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	63.17%
11) S ortho-Terphenyl (SURR)	11.658	7248338	41.141 ug/ml
Spiked Amount 50.000		Recovery =	82.28%

Target Compounds

(f)=RT Delta > 1/2 Window

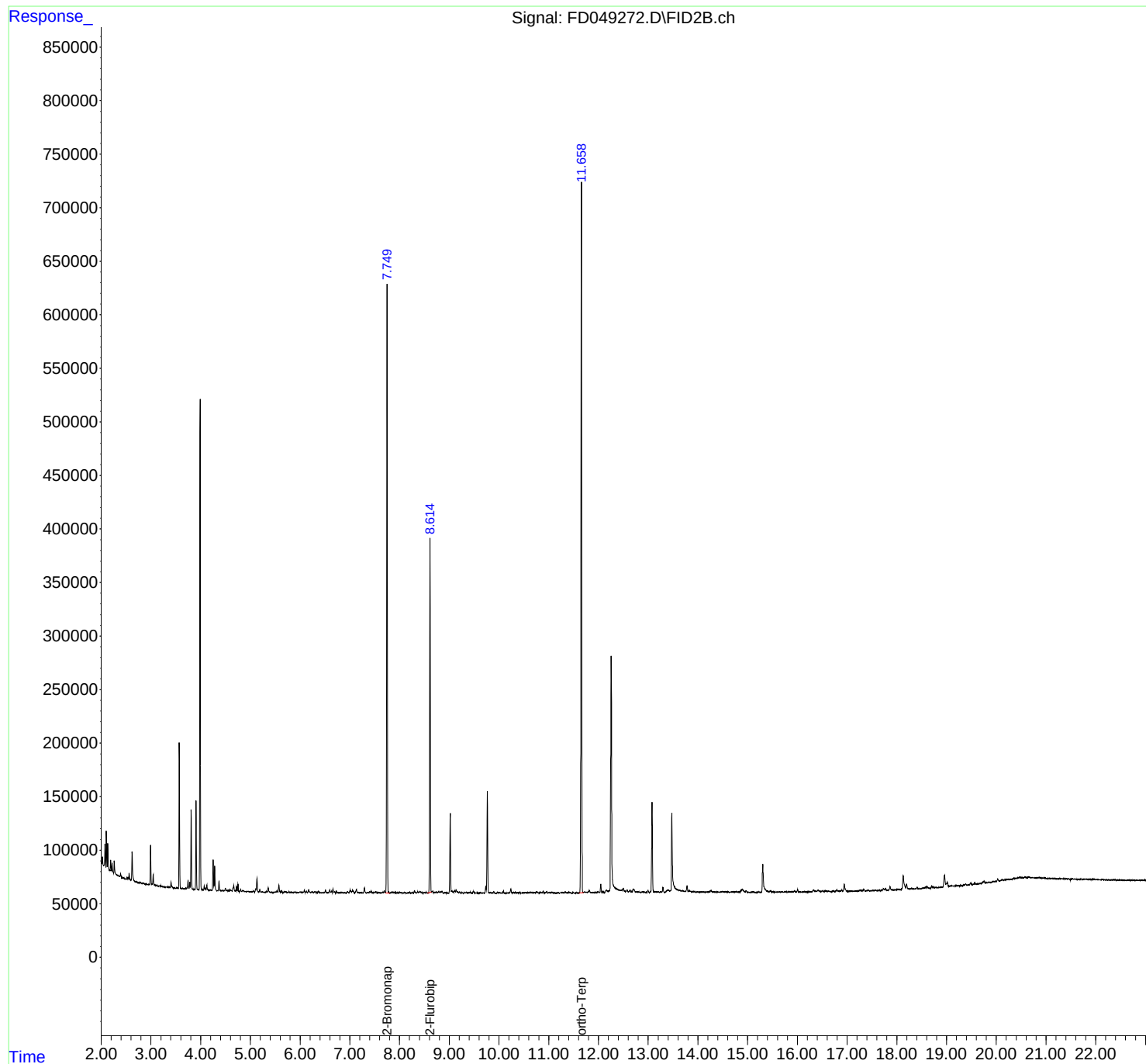
(m)=manual int.

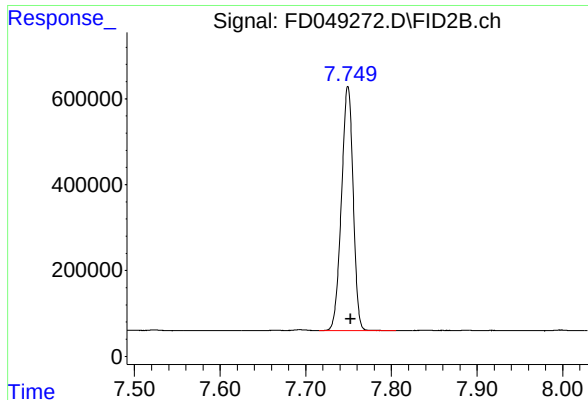
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049272.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 16:38
Operator : YP/AJ
Sample : Q1744-01
Misc :
ALS Vial : 64 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
B-158-SB01

Integration File: autoint1.e
Quant Time: Apr 11 01:03:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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

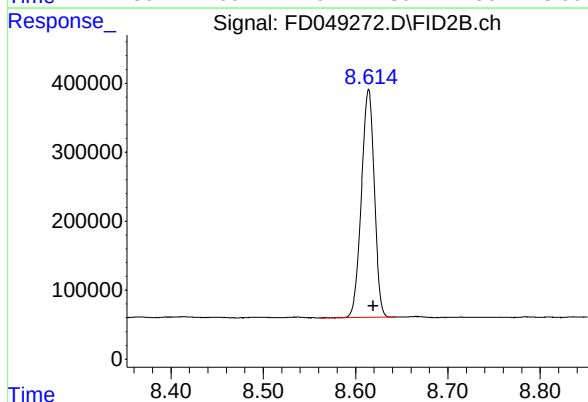




#4 2-Bromonaphthalene (SURR)

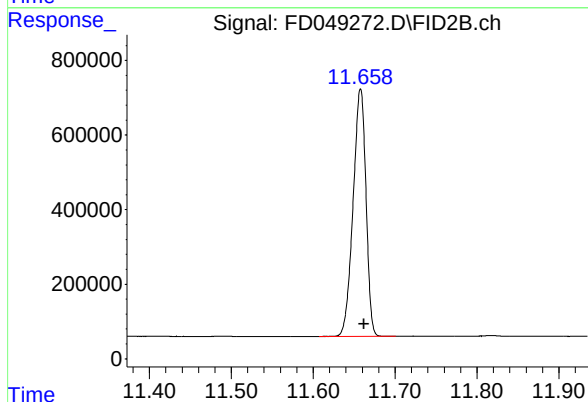
R.T.: 7.749 min
Delta R.T.: -0.003 min
Response: 5408441
Conc: 36.51 ug/ml

Instrument :
FID_D
ClientSampleId :
B-158-SB01



#6 2-Fluorobiphenyl (SURR)

R.T.: 8.614 min
Delta R.T.: -0.005 min
Response: 3221957
Conc: 31.59 ug/ml



#11 ortho-Terphenyl (SURR)

R.T.: 11.658 min
Delta R.T.: -0.004 min
Response: 7248338
Conc: 41.14 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049272.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 16:38
 Sample : Q1744-01
 Misc :
 ALS Vial : 64 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.072	4.042	4.086	BV	3967	31326	0.43%	0.084%
2	4.096	4.086	4.110	VV	1934	17505	0.24%	0.047%
3	4.125	4.110	4.144	VV	5153	47695	0.66%	0.128%
4	4.150	4.144	4.173	VV	636	5532	0.08%	0.015%
5	4.192	4.173	4.229	PV	906	12538	0.17%	0.034%
6	4.252	4.229	4.268	VV	28785	309323	4.26%	0.832%
7	4.282	4.268	4.327	VV	23072	220342	3.03%	0.593%
8	4.369	4.327	4.415	PV	9237	87313	1.20%	0.235%
9	4.451	4.415	4.467	VV	529	9636	0.13%	0.026%
10	4.471	4.467	4.477	VV	349	2034	0.03%	0.005%
11	4.498	4.477	4.520	VV	2920	32499	0.45%	0.087%
12	4.524	4.520	4.529	VV	571	2582	0.04%	0.007%
13	4.537	4.529	4.552	VV	704	7832	0.11%	0.021%
14	4.564	4.552	4.571	VV	618	4769	0.07%	0.013%
15	4.576	4.571	4.579	VV	493	2135	0.03%	0.006%
16	4.591	4.579	4.603	VV	1396	13663	0.19%	0.037%
17	4.612	4.603	4.634	VV	1115	12826	0.18%	0.034%
18	4.665	4.634	4.688	VV	5380	82006	1.13%	0.221%
19	4.722	4.688	4.736	VV	4649	49007	0.67%	0.132%
20	4.752	4.736	4.786	VV	7081	65394	0.90%	0.176%
21	4.805	4.786	4.827	PV	2215	20680	0.28%	0.056%
22	4.844	4.827	4.859	VV	1398	14575	0.20%	0.039%
23	4.869	4.859	4.902	VV	1042	11002	0.15%	0.030%
24	4.912	4.902	4.926	VV	284	2292	0.03%	0.006%
25	4.941	4.926	4.960	VV	662	7876	0.11%	0.021%
26	4.964	4.960	4.994	VV	352	3841	0.05%	0.010%
27	5.003	4.994	5.010	VV	271	1460	0.02%	0.004%
28	5.018	5.010	5.024	VV	274	1870	0.03%	0.005%
29	5.032	5.024	5.041	VV	277	1898	0.03%	0.005%
30	5.056	5.041	5.080	VV	876	10346	0.14%	0.028%
31	5.105	5.080	5.115	VV	3113	31610	0.44%	0.085%
32	5.132	5.115	5.170	VV	12963	145792	2.01%	0.392%
33	5.190	5.170	5.213	VV	2575	28140	0.39%	0.076%
34	5.218	5.213	5.235	VV	334	3455	0.05%	0.009%
35	5.249	5.235	5.281	VV	569	8089	0.11%	0.022%
36	5.322	5.298	5.344	PV	1023	12820	0.18%	0.034%

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37	5.359	5.344	5.399	VV	4311	46583	0.64%	0.125%
38	5.410	5.399	5.418	VV	329	2447	0.03%	0.007%
39	5.424	5.418	5.432	VV	286	1549	0.02%	0.004%
40	5.435	5.432	5.451	VV	251	1111	0.02%	0.003%
41	5.462	5.451	5.470	PV	311	1441	0.02%	0.004%
42	5.476	5.470	5.482	VV	304	1257	0.02%	0.003%
43	5.498	5.482	5.519	VV	761	8671	0.12%	0.023%
44	5.533	5.519	5.554	VV	1628	16786	0.23%	0.045%
45	5.574	5.554	5.618	VV	7049	91971	1.27%	0.247%
46	5.632	5.618	5.652	VV	1529	15856	0.22%	0.043%
47	5.672	5.652	5.677	VV	416	2789	0.04%	0.008%
48	5.698	5.677	5.709	VV	819	11245	0.15%	0.030%
49	5.715	5.709	5.749	VV	833	8900	0.12%	0.024%
50	5.776	5.749	5.798	VV	1050	11523	0.16%	0.031%
51	5.825	5.810	5.844	VV	663	7952	0.11%	0.021%
52	5.879	5.844	5.901	VV	604	11092	0.15%	0.030%
53	5.907	5.901	5.917	VV	365	2820	0.04%	0.008%
54	5.925	5.917	5.939	VV	483	3748	0.05%	0.010%
55	5.944	5.939	5.953	VV	224	1553	0.02%	0.004%
56	5.962	5.953	5.969	VV	260	1753	0.02%	0.005%
57	5.995	5.969	6.010	VV	784	10364	0.14%	0.028%
58	6.016	6.010	6.020	VV	404	2388	0.03%	0.006%
59	6.031	6.020	6.048	VV	744	7998	0.11%	0.022%
60	6.086	6.048	6.110	VV	2396	34289	0.47%	0.092%
61	6.129	6.110	6.150	VV	1238	17047	0.23%	0.046%
62	6.173	6.150	6.211	VV	2865	37559	0.52%	0.101%
63	6.230	6.211	6.245	VV	905	13408	0.18%	0.036%
64	6.251	6.245	6.273	VV	705	7097	0.10%	0.019%
65	6.306	6.273	6.341	VV	1140	23144	0.32%	0.062%
66	6.366	6.341	6.426	VV	1658	26372	0.36%	0.071%
67	6.442	6.426	6.447	VV	291	2300	0.03%	0.006%
68	6.454	6.447	6.472	VV	316	3675	0.05%	0.010%
69	6.483	6.472	6.489	VV	352	2664	0.04%	0.007%
70	6.512	6.489	6.541	VV	2766	32918	0.45%	0.089%
71	6.558	6.541	6.570	VV	387	5597	0.08%	0.015%
72	6.596	6.570	6.616	VV	2728	36243	0.50%	0.097%
73	6.632	6.616	6.644	VV	1562	17139	0.24%	0.046%
74	6.661	6.644	6.681	VV	3761	40880	0.56%	0.110%
75	6.694	6.681	6.714	VV	1233	13862	0.19%	0.037%
76	6.733	6.714	6.773	VV	1993	24758	0.34%	0.067%
77	6.784	6.773	6.807	VV	430	5013	0.07%	0.013%
78	6.822	6.807	6.827	PV	465	3704	0.05%	0.010%
79	6.833	6.827	6.869	VV	536	8731	0.12%	0.023%
80	6.878	6.869	6.889	VV	386	3482	0.05%	0.009%
81	6.894	6.889	6.897	VV	416	1361	0.02%	0.004%
82	6.901	6.897	6.924	VV	349	4034	0.06%	0.011%
83	6.953	6.932	6.985	VV	1513	22520	0.31%	0.061%
84	7.006	6.985	7.022	VV	3022	38102	0.52%	0.102%
85	7.026	7.022	7.038	VV	1675	13698	0.19%	0.037%
86	7.059	7.038	7.094	VV	2273	50974	0.70%	0.137%
87	7.133	7.094	7.162	VV	3540	55032	0.76%	0.148%
88	7.173	7.162	7.187	VV	524	6041	0.08%	0.016%
89	7.190	7.187	7.210	VV	464	5013	0.07%	0.013%

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90	7.213	7.210	7.225	VV	408	2660	0.04%	0.007%
91	7.243	7.225	7.267	VV	577	8730	0.12%	0.023%
92	7.294	7.267	7.332	VV	5016	61962	0.85%	0.167%
93	7.353	7.332	7.364	VV	998	10475	0.14%	0.028%
94	7.374	7.364	7.384	VV	849	7869	0.11%	0.021%
95	7.400	7.384	7.414	VV	1443	16332	0.22%	0.044%
96	7.431	7.414	7.453	VV	1787	23010	0.32%	0.062%
97	7.468	7.453	7.483	VV	975	11030	0.15%	0.030%
98	7.499	7.483	7.511	VV	1132	13395	0.18%	0.036%
99	7.524	7.511	7.545	VV	1740	17999	0.25%	0.048%
100	7.562	7.545	7.570	VV	311	3074	0.04%	0.008%
101	7.592	7.570	7.620	VV	437	8698	0.12%	0.023%
102	7.664	7.620	7.678	PV	953	16643	0.23%	0.045%
103	7.693	7.678	7.716	VV	2414	28388	0.39%	0.076%
104	7.749	7.716	7.805	VV	570584	5418932	74.58%	14.575%
105	7.815	7.805	7.820	VV	385	2713	0.04%	0.007%
106	7.839	7.820	7.854	VV	983	14578	0.20%	0.039%
107	7.860	7.854	7.875	VV	764	7927	0.11%	0.021%
108	7.886	7.875	7.904	VV	1021	11169	0.15%	0.030%
109	7.917	7.904	7.934	VV	752	8912	0.12%	0.024%
110	7.939	7.934	7.942	VV	345	1276	0.02%	0.003%
111	7.953	7.942	7.979	VV	574	6806	0.09%	0.018%
112	7.998	7.979	8.011	VV	1479	15622	0.21%	0.042%
113	8.017	8.011	8.043	VV	618	7954	0.11%	0.021%
114	8.050	8.043	8.069	VV	438	3733	0.05%	0.010%
115	8.092	8.069	8.118	VV	730	11200	0.15%	0.030%
116	8.124	8.118	8.134	VV	346	2134	0.03%	0.006%
117	8.141	8.134	8.145	VV	243	1241	0.02%	0.003%
118	8.150	8.145	8.169	VV	300	2700	0.04%	0.007%
119	8.173	8.169	8.183	VV	309	1774	0.02%	0.005%
120	8.204	8.183	8.223	VV	683	10166	0.14%	0.027%
121	8.232	8.223	8.240	VV	341	2585	0.04%	0.007%
122	8.251	8.240	8.277	VV	510	6661	0.09%	0.018%
123	8.300	8.277	8.319	VV	2404	28275	0.39%	0.076%
124	8.332	8.319	8.347	VV	504	6021	0.08%	0.016%
125	8.366	8.347	8.384	VV	1455	17886	0.25%	0.048%
126	8.414	8.384	8.435	VV	1633	34250	0.47%	0.092%
127	8.450	8.435	8.472	VV	851	12264	0.17%	0.033%
128	8.493	8.472	8.520	PV	1030	16613	0.23%	0.045%
129	8.538	8.520	8.560	VV	1197	14971	0.21%	0.040%
130	8.614	8.560	8.644	VV	331126	3252403	44.76%	8.748%
131	8.666	8.644	8.686	VV	2087	35015	0.48%	0.094%
132	8.714	8.686	8.733	VV	1173	23943	0.33%	0.064%
133	8.738	8.733	8.748	VV	1043	8640	0.12%	0.023%
134	8.758	8.748	8.771	VV	1079	11993	0.17%	0.032%
135	8.785	8.771	8.799	VV	1625	19593	0.27%	0.053%
136	8.809	8.799	8.823	VV	1356	15348	0.21%	0.041%
137	8.836	8.823	8.847	VV	1537	17175	0.24%	0.046%
138	8.858	8.847	8.880	VV	1999	21486	0.30%	0.058%
139	8.901	8.880	8.935	VV	1007	16267	0.22%	0.044%
140	8.954	8.935	8.968	VV	974	10204	0.14%	0.027%
141	8.975	8.968	8.980	VV	366	2001	0.03%	0.005%

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142	9.020	8.980	9.042	VV	74825	740119	10.19%	1.991%
143	9.055	9.042	9.070	VV	2343	30279	0.42%	0.081%
144	9.075	9.070	9.091	VV	1471	14723	0.20%	0.040%
145	9.105	9.091	9.125	VV	2264	35057	0.48%	0.094%
146	9.138	9.125	9.161	VV	3297	45662	0.63%	0.123%
147	9.173	9.161	9.193	VV	1698	21160	0.29%	0.057%
148	9.208	9.193	9.232	VV	1103	15744	0.22%	0.042%
149	9.252	9.232	9.282	VV	732	12176	0.17%	0.033%
150	9.311	9.282	9.325	VV	658	10600	0.15%	0.029%
151	9.342	9.325	9.379	VV	1152	19214	0.26%	0.052%
152	9.402	9.379	9.413	VV	992	11610	0.16%	0.031%
153	9.426	9.413	9.439	VV	906	8685	0.12%	0.023%
154	9.448	9.439	9.464	VV	371	4530	0.06%	0.012%
155	9.487	9.464	9.530	VV	2020	33284	0.46%	0.090%
156	9.567	9.530	9.602	VV	514	11608	0.16%	0.031%
157	9.622	9.602	9.647	PV	901	11594	0.16%	0.031%
158	9.652	9.647	9.658	VV	209	1054	0.01%	0.003%
159	9.684	9.664	9.712	VV	457	9631	0.13%	0.026%
160	9.736	9.712	9.746	VV	6716	71419	0.98%	0.192%
161	9.767	9.746	9.799	VV	95149	980560	13.49%	2.637%
162	9.817	9.799	9.827	VV	671	8680	0.12%	0.023%
163	9.835	9.827	9.857	VV	685	7495	0.10%	0.020%
164	9.863	9.857	9.870	VV	250	1758	0.02%	0.005%
165	9.874	9.870	9.878	VV	307	1304	0.02%	0.004%
166	9.894	9.878	9.927	VV	1527	20010	0.28%	0.054%
167	9.972	9.939	9.987	VV	800	13345	0.18%	0.036%
168	9.995	9.987	10.032	VV	837	12405	0.17%	0.033%
169	10.037	10.032	10.046	VV	387	2284	0.03%	0.006%
170	10.066	10.046	10.072	VV	472	5304	0.07%	0.014%
171	10.091	10.072	10.121	VV	1962	23288	0.32%	0.063%
172	10.127	10.121	10.134	VV	211	1198	0.02%	0.003%
173	10.172	10.145	10.186	VV	408	4892	0.07%	0.013%
174	10.239	10.186	10.270	VV	4193	63438	0.87%	0.171%
175	10.288	10.270	10.304	VV	883	12274	0.17%	0.033%
176	10.325	10.304	10.345	VV	925	15057	0.21%	0.040%
177	10.357	10.345	10.365	VV	550	5848	0.08%	0.016%
178	10.369	10.365	10.389	VV	567	6363	0.09%	0.017%
179	10.394	10.389	10.403	VV	395	2748	0.04%	0.007%
180	10.421	10.403	10.435	VV	1173	14028	0.19%	0.038%
181	10.442	10.435	10.445	VV	296	1637	0.02%	0.004%
182	10.453	10.445	10.467	VV	404	3479	0.05%	0.009%
183	10.497	10.467	10.506	VV	810	11321	0.16%	0.030%
184	10.517	10.506	10.527	VV	751	7546	0.10%	0.020%
185	10.533	10.527	10.539	VV	779	4551	0.06%	0.012%
186	10.542	10.539	10.547	VV	562	2406	0.03%	0.006%
187	10.554	10.547	10.563	VV	526	3920	0.05%	0.011%
188	10.580	10.563	10.596	VV	665	8787	0.12%	0.024%
189	10.626	10.596	10.643	VV	1108	20377	0.28%	0.055%
190	10.649	10.643	10.670	VV	813	8778	0.12%	0.024%
191	10.689	10.670	10.704	VV	605	9266	0.13%	0.025%
192	10.711	10.704	10.717	VV	554	3951	0.05%	0.011%
193	10.722	10.717	10.734	VV	628	5473	0.08%	0.015%
194	10.762	10.734	10.786	VV	1626	29405	0.40%	0.079%

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195	10.792	10.786	10.797	VV	482	2401	0.03%	0.006%
196	10.831	10.797	10.865	VV	730	20101	0.28%	0.054%
197	10.886	10.865	10.907	VV	1692	22718	0.31%	0.061%
198	10.911	10.907	10.927	VV	356	4460	0.06%	0.012%
199	10.957	10.927	10.979	VV	1309	25266	0.35%	0.068%
200	11.002	10.979	11.013	VV	540	7652	0.11%	0.021%
201	11.046	11.013	11.074	VV	894	20285	0.28%	0.055%
202	11.086	11.074	11.100	VV	772	8820	0.12%	0.024%
203	11.112	11.100	11.138	VV	476	7219	0.10%	0.019%
204	11.147	11.138	11.163	VV	286	3610	0.05%	0.010%
205	11.168	11.163	11.179	VV	333	2477	0.03%	0.007%
206	11.194	11.179	11.214	VV	344	5425	0.07%	0.015%
207	11.220	11.214	11.226	VV	308	1935	0.03%	0.005%
208	11.260	11.226	11.289	VV	889	17529	0.24%	0.047%
209	11.331	11.289	11.358	VV	1544	25458	0.35%	0.068%
210	11.379	11.358	11.393	VV	549	8070	0.11%	0.022%
211	11.412	11.393	11.436	VV	919	15291	0.21%	0.041%
212	11.442	11.436	11.457	VV	385	3075	0.04%	0.008%
213	11.462	11.457	11.469	VV	229	1363	0.02%	0.004%
214	11.492	11.473	11.518	VV	993	12567	0.17%	0.034%
215	11.523	11.518	11.548	VV	289	3255	0.04%	0.009%
216	11.554	11.548	11.561	PV	224	1161	0.02%	0.003%
217	11.570	11.561	11.586	VV	293	2527	0.03%	0.007%
218	11.596	11.586	11.602	VV	176	1256	0.02%	0.003%
219	11.658	11.602	11.701	VV	665751	7266188	100.00%	19.544%
220	11.722	11.701	11.742	VV	1158	20093	0.28%	0.054%
221	11.747	11.742	11.755	VV	914	6450	0.09%	0.017%
222	11.766	11.755	11.774	VV	864	8751	0.12%	0.024%
223	11.793	11.774	11.798	VV	1094	13310	0.18%	0.036%
224	11.818	11.798	11.852	VV	2689	43010	0.59%	0.116%
225	11.866	11.852	11.871	VV	594	5854	0.08%	0.016%
226	11.876	11.871	11.894	VV	679	7220	0.10%	0.019%
227	11.897	11.894	11.904	VV	455	2661	0.04%	0.007%
228	11.928	11.912	11.947	VV	756	10543	0.15%	0.028%
229	11.990	11.947	12.020	VV	1269	32909	0.45%	0.089%
230	12.049	12.020	12.073	VV	8220	99554	1.37%	0.268%
231	12.092	12.073	12.120	VV	1683	25967	0.36%	0.070%
232	12.163	12.120	12.188	VV	2672	71270	0.98%	0.192%
233	12.257	12.188	12.349	VV	221313	3097393	42.63%	8.331%
234	12.354	12.349	12.416	VV	4148	133830	1.84%	0.360%
235	12.422	12.416	12.460	VV	2778	65552	0.90%	0.176%
236	12.499	12.460	12.528	VV	4490	116365	1.60%	0.313%
237	12.535	12.528	12.547	VV	1585	17021	0.23%	0.046%
238	12.574	12.547	12.599	VV	2632	60028	0.83%	0.161%
239	12.634	12.599	12.660	VV	2811	63557	0.87%	0.171%
240	12.700	12.660	12.715	VV	3604	71047	0.98%	0.191%
241	12.720	12.715	12.749	VV	2925	37074	0.51%	0.100%
242	12.760	12.749	12.775	VV	1055	15524	0.21%	0.042%
243	12.781	12.775	12.823	VV	1060	23125	0.32%	0.062%
244	12.830	12.823	12.837	VV	923	6162	0.08%	0.017%
245	12.841	12.837	12.865	VV	705	10142	0.14%	0.027%
246	12.872	12.865	12.880	VV	773	6437	0.09%	0.017%

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247	12.898	12.880	12.928	VV	1135	24173	0.33%	0.065%
248	12.934	12.928	12.973	VV	692	14392	0.20%	0.039%
249	12.996	12.973	13.030	VV	2399	36960	0.51%	0.099%
250	13.079	13.030	13.113	VV	84386	997149	13.72%	2.682%
251	13.135	13.113	13.151	VV	1014	19601	0.27%	0.053%
252	13.165	13.151	13.187	VV	968	18305	0.25%	0.049%
253	13.193	13.187	13.219	VV	916	14685	0.20%	0.039%
254	13.241	13.219	13.251	VV	926	13466	0.19%	0.036%
255	13.267	13.251	13.277	VV	892	12473	0.17%	0.034%
256	13.297	13.277	13.345	VV	4923	73583	1.01%	0.198%
257	13.393	13.345	13.435	VV	2525	103136	1.42%	0.277%
258	13.477	13.435	13.572	VV	74701	1139592	15.68%	3.065%
259	13.578	13.572	13.599	VV	3258	47095	0.65%	0.127%
260	13.602	13.599	13.635	VV	2827	51326	0.71%	0.138%
261	13.652	13.635	13.666	VV	2192	37098	0.51%	0.100%
262	13.677	13.666	13.692	VV	1950	28261	0.39%	0.076%
263	13.696	13.692	13.699	VV	1903	8104	0.11%	0.022%
264	13.702	13.699	13.722	VV	1880	21246	0.29%	0.057%
265	13.726	13.722	13.737	VV	1340	11489	0.16%	0.031%
266	13.781	13.737	13.808	VV	6483	116942	1.61%	0.315%
267	13.829	13.808	13.869	VV	2224	54988	0.76%	0.148%
268	13.892	13.869	13.909	VV	1096	23643	0.33%	0.064%
269	13.911	13.909	13.914	VV	1113	3262	0.04%	0.009%
270	13.935	13.914	13.964	VV	1236	30315	0.42%	0.082%
271	13.969	13.964	13.984	VV	813	8499	0.12%	0.023%
272	13.986	13.984	13.993	VV	775	3947	0.05%	0.011%
273	14.000	13.993	14.013	VV	767	7766	0.11%	0.021%
274	14.023	14.013	14.028	VV	783	5798	0.08%	0.016%
275	14.041	14.028	14.078	VV	940	21437	0.30%	0.058%
276	14.091	14.078	14.108	VV	760	10504	0.14%	0.028%
277	14.121	14.108	14.126	VV	760	6423	0.09%	0.017%
278	14.129	14.126	14.151	VV	703	7587	0.10%	0.020%
279	14.182	14.151	14.202	VV	853	19941	0.27%	0.054%
280	14.261	14.202	14.287	VV	2378	61981	0.85%	0.167%
281	14.291	14.287	14.299	VV	736	5235	0.07%	0.014%
282	14.310	14.299	14.345	VV	966	18602	0.26%	0.050%
283	14.350	14.345	14.376	VV	675	10154	0.14%	0.027%
284	14.386	14.376	14.409	VV	686	11777	0.16%	0.032%
285	14.417	14.409	14.447	VV	688	10474	0.14%	0.028%
286	14.472	14.447	14.483	VV	1027	16990	0.23%	0.046%
287	14.490	14.483	14.515	VV	1194	15827	0.22%	0.043%
288	14.522	14.515	14.529	VV	823	6226	0.09%	0.017%
289	14.554	14.529	14.572	VV	858	19046	0.26%	0.051%
290	14.586	14.572	14.592	VV	694	6985	0.10%	0.019%
291	14.594	14.592	14.622	VV	840	9702	0.13%	0.026%
292	14.626	14.622	14.633	VV	442	2435	0.03%	0.007%
293	14.639	14.633	14.643	VV	443	2507	0.03%	0.007%
294	14.655	14.643	14.665	VV	584	6081	0.08%	0.016%
295	14.677	14.665	14.692	VV	624	8053	0.11%	0.022%
296	14.730	14.692	14.739	VV	737	17649	0.24%	0.047%
297	14.745	14.739	14.754	VV	826	5848	0.08%	0.016%
298	14.768	14.754	14.795	VV	875	15428	0.21%	0.041%
299	14.799	14.795	14.805	VV	553	3051	0.04%	0.008%

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300	14.814	14.805	14.840	VV	556	9706	0.13%	0.026%
301	14.863	14.840	14.872	VV	1976	23292	0.32%	0.063%
302	14.889	14.872	14.919	VV	2979	66773	0.92%	0.180%
303	14.927	14.919	14.950	VV	1631	20430	0.28%	0.055%
304	14.972	14.950	15.007	VV	1779	26930	0.37%	0.072%
305	15.018	15.007	15.044	VV	425	6461	0.09%	0.017%
306	15.048	15.044	15.055	VV	273	1646	0.02%	0.004%
307	15.075	15.055	15.085	VV	334	5061	0.07%	0.014%
308	15.102	15.085	15.122	VV	634	9788	0.13%	0.026%
309	15.127	15.122	15.150	VV	482	5509	0.08%	0.015%
310	15.154	15.150	15.161	VV	335	1614	0.02%	0.004%
311	15.167	15.161	15.180	VV	205	1675	0.02%	0.005%
312	15.206	15.180	15.221	VV	458	7584	0.10%	0.020%
313	15.234	15.221	15.249	VV	433	4400	0.06%	0.012%
314	15.252	15.249	15.267	VV	232	1351	0.02%	0.004%
315	15.303	15.267	15.431	PV	26597	499930	6.88%	1.345%
316	15.464	15.431	15.554	VV	1880	53757	0.74%	0.145%
317	15.577	15.554	15.586	PV	448	5412	0.07%	0.015%
318	15.598	15.586	15.612	VV	351	4648	0.06%	0.013%
319	15.619	15.612	15.632	VV	401	3650	0.05%	0.010%
320	15.637	15.632	15.642	VV	393	1930	0.03%	0.005%
321	15.650	15.642	15.658	VV	457	3306	0.05%	0.009%
322	15.661	15.658	15.674	VV	346	3063	0.04%	0.008%
323	15.688	15.674	15.709	VV	504	7014	0.10%	0.019%
324	15.714	15.709	15.729	VV	317	2599	0.04%	0.007%
325	15.749	15.729	15.798	VV	658	16155	0.22%	0.043%
326	15.834	15.798	15.840	VV	690	10832	0.15%	0.029%
327	15.844	15.840	15.875	VV	636	10220	0.14%	0.027%
328	15.879	15.875	15.889	VV	471	3393	0.05%	0.009%
329	15.908	15.889	15.923	VV	733	11238	0.15%	0.030%
330	15.944	15.923	15.983	VV	1203	22530	0.31%	0.061%
331	16.005	15.983	16.035	VV	2209	29574	0.41%	0.080%
332	16.047	16.035	16.052	VV	365	2054	0.03%	0.006%
333	16.057	16.052	16.065	VV	255	1289	0.02%	0.003%
334	16.110	16.065	16.116	VV	329	3124	0.04%	0.008%
335	16.138	16.116	16.152	VV	588	7249	0.10%	0.019%
336	16.167	16.152	16.192	VV	279	4263	0.06%	0.011%
337	16.197	16.192	16.212	VV	286	1914	0.03%	0.005%
338	16.240	16.223	16.265	VV	211	3024	0.04%	0.008%
339	16.281	16.265	16.289	PV	318	2569	0.04%	0.007%
340	16.319	16.289	16.362	VV	1873	47061	0.65%	0.127%
341	16.367	16.362	16.380	VV	754	7366	0.10%	0.020%
342	16.384	16.380	16.390	VV	742	3705	0.05%	0.010%
343	16.416	16.390	16.431	VV	1730	30226	0.42%	0.081%
344	16.440	16.431	16.473	VV	1200	17032	0.23%	0.046%
345	16.507	16.473	16.533	VV	924	18192	0.25%	0.049%
346	16.563	16.533	16.592	VV	1228	23882	0.33%	0.064%
347	16.622	16.592	16.643	VV	569	14583	0.20%	0.039%
348	16.647	16.643	16.653	VV	360	2026	0.03%	0.005%
349	16.662	16.653	16.688	VV	352	4695	0.06%	0.013%
350	16.695	16.688	16.707	PV	239	1543	0.02%	0.004%
351	16.731	16.707	16.762	VV	855	13592	0.19%	0.037%

					rteres			
352	16.791	16.762	16.835	VV	1551	33799	0.47%	0.091%
353	16.855	16.835	16.868	VV	830	12679	0.17%	0.034%
354	16.890	16.868	16.911	VV	1462	21759	0.30%	0.059%
355	16.941	16.911	17.021	VV	6973	126925	1.75%	0.341%
356	17.026	17.021	17.057	VV	385	4312	0.06%	0.012%
357	17.081	17.066	17.096	VV	391	4649	0.06%	0.013%
358	17.129	17.108	17.137	PV	194	1400	0.02%	0.004%
359	17.165	17.137	17.174	VV	276	4610	0.06%	0.012%
360	17.179	17.174	17.204	VV	425	3000	0.04%	0.008%
361	17.261	17.204	17.271	VV	898	17898	0.25%	0.048%
362	17.280	17.271	17.305	VV	780	12247	0.17%	0.033%
363	17.335	17.305	17.364	VV	1982	32614	0.45%	0.088%
364	17.367	17.364	17.380	VV	164	1012	0.01%	0.003%
365	17.422	17.380	17.467	VV	573	16682	0.23%	0.045%
366	17.489	17.467	17.495	PV	379	3343	0.05%	0.009%
367	17.503	17.495	17.544	VV	428	7439	0.10%	0.020%
368	17.559	17.544	17.565	VV	438	4043	0.06%	0.011%
369	17.572	17.565	17.597	VV	489	5768	0.08%	0.016%
370	17.612	17.597	17.626	PV	331	3947	0.05%	0.011%
371	17.638	17.626	17.651	VV	347	4163	0.06%	0.011%
372	17.654	17.651	17.664	VV	272	1708	0.02%	0.005%
373	17.669	17.664	17.680	VV	169	1220	0.02%	0.003%
374	17.730	17.680	17.754	PV	1903	36620	0.50%	0.098%
375	17.774	17.754	17.799	VV	1699	27147	0.37%	0.073%
376	17.824	17.809	17.835	VV	373	3269	0.04%	0.009%
377	17.863	17.835	17.884	VV	3507	47311	0.65%	0.127%
378	17.890	17.884	17.897	VV	677	4369	0.06%	0.012%
379	17.900	17.897	17.919	VV	537	3516	0.05%	0.009%
380	17.936	17.919	17.947	VV	300	2419	0.03%	0.007%
381	17.959	17.947	17.972	PV	332	2703	0.04%	0.007%
382	17.975	17.972	17.979	VV	292	1047	0.01%	0.003%
383	18.012	17.979	18.038	VV	656	13230	0.18%	0.036%
384	18.057	18.038	18.083	VV	593	10576	0.15%	0.028%
385	18.128	18.083	18.175	VV	13309	270369	3.72%	0.727%
386	18.194	18.175	18.247	VV	5175	97065	1.34%	0.261%
387	18.253	18.247	18.270	VV	588	6395	0.09%	0.017%
388	18.291	18.270	18.307	VV	1063	16679	0.23%	0.045%
389	18.312	18.307	18.331	VV	641	6276	0.09%	0.017%
390	18.340	18.331	18.351	VV	444	4289	0.06%	0.012%
391	18.357	18.351	18.376	VV	300	3822	0.05%	0.010%
392	18.405	18.376	18.426	VV	1682	24663	0.34%	0.066%
393	18.433	18.426	18.438	VV	461	2457	0.03%	0.007%
394	18.448	18.438	18.485	VV	594	8501	0.12%	0.023%
395	18.536	18.485	18.552	VV	806	18003	0.25%	0.048%
396	18.600	18.552	18.649	VV	2167	57930	0.80%	0.156%
397	18.652	18.649	18.659	VV	336	1320	0.02%	0.004%
398	18.667	18.659	18.677	VV	343	2880	0.04%	0.008%
399	18.703	18.677	18.737	VV	2348	47713	0.66%	0.128%
400	18.779	18.737	18.802	VV	730	25232	0.35%	0.068%
401	18.811	18.802	18.839	VV	721	12781	0.18%	0.034%
402	18.861	18.839	18.869	VV	605	9258	0.13%	0.025%
403	18.877	18.869	18.890	VV	565	5643	0.08%	0.015%
404	18.900	18.890	18.907	VV	458	4398	0.06%	0.012%

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405	18.915	18.907	18.923	VV	566	4612	0.06%	0.012%
406	18.957	18.923	18.985	VV	11717	219027	3.01%	0.589%
407	19.009	18.985	19.061	VV	4689	130454	1.80%	0.351%
408	19.099	19.061	19.126	VV	1894	59319	0.82%	0.160%
409	19.132	19.126	19.150	VV	1580	19073	0.26%	0.051%
410	19.177	19.150	19.212	VV	1563	49541	0.68%	0.133%
411	19.222	19.212	19.234	VV	1272	15730	0.22%	0.042%
412	19.248	19.234	19.254	VV	1645	16401	0.23%	0.044%
413	19.260	19.254	19.267	VV	1366	8763	0.12%	0.024%
414	19.287	19.267	19.312	VV	1471	33776	0.46%	0.091%
415	19.321	19.312	19.330	VV	1334	14270	0.20%	0.038%
416	19.385	19.330	19.411	VV	2814	88693	1.22%	0.239%
417	19.428	19.411	19.433	VV	1656	20658	0.28%	0.056%
418	19.442	19.433	19.446	VV	1649	12424	0.17%	0.033%
419	19.490	19.446	19.522	VV	3264	101033	1.39%	0.272%
420	19.562	19.522	19.589	VV	2996	87906	1.21%	0.236%
421	19.608	19.589	19.612	VV	2159	28855	0.40%	0.078%
422	19.653	19.612	19.660	VV	2252	58939	0.81%	0.159%
423	19.675	19.660	19.700	VV	2503	53689	0.74%	0.144%
424	19.725	19.700	19.731	VV	3384	54421	0.75%	0.146%
425	19.754	19.731	19.780	VV	4237	103616	1.43%	0.279%
426	19.792	19.780	19.808	VV	2929	46184	0.64%	0.124%
427	19.811	19.808	19.826	VV	2812	29688	0.41%	0.080%
428	19.856	19.826	19.882	VV	3340	101646	1.40%	0.273%
429	19.937	19.882	19.958	VV	3714	148163	2.04%	0.399%
430	19.983	19.958	19.997	VV	3800	85351	1.17%	0.230%
431	20.030	19.997	20.055	VV	5820	156524	2.15%	0.421%
432	20.084	20.055	20.088	VV	4067	75579	1.04%	0.203%
433	20.115	20.088	20.150	VV	5084	166549	2.29%	0.448%
434	20.178	20.150	20.184	VV	4828	92150	1.27%	0.248%
435	20.232	20.184	20.267	VV	5126	241727	3.33%	0.650%
436	20.317	20.267	20.330	VV	5195	191463	2.63%	0.515%
437	20.353	20.330	20.383	VV	5654	171381	2.36%	0.461%
438	20.388	20.383	20.395	VV	5499	41052	0.56%	0.110%
439	20.461	20.395	20.465	VV	6392	245346	3.38%	0.660%
440	20.473	20.465	20.489	VV	6453	92566	1.27%	0.249%
441	20.493	20.489	20.508	VV	6308	68334	0.94%	0.184%
442	20.517	20.508	20.527	VV	6090	69643	0.96%	0.187%
443	20.531	20.527	20.551	VV	5966	84764	1.17%	0.228%
444	20.583	20.551	20.596	VV	6388	165246	2.27%	0.444%
445	20.601	20.596	20.613	VV	5998	61169	0.84%	0.165%
446	20.621	20.613	20.623	VV	5900	35852	0.49%	0.096%
447	20.659	20.623	20.699	VV	6380	267281	3.68%	0.719%
448	20.703	20.699	20.711	VV	5466	38414	0.53%	0.103%
449	20.728	20.711	20.744	VV	5608	109614	1.51%	0.295%
450	20.749	20.744	20.753	VV	5345	27257	0.38%	0.073%
451	20.756	20.753	20.764	VV	5307	34668	0.48%	0.093%
452	20.775	20.764	20.792	VV	5273	87145	1.20%	0.234%
453	20.797	20.792	20.810	VV	5185	55333	0.76%	0.149%
454	20.860	20.810	20.887	VV	5444	235690	3.24%	0.634%
455	20.892	20.887	20.928	VV	4858	116259	1.60%	0.313%
456	20.940	20.928	20.950	VV	4646	58919	0.81%	0.158%

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457	20.961	20.950	21.009	VV	4660	157276	2.16%	0.423%
458	21.014	21.009	21.021	VV	4241	30107	0.41%	0.081%
459	21.026	21.021	21.047	VV	4125	64005	0.88%	0.172%
460	21.054	21.047	21.062	VV	4086	35310	0.49%	0.095%
461	21.067	21.062	21.085	VV	4041	53868	0.74%	0.145%
462	21.094	21.085	21.098	VV	3986	32686	0.45%	0.088%
463	21.112	21.098	21.117	VV	4039	44479	0.61%	0.120%
464	21.120	21.117	21.129	VV	3992	26622	0.37%	0.072%
465	21.136	21.129	21.154	VV	3929	56557	0.78%	0.152%
466	21.158	21.154	21.172	VV	3882	41592	0.57%	0.112%
467	21.183	21.172	21.219	VV	3798	100126	1.38%	0.269%
468	21.224	21.219	21.227	VV	3309	15352	0.21%	0.041%
469	21.231	21.227	21.242	VV	3364	29330	0.40%	0.079%
470	21.248	21.242	21.257	VV	3199	27635	0.38%	0.074%
471	21.282	21.257	21.301	VV	3534	88023	1.21%	0.237%
472	21.305	21.301	21.339	VV	3362	70994	0.98%	0.191%
473	21.341	21.339	21.343	VV	3016	8630	0.12%	0.023%
474	21.352	21.343	21.365	VV	3157	37919	0.52%	0.102%
475	21.370	21.365	21.377	VV	3127	22162	0.30%	0.060%
476	21.382	21.377	21.393	VV	2951	26560	0.37%	0.071%
477	21.417	21.393	21.427	VV	2908	56494	0.78%	0.152%
478	21.432	21.427	21.445	VV	2787	30852	0.42%	0.083%
479	21.448	21.445	21.485	VV	2663	59166	0.81%	0.159%
480	21.492	21.485	21.496	VV	2277	13765	0.19%	0.037%
481	21.538	21.496	21.565	VV	2490	94831	1.31%	0.255%
482	21.579	21.565	21.587	VV	2282	28403	0.39%	0.076%
483	21.592	21.587	21.620	VV	2166	40391	0.56%	0.109%
484	21.627	21.620	21.632	VV	1992	12974	0.18%	0.035%
485	21.637	21.632	21.670	VV	1941	41526	0.57%	0.112%
486	21.676	21.670	21.684	VV	1924	15123	0.21%	0.041%
487	21.706	21.684	21.715	VV	1945	33739	0.46%	0.091%
488	21.720	21.715	21.731	VV	1787	15517	0.21%	0.042%
489	21.739	21.731	21.744	VV	1749	12915	0.18%	0.035%
490	21.749	21.744	21.766	VV	1816	22017	0.30%	0.059%
491	21.778	21.766	21.786	VV	1775	20723	0.29%	0.056%
492	21.794	21.786	21.800	VV	1734	14271	0.20%	0.038%
493	21.803	21.800	21.822	VV	1704	20181	0.28%	0.054%
494	21.826	21.822	21.841	VV	1602	17544	0.24%	0.047%
495	21.858	21.841	21.892	VV	1545	39789	0.55%	0.107%
496	21.914	21.892	21.927	VV	1140	22599	0.31%	0.061%
497	21.932	21.927	21.972	VV	1205	27414	0.38%	0.074%
498	21.976	21.972	21.980	VV	926	4253	0.06%	0.011%
499	21.986	21.980	22.003	VV	1042	10974	0.15%	0.030%
500	22.018	22.003	22.029	VV	811	11223	0.15%	0.030%
501	22.034	22.029	22.039	VV	805	4360	0.06%	0.012%
502	22.048	22.039	22.065	VV	801	10519	0.14%	0.028%
503	22.071	22.065	22.082	VV	581	5212	0.07%	0.014%
504	22.087	22.082	22.090	VV	509	2603	0.04%	0.007%
505	22.095	22.090	22.111	VV	627	6008	0.08%	0.016%
506	22.142	22.111	22.188	VV	504	15791	0.22%	0.042%
Sum of corrected areas:						37178901		

Aromatic EPH 040725.M Fri Apr 11 01:38:29 2025 rteres

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB02	SDG No.:	Q1744
Lab Sample ID:	Q1744-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	56
Sample Wt/Vol:	30.05 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
04/08/25 10:10	04/11/25 0:05	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	0.51	J	1	0.25	1.78	mg/kg	FC068564.D
Aliphatic C12-C16	Aliphatic C12-C16	2.96		1	0.20	1.19	mg/kg	FC068564.D
Aliphatic C16-C21	Aliphatic C16-C21	1.32	J	1	0.23	1.78	mg/kg	FC068564.D
Aliphatic C21-C28	Aliphatic C21-C28	0.95	U	1	0.95	2.38	mg/kg	FC068564.D
Aliphatic C28-C40	Aliphatic C28-C40	2.60	J	1	2.10	3.57	mg/kg	FC068564.D
Aromatic C10-C12	Aromatic C10-C12	0.70	J	1	0.21	1.19	mg/kg	FD049273.D
Aromatic C12-C16	Aromatic C12-C16	0.69	J	1	0.41	1.78	mg/kg	FD049273.D
Aromatic C16-C21	Aromatic C16-C21	4.67		1	0.71	2.97	mg/kg	FD049273.D
Aromatic C21-C36	Aromatic C21-C36	3.40	J	1	2.12	4.75	mg/kg	FD049273.D
Total AliphaticEPH	Total AliphaticEPH	7.39	J		3.72	10.7	mg/kg	
Total AromaticEPH	Total AromaticEPH	9.46	J		3.46	10.7	mg/kg	
Total EPH	Total EPH	16.8	J		7.18	21.4	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:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB02	SDG No.:	Q1744
Lab Sample ID:	Q1744-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	56
Sample Wt/Vol:	30.05 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068564.D	1	04/08/25	04/11/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	0.51	J	0.25	1.78	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	2.96		0.20	1.19	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	1.32	J	0.23	1.78	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	0.95	U	0.95	2.38	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	2.60	J	2.10	3.57	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	31.5		40 - 140	63%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1744-03	Acq On:	11 Apr 2025 00:05
Client Sample ID:	B-158-SB02	Operator:	YP/AJ
Data file:	FC068564.D	Misc:	
Instrument:	FID_C	ALS Vial:	23
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.345	6.644	451147	4.285	300	ug/ml
Aliphatic C12-C16	6.645	10.043	2545930	24.881	200	ug/ml
Aliphatic C16-C21	10.044	13.409	1097643	11.108	300	ug/ml
Aliphatic C21-C28	13.410	17.073	427193	4.536	400	ug/ml
Aliphatic C28-C40	17.074	22.075	1965755	21.87	600	ug/ml
Aliphatic EPH	3.345	22.075	6487668	66.68		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.144	13.144	2927619	31.52		ug/ml
Aliphatic C9-C28	3.345	17.073	4521913	44.81	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068564.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 00:05
Operator : YP/AJ
Sample : Q1744-03
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-158-SB02

Integration File: autoint1.e
Quant Time: Apr 11 03:47:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
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...	13.144	2927619	31.516 ug/ml
Spiked Amount	50.000	Recovery	= 63.03%

Target Compounds

(f)=RT Delta > 1/2 Window

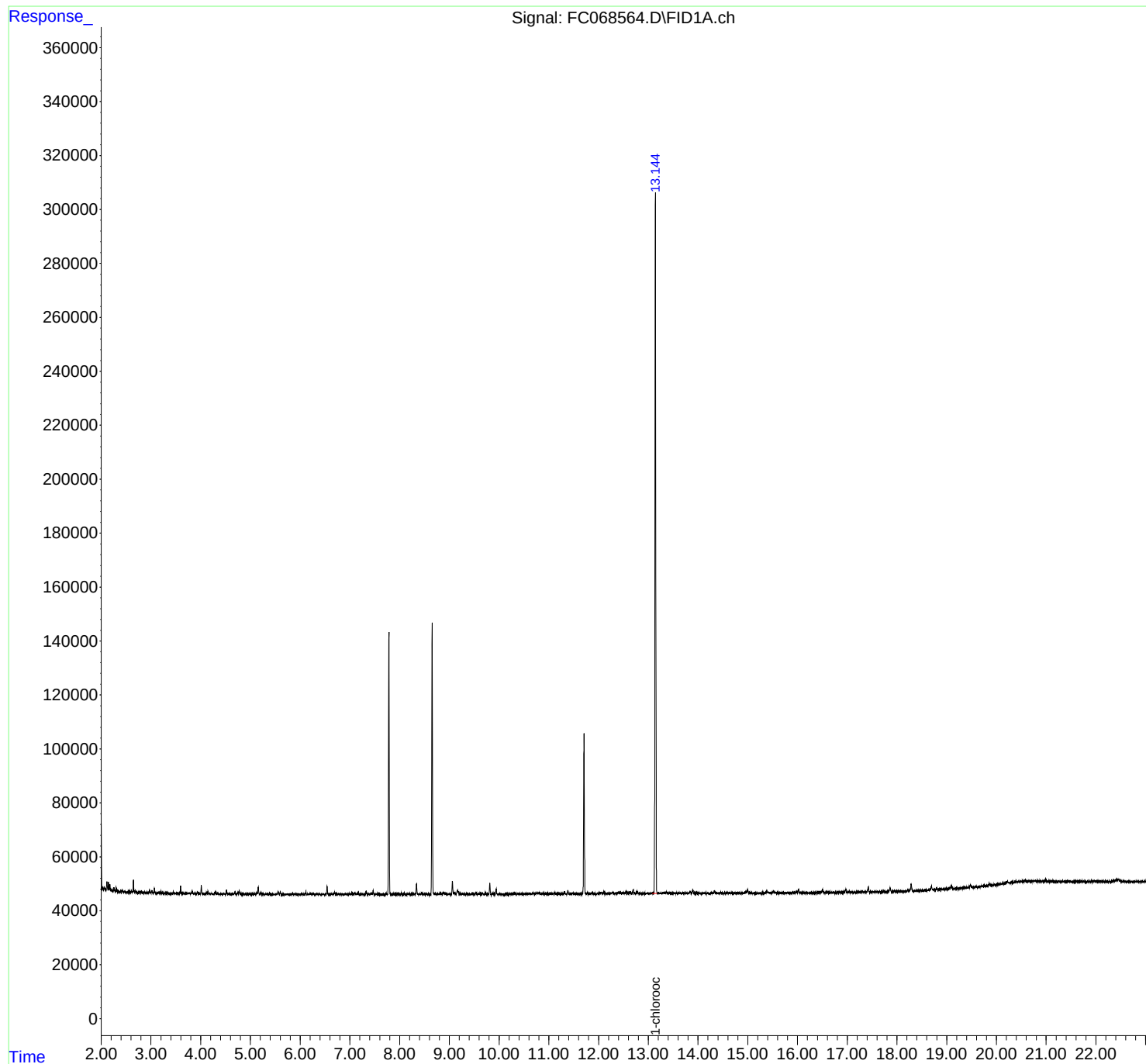
(m)=manual int.

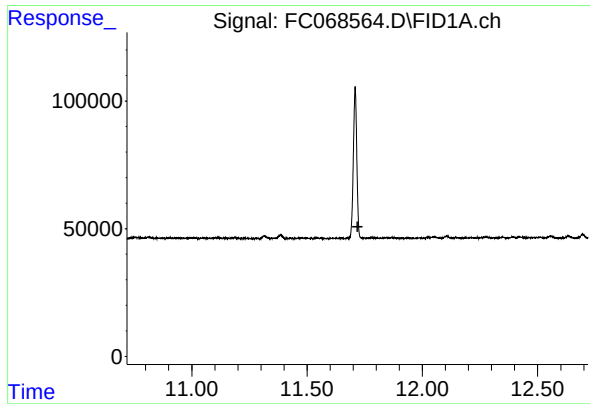
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068564.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 00:05
Operator : YP/AJ
Sample : Q1744-03
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-158-SB02

Integration File: autoint1.e
Quant Time: Apr 11 03:47:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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

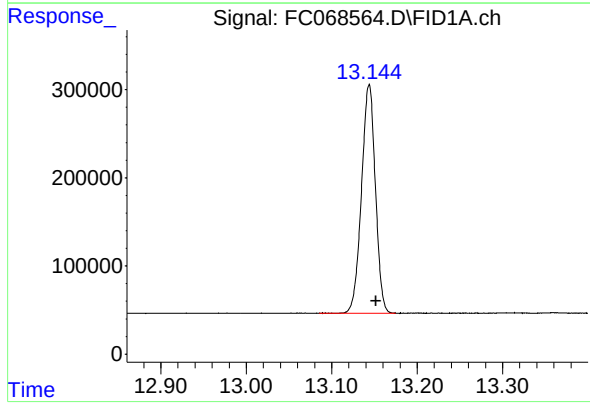




#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T.: 11.719 min
Response: 0
Conc: N.D.

Instrument :
FID_C
ClientSampleId :
B-158-SB02



#12 1-chlorooctadecane (SURR)

R.T.: 13.144 min
Delta R.T.: -0.008 min
Response: 2927619
Conc: 31.52 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068564.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 00:05
 Sample : Q1744-03
 Misc :
 ALS Vial : 23 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	2.418	2.371	2.547	BV	743	5372	0.18%	0.056%
2	2.574	2.547	2.594	PV	351	4488	0.15%	0.047%
3	2.605	2.594	2.624	VV	261	3279	0.11%	0.034%
4	2.647	2.624	2.667	VV	4703	38597	1.31%	0.403%
5	2.684	2.667	2.732	VV	694	11239	0.38%	0.117%
6	2.748	2.732	2.759	PV	167	1462	0.05%	0.015%
7	2.779	2.759	2.797	VV	210	3312	0.11%	0.035%
8	2.813	2.797	2.863	VV	267	3842	0.13%	0.040%
9	2.878	2.863	2.934	VV	263	4775	0.16%	0.050%
10	2.969	2.934	3.000	VV	923	14066	0.48%	0.147%
11	3.018	3.000	3.051	VV	965	10651	0.36%	0.111%
12	3.069	3.051	3.092	VV	1897	17211	0.59%	0.180%
13	3.107	3.092	3.128	VV	87	1539	0.05%	0.016%
14	3.148	3.128	3.161	VV	233	2798	0.10%	0.029%
15	3.197	3.161	3.227	VV	616	7636	0.26%	0.080%
16	3.234	3.227	3.247	VV	106	796	0.03%	0.008%
17	3.261	3.247	3.318	VV	162	3032	0.10%	0.032%
18	3.328	3.318	3.341	VV	59	974	0.03%	0.010%
19	3.345	3.341	3.354	VV	109	703	0.02%	0.007%
20	3.361	3.354	3.374	VV	116	1177	0.04%	0.012%
21	3.385	3.374	3.411	VV	107	1513	0.05%	0.016%
22	3.446	3.411	3.465	PV	651	7476	0.25%	0.078%
23	3.476	3.465	3.491	VV	131	1403	0.05%	0.015%
24	3.497	3.491	3.509	VV	112	956	0.03%	0.010%
25	3.547	3.509	3.568	VV	178	3162	0.11%	0.033%
26	3.596	3.568	3.630	VV	2860	25874	0.88%	0.270%
27	3.650	3.630	3.673	VV	149	2672	0.09%	0.028%
28	3.688	3.673	3.698	VV	141	1458	0.05%	0.015%
29	3.721	3.698	3.741	VV	217	3846	0.13%	0.040%
30	3.773	3.741	3.811	VV	377	9706	0.33%	0.101%
31	3.833	3.811	3.875	VV	944	12732	0.43%	0.133%
32	3.890	3.875	3.918	VV	159	2843	0.10%	0.030%
33	3.932	3.918	3.987	VV	499	8773	0.30%	0.092%
34	4.013	3.987	4.082	PV	3125	31195	1.06%	0.326%
35	4.119	4.082	4.134	VV	509	6927	0.24%	0.072%
36	4.147	4.134	4.174	VV	1115	11038	0.38%	0.115%

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37	4.181	4.174	4.198	VV	140	1598	0.05%	0.017%
38	4.216	4.198	4.250	VV	297	4063	0.14%	0.042%
39	4.294	4.250	4.320	VV	694	12628	0.43%	0.132%
40	4.329	4.320	4.352	VV	214	2702	0.09%	0.028%
41	4.389	4.352	4.428	VV	136	3481	0.12%	0.036%
42	4.447	4.428	4.459	VV	142	2178	0.07%	0.023%
43	4.473	4.459	4.496	VV	128	2330	0.08%	0.024%
44	4.520	4.496	4.542	VV	1576	15560	0.53%	0.163%
45	4.552	4.542	4.561	VV	167	1729	0.06%	0.018%
46	4.567	4.561	4.591	VV	252	2033	0.07%	0.021%
47	4.633	4.591	4.652	VV	285	5294	0.18%	0.055%
48	4.689	4.652	4.714	VV	897	12314	0.42%	0.129%
49	4.745	4.714	4.759	VV	861	10065	0.34%	0.105%
50	4.775	4.759	4.800	VV	1381	13700	0.47%	0.143%
51	4.811	4.800	4.821	VV	182	1326	0.05%	0.014%
52	4.828	4.821	4.844	VV	210	1556	0.05%	0.016%
53	4.865	4.844	4.879	VV	140	2762	0.09%	0.029%
54	4.901	4.879	4.919	VV	270	3761	0.13%	0.039%
55	4.939	4.919	4.951	VV	182	2160	0.07%	0.023%
56	4.974	4.951	4.994	VV	244	3431	0.12%	0.036%
57	5.002	4.994	5.041	VV	150	2320	0.08%	0.024%
58	5.080	5.041	5.107	VV	271	4471	0.15%	0.047%
59	5.130	5.107	5.139	VV	637	6514	0.22%	0.068%
60	5.157	5.139	5.188	VV	2812	31157	1.06%	0.325%
61	5.213	5.188	5.231	VV	515	7430	0.25%	0.078%
62	5.241	5.231	5.261	VV	258	2767	0.09%	0.029%
63	5.265	5.261	5.311	VV	187	2073	0.07%	0.022%
64	5.331	5.311	5.371	PV	177	4973	0.17%	0.052%
65	5.383	5.371	5.406	VV	559	5721	0.19%	0.060%
66	5.435	5.406	5.506	VV	136	4492	0.15%	0.047%
67	5.528	5.506	5.540	VV	164	1889	0.06%	0.020%
68	5.560	5.540	5.579	VV	1085	11159	0.38%	0.117%
69	5.601	5.579	5.627	VV	1132	12310	0.42%	0.129%
70	5.657	5.627	5.698	PV	274	4177	0.14%	0.044%
71	5.704	5.698	5.711	VV	74	426	0.01%	0.004%
72	5.750	5.711	5.797	VV	208	5556	0.19%	0.058%
73	5.809	5.797	5.830	VV	106	1589	0.05%	0.017%
74	5.851	5.830	5.882	VV	293	5725	0.19%	0.060%
75	5.901	5.882	5.924	VV	173	2766	0.09%	0.029%
76	5.935	5.924	5.968	VV	146	2528	0.09%	0.026%
77	5.980	5.968	6.030	VV	127	3316	0.11%	0.035%
78	6.080	6.030	6.101	VV	207	4978	0.17%	0.052%
79	6.117	6.101	6.139	VV	888	9332	0.32%	0.097%
80	6.159	6.139	6.183	VV	242	4381	0.15%	0.046%
81	6.203	6.183	6.234	VV	572	7491	0.25%	0.078%
82	6.262	6.234	6.301	VV	434	7929	0.27%	0.083%
83	6.333	6.301	6.380	VV	301	9116	0.31%	0.095%
84	6.390	6.380	6.412	VV	200	2190	0.07%	0.023%
85	6.422	6.412	6.441	VV	96	1154	0.04%	0.012%
86	6.455	6.441	6.514	VV	138	3682	0.13%	0.038%
87	6.543	6.514	6.574	VV	3147	33216	1.13%	0.347%
88	6.628	6.574	6.646	VV	372	6194	0.21%	0.065%
89	6.662	6.646	6.674	VV	343	3782	0.13%	0.040%

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90	6.693	6.674	6.714	VV	867	10541	0.36%	0.110%
91	6.730	6.714	6.746	VV	353	4173	0.14%	0.044%
92	6.766	6.746	6.804	VV	465	6709	0.23%	0.070%
93	6.820	6.804	6.846	VV	126	2265	0.08%	0.024%
94	6.864	6.846	6.929	VV	162	5432	0.18%	0.057%
95	6.940	6.929	6.949	VV	142	1204	0.04%	0.013%
96	6.954	6.949	6.967	VV	140	873	0.03%	0.009%
97	6.988	6.967	7.009	VV	358	4907	0.17%	0.051%
98	7.042	7.009	7.077	VV	649	13522	0.46%	0.141%
99	7.102	7.077	7.132	VV	474	10033	0.34%	0.105%
100	7.169	7.132	7.194	VV	861	15116	0.51%	0.158%
101	7.202	7.194	7.223	VV	229	2623	0.09%	0.027%
102	7.247	7.223	7.263	VV	312	4173	0.14%	0.044%
103	7.275	7.263	7.289	VV	217	2055	0.07%	0.021%
104	7.329	7.289	7.363	PV	1441	20135	0.68%	0.210%
105	7.386	7.363	7.397	VV	348	4565	0.16%	0.048%
106	7.406	7.397	7.415	VV	305	2696	0.09%	0.028%
107	7.432	7.415	7.447	VV	451	5807	0.20%	0.061%
108	7.468	7.447	7.491	VV	1621	18467	0.63%	0.193%
109	7.531	7.491	7.544	VV	310	5695	0.19%	0.059%
110	7.560	7.544	7.611	VV	424	6826	0.23%	0.071%
111	7.615	7.611	7.621	VV	137	673	0.02%	0.007%
112	7.636	7.621	7.666	VV	121	2586	0.09%	0.027%
113	7.685	7.666	7.709	PV	162	2521	0.09%	0.026%
114	7.731	7.709	7.753	VV	637	7771	0.26%	0.081%
115	7.785	7.753	7.861	VV	96949	938963	31.92%	9.809%
116	7.885	7.861	7.912	VV	241	5587	0.19%	0.058%
117	7.923	7.912	7.972	VV	253	5909	0.20%	0.062%
118	7.990	7.972	8.015	VV	255	4185	0.14%	0.044%
119	8.035	8.015	8.068	PV	720	8707	0.30%	0.091%
120	8.092	8.068	8.117	VV	569	6653	0.23%	0.070%
121	8.163	8.117	8.181	VV	264	5570	0.19%	0.058%
122	8.208	8.181	8.228	VV	204	3365	0.11%	0.035%
123	8.245	8.228	8.285	VV	467	8552	0.29%	0.089%
124	8.300	8.285	8.311	VV	184	2671	0.09%	0.028%
125	8.340	8.311	8.366	VV	4090	44841	1.52%	0.468%
126	8.374	8.366	8.411	VV	264	3747	0.13%	0.039%
127	8.450	8.411	8.472	VV	418	10230	0.35%	0.107%
128	8.488	8.472	8.521	VV	314	5317	0.18%	0.056%
129	8.535	8.521	8.558	VV	225	3455	0.12%	0.036%
130	8.574	8.558	8.604	VV	309	4339	0.15%	0.045%
131	8.654	8.604	8.732	VV	100907	1018375	34.62%	10.639%
132	8.757	8.732	8.776	VV	323	6895	0.23%	0.072%
133	8.803	8.776	8.816	VV	366	7623	0.26%	0.080%
134	8.831	8.816	8.858	VV	454	8387	0.29%	0.088%
135	8.878	8.858	8.919	VV	815	15810	0.54%	0.165%
136	8.932	8.919	8.976	VV	272	5928	0.20%	0.062%
137	8.998	8.976	9.021	VV	257	4132	0.14%	0.043%
138	9.063	9.021	9.084	VV	4962	54152	1.84%	0.566%
139	9.098	9.084	9.134	VV	654	13030	0.44%	0.136%
140	9.163	9.134	9.175	VV	1564	22752	0.77%	0.238%
141	9.181	9.175	9.208	VV	1088	13116	0.45%	0.137%

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142	9.218	9.208	9.235	VV	363	3999	0.14%	0.042%
143	9.251	9.235	9.288	VV	308	4817	0.16%	0.050%
144	9.303	9.288	9.334	VV	253	4434	0.15%	0.046%
145	9.353	9.334	9.367	VV	213	2941	0.10%	0.031%
146	9.383	9.367	9.429	VV	269	5983	0.20%	0.063%
147	9.461	9.429	9.508	VV	338	8415	0.29%	0.088%
148	9.533	9.508	9.568	VV	668	11528	0.39%	0.120%
149	9.584	9.568	9.597	VV	257	3083	0.10%	0.032%
150	9.611	9.597	9.648	VV	203	4213	0.14%	0.044%
151	9.668	9.648	9.701	VV	379	6888	0.23%	0.072%
152	9.722	9.701	9.754	VV	675	7965	0.27%	0.083%
153	9.783	9.754	9.793	PV	283	3624	0.12%	0.038%
154	9.814	9.793	9.843	VV	4201	42538	1.45%	0.444%
155	9.862	9.843	9.910	VV	376	6460	0.22%	0.067%
156	9.941	9.910	9.992	VV	2068	26172	0.89%	0.273%
157	10.011	9.992	10.022	VV	209	2594	0.09%	0.027%
158	10.034	10.022	10.058	VV	176	2835	0.10%	0.030%
159	10.074	10.058	10.101	VV	122	1633	0.06%	0.017%
160	10.106	10.101	10.123	VV	132	1074	0.04%	0.011%
161	10.139	10.123	10.196	VV	295	4971	0.17%	0.052%
162	10.221	10.196	10.239	VV	203	2595	0.09%	0.027%
163	10.271	10.239	10.299	VV	235	5772	0.20%	0.060%
164	10.333	10.299	10.354	VV	483	8931	0.30%	0.093%
165	10.376	10.354	10.392	VV	293	4727	0.16%	0.049%
166	10.414	10.392	10.450	VV	230	5590	0.19%	0.058%
167	10.472	10.450	10.519	VV	305	6565	0.22%	0.069%
168	10.542	10.519	10.559	VV	243	4115	0.14%	0.043%
169	10.581	10.559	10.596	VV	254	4714	0.16%	0.049%
170	10.615	10.596	10.628	VV	293	4454	0.15%	0.047%
171	10.632	10.628	10.651	VV	327	3258	0.11%	0.034%
172	10.681	10.651	10.728	VV	738	14476	0.49%	0.151%
173	10.761	10.728	10.788	VV	528	13219	0.45%	0.138%
174	10.813	10.788	10.851	VV	564	12196	0.41%	0.127%
175	10.906	10.851	10.921	VV	258	8571	0.29%	0.090%
176	10.939	10.921	10.961	VV	284	4686	0.16%	0.049%
177	11.012	10.961	11.041	VV	248	8599	0.29%	0.090%
178	11.055	11.041	11.086	VV	218	5122	0.17%	0.054%
179	11.110	11.086	11.163	VV	336	9890	0.34%	0.103%
180	11.188	11.163	11.221	VV	390	6975	0.24%	0.073%
181	11.231	11.221	11.264	VV	145	2566	0.09%	0.027%
182	11.278	11.264	11.291	VV	181	1819	0.06%	0.019%
183	11.315	11.291	11.341	VV	1021	12667	0.43%	0.132%
184	11.385	11.341	11.418	VV	1473	19112	0.65%	0.200%
185	11.431	11.418	11.442	VV	136	1703	0.06%	0.018%
186	11.476	11.442	11.511	VV	306	6740	0.23%	0.070%
187	11.546	11.511	11.584	PV	239	4916	0.17%	0.051%
188	11.607	11.584	11.624	VV	173	1825	0.06%	0.019%
189	11.638	11.624	11.664	VV	124	1975	0.07%	0.021%
190	11.709	11.664	11.761	VV	58950	622091	21.15%	6.499%
191	11.778	11.761	11.821	VV	417	8424	0.29%	0.088%
192	11.841	11.821	11.852	VV	297	4129	0.14%	0.043%
193	11.872	11.852	11.921	VV	353	8102	0.28%	0.085%
194	11.988	11.921	12.008	VV	247	7252	0.25%	0.076%

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195	12.053	12.008	12.084	VV	603	16091	0.55%	0.168%
196	12.107	12.084	12.129	VV	1011	13477	0.46%	0.141%
197	12.149	12.129	12.174	VV	349	6863	0.23%	0.072%
198	12.209	12.174	12.235	VV	290	8062	0.27%	0.084%
199	12.276	12.235	12.318	VV	542	15227	0.52%	0.159%
200	12.349	12.318	12.373	VV	449	10504	0.36%	0.110%
201	12.392	12.373	12.405	VV	592	7425	0.25%	0.078%
202	12.423	12.405	12.458	VV	590	11996	0.41%	0.125%
203	12.508	12.458	12.529	VV	431	13960	0.47%	0.146%
204	12.558	12.529	12.596	VV	897	17039	0.58%	0.178%
205	12.634	12.596	12.670	VV	926	16424	0.56%	0.172%
206	12.695	12.670	12.721	VV	1544	20425	0.69%	0.213%
207	12.780	12.721	12.802	VV	735	18677	0.63%	0.195%
208	12.815	12.802	12.935	VV	281	14626	0.50%	0.153%
209	12.967	12.935	13.004	VV	254	7492	0.25%	0.078%
210	13.017	13.004	13.032	VV	226	2802	0.10%	0.029%
211	13.062	13.032	13.078	VV	305	5833	0.20%	0.061%
212	13.144	13.078	13.188	VV	260592	2941663	100.00%	30.730%
213	13.200	13.188	13.213	VV	322	4287	0.15%	0.045%
214	13.257	13.213	13.281	VV	324	10645	0.36%	0.111%
215	13.308	13.281	13.337	VV	531	12745	0.43%	0.133%
216	13.360	13.337	13.418	VV	683	17589	0.60%	0.184%
217	13.427	13.418	13.445	VV	251	3621	0.12%	0.038%
218	13.453	13.445	13.488	VV	201	5025	0.17%	0.052%
219	13.505	13.488	13.561	VV	309	10399	0.35%	0.109%
220	13.584	13.561	13.631	VV	358	10358	0.35%	0.108%
221	13.714	13.631	13.731	VV	300	12977	0.44%	0.136%
222	13.745	13.731	13.789	VV	348	8035	0.27%	0.084%
223	13.807	13.789	13.819	VV	236	3729	0.13%	0.039%
224	13.843	13.819	13.871	VV	949	13871	0.47%	0.145%
225	13.895	13.871	13.944	VV	1396	20180	0.69%	0.211%
226	13.949	13.944	13.988	VV	205	3569	0.12%	0.037%
227	13.996	13.988	14.038	VV	144	3744	0.13%	0.039%
228	14.044	14.038	14.064	VV	107	1346	0.05%	0.014%
229	14.136	14.064	14.174	VV	209	7692	0.26%	0.080%
230	14.187	14.174	14.211	VV	154	2110	0.07%	0.022%
231	14.230	14.211	14.246	VV	160	2292	0.08%	0.024%
232	14.256	14.246	14.268	VV	122	1403	0.05%	0.015%
233	14.276	14.268	14.298	VV	133	2372	0.08%	0.025%
234	14.331	14.298	14.399	VV	973	20915	0.71%	0.218%
235	14.411	14.399	14.435	VV	209	3838	0.13%	0.040%
236	14.458	14.435	14.538	VV	465	13486	0.46%	0.141%
237	14.585	14.538	14.638	VV	296	12419	0.42%	0.130%
238	14.644	14.638	14.691	VV	208	5541	0.19%	0.058%
239	14.723	14.691	14.741	VV	209	4240	0.14%	0.044%
240	14.780	14.741	14.878	VV	201	12751	0.43%	0.133%
241	14.953	14.878	14.974	VV	717	15521	0.53%	0.162%
242	14.997	14.974	15.027	VV	1334	21471	0.73%	0.224%
243	15.043	15.027	15.101	VV	415	7479	0.25%	0.078%
244	15.106	15.101	15.133	VV	137	1141	0.04%	0.012%
245	15.142	15.133	15.158	VV	74	526	0.02%	0.005%
246	15.176	15.158	15.183	PV	109	987	0.03%	0.010%

					rteres			
247	15.200	15.183	15.226	VV	127	2039	0.07%	0.021%
248	15.293	15.226	15.328	VV	120	4376	0.15%	0.046%
249	15.375	15.328	15.468	VV	806	23706	0.81%	0.248%
250	15.519	15.468	15.558	VV	779	17031	0.58%	0.178%
251	15.578	15.558	15.648	VV	167	5569	0.19%	0.058%
252	15.748	15.648	15.766	VV	174	6629	0.23%	0.069%
253	15.772	15.766	15.778	VV	119	758	0.03%	0.008%
254	15.786	15.778	15.838	VV	135	4055	0.14%	0.042%
255	15.856	15.838	15.924	VV	153	6303	0.21%	0.066%
256	15.981	15.924	15.996	VV	579	8760	0.30%	0.092%
257	16.020	15.996	16.056	VV	1391	19539	0.66%	0.204%
258	16.081	16.056	16.114	VV	230	4371	0.15%	0.046%
259	16.131	16.114	16.151	VV	102	1297	0.04%	0.014%
260	16.182	16.151	16.260	VV	113	4042	0.14%	0.042%
261	16.272	16.260	16.278	PV	61	599	0.02%	0.006%
262	16.284	16.278	16.311	VV	134	1174	0.04%	0.012%
263	16.318	16.311	16.344	VV	117	1607	0.05%	0.017%
264	16.392	16.344	16.438	VV	154	4467	0.15%	0.047%
265	16.504	16.438	16.558	VV	1252	22276	0.76%	0.233%
266	16.584	16.558	16.652	VV	192	5983	0.20%	0.062%
267	16.673	16.652	16.685	VV	150	2353	0.08%	0.025%
268	16.730	16.685	16.760	VV	202	5248	0.18%	0.055%
269	16.812	16.760	16.841	VV	144	4687	0.16%	0.049%
270	16.871	16.841	16.901	VV	257	4891	0.17%	0.051%
271	16.936	16.901	16.947	VV	406	5757	0.20%	0.060%
272	16.970	16.947	16.997	VV	1333	18440	0.63%	0.193%
273	17.021	16.997	17.101	VV	345	8198	0.28%	0.086%
274	17.126	17.101	17.138	PV	101	1722	0.06%	0.018%
275	17.148	17.138	17.218	PB	73	1872	0.06%	0.020%
276	17.266	17.218	17.280	BV	156	3441	0.12%	0.036%
277	17.302	17.280	17.338	VV	325	6201	0.21%	0.065%
278	17.356	17.338	17.364	VV	131	1603	0.05%	0.017%
279	17.422	17.364	17.465	VV	1988	33284	1.13%	0.348%
280	17.473	17.465	17.482	VV	129	866	0.03%	0.009%
281	17.507	17.482	17.532	VV	135	2875	0.10%	0.030%
282	17.552	17.532	17.588	VV	90	2151	0.07%	0.022%
283	17.601	17.588	17.611	VV	80	981	0.03%	0.010%
284	17.645	17.611	17.666	VV	185	3428	0.12%	0.036%
285	17.693	17.666	17.723	VV	163	3191	0.11%	0.033%
286	17.745	17.723	17.775	PV	157	3114	0.11%	0.033%
287	17.860	17.775	17.923	VV	1450	30540	1.04%	0.319%
288	17.952	17.923	17.981	VV	416	7659	0.26%	0.080%
289	17.987	17.981	18.004	VV	118	1301	0.04%	0.014%
290	18.019	18.004	18.025	VV	171	1252	0.04%	0.013%
291	18.042	18.025	18.052	VV	129	1631	0.06%	0.017%
292	18.095	18.052	18.107	VV	119	2466	0.08%	0.026%
293	18.219	18.107	18.255	PV	519	17880	0.61%	0.187%
294	18.284	18.255	18.326	VV	2619	38733	1.32%	0.405%
295	18.339	18.326	18.354	VV	62	913	0.03%	0.010%
296	18.386	18.354	18.411	VV	178	4495	0.15%	0.047%
297	18.422	18.411	18.458	VV	146	2491	0.08%	0.026%
298	18.505	18.458	18.513	PV	128	3030	0.10%	0.032%
299	18.541	18.513	18.601	VV	181	5654	0.19%	0.059%

					rteres			
300	18.693	18.601	18.758	VV	1298	29320	1.00%	0.306%
301	18.799	18.758	18.838	VV	527	11204	0.38%	0.117%
302	18.864	18.838	18.893	VV	272	5190	0.18%	0.054%
303	18.950	18.893	18.965	VV	198	4678	0.16%	0.049%
304	18.985	18.965	19.013	VV	293	5342	0.18%	0.056%
305	19.042	19.013	19.054	VV	383	6662	0.23%	0.070%
306	19.058	19.054	19.063	VV	374	1885	0.06%	0.020%
307	19.093	19.063	19.147	VV	1501	30988	1.05%	0.324%
308	19.201	19.147	19.221	VV	332	10184	0.35%	0.106%
309	19.237	19.221	19.251	VV	319	4640	0.16%	0.048%
310	19.296	19.251	19.322	VV	315	11892	0.40%	0.124%
311	19.350	19.322	19.358	VV	411	6954	0.24%	0.073%
312	19.395	19.358	19.429	VV	415	15055	0.51%	0.157%
313	19.478	19.429	19.508	VV	1245	31538	1.07%	0.329%
314	19.593	19.508	19.605	VV	557	26048	0.89%	0.272%
315	19.671	19.605	19.681	VV	643	23108	0.79%	0.241%
316	19.853	19.681	19.888	VV	1314	92435	3.14%	0.966%
317	19.894	19.888	19.934	VV	865	22479	0.76%	0.235%
318	20.044	19.934	20.053	VV	1108	66930	2.28%	0.699%
319	20.131	20.053	20.158	VV	1378	73061	2.48%	0.763%
320	20.217	20.158	20.248	VV	2024	80829	2.75%	0.844%
321	20.277	20.248	20.298	VV	1450	42649	1.45%	0.446%
322	20.395	20.298	20.432	VV	1762	127367	4.33%	1.331%
323	20.446	20.432	20.464	VV	1708	31711	1.08%	0.331%
324	20.584	20.464	20.651	VV	1967	191079	6.50%	1.996%
325	20.662	20.651	20.671	VV	1609	18655	0.63%	0.195%
326	20.682	20.671	20.720	VV	1594	46953	1.60%	0.491%
327	20.729	20.720	20.748	VV	1610	25723	0.87%	0.269%
328	20.780	20.748	20.824	VV	1709	74170	2.52%	0.775%
329	20.833	20.824	20.944	VV	1544	100411	3.41%	1.049%
330	20.993	20.944	21.094	VV	1639	121912	4.14%	1.274%
331	21.102	21.094	21.194	VV	1271	68700	2.34%	0.718%
332	21.348	21.194	21.361	VV	1031	100822	3.43%	1.053%
333	21.369	21.361	21.410	VV	969	26515	0.90%	0.277%
334	21.451	21.410	21.570	VV	968	79058	2.69%	0.826%
335	21.608	21.570	21.651	VV	699	31802	1.08%	0.332%
336	21.717	21.651	21.804	VV	648	52467	1.78%	0.548%
337	21.826	21.804	21.864	VV	532	16141	0.55%	0.169%
338	21.974	21.864	22.174	VV	566	66424	2.26%	0.694%
339	22.257	22.174	22.318	VV	91	8094	0.28%	0.085%
Sum of corrected areas:						9572493		

Aliphatic EPH 040925.M Fri Apr 11 04:56:12 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	04/05/25
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	04/07/25
Client Sample ID:	B-158-SB02	SDG No.:	Q1744
Lab Sample ID:	Q1744-03	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	56
Sample Wt/Vol:	30.05 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FD049273.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	0.70	J	0.21	1.19	mg/kg
Aromatic C12-C16	Aromatic C12-C16	0.69	J	0.41	1.78	mg/kg
Aromatic C16-C21	Aromatic C16-C21	4.67		0.71	2.97	mg/kg
Aromatic C21-C36	Aromatic C21-C36	3.40	J	2.12	4.75	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	35.0		40 - 140	70%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	30.2		40 - 140	60%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	29.0		40 - 140	58%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	Q1744-03	Acq On:	10 Apr 2025 17:15
Client Sample ID:	B-158-SB02	Operator:	YP/AJ
Data file:	FD049273.D	Misc:	
Instrument:	FID_D	ALS Vial:	65
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	918172	5.856	200	ug/ml
Aromatic C12-C16	6.186	8.813	987403	5.801	300	ug/ml
Aromatic C16-C21	8.814	13.102	6590060	39.296	500	ug/ml
Aromatic C21-C36	13.103	18.519	3952627	28.613	800	ug/ml
Aromatic EPH	4.440	18.519	12448262	79.566		ug/ml
2-Bromonaphthalene (SURR)	7.749	7.749	5186623	35.01		ug/ml
2-Fluorobiphenyl (SURR)	8.615	8.615	3081793	30.21		ug/ml
ortho-Terphenyl (SURR)	11.657	11.657	5112481	29.02		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049273.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 17:15
 Operator : YP/AJ
 Sample : Q1744-03
 Misc :
 ALS Vial : 65 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 B-158-SB02

Integration File: autoint1.e
 Quant Time: Apr 11 01:04:06 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.749	5186623	35.013 ug/ml
Spiked Amount 50.000		Recovery =	70.03%
6) S 2-Fluorobiphenyl (SURR)	8.615	3081793	30.213 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	60.43%
11) S ortho-Terphenyl (SURR)	11.657	5112481	29.018 ug/ml
Spiked Amount 50.000		Recovery =	58.04%

Target Compounds

(f)=RT Delta > 1/2 Window

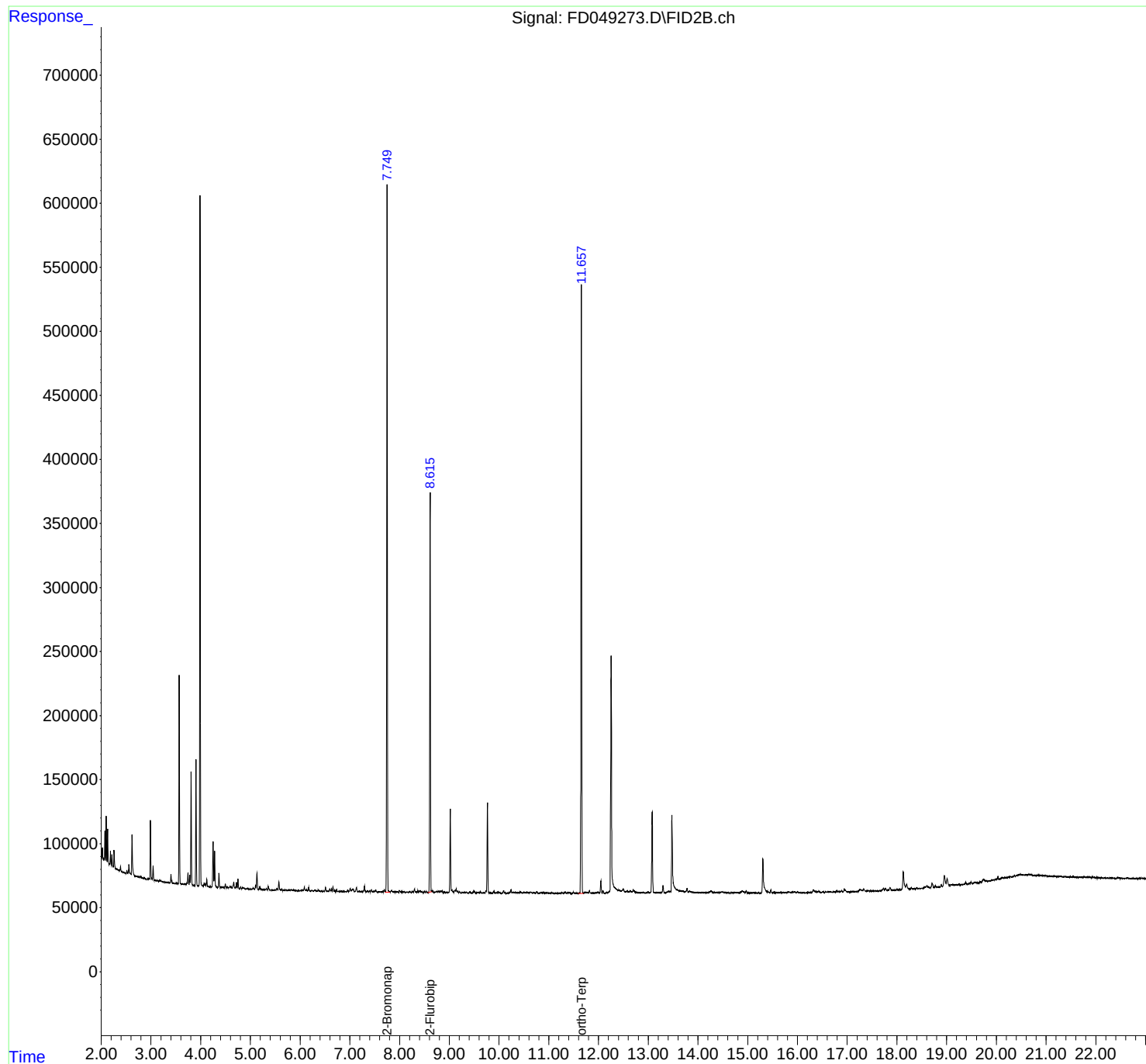
(m)=manual int.

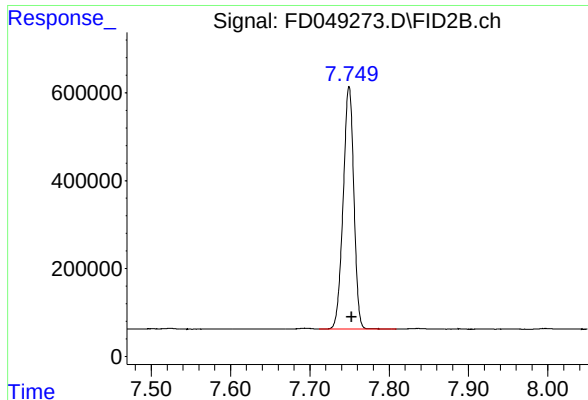
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049273.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 17:15
Operator : YP/AJ
Sample : Q1744-03
Misc :
ALS Vial : 65 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
B-158-SB02

Integration File: autoint1.e
Quant Time: Apr 11 01:04:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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

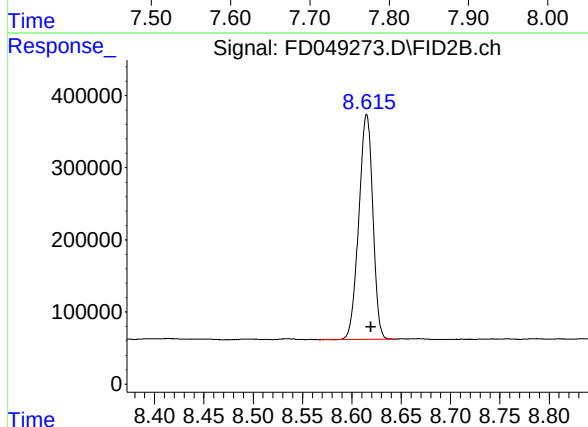




#4 2-Bromonaphthalene (SURR)

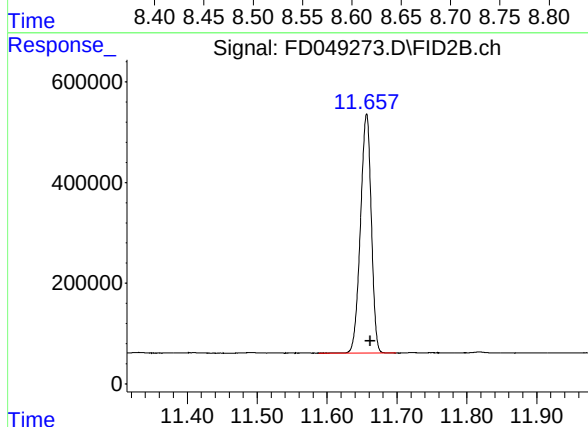
R.T.: 7.749 min
Delta R.T.: -0.003 min
Response: 5186623
Conc: 35.01 ug/ml

Instrument :
FID_D
ClientSampleId :
B-158-SB02



#6 2-Fluorobiphenyl (SURR)

R.T.: 8.615 min
Delta R.T.: -0.004 min
Response: 3081793
Conc: 30.21 ug/ml



#11 ortho-Terphenyl (SURR)

R.T.: 11.657 min
Delta R.T.: -0.005 min
Response: 5112481
Conc: 29.02 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049273.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 17:15
 Sample : Q1744-03
 Misc :
 ALS Vial : 65 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.071	4.042	4.083	BV	2835	21686	0.42%	0.064%
2	4.094	4.083	4.108	VV	1986	17948	0.35%	0.053%
3	4.123	4.108	4.145	VV	5932	53329	1.03%	0.158%
4	4.149	4.145	4.179	VV	426	2526	0.05%	0.007%
5	4.192	4.179	4.208	PV	479	4589	0.09%	0.014%
6	4.250	4.222	4.267	VV	35626	378055	7.28%	1.123%
7	4.281	4.267	4.340	VV	28409	267950	5.16%	0.796%
8	4.368	4.350	4.385	PV	11227	93559	1.80%	0.278%
9	4.390	4.385	4.424	VV	862	9977	0.19%	0.030%
10	4.429	4.424	4.436	VV	305	1440	0.03%	0.004%
11	4.444	4.436	4.449	VV	304	1903	0.04%	0.006%
12	4.455	4.449	4.477	VV	392	3572	0.07%	0.011%
13	4.496	4.477	4.517	PV	3354	32634	0.63%	0.097%
14	4.545	4.517	4.552	VV	824	11017	0.21%	0.033%
15	4.559	4.552	4.565	VV	607	3545	0.07%	0.011%
16	4.589	4.565	4.601	VV	1366	18419	0.35%	0.055%
17	4.608	4.601	4.634	VV	1078	12404	0.24%	0.037%
18	4.665	4.634	4.689	VV	5081	68881	1.33%	0.205%
19	4.699	4.689	4.703	VV	782	4849	0.09%	0.014%
20	4.720	4.703	4.735	VV	4870	48208	0.93%	0.143%
21	4.750	4.735	4.782	VV	7703	71931	1.38%	0.214%
22	4.804	4.782	4.825	VV	1649	16711	0.32%	0.050%
23	4.841	4.825	4.859	VV	1244	15382	0.30%	0.046%
24	4.867	4.859	4.907	VV	762	11171	0.22%	0.033%
25	4.916	4.907	4.923	VV	369	2673	0.05%	0.008%
26	4.938	4.923	4.962	VV	906	12128	0.23%	0.036%
27	4.965	4.962	4.975	VV	364	1661	0.03%	0.005%
28	4.992	4.975	4.997	PV	284	2396	0.05%	0.007%
29	5.008	5.004	5.021	VV	252	1952	0.04%	0.006%
30	5.033	5.021	5.043	VV	563	5314	0.10%	0.016%
31	5.056	5.043	5.078	VV	1074	13484	0.26%	0.040%
32	5.105	5.078	5.115	VV	3388	36109	0.70%	0.107%
33	5.132	5.115	5.167	VV	12915	145215	2.79%	0.431%
34	5.189	5.167	5.204	VV	2514	27662	0.53%	0.082%
35	5.217	5.204	5.237	VV	579	8187	0.16%	0.024%
36	5.244	5.237	5.258	VV	412	3517	0.07%	0.010%

					rteres			
37	5.261	5.258	5.278	VV	311	1776	0.03%	0.005%
38	5.295	5.278	5.302	PV	253	1682	0.03%	0.005%
39	5.321	5.302	5.342	VV	971	13228	0.25%	0.039%
40	5.359	5.342	5.402	VV	2905	32765	0.63%	0.097%
41	5.409	5.402	5.421	VV	210	1630	0.03%	0.005%
42	5.430	5.421	5.437	VV	278	1522	0.03%	0.005%
43	5.464	5.437	5.487	PV	290	4725	0.09%	0.014%
44	5.501	5.487	5.513	VV	625	5511	0.11%	0.016%
45	5.533	5.513	5.551	VV	1637	17684	0.34%	0.053%
46	5.573	5.551	5.611	VV	6703	80543	1.55%	0.239%
47	5.631	5.611	5.653	VV	1248	15451	0.30%	0.046%
48	5.661	5.653	5.666	VV	392	1900	0.04%	0.006%
49	5.693	5.677	5.707	PV	530	5655	0.11%	0.017%
50	5.715	5.707	5.748	VV	578	8133	0.16%	0.024%
51	5.778	5.748	5.802	VV	710	11267	0.22%	0.033%
52	5.826	5.802	5.847	VV	1033	13553	0.26%	0.040%
53	5.873	5.857	5.886	VV	557	5690	0.11%	0.017%
54	5.890	5.886	5.932	VV	287	5475	0.11%	0.016%
55	5.939	5.932	5.961	PV	208	2606	0.05%	0.008%
56	5.968	5.961	5.983	VV	453	2769	0.05%	0.008%
57	5.993	5.983	6.018	VV	333	4244	0.08%	0.013%
58	6.026	6.018	6.050	VV	518	7077	0.14%	0.021%
59	6.063	6.050	6.067	VV	608	4720	0.09%	0.014%
60	6.086	6.067	6.105	VV	3033	35062	0.67%	0.104%
61	6.126	6.105	6.157	VV	1182	20364	0.39%	0.060%
62	6.171	6.157	6.208	VV	2970	32215	0.62%	0.096%
63	6.228	6.208	6.273	VV	698	15596	0.30%	0.046%
64	6.304	6.273	6.322	VV	1006	18410	0.35%	0.055%
65	6.342	6.322	6.350	VV	382	4694	0.09%	0.014%
66	6.364	6.350	6.395	VV	1196	16730	0.32%	0.050%
67	6.401	6.395	6.422	VV	451	3180	0.06%	0.009%
68	6.431	6.422	6.468	PV	260	4573	0.09%	0.014%
69	6.479	6.468	6.493	VV	289	2459	0.05%	0.007%
70	6.512	6.493	6.548	VV	3336	36460	0.70%	0.108%
71	6.559	6.548	6.567	PV	253	1537	0.03%	0.005%
72	6.595	6.567	6.616	VV	2225	29407	0.57%	0.087%
73	6.630	6.616	6.644	VV	1634	16470	0.32%	0.049%
74	6.661	6.644	6.680	VV	3795	38154	0.73%	0.113%
75	6.694	6.680	6.712	VV	1112	11322	0.22%	0.034%
76	6.734	6.712	6.749	VV	2001	18574	0.36%	0.055%
77	6.766	6.749	6.781	VV	456	3944	0.08%	0.012%
78	6.786	6.781	6.802	VV	295	2952	0.06%	0.009%
79	6.814	6.802	6.818	PV	270	1469	0.03%	0.004%
80	6.828	6.818	6.873	VV	453	6967	0.13%	0.021%
81	6.881	6.873	6.902	VV	412	4681	0.09%	0.014%
82	6.909	6.902	6.933	VV	382	3127	0.06%	0.009%
83	6.953	6.933	6.982	VV	1453	17972	0.35%	0.053%
84	7.007	6.982	7.038	VV	2777	46355	0.89%	0.138%
85	7.054	7.038	7.101	VV	2372	50616	0.97%	0.150%
86	7.134	7.101	7.171	VV	3505	51411	0.99%	0.153%
87	7.186	7.171	7.208	VV	570	7993	0.15%	0.024%
88	7.212	7.208	7.215	VV	352	1405	0.03%	0.004%
89	7.219	7.215	7.227	VV	368	2094	0.04%	0.006%

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90	7.242	7.227	7.257	VV	489	5543	0.11%	0.016%
91	7.294	7.257	7.330	VV	4600	60163	1.16%	0.179%
92	7.353	7.330	7.385	VV	1090	21383	0.41%	0.063%
93	7.400	7.385	7.413	VV	1308	12644	0.24%	0.038%
94	7.431	7.413	7.456	VV	1876	20688	0.40%	0.061%
95	7.465	7.456	7.482	VV	658	6051	0.12%	0.018%
96	7.502	7.482	7.512	VV	895	10792	0.21%	0.032%
97	7.524	7.512	7.558	VV	1666	17559	0.34%	0.052%
98	7.568	7.558	7.575	VV	203	1227	0.02%	0.004%
99	7.591	7.575	7.624	VV	398	8238	0.16%	0.024%
100	7.633	7.624	7.640	VV	403	2856	0.05%	0.008%
101	7.666	7.640	7.678	VV	754	10348	0.20%	0.031%
102	7.694	7.678	7.712	VV	2206	24628	0.47%	0.073%
103	7.749	7.712	7.808	VV	553680	5195556	100.00%	15.428%
104	7.836	7.808	7.878	VV	1722	31016	0.60%	0.092%
105	7.889	7.878	7.905	VV	855	7641	0.15%	0.023%
106	7.919	7.905	7.934	VV	623	6572	0.13%	0.020%
107	7.949	7.934	7.980	VV	565	7630	0.15%	0.023%
108	7.997	7.980	8.016	VV	1733	19513	0.38%	0.058%
109	8.026	8.016	8.046	VV	603	7408	0.14%	0.022%
110	8.051	8.046	8.073	VV	423	5172	0.10%	0.015%
111	8.089	8.073	8.116	VV	671	9983	0.19%	0.030%
112	8.124	8.116	8.135	VV	381	3241	0.06%	0.010%
113	8.142	8.135	8.148	VV	285	1876	0.04%	0.006%
114	8.154	8.148	8.161	VV	481	2621	0.05%	0.008%
115	8.194	8.161	8.225	VV	780	16847	0.32%	0.050%
116	8.232	8.225	8.246	VV	511	4878	0.09%	0.014%
117	8.256	8.246	8.270	VV	714	7980	0.15%	0.024%
118	8.301	8.270	8.324	VV	3061	40447	0.78%	0.120%
119	8.331	8.324	8.348	VV	531	6633	0.13%	0.020%
120	8.365	8.348	8.380	VV	1511	17412	0.34%	0.052%
121	8.394	8.380	8.405	VV	1247	14650	0.28%	0.044%
122	8.413	8.405	8.438	VV	1512	21865	0.42%	0.065%
123	8.445	8.438	8.476	VV	933	11321	0.22%	0.034%
124	8.494	8.476	8.520	PV	896	12534	0.24%	0.037%
125	8.536	8.520	8.566	VV	1339	15294	0.29%	0.045%
126	8.574	8.566	8.581	VV	386	2017	0.04%	0.006%
127	8.615	8.581	8.645	VV	312862	3102560	59.72%	9.213%
128	8.651	8.645	8.655	VV	1202	6851	0.13%	0.020%
129	8.667	8.655	8.694	VV	1496	19625	0.38%	0.058%
130	8.711	8.694	8.717	VV	717	7273	0.14%	0.022%
131	8.720	8.717	8.724	VV	615	2342	0.05%	0.007%
132	8.743	8.724	8.751	VV	1065	14390	0.28%	0.043%
133	8.757	8.751	8.771	VV	1162	10886	0.21%	0.032%
134	8.787	8.771	8.802	VV	1491	19342	0.37%	0.057%
135	8.809	8.802	8.820	VV	1243	11471	0.22%	0.034%
136	8.835	8.820	8.845	VV	1501	17728	0.34%	0.053%
137	8.860	8.845	8.879	VV	1474	18364	0.35%	0.055%
138	8.904	8.879	8.917	VV	815	10949	0.21%	0.033%
139	8.925	8.917	8.939	VV	462	4711	0.09%	0.014%
140	8.953	8.939	8.973	VV	704	9094	0.18%	0.027%
141	9.020	8.973	9.042	VV	65656	654286	12.59%	1.943%

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142	9.054	9.042	9.089	VV	2621	41563	0.80%	0.123%
143	9.107	9.089	9.124	VV	1988	31627	0.61%	0.094%
144	9.140	9.124	9.165	VV	3024	44386	0.85%	0.132%
145	9.175	9.165	9.191	VV	1208	12490	0.24%	0.037%
146	9.208	9.191	9.238	VV	948	12038	0.23%	0.036%
147	9.260	9.238	9.274	VV	619	9173	0.18%	0.027%
148	9.278	9.274	9.288	VV	320	1855	0.04%	0.006%
149	9.307	9.288	9.326	VV	639	9437	0.18%	0.028%
150	9.343	9.326	9.386	VV	953	11990	0.23%	0.036%
151	9.407	9.386	9.460	VV	987	18786	0.36%	0.056%
152	9.490	9.470	9.532	VV	1585	30609	0.59%	0.091%
153	9.542	9.532	9.550	VV	275	1872	0.04%	0.006%
154	9.575	9.550	9.606	VV	508	11419	0.22%	0.034%
155	9.621	9.606	9.665	VV	1009	14233	0.27%	0.042%
156	9.678	9.673	9.687	VV	383	1969	0.04%	0.006%
157	9.699	9.687	9.707	VV	502	4071	0.08%	0.012%
158	9.712	9.707	9.716	VV	360	1356	0.03%	0.004%
159	9.738	9.716	9.745	VV	1994	21504	0.41%	0.064%
160	9.768	9.745	9.798	VV	70658	710715	13.68%	2.110%
161	9.820	9.798	9.827	VV	506	6005	0.12%	0.018%
162	9.835	9.827	9.870	VV	490	6898	0.13%	0.020%
163	9.895	9.870	9.934	VV	1834	26084	0.50%	0.077%
164	9.968	9.943	9.991	VV	863	15409	0.30%	0.046%
165	10.003	9.991	10.028	VV	630	9022	0.17%	0.027%
166	10.066	10.028	10.074	VV	559	7392	0.14%	0.022%
167	10.091	10.074	10.111	VV	2090	24541	0.47%	0.073%
168	10.115	10.111	10.143	VV	348	3969	0.08%	0.012%
169	10.153	10.143	10.159	VV	229	1442	0.03%	0.004%
170	10.173	10.159	10.195	VV	446	6159	0.12%	0.018%
171	10.198	10.195	10.208	VV	402	2845	0.05%	0.008%
172	10.240	10.208	10.273	VV	3023	48247	0.93%	0.143%
173	10.291	10.273	10.311	VV	1023	16691	0.32%	0.050%
174	10.328	10.311	10.348	VV	1109	17882	0.34%	0.053%
175	10.362	10.348	10.387	VV	798	15216	0.29%	0.045%
176	10.389	10.387	10.399	VV	519	3540	0.07%	0.011%
177	10.420	10.399	10.470	VV	1246	29294	0.56%	0.087%
178	10.492	10.470	10.506	VV	906	15666	0.30%	0.047%
179	10.512	10.506	10.548	VV	873	18368	0.35%	0.055%
180	10.569	10.548	10.596	VV	1091	24568	0.47%	0.073%
181	10.629	10.596	10.643	VV	1355	27112	0.52%	0.081%
182	10.649	10.643	10.666	VV	990	10431	0.20%	0.031%
183	10.686	10.666	10.700	VV	858	11945	0.23%	0.035%
184	10.704	10.700	10.713	VV	577	4112	0.08%	0.012%
185	10.724	10.713	10.735	VV	569	6507	0.13%	0.019%
186	10.763	10.735	10.782	VV	1471	24488	0.47%	0.073%
187	10.791	10.782	10.807	VV	520	5514	0.11%	0.016%
188	10.852	10.807	10.868	VV	914	20780	0.40%	0.062%
189	10.888	10.868	10.913	VV	1220	19370	0.37%	0.058%
190	10.918	10.913	10.929	VV	707	5588	0.11%	0.017%
191	10.934	10.929	10.938	VV	590	2599	0.05%	0.008%
192	10.960	10.938	10.988	VV	923	18923	0.36%	0.056%
193	11.005	10.988	11.018	VV	680	9076	0.17%	0.027%
194	11.029	11.018	11.035	VV	607	4797	0.09%	0.014%

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195	11.058	11.035	11.071	VV	764	13252	0.26%	0.039%
196	11.084	11.071	11.103	VV	748	9074	0.17%	0.027%
197	11.142	11.113	11.157	VV	479	8038	0.15%	0.024%
198	11.164	11.157	11.183	VV	432	5580	0.11%	0.017%
199	11.222	11.183	11.238	VV	513	11988	0.23%	0.036%
200	11.262	11.238	11.284	VV	785	15626	0.30%	0.046%
201	11.304	11.284	11.311	VV	683	9102	0.18%	0.027%
202	11.331	11.311	11.357	VV	1554	22061	0.42%	0.066%
203	11.359	11.357	11.363	VV	374	1243	0.02%	0.004%
204	11.386	11.363	11.393	VV	772	10460	0.20%	0.031%
205	11.410	11.393	11.443	VV	985	17773	0.34%	0.053%
206	11.446	11.443	11.465	VV	337	2547	0.05%	0.008%
207	11.493	11.465	11.513	VV	1173	18509	0.36%	0.055%
208	11.524	11.513	11.540	VV	539	7041	0.14%	0.021%
209	11.562	11.540	11.584	VV	503	9593	0.18%	0.028%
210	11.611	11.584	11.618	VV	587	7173	0.14%	0.021%
211	11.657	11.618	11.703	VV	476214	5124853	98.64%	15.218%
212	11.722	11.703	11.739	VV	1176	16962	0.33%	0.050%
213	11.750	11.739	11.788	VV	1036	23991	0.46%	0.071%
214	11.797	11.788	11.801	VV	883	6261	0.12%	0.019%
215	11.818	11.801	11.860	VV	2496	38926	0.75%	0.116%
216	11.863	11.860	11.908	VV	592	12876	0.25%	0.038%
217	11.928	11.908	11.951	VV	774	15870	0.31%	0.047%
218	11.988	11.951	12.015	VV	1245	32647	0.63%	0.097%
219	12.049	12.015	12.073	VV	9788	120213	2.31%	0.357%
220	12.090	12.073	12.113	VV	2243	27710	0.53%	0.082%
221	12.134	12.113	12.139	VV	521	5407	0.10%	0.016%
222	12.254	12.139	12.396	VV	185508	2661939	51.23%	7.904%
223	12.410	12.396	12.427	VV	2897	47294	0.91%	0.140%
224	12.429	12.427	12.454	VV	2444	35417	0.68%	0.105%
225	12.499	12.454	12.542	VV	3724	121753	2.34%	0.362%
226	12.547	12.542	12.558	VV	1426	13549	0.26%	0.040%
227	12.576	12.558	12.605	VV	2304	47876	0.92%	0.142%
228	12.635	12.605	12.675	VV	2400	66515	1.28%	0.198%
229	12.699	12.675	12.712	VV	2673	44673	0.86%	0.133%
230	12.720	12.712	12.761	VV	2470	42635	0.82%	0.127%
231	12.765	12.761	12.770	VV	971	4896	0.09%	0.015%
232	12.786	12.770	12.798	VV	964	13677	0.26%	0.041%
233	12.804	12.798	12.819	VV	758	8632	0.17%	0.026%
234	12.823	12.819	12.829	VV	697	3798	0.07%	0.011%
235	12.847	12.829	12.865	VV	658	12514	0.24%	0.037%
236	12.910	12.865	12.943	VV	1069	33230	0.64%	0.099%
237	12.966	12.943	12.975	VV	668	10562	0.20%	0.031%
238	12.995	12.975	13.019	VV	1540	23425	0.45%	0.070%
239	13.032	13.019	13.038	VV	649	5904	0.11%	0.018%
240	13.080	13.038	13.112	VV	63876	745143	14.34%	2.213%
241	13.125	13.112	13.145	VV	881	14629	0.28%	0.043%
242	13.150	13.145	13.157	VV	721	4314	0.08%	0.013%
243	13.167	13.157	13.172	VV	731	6074	0.12%	0.018%
244	13.178	13.172	13.183	VV	733	4268	0.08%	0.013%
245	13.195	13.183	13.204	VV	734	7871	0.15%	0.023%
246	13.210	13.204	13.218	VV	556	4102	0.08%	0.012%

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247	13.244	13.218	13.259	VV	892	15342	0.30%	0.046%
248	13.297	13.259	13.332	VV	6138	88572	1.70%	0.263%
249	13.335	13.332	13.346	VV	617	4312	0.08%	0.013%
250	13.367	13.346	13.375	VV	1009	12993	0.25%	0.039%
251	13.416	13.375	13.440	VV	1690	54931	1.06%	0.163%
252	13.476	13.440	13.635	VV	61145	1032236	19.87%	3.065%
253	13.645	13.635	13.675	VV	2063	44527	0.86%	0.132%
254	13.691	13.675	13.719	VV	1988	45808	0.88%	0.136%
255	13.737	13.719	13.743	VV	1539	21778	0.42%	0.065%
256	13.745	13.743	13.753	VV	1514	7695	0.15%	0.023%
257	13.779	13.753	13.813	VV	3927	74471	1.43%	0.221%
258	13.827	13.813	13.846	VV	1875	30285	0.58%	0.090%
259	13.854	13.846	13.874	VV	1282	18711	0.36%	0.056%
260	13.883	13.874	13.890	VV	982	9122	0.18%	0.027%
261	13.900	13.890	13.932	VV	991	20626	0.40%	0.061%
262	13.950	13.932	13.957	VV	807	10802	0.21%	0.032%
263	13.959	13.957	13.982	VV	799	9459	0.18%	0.028%
264	13.990	13.982	14.012	VV	731	10698	0.21%	0.032%
265	14.033	14.012	14.044	VV	654	10613	0.20%	0.032%
266	14.051	14.044	14.076	VV	722	11770	0.23%	0.035%
267	14.090	14.076	14.122	VV	789	15838	0.30%	0.047%
268	14.125	14.122	14.137	VV	651	5265	0.10%	0.016%
269	14.138	14.137	14.175	VV	651	12158	0.23%	0.036%
270	14.194	14.175	14.205	VV	638	10291	0.20%	0.031%
271	14.262	14.205	14.299	VV	1915	62710	1.21%	0.186%
272	14.304	14.299	14.346	VV	889	20392	0.39%	0.061%
273	14.351	14.346	14.362	VV	750	6484	0.12%	0.019%
274	14.368	14.362	14.373	VV	697	4294	0.08%	0.013%
275	14.392	14.373	14.410	VV	922	15329	0.30%	0.046%
276	14.419	14.410	14.448	VV	706	13824	0.27%	0.041%
277	14.467	14.448	14.475	VV	1062	13878	0.27%	0.041%
278	14.492	14.475	14.538	VV	1229	32575	0.63%	0.097%
279	14.553	14.538	14.559	VV	867	8918	0.17%	0.026%
280	14.563	14.559	14.588	VV	732	9825	0.19%	0.029%
281	14.597	14.588	14.622	VV	628	10161	0.20%	0.030%
282	14.630	14.622	14.640	VV	362	3439	0.07%	0.010%
283	14.647	14.640	14.663	VV	368	4207	0.08%	0.012%
284	14.673	14.663	14.696	VV	496	8190	0.16%	0.024%
285	14.701	14.696	14.710	VV	590	3811	0.07%	0.011%
286	14.726	14.710	14.752	VV	799	10961	0.21%	0.033%
287	14.770	14.752	14.780	VV	727	9072	0.17%	0.027%
288	14.809	14.780	14.835	VV	501	13378	0.26%	0.040%
289	14.889	14.835	14.918	VV	1825	53305	1.03%	0.158%
290	14.928	14.918	14.945	VV	1292	14753	0.28%	0.044%
291	14.973	14.945	15.013	VV	1952	29433	0.57%	0.087%
292	15.020	15.013	15.037	PV	239	1788	0.03%	0.005%
293	15.052	15.037	15.060	VV	237	2305	0.04%	0.007%
294	15.066	15.060	15.075	VV	236	1231	0.02%	0.004%
295	15.096	15.075	15.100	VV	432	3707	0.07%	0.011%
296	15.121	15.100	15.142	VV	537	9311	0.18%	0.028%
297	15.145	15.142	15.162	VV	326	2463	0.05%	0.007%
298	15.165	15.162	15.180	VV	311	2515	0.05%	0.007%
299	15.193	15.180	15.213	VV	293	4470	0.09%	0.013%

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300	15.219	15.213	15.268	VV	366	6775	0.13%	0.020%
301	15.304	15.268	15.400	VV	26918	481711	9.27%	1.430%
302	15.403	15.400	15.423	VV	1109	12302	0.24%	0.037%
303	15.427	15.423	15.431	VV	741	3281	0.06%	0.010%
304	15.434	15.431	15.439	VV	687	2823	0.05%	0.008%
305	15.465	15.439	15.496	VV	2581	38165	0.73%	0.113%
306	15.499	15.496	15.503	VV	339	1410	0.03%	0.004%
307	15.510	15.503	15.521	VV	343	3128	0.06%	0.009%
308	15.534	15.521	15.555	VV	486	6479	0.12%	0.019%
309	15.577	15.555	15.593	VV	573	9192	0.18%	0.027%
310	15.600	15.593	15.625	VV	494	5719	0.11%	0.017%
311	15.646	15.625	15.670	VV	429	8960	0.17%	0.027%
312	15.683	15.670	15.694	VV	423	5897	0.11%	0.018%
313	15.701	15.694	15.720	VV	575	6735	0.13%	0.020%
314	15.726	15.720	15.740	VV	445	4861	0.09%	0.014%
315	15.758	15.740	15.789	VV	626	12891	0.25%	0.038%
316	15.827	15.789	15.840	VV	775	17885	0.34%	0.053%
317	15.844	15.840	15.870	VV	656	10218	0.20%	0.030%
318	15.875	15.870	15.890	VV	625	6167	0.12%	0.018%
319	15.911	15.890	15.925	VV	1151	16426	0.32%	0.049%
320	15.943	15.925	15.985	VV	1013	20739	0.40%	0.062%
321	16.005	15.985	16.026	VV	1148	15570	0.30%	0.046%
322	16.033	16.026	16.044	VV	417	2995	0.06%	0.009%
323	16.054	16.044	16.058	VV	264	1646	0.03%	0.005%
324	16.062	16.058	16.080	VV	307	1525	0.03%	0.005%
325	16.089	16.080	16.103	VV	226	2208	0.04%	0.007%
326	16.112	16.103	16.117	VV	290	1325	0.03%	0.004%
327	16.126	16.117	16.150	VV	291	3812	0.07%	0.011%
328	16.169	16.150	16.177	PV	307	2652	0.05%	0.008%
329	16.183	16.177	16.196	VV	337	2300	0.04%	0.007%
330	16.215	16.196	16.219	VV	337	3308	0.06%	0.010%
331	16.238	16.219	16.268	VV	442	9312	0.18%	0.028%
332	16.318	16.268	16.395	VV	2511	84788	1.63%	0.252%
333	16.415	16.395	16.432	VV	1178	20483	0.39%	0.061%
334	16.437	16.432	16.442	VV	920	4927	0.09%	0.015%
335	16.444	16.442	16.462	VV	1008	6508	0.13%	0.019%
336	16.476	16.462	16.487	VV	351	3269	0.06%	0.010%
337	16.506	16.487	16.542	VV	687	10923	0.21%	0.032%
338	16.570	16.542	16.580	VV	636	7667	0.15%	0.023%
339	16.588	16.580	16.608	VV	498	6305	0.12%	0.019%
340	16.626	16.608	16.644	VV	593	10117	0.19%	0.030%
341	16.647	16.644	16.655	VV	559	2965	0.06%	0.009%
342	16.663	16.655	16.689	VV	423	6741	0.13%	0.020%
343	16.697	16.689	16.700	VV	281	1458	0.03%	0.004%
344	16.727	16.700	16.732	VV	722	7811	0.15%	0.023%
345	16.735	16.732	16.759	VV	740	7367	0.14%	0.022%
346	16.788	16.759	16.810	VV	1279	23035	0.44%	0.068%
347	16.826	16.810	16.838	VV	682	10400	0.20%	0.031%
348	16.850	16.838	16.870	VV	930	12258	0.24%	0.036%
349	16.889	16.870	16.917	VV	1216	20792	0.40%	0.062%
350	16.941	16.917	16.957	VV	2616	38267	0.74%	0.114%
351	16.965	16.957	16.988	VV	1533	19931	0.38%	0.059%

					rteres			
352	16.994	16.988	17.001	VV	645	3244	0.06%	0.010%
353	17.008	17.001	17.023	VV	409	3510	0.07%	0.010%
354	17.034	17.023	17.070	VV	289	3163	0.06%	0.009%
355	17.084	17.070	17.097	PV	275	3216	0.06%	0.010%
356	17.102	17.097	17.110	VV	246	1592	0.03%	0.005%
357	17.124	17.110	17.150	VV	481	7831	0.15%	0.023%
358	17.160	17.150	17.167	VV	510	3975	0.08%	0.012%
359	17.177	17.167	17.196	VV	628	7089	0.14%	0.021%
360	17.257	17.196	17.307	VV	2079	72316	1.39%	0.215%
361	17.333	17.307	17.370	VV	2326	47821	0.92%	0.142%
362	17.375	17.370	17.386	VV	586	4264	0.08%	0.013%
363	17.426	17.386	17.458	VV	1011	28467	0.55%	0.085%
364	17.462	17.458	17.479	VV	786	7115	0.14%	0.021%
365	17.484	17.479	17.488	VV	591	3082	0.06%	0.009%
366	17.492	17.488	17.510	VV	669	7240	0.14%	0.021%
367	17.523	17.510	17.545	VV	652	10126	0.19%	0.030%
368	17.565	17.545	17.579	VV	763	11627	0.22%	0.035%
369	17.605	17.579	17.614	VV	645	10687	0.21%	0.032%
370	17.618	17.614	17.624	VV	594	2776	0.05%	0.008%
371	17.631	17.624	17.637	PV	746	3204	0.06%	0.010%
372	17.662	17.637	17.672	VV	605	11060	0.21%	0.033%
373	17.728	17.672	17.753	VV	2405	57600	1.11%	0.171%
374	17.774	17.753	17.818	VV	2234	46686	0.90%	0.139%
375	17.825	17.818	17.835	VV	628	6025	0.12%	0.018%
376	17.861	17.835	17.893	VV	2583	48183	0.93%	0.143%
377	17.912	17.893	17.945	VV	549	12957	0.25%	0.038%
378	17.956	17.945	17.973	VV	419	4869	0.09%	0.014%
379	18.007	17.973	18.030	VV	868	16459	0.32%	0.049%
380	18.060	18.030	18.080	VV	589	12445	0.24%	0.037%
381	18.127	18.080	18.177	VV	14433	280105	5.39%	0.832%
382	18.194	18.177	18.244	VV	4301	89373	1.72%	0.265%
383	18.252	18.244	18.257	VV	743	5699	0.11%	0.017%
384	18.294	18.257	18.333	VV	1162	32883	0.63%	0.098%
385	18.335	18.333	18.364	VV	596	8370	0.16%	0.025%
386	18.370	18.364	18.382	VV	503	4792	0.09%	0.014%
387	18.403	18.382	18.428	VV	1256	18760	0.36%	0.056%
388	18.452	18.428	18.459	VV	692	10164	0.20%	0.030%
389	18.466	18.459	18.478	VV	544	5100	0.10%	0.015%
390	18.490	18.478	18.495	VV	492	4573	0.09%	0.014%
391	18.500	18.495	18.507	VV	605	3460	0.07%	0.010%
392	18.602	18.507	18.623	VV	2462	81017	1.56%	0.241%
393	18.634	18.623	18.674	VV	1597	30949	0.60%	0.092%
394	18.707	18.674	18.748	VV	4153	87211	1.68%	0.259%
395	18.772	18.748	18.793	VV	1629	31894	0.61%	0.095%
396	18.805	18.793	18.810	VV	1070	9878	0.19%	0.029%
397	18.814	18.810	18.822	VV	985	6479	0.12%	0.019%
398	18.827	18.822	18.832	VV	794	4356	0.08%	0.013%
399	18.836	18.832	18.845	VV	758	5331	0.10%	0.016%
400	18.848	18.845	18.870	VV	729	8427	0.16%	0.025%
401	18.893	18.870	18.915	VV	2399	40455	0.78%	0.120%
402	18.954	18.915	18.987	VV	9370	207946	4.00%	0.617%
403	19.010	18.987	19.067	VV	6929	174748	3.36%	0.519%
404	19.098	19.067	19.128	VV	2036	66057	1.27%	0.196%

					rteres			
405	19.137	19.128	19.173	VV	1968	45602	0.88%	0.135%
406	19.177	19.173	19.181	VV	1549	7309	0.14%	0.022%
407	19.190	19.181	19.220	VV	1875	37209	0.72%	0.110%
408	19.242	19.220	19.277	VV	1795	53766	1.03%	0.160%
409	19.294	19.277	19.317	VV	1694	36855	0.71%	0.109%
410	19.329	19.317	19.335	VV	1558	16487	0.32%	0.049%
411	19.382	19.335	19.407	VV	2709	88656	1.71%	0.263%
412	19.412	19.407	19.418	VV	1907	11350	0.22%	0.034%
413	19.454	19.418	19.464	VV	2065	53127	1.02%	0.158%
414	19.491	19.464	19.523	VV	2947	82644	1.59%	0.245%
415	19.560	19.523	19.568	VV	2919	61189	1.18%	0.182%
416	19.573	19.568	19.597	VV	2910	46294	0.89%	0.137%
417	19.618	19.597	19.626	VV	2537	40300	0.78%	0.120%
418	19.630	19.626	19.640	VV	2317	18905	0.36%	0.056%
419	19.673	19.640	19.704	VV	3059	97414	1.87%	0.289%
420	19.754	19.704	19.776	VV	4587	169309	3.26%	0.503%
421	19.784	19.776	19.825	VV	3549	96324	1.85%	0.286%
422	19.853	19.825	19.862	VV	3436	68754	1.32%	0.204%
423	19.866	19.862	19.872	VV	3349	18987	0.37%	0.056%
424	19.900	19.872	19.908	VV	3491	71343	1.37%	0.212%
425	19.934	19.908	19.951	VV	3889	93561	1.80%	0.278%
426	19.980	19.951	20.002	VV	4161	118940	2.29%	0.353%
427	20.030	20.002	20.057	VV	5677	154169	2.97%	0.458%
428	20.066	20.057	20.072	VV	4175	37030	0.71%	0.110%
429	20.120	20.072	20.142	VV	5248	195381	3.76%	0.580%
430	20.171	20.142	20.178	VV	4987	105065	2.02%	0.312%
431	20.238	20.178	20.258	VV	5253	238625	4.59%	0.709%
432	20.283	20.258	20.300	VV	5902	137551	2.65%	0.408%
433	20.363	20.300	20.380	VV	6121	269310	5.18%	0.800%
434	20.412	20.380	20.423	VV	6211	154104	2.97%	0.458%
435	20.427	20.423	20.431	VV	6080	27450	0.53%	0.082%
436	20.470	20.431	20.493	VV	6960	245293	4.72%	0.728%
437	20.496	20.493	20.512	VV	6574	70272	1.35%	0.209%
438	20.518	20.512	20.538	VV	6511	102407	1.97%	0.304%
439	20.554	20.538	20.563	VV	6365	93567	1.80%	0.278%
440	20.575	20.563	20.599	VV	6431	132485	2.55%	0.393%
441	20.602	20.599	20.618	VV	6268	72384	1.39%	0.215%
442	20.622	20.618	20.627	VV	6155	30912	0.59%	0.092%
443	20.639	20.627	20.648	VV	6409	80274	1.55%	0.238%
444	20.658	20.648	20.693	VV	6546	169423	3.26%	0.503%
445	20.696	20.693	20.727	VV	6062	115468	2.22%	0.343%
446	20.738	20.727	20.743	VV	5437	54395	1.05%	0.162%
447	20.750	20.743	20.755	VV	5583	38208	0.74%	0.113%
448	20.762	20.755	20.772	VV	5570	54287	1.04%	0.161%
449	20.776	20.772	20.782	VV	5517	33909	0.65%	0.101%
450	20.788	20.782	20.814	VV	5508	102018	1.96%	0.303%
451	20.857	20.814	20.882	VV	5495	213710	4.11%	0.635%
452	20.894	20.882	20.908	VV	5087	77599	1.49%	0.230%
453	20.917	20.908	20.924	VV	5038	49117	0.95%	0.146%
454	20.930	20.924	20.939	VV	5022	42089	0.81%	0.125%
455	20.948	20.939	20.962	VV	4906	65551	1.26%	0.195%
456	20.966	20.962	20.975	VV	4711	37393	0.72%	0.111%

					rteres			
457	20.981	20.975	21.005	VV	4764	83678	1.61%	0.248%
458	21.011	21.005	21.020	VV	4505	38456	0.74%	0.114%
459	21.026	21.020	21.048	VV	4581	73249	1.41%	0.218%
460	21.061	21.048	21.102	VV	4408	131830	2.54%	0.391%
461	21.121	21.102	21.140	VV	3997	88280	1.70%	0.262%
462	21.157	21.140	21.162	VV	3966	50497	0.97%	0.150%
463	21.166	21.162	21.171	VV	4016	21926	0.42%	0.065%
464	21.185	21.171	21.203	VV	3872	72036	1.39%	0.214%
465	21.207	21.203	21.211	VV	3630	15770	0.30%	0.047%
466	21.214	21.211	21.220	VV	3649	19786	0.38%	0.059%
467	21.225	21.220	21.240	VV	3625	41979	0.81%	0.125%
468	21.245	21.240	21.250	VV	3475	19839	0.38%	0.059%
469	21.285	21.250	21.308	VV	3708	121885	2.35%	0.362%
470	21.311	21.308	21.328	VV	3338	37623	0.72%	0.112%
471	21.333	21.328	21.350	VV	3023	38448	0.74%	0.114%
472	21.375	21.350	21.383	VV	3001	58796	1.13%	0.175%
473	21.388	21.383	21.408	VV	3130	44324	0.85%	0.132%
474	21.412	21.408	21.437	VV	3016	46944	0.90%	0.139%
475	21.440	21.437	21.453	VV	2728	26027	0.50%	0.077%
476	21.458	21.453	21.462	VV	2563	12621	0.24%	0.037%
477	21.484	21.462	21.497	VV	2732	54800	1.05%	0.163%
478	21.502	21.497	21.509	VV	2670	17967	0.35%	0.053%
479	21.540	21.509	21.553	VV	2593	64975	1.25%	0.193%
480	21.560	21.553	21.564	VV	2378	14567	0.28%	0.043%
481	21.568	21.564	21.579	VV	2388	20161	0.39%	0.060%
482	21.587	21.579	21.600	VV	2321	27498	0.53%	0.082%
483	21.605	21.600	21.613	VV	2272	16855	0.32%	0.050%
484	21.628	21.613	21.640	VV	2157	31745	0.61%	0.094%
485	21.648	21.640	21.667	VV	2135	31702	0.61%	0.094%
486	21.672	21.667	21.677	VV	1819	10473	0.20%	0.031%
487	21.695	21.677	21.702	VV	1930	27330	0.53%	0.081%
488	21.721	21.702	21.738	VV	1804	36781	0.71%	0.109%
489	21.752	21.738	21.761	VV	1889	25000	0.48%	0.074%
490	21.770	21.761	21.780	VV	1953	20775	0.40%	0.062%
491	21.786	21.780	21.797	VV	1826	17728	0.34%	0.053%
492	21.818	21.797	21.825	VV	1782	27552	0.53%	0.082%
493	21.836	21.825	21.855	VV	1706	28648	0.55%	0.085%
494	21.860	21.855	21.879	VV	1668	21178	0.41%	0.063%
495	21.884	21.879	21.897	VV	1416	13962	0.27%	0.041%
496	21.909	21.897	21.953	VV	1301	40500	0.78%	0.120%
497	21.967	21.953	22.001	VV	1186	26961	0.52%	0.080%
498	22.023	22.001	22.028	VV	1200	13493	0.26%	0.040%
499	22.034	22.028	22.075	VV	839	18915	0.36%	0.056%
500	22.083	22.075	22.089	VV	457	3365	0.06%	0.010%
501	22.092	22.089	22.112	VV	438	3953	0.08%	0.012%
502	22.125	22.118	22.163	VV	289	5475	0.11%	0.016%
					Sum of corrected areas:			
					33677166			

Aromatic EPH 040725.M Fri Apr 11 01:39:23 2025



CALIBRATION SUMMARY

Initial Calibration Report for SequenceID : FC040925AL

AreaCount

Parameter Range	FC068515.D	FC068516.D	FC068517.D	FC068518.D	FC068519.D	
Aliphatic C9-C12	28917690.000	15222657.000	6286032.000	3422392.000	1645296.000	
Aliphatic C12-C16	18431489.000	9897338.000	4088590.000	2253140.000	1056103.000	
Aliphatic C16-C21	26693561.000	14380121.000	5937795.000	3290227.000	1508988.000	
Aliphatic C21-C28	34681529.000	18246305.000	7529133.000	4137443.000	1908822.000	
Aliphatic C28-C40	51686216.000	25852842.000	10689091.000	5728785.000	2776165.000	
Aliphatic EPH	160410485.000	83599263.000	34530641.000	18831987.000	8895374.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aliphatic C9-C12	105282.0026666	6.555				
Aliphatic C12-C16	102322.575	7.446				
Aliphatic C16-C21	98816.5386664	7.616				
Aliphatic C21-C28	94185.337	6.542				
Aliphatic C28-C40	89882.8349998	4.545				
Aliphatic EPH	96276.6184442	6.125				

Concentration

Parameter Range	FC068515.D	FC068516.D	FC068517.D	FC068518.D	FC068519.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	FC068515.D	FC068516.D	FC068517.D	FC068518.D	FC068519.D	
Aliphatic C9-C12	96392.300000	101484.380000	104767.200000	114079.733333	109686.400000	
Aliphatic C12-C16	92157.445000	98973.380000	102214.750000	112657.000000	105610.300000	
Aliphatic C16-C21	88978.536666	95867.473333	98963.250000	109674.233333	100599.200000	

Initial Calibration Report for SequenceID : FC040925AL

Aliphatic C21-C28	86703.822500	91231.525000	94114.162500	103436.075000	95441.100000	
Aliphatic C28-C40	86143.693333	86176.140000	89075.758333	95479.750000	92538.833333	
Aliphatic EPH	89116.936111	92888.070000	95918.447222	104622.150000	98837.488888	

Initial Calibration Report for SequenceID : FD040725AR

AreaCount

Parameter Range	FD049232.D	FD049233.D	FD049234.D	FD049235.D	FD049236.D	
Aromatic C10-C12	29839752.000	14982241.000	6112471.000	3350222.000	1646164.000	
Aromatic C12-C16	49677487.000	24625801.000	9979747.000	5389632.000	2630674.000	
Aromatic C16-C21	65416364.000	32353084.000	13305741.000	7066388.000	3404391.000	
Aromatic C21-C36	119779017.000	59475216.000	24862220.000	13179500.000	6339819.000	
Aromatic EPH	264712620.000	131436342.000	54260179.000	28985742.000	14021048.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aromatic C10-C12	156792.089	5.507				
Aromatic C12-C16	170225.0826662	4.035				
Aromatic C16-C21	167701.4685	3.541				
Aromatic C21-C36	138140.428666	4.246				
Aromatic EPH	152129.3976664	4.123				

Concentration

Parameter Range	FD049232.D	FD049233.D	FD049234.D	FD049235.D	FD049236.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	FD049232.D	FD049233.D	FD049234.D	FD049235.D	FD049236.D	
Aromatic C10-C12	149198.760000	149822.410000	152811.775000	167511.100000	164616.400000	
Aromatic C12-C16	165591.623333	164172.006666	166329.116666	179654.400000	175378.266666	
Aromatic C16-C21	163540.910000	161765.420000	166321.762500	176659.700000	170219.550000	
Aromatic C21-C36	133087.796666	132167.146666	138123.444444	146438.888888	140884.866666	
Aromatic EPH	147062.566666	146040.380000	150722.719444	161031.900000	155789.422222	

Continuing Calibration Report for SequenceID : FC041125AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV

File ID : FC068559.D

Aliphatic C9-C12	6096249.000	60.000	3.345	6.644	101604.150	105282.003	3.493
Aliphatic C12-C16	3784483.000	40.000	6.645	10.043	94612.075	102322.575	7.535
Aliphatic C16-C21	5304758.000	60.000	10.044	13.409	88412.633	98816.539	10.529
Aliphatic C21-C28	6712207.000	80.000	13.410	17.073	83902.588	94185.337	10.918
Aliphatic C28-C40	10067118.000	120.000	17.074	22.075	83892.650	89882.835	6.664
Aliphatic EPH	31964815.000	360.000	3.345	22.075	88791.153	96276.618	7.775

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	10 Apr 2025 19:45
Client Sample ID:		Operator:	YP/AJ
Data file:	FC068559.D	Misc:	
Instrument:	FID_C	ALS Vial:	9
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.345	6.644	6096249.000	60.000	ug/ml
Aliphatic C12-C16	6.645	10.043	3784483.000	40.000	ug/ml
Aliphatic C16-C21	10.044	13.409	5304758.000	60.000	ug/ml
Aliphatic C21-C28	13.410	17.073	6712207.000	80.000	ug/ml
Aliphatic C28-C40	17.074	22.075	10067118.000	120.000	ug/ml
Aliphatic EPH	3.345	22.075	31964815.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068559.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 19:45
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
 Quant Time: Apr 11 03:45:28 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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)	11.710	2312856	18.163 ug/ml
Spiked Amount 50.000		Recovery =	36.33%
12) S 1-chlorooctadecane (S...	13.143	1655271	17.819 ug/ml
Spiked Amount 50.000		Recovery =	35.64%
Target Compounds			
1) T n-Nonane (C9)	3.445	2044969	19.416 ug/ml
2) T n-Decane (C10)	4.519	2041557	19.377 ug/ml
3) T A~Naphthalene (C11.7)	6.116	2242688	19.257 ug/ml
4) T n-Dodecane (C12)	6.544	2009723	19.111 ug/ml
5) T A~2-methylnaphthalene...	7.174	2187969	18.944 ug/ml
6) T n-Tetradecane (C14)	8.341	1923368	18.709 ug/ml
7) T n-Hexadecane (C16)	9.943	1861115	18.275 ug/ml
8) T n-Octadecane (C18)	11.386	1816626	18.052 ug/ml
10) T n-Eicosane (C20)	12.697	1755004	17.843 ug/ml
11) T n-Heneicosane (C21)	13.309	1733128	17.784 ug/ml
13) T n-Docosane (C22)	13.896	1715052	17.755 ug/ml
14) T n-Tetracosane (C24)	14.999	1690398	17.759 ug/ml
15) T n-Hexacosane (C26)	16.021	1660044	17.773 ug/ml
16) T n-Octacosane (C28)	16.973	1646713	17.986 ug/ml
17) T n-Tricontane (C30)	17.861	1680866	18.284 ug/ml
18) T n-Dotriacontane (C32)	18.696	1700136	18.534 ug/ml
19) T n-Tetratriacontane (C34)	19.481	1665071	18.638 ug/ml
20) T n-Hexatriacontane (C36)	20.222	1682112	18.778 ug/ml
21) T n-Octatriacontane (C38)	20.996	1663838	18.819 ug/ml
22) T n-Tetracontane (C40)	21.973	1675095	18.969 ug/ml

(f)=RT Delta > 1/2 Window

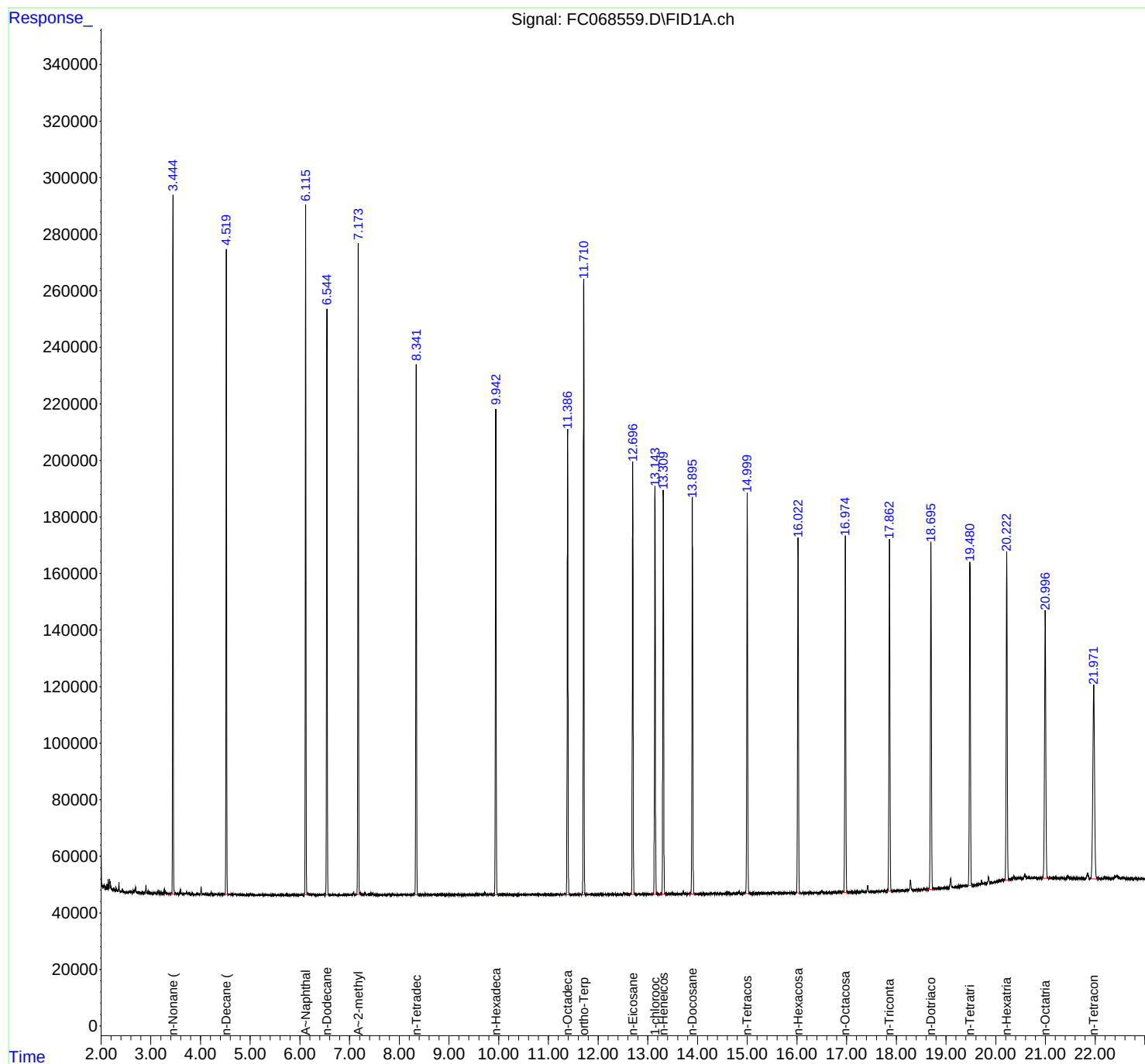
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068559.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 19:45
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 9 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
Quant Time: Apr 11 03:45:28 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068559.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 19:45
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	3.445	3.395	3.484	BB	246252	2044969	88.42%	5.066%
2	4.519	4.464	4.552	BB	227698	2041557	88.27%	5.058%
3	6.116	6.059	6.175	BB	243682	2242688	96.97%	5.556%
4	6.544	6.484	6.580	BB	206838	2009723	86.89%	4.979%
5	7.174	7.119	7.202	BV	230300	2187969	94.60%	5.421%
6	8.341	8.279	8.390	BB	187974	1923368	83.16%	4.765%
7	9.943	9.877	9.985	BB	171202	1861115	80.47%	4.611%
8	11.386	11.275	11.432	BB	165045	1816626	78.54%	4.501%
9	11.710	11.649	11.742	BB	217609	2312856	100.00%	5.730%
10	12.697	12.639	12.740	BB	152924	1755004	75.88%	4.348%
11	13.143	13.082	13.187	BB	144642	1655271	71.57%	4.101%
12	13.309	13.247	13.354	BB	143048	1733128	74.93%	4.294%
13	13.896	13.837	13.947	BB	139773	1715052	74.15%	4.249%
14	14.999	14.934	15.044	BB	141797	1690398	73.09%	4.188%
15	16.021	15.990	16.074	BB	125265	1660044	71.77%	4.113%
16	16.973	16.912	17.015	BB	125635	1646713	71.20%	4.080%
17	17.861	17.797	17.909	BB	124249	1680866	72.67%	4.164%
18	18.696	18.629	18.752	BB	122365	1700136	73.51%	4.212%
19	19.481	19.440	19.539	BB	113953	1665071	71.99%	4.125%
20	20.222	20.180	20.259	BB	115888	1682112	72.73%	4.167%
21	20.996	20.919	21.070	BB	94500	1663838	71.94%	4.122%
22	21.973	21.904	22.065	BB	68744	1675095	72.43%	4.150%
Sum of corrected areas:						40363600		

Aliphatic EPH 040925.M Fri Apr 11 04:47:02 2025

Continuing Calibration Report for SequenceID : FC041125AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV

File ID : FC068571.D

Aliphatic C9-C12	6233414.000	60.000	3.345	6.644	103890.233	105282.003	1.322
Aliphatic C12-C16	3778079.000	40.000	6.645	10.043	94451.975	102322.575	7.692
Aliphatic C16-C21	5202338.000	60.000	10.044	13.409	86705.633	98816.539	12.256
Aliphatic C21-C28	6676284.000	80.000	13.410	17.073	83453.550	94185.337	11.394
Aliphatic C28-C40	10202260.000	120.000	17.074	22.075	85018.833	89882.835	5.411
Aliphatic EPH	32092375.000	360.000	3.345	22.075	89145.486	96276.618	7.407

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	11 Apr 2025 04:22
Client Sample ID:		Operator:	YP/AJ
Data file:	FC068571.D	Misc:	
Instrument:	FID_C	ALS Vial:	9
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.345	6.644	6233414.000	60.000	ug/ml
Aliphatic C12-C16	6.645	10.043	3778079.000	40.000	ug/ml
Aliphatic C16-C21	10.044	13.409	5202338.000	60.000	ug/ml
Aliphatic C21-C28	13.410	17.073	6676284.000	80.000	ug/ml
Aliphatic C28-C40	17.074	22.075	10202260.000	120.000	ug/ml
Aliphatic EPH	3.345	22.075	32092375.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068571.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 04:22
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
 Quant Time: Apr 11 05:04:39 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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)	11.714	2299459	18.058 ug/ml
Spiked Amount 50.000		Recovery =	36.12%
12) S 1-chlorooctadecane (S...	13.147	1624242	17.485 ug/ml
Spiked Amount 50.000		Recovery =	34.97%
Target Compounds			
1) T n-Nonane (C9)	3.445	2097822	19.918 ug/ml
2) T n-Decane (C10)	4.520	2091384	19.850 ug/ml
3) T A~Naphthalene (C11.7)	6.117	2277452	19.556 ug/ml
4) T n-Dodecane (C12)	6.546	2044208	19.438 ug/ml
5) T A~2-methylnaphthalene...	7.176	2218408	19.207 ug/ml
6) T n-Tetradecane (C14)	8.344	1932863	18.801 ug/ml
7) T n-Hexadecane (C16)	9.946	1845216	18.119 ug/ml
8) T n-Octadecane (C18)	11.390	1780114	17.689 ug/ml
10) T n-Eicosane (C20)	12.701	1720771	17.495 ug/ml
11) T n-Heneicosane (C21)	13.314	1701453	17.459 ug/ml
13) T n-Docosane (C22)	13.900	1688310	17.478 ug/ml
14) T n-Tetracosane (C24)	15.005	1673204	17.579 ug/ml
15) T n-Hexacosane (C26)	16.027	1658703	17.758 ug/ml
16) T n-Octacosane (C28)	16.978	1656067	18.088 ug/ml
17) T n-Tricontane (C30)	17.867	1702882	18.523 ug/ml
18) T n-Dotriacontane (C32)	18.701	1727489	18.833 ug/ml
19) T n-Tetratriacontane (C34)	19.486	1697330	18.999 ug/ml
20) T n-Hexatriacontane (C36)	20.228	1708136	19.068 ug/ml
21) T n-Octatriacontane (C38)	21.005	1685632	19.066 ug/ml
22) T n-Tetracontane (C40)	21.983	1680791	19.034 ug/ml

(f)=RT Delta > 1/2 Window

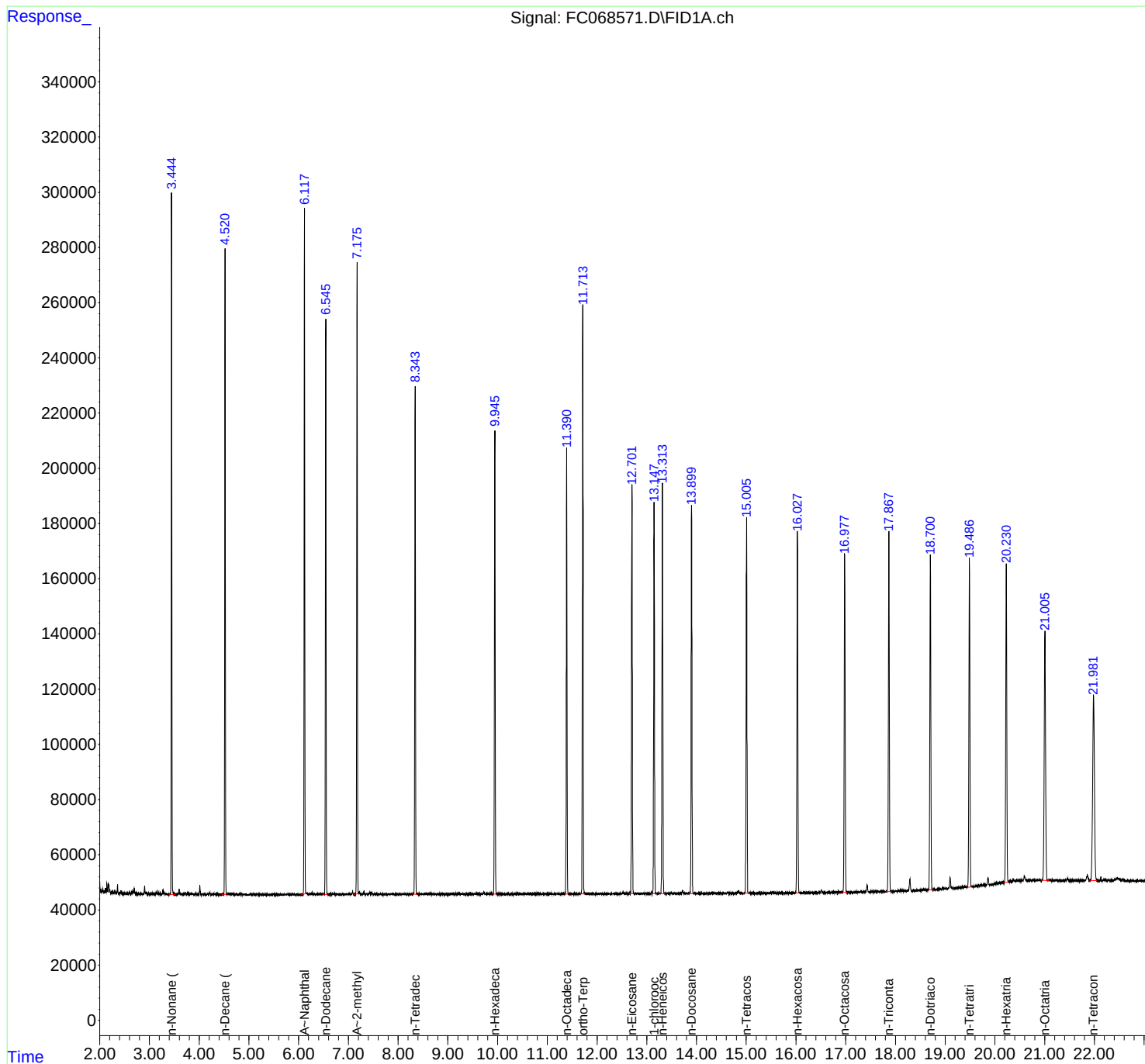
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068571.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 04:22
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 9 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
Quant Time: Apr 11 05:04:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068571.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 04:22
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 9 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	3.445	3.395	3.517	BB	253398	2097822	91.23%	5.178%
2	4.520	4.464	4.557	BB	233991	2091384	90.95%	5.162%
3	6.117	6.060	6.152	BB	247967	2277452	99.04%	5.622%
4	6.546	6.487	6.589	BB	208582	2044208	88.90%	5.046%
5	7.176	7.110	7.207	BB	228305	2218408	96.48%	5.476%
6	8.344	8.279	8.380	BB	184004	1932863	84.06%	4.771%
7	9.946	9.887	9.989	BB	167978	1845216	80.25%	4.555%
8	11.390	11.345	11.427	BB	161389	1780114	77.41%	4.394%
9	11.714	11.654	11.762	BB	212313	2299459	100.00%	5.676%
10	12.701	12.642	12.749	BB	148324	1720771	74.83%	4.248%
11	13.147	13.089	13.194	BB	141695	1624242	70.64%	4.009%
12	13.314	13.252	13.365	BB	148517	1701453	73.99%	4.200%
13	13.900	13.840	13.945	BB	139225	1688310	73.42%	4.167%
14	15.005	14.935	15.052	BB	136140	1673204	72.77%	4.130%
15	16.027	15.990	16.074	BB	130817	1658703	72.13%	4.094%
16	16.978	16.932	17.029	BB	121776	1656067	72.02%	4.088%
17	17.867	17.805	17.917	BB	130255	1702882	74.06%	4.203%
18	18.701	18.657	18.754	BB	121209	1727489	75.13%	4.264%
19	19.486	19.440	19.534	BB	118841	1697330	73.81%	4.190%
20	20.228	20.180	20.269	BB	114701	1708136	74.28%	4.216%
21	21.005	20.929	21.080	BB	90422	1685632	73.31%	4.161%
22	21.983	21.909	22.057	BB	67162	1680791	73.10%	4.149%
Sum of corrected areas:							40511935	

Aliphatic EPH 040925.M Fri Apr 11 05:06:19 2025

Continuing Calibration Report for SequenceID : FD041025AR

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV

File ID : FD049268.D

Aromatic C10-C12	5439988.000	40.000	4.440	6.185	135999.700	156792.089	13.261
Aromatic C12-C16	8722016.000	60.000	6.186	8.813	145366.933	170225.083	14.603
Aromatic C16-C21	11673840.000	80.000	8.814	13.102	145923.000	167701.469	12.986
Aromatic C21-C36	23479622.000	180.000	13.103	18.519	130442.344	138140.429	5.573
Aromatic EPH	49315466.000	360.000	4.440	18.519	136987.406	152129.398	9.953

Lab Sample ID:	20 PPM AROMATIC HC	Acq On:	10 Apr 2025 14:10
Client Sample ID:		Operator:	YP/AJ
Data file:	FD049268.D	Misc:	
Instrument:	FID_D	ALS Vial:	54
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aromatic C10-C12	4.440	6.185	5439988.000	40.000	ug/ml
Aromatic C12-C16	6.186	8.813	8722016.000	60.000	ug/ml
Aromatic C16-C21	8.814	13.102	11673840.000	80.000	ug/ml
Aromatic C21-C36	13.103	18.519	23479622.000	180.000	ug/ml
Aromatic EPH	4.440	18.519	49315466.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049268.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 14:10
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD
 Misc :
 ALS Vial : 54 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD

Integration File: autoint1.e
 Quant Time: Apr 11 01:02:26 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.748	2536027	17.120 ug/ml
Spiked Amount 50.000		Recovery =	34.24%
6) S 2-Fluorobiphenyl (SURR)	8.613	1748125	17.138 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	34.28%
11) S ortho-Terphenyl (SURR)	11.656	3016454	17.121 ug/ml
Spiked Amount 50.000		Recovery =	34.24%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.540	2636812	17.596 ug/ml
2) T Naphthalene (C11.7)	6.085	2803176	17.120 ug/ml
3) T 2-Methylnaphthalene (...)	7.138	2799556	17.308 ug/ml
5) T Acenaphthylene (C15.06)	8.417	2991179	16.934 ug/ml
7) T Acenaphthene (C15.5)	8.713	2931281	17.014 ug/ml
8) T Fluorene (C16.55)	9.493	3003873	17.226 ug/ml
9) T Phenanthrene (C19.36)	10.892	3034981	17.685 ug/ml
10) T Anthracene (C19.43)	10.966	2579025	16.417 ug/ml
12) T Fluoranthene (C21.85)	12.704	3060872	18.109 ug/ml
13) T Pyrene (C20.8)	13.002	3055961	18.221 ug/ml
14) T Benzo[a]anthracene (C...	14.871	2662947	18.525 ug/ml
15) T Chrysene (C27.41)	14.914	2705603	18.751 ug/ml
16) T benzo[b]fluoranthene ...	16.420	2637152	18.956 ug/ml
17) T Bnezo[k]fluoranthene ...	16.453	2571918	18.805 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.800	2454442	18.875 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.162	2331161	18.910 ug/ml
20) T Dibenz[a,h]anthracene...	18.203	2548100	20.152 ug/ml
21) T Benzo[g,h,i]perylene ...	18.419	2507427	19.207 ug/ml

(f)=RT Delta > 1/2 Window

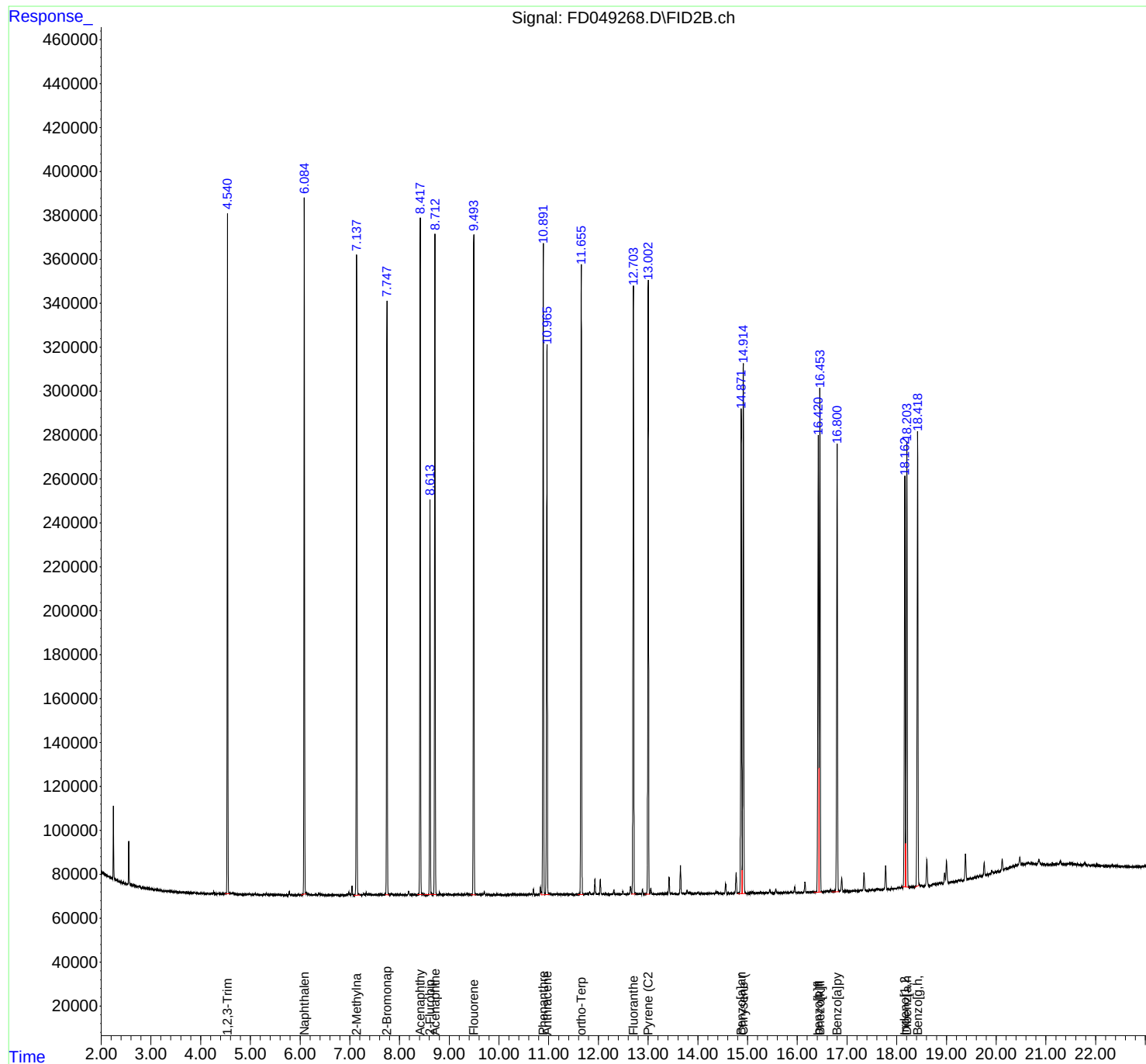
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049268.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 14:10
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 54 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Apr 11 01:02:26 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049268.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 14:10
 Sample : 20 PPM AROMATIC HC STD
 Misc :
 ALS Vial : 54 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.540	4.483	4.585	BB	309459	2636812	86.15%	4.657%
2	6.085	6.025	6.122	BV	317311	2803176	91.58%	4.951%
3	7.138	7.085	7.210	BB	290923	2799556	91.46%	4.945%
4	7.748	7.713	7.788	BV	269813	2536027	82.85%	4.479%
5	8.417	8.365	8.468	BB	308334	2991179	97.72%	5.283%
6	8.613	8.495	8.655	BB	179567	1748125	57.11%	3.088%
7	8.713	8.658	8.743	BV	300723	2931281	95.77%	5.177%
8	9.493	9.440	9.540	BB	300652	3003873	98.14%	5.306%
9	10.892	10.849	10.928	VV	296447	3034981	99.15%	5.361%
10	10.966	10.928	11.022	PV	250078	2579025	84.26%	4.555%
11	11.656	11.578	11.702	BB	286709	3016454	98.55%	5.328%
12	12.704	12.670	12.752	VV	276645	3060872	100.00%	5.406%
13	13.002	12.938	13.033	BV	279126	3055961	99.84%	5.398%
14	14.871	14.794	14.891	PV	220815	2662947	87.00%	4.704%
15	14.914	14.891	14.955	VB	241467	2705603	88.39%	4.779%
16	16.420	16.327	16.436	BV	208057	2637152	86.16%	4.658%
17	16.453	16.436	16.490	VV	229362	2571918	84.03%	4.543%
18	16.800	16.695	16.836	BV	203909	2454442	80.19%	4.335%
19	18.162	18.110	18.179	BV	187205	2331161	76.16%	4.117%
20	18.203	18.179	18.252	VB	203250	2548100	83.25%	4.501%
21	18.419	18.370	18.447	BV	206330	2507427	81.92%	4.429%
Sum of corrected areas:							56616070	

Aromatic EPH 040725.M Fri Apr 11 01:32:15 2025

Continuing Calibration Report for SequenceID : FD041025AR

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV

File ID : FD049280.D

Aromatic C10-C12	5275482.000	40.000	4.440	6.185	131887.050	156792.089	15.884
Aromatic C12-C16	8494935.000	60.000	6.186	8.813	141582.250	170225.083	16.826
Aromatic C16-C21	11446135.000	80.000	8.814	13.102	143076.688	167701.469	14.684
Aromatic C21-C36	22930748.000	180.000	13.103	18.519	127393.044	138140.429	7.780
Aromatic EPH	48147300.000	360.000	4.440	18.519	133742.500	152129.398	12.086

Lab Sample ID:	20 PPM AROMATIC HC	Acq On:	10 Apr 2025 21:36
Client Sample ID:		Operator:	YP/AJ
Data file:	FD049280.D	Misc:	
Instrument:	FID_D	ALS Vial:	54
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aromatic C10-C12	4.440	6.185	5275482.000	40.000	ug/ml
Aromatic C12-C16	6.186	8.813	8494935.000	60.000	ug/ml
Aromatic C16-C21	8.814	13.102	11446135.000	80.000	ug/ml
Aromatic C21-C36	13.103	18.519	22930748.000	180.000	ug/ml
Aromatic EPH	4.440	18.519	48147300.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049280.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 21:36
 Operator : YP/AJ
 Sample : 20 PPM AROMATIC HC STD
 Misc :
 ALS Vial : 54 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 20 PPM AROMATIC HC STD

Integration File: autoint1.e
 Quant Time: Apr 11 01:06:20 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.747	2481508	16.752 ug/ml
Spiked Amount 50.000		Recovery =	33.50%
6) S 2-Fluorobiphenyl (SURR)	8.613	1747464	17.132 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	34.26%
11) S ortho-Terphenyl (SURR)	11.654	2947296	16.729 ug/ml
Spiked Amount 50.000		Recovery =	33.46%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.541	2550951	17.023 ug/ml
2) T Naphthalene (C11.7)	6.085	2724531	16.640 ug/ml
3) T 2-Methylnaphthalene (...)	7.138	2728423	16.868 ug/ml
5) T Acenaphthylene (C15.06)	8.416	2908316	16.465 ug/ml
7) T Acenaphthene (C15.5)	8.712	2858196	16.590 ug/ml
8) T Fluorene (C16.55)	9.492	2940163	16.861 ug/ml
9) T Phenanthrene (C19.36)	10.890	2978354	17.355 ug/ml
10) T Anthracene (C19.43)	10.964	2563229	16.316 ug/ml
12) T Fluoranthene (C21.85)	12.702	2975132	17.601 ug/ml
13) T Pyrene (C20.8)	13.000	2964389	17.675 ug/ml
14) T Benzo[a]anthracene (C...	14.869	2629309	18.291 ug/ml
15) T Chrysene (C27.41)	14.912	2654193	18.394 ug/ml
16) T benzo[b]fluoranthene ...	16.419	2552320	18.346 ug/ml
17) T Bnezo[k]fluoranthene ...	16.451	2508304	18.340 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.799	2369094	18.219 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.162	2273445	18.442 ug/ml
20) T Dibenz[a,h]anthracene...	18.201	2548203	20.152 ug/ml
21) T Benzo[g,h,i]perylene ...	18.418	2420748	18.543 ug/ml

(f)=RT Delta > 1/2 Window

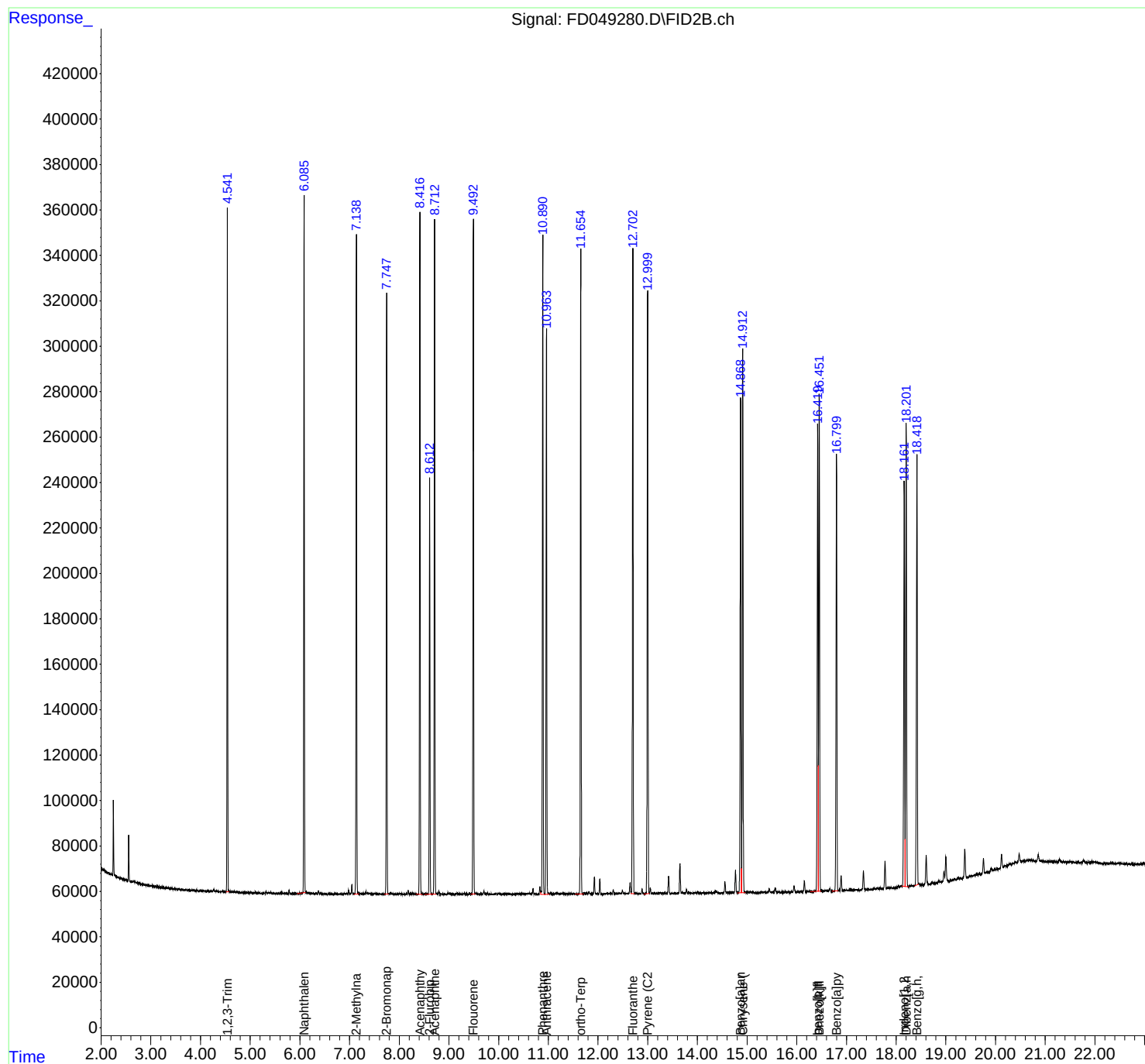
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049280.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 21:36
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 54 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Apr 11 01:06:20 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049280.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 21:36
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 54 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.541	4.515	4.575	BV	301033	2550951	85.65%	4.611%
2	6.085	5.954	6.113	BV	307280	2724531	91.48%	4.925%
3	7.138	7.085	7.192	BB	290327	2728423	91.61%	4.932%
4	7.747	7.695	7.789	BB	264796	2481508	83.32%	4.485%
5	8.416	8.329	8.469	BV	299917	2908316	97.65%	5.257%
6	8.613	8.512	8.647	BV	183651	1747464	58.67%	3.159%
7	8.712	8.647	8.747	VB	296946	2858196	95.97%	5.166%
8	9.492	9.442	9.534	BB	296473	2940163	98.72%	5.314%
9	10.890	10.847	10.929	VV	290282	2978354	100.00%	5.384%
10	10.964	10.929	11.019	VV	248465	2563229	86.06%	4.633%
11	11.654	11.542	11.712	BB	283992	2947296	98.96%	5.327%
12	12.702	12.669	12.737	VB	283957	2975132	99.89%	5.378%
13	13.000	12.925	13.032	BV	265704	2964389	99.53%	5.358%
14	14.869	14.809	14.889	BV	218402	2629309	88.28%	4.753%
15	14.912	14.889	14.960	VB	239370	2654193	89.12%	4.798%
16	16.419	16.269	16.434	BV	206164	2552320	85.70%	4.613%
17	16.451	16.434	16.495	VB	218540	2508304	84.22%	4.534%
18	16.799	16.712	16.835	BB	191618	2369094	79.54%	4.282%
19	18.162	18.110	18.179	BV	178106	2273445	76.33%	4.109%
20	18.201	18.179	18.255	VB	204282	2548203	85.56%	4.606%
21	18.418	18.370	18.445	BV	189649	2420748	81.28%	4.376%
Sum of corrected areas:							55323567	

Aromatic EPH 040725.M Fri Apr 11 01:36:56 2025



QC SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BL	SDG No.:	Q1744
Lab Sample ID:	PB167513BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.02 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
04/08/25 10:10	04/10/25 21:36	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	0.14	U	1	0.14	1.00	mg/kg	FC068560.D
Aliphatic C12-C16	Aliphatic C12-C16	0.11	U	1	0.11	0.67	mg/kg	FC068560.D
Aliphatic C16-C21	Aliphatic C16-C21	0.13	U	1	0.13	1.00	mg/kg	FC068560.D
Aliphatic C21-C28	Aliphatic C21-C28	0.53	U	1	0.53	1.33	mg/kg	FC068560.D
Aliphatic C28-C40	Aliphatic C28-C40	1.18	U	1	1.18	2.00	mg/kg	FC068560.D
Aromatic C10-C12	Aromatic C10-C12	0.12	U	1	0.12	0.67	mg/kg	FD049269.D
Aromatic C12-C16	Aromatic C12-C16	0.23	U	1	0.23	1.00	mg/kg	FD049269.D
Aromatic C16-C21	Aromatic C16-C21	0.40	U	1	0.40	1.67	mg/kg	FD049269.D
Aromatic C21-C36	Aromatic C21-C36	1.19	U	1	1.19	2.66	mg/kg	FD049269.D
TotalAliphaticEPH	Total AliphaticEPH	2.09	U		2.09	5.99	mg/kg	
TotalAromaticEPH	Total AromaticEPH	1.94	U		1.94	6.00	mg/kg	
Total EPH	Total EPH	4.03	U		4.03	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:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BL	SDG No.:	Q1744
Lab Sample ID:	PB167513BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.02 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068560.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	0.14	U	0.14	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	0.11	U	0.11	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	0.13	U	0.13	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	0.53	U	0.53	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.18	U	1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	36.3		40 - 140	72%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167513BL	Acq On:	10 Apr 2025 21:36
Client Sample ID:	PB167513BL	Operator:	YP/AJ
Data file:	FC068560.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	3.345	6.644	0	0	300	ug/ml
Aliphatic C12-C16	6.645	10.043	0	0	200	ug/ml
Aliphatic C16-C21	10.044	13.409	0	0	300	ug/ml
Aliphatic C21-C28	13.410	17.073	0	0	400	ug/ml
Aliphatic C28-C40	17.074	22.075	0	0	600	ug/ml
Aliphatic EPH	3.345	22.075	0	0		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.143	13.143	3367296	36.25		ug/ml
Aliphatic C9-C28	3.345	17.073	0	0	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068560.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 21:36
Operator : YP/AJ
Sample : PB167513BL
Misc :
ALS Vial : 19 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167513BL

Integration File: autoint1.e
Quant Time: Apr 11 03:45:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
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...	13.143	3367296	36.249 ug/ml
Spiked Amount	50.000	Recovery	= 72.50%

Target Compounds

(f)=RT Delta > 1/2 Window

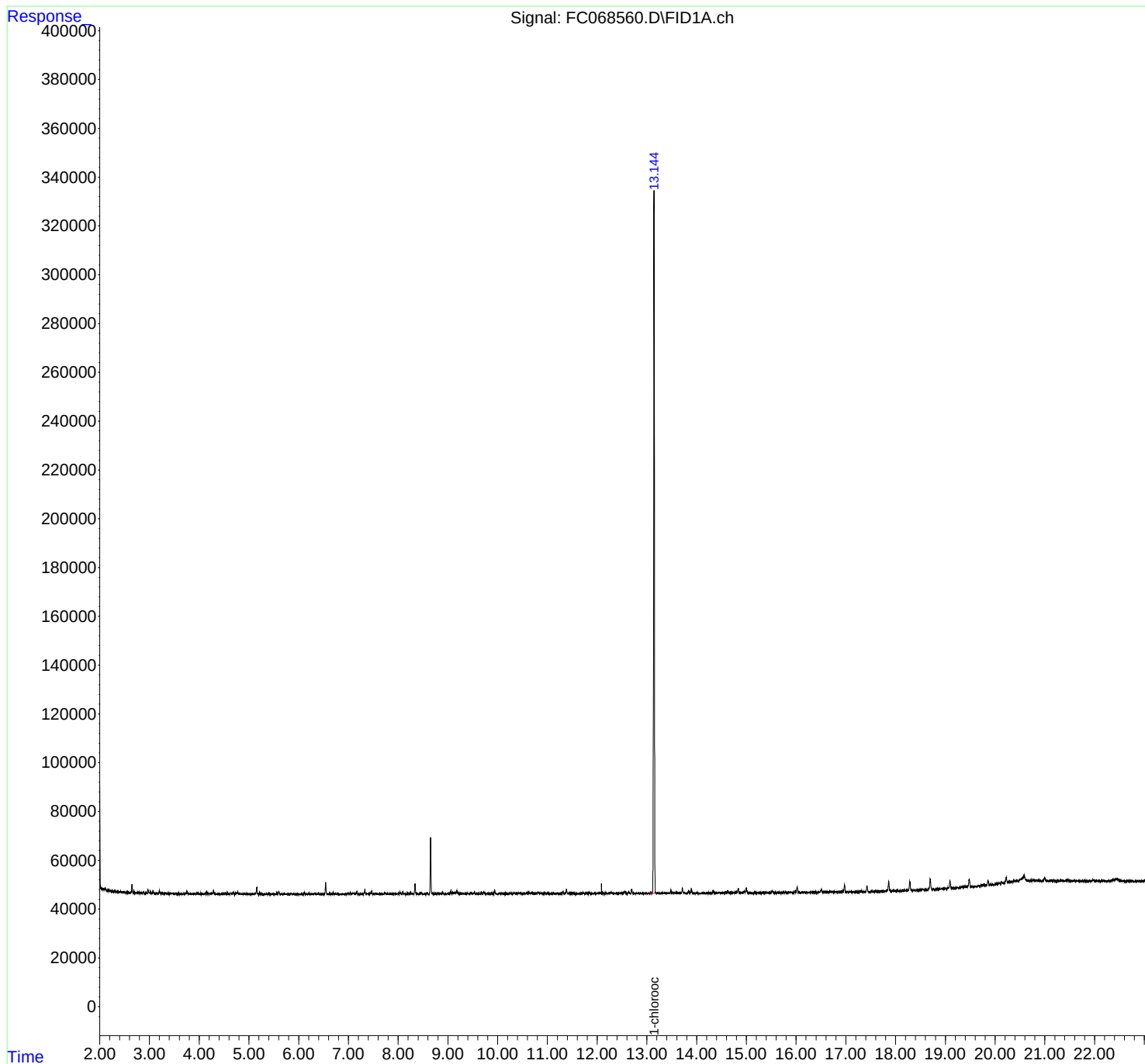
(m)=manual int.

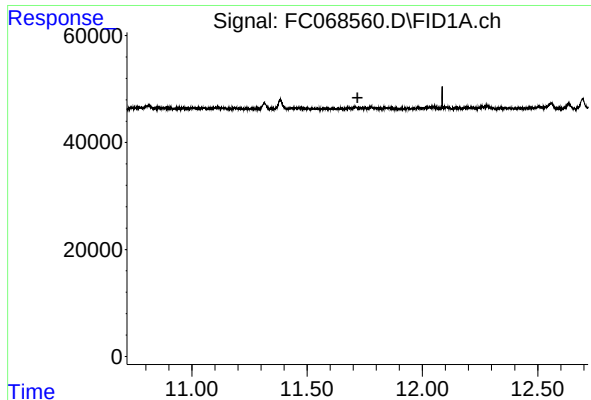
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068560.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 21:36
Operator : YP/AJ
Sample : PB167513BL
Misc :
ALS Vial : 19 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167513BL

Integration File: autoint1.e
Quant Time: Apr 11 03:45:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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

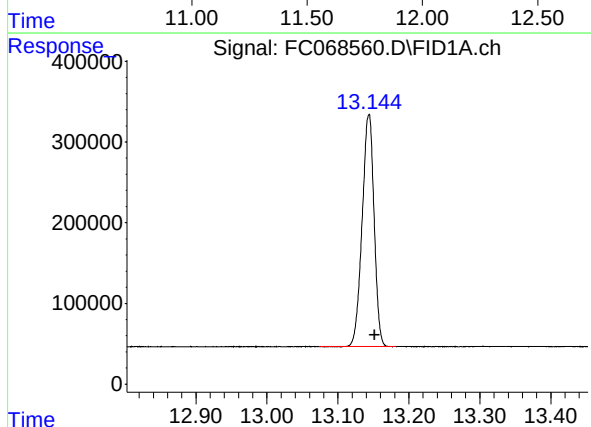




#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T.: 11.719 min
Response: 0
Conc: N.D.

Instrument :
FID_C
ClientSampleId :
PB167513BL



#12 1-chlorooctadecane (SURR)

R.T.: 13.143 min
Delta R.T.: -0.008 min
Response: 3367296
Conc: 36.25 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068560.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 21:36
Sample : PB167513BL
Misc :
ALS Vial : 19 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	13.143	13.074	13.182	BB	287294	3367296	100.00%	100.000%
Sum of corrected areas:							3367296	

Aliphatic EPH 040925.M Fri Apr 11 04:48:01 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BL	SDG No.:	Q1744
Lab Sample ID:	PB167513BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.02 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FD049269.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	0.12	U	0.12	0.67	mg/kg
Aromatic C12-C16	Aromatic C12-C16	0.23	U	0.23	1.00	mg/kg
Aromatic C16-C21	Aromatic C16-C21	0.40	U	0.40	1.67	mg/kg
Aromatic C21-C36	Aromatic C21-C36	1.19	U	1.19	2.66	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	48.6		40 - 140	97%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	45.8		40 - 140	92%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	41.5		40 - 140	83%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	PB167513BL	Acq On:	10 Apr 2025 14:48
Client Sample ID:	PB167513BL	Operator:	YP/AJ
Data file:	FD049269.D	Misc:	
Instrument:	FID_D	ALS Vial:	61
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	0	0	200	ug/ml
Aromatic C12-C16	6.186	8.813	0	0	300	ug/ml
Aromatic C16-C21	8.814	13.102	0	0	500	ug/ml
Aromatic C21-C36	13.103	18.519	0	0	800	ug/ml
Aromatic EPH	4.440	18.519	0	0		ug/ml
2-Bromonaphthalene (SURRE)	7.750	7.750	7195070	48.57		ug/ml
2-Fluorobiphenyl (SURRE)	8.616	8.616	4667252	45.76		ug/ml
ortho-Terphenyl (SURRE)	11.658	11.658	7315586	41.52		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049269.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 14:48
 Operator : YP/AJ
 Sample : PB167513BL
 Misc :
 ALS Vial : 61 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 PB167513BL

Integration File: autoint1.e
 Quant Time: Apr 11 01:02:47 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.750	7195070	48.572 ug/ml
Spiked Amount 50.000		Recovery =	97.14%
6) S 2-Fluorobiphenyl (SURR)	8.616	4667252	45.756 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	91.51%
11) S ortho-Terphenyl (SURR)	11.658	7315586	41.523 ug/ml
Spiked Amount 50.000		Recovery =	83.05%

Target Compounds

(f)=RT Delta > 1/2 Window

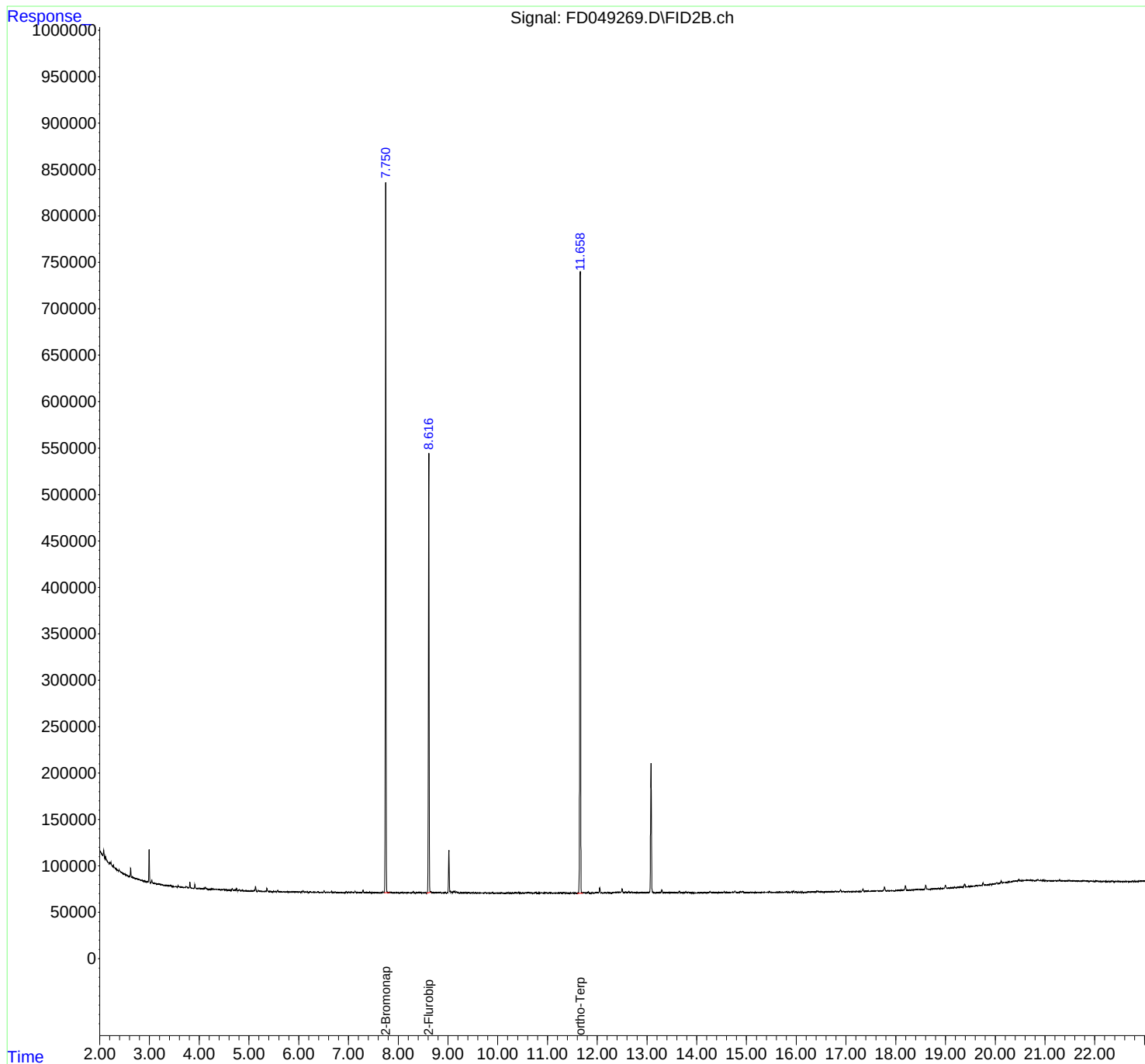
(m)=manual int.

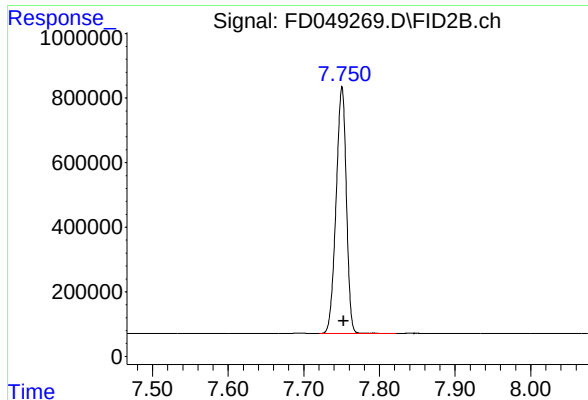
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049269.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 14:48
Operator : YP/AJ
Sample : PB167513BL
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
PB167513BL

Integration File: autoint1.e
Quant Time: Apr 11 01:02:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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

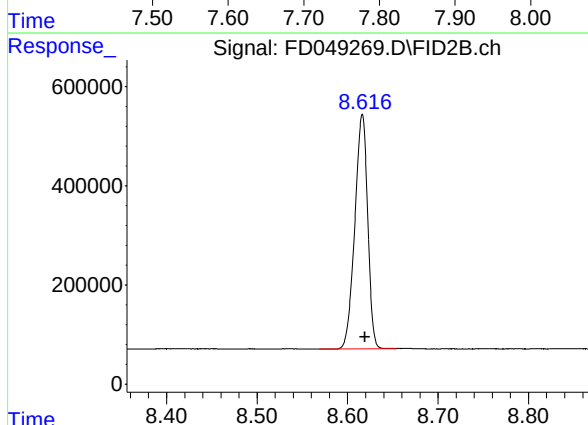




#4 2-Bromonaphthalene (SURR)

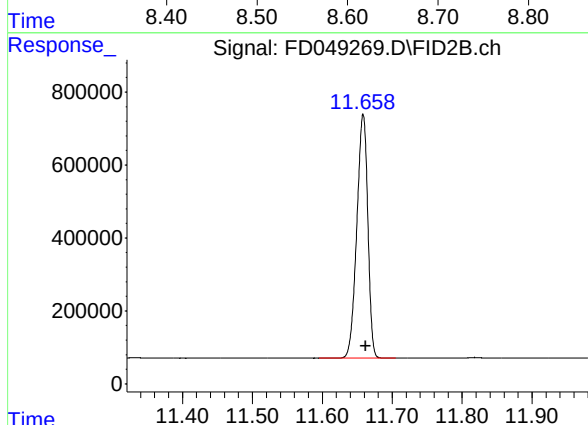
R.T.: 7.750 min
Delta R.T.: -0.002 min
Response: 7195070
Conc: 48.57 ug/ml

Instrument :
FID_D
ClientSampleId :
PB167513BL



#6 2-Fluorobiphenyl (SURR)

R.T.: 8.616 min
Delta R.T.: -0.003 min
Response: 4667252
Conc: 45.76 ug/ml



#11 ortho-Terphenyl (SURR)

R.T.: 11.658 min
Delta R.T.: -0.004 min
Response: 7315586
Conc: 41.52 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049269.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 14:48
Sample : PB167513BL
Misc :
ALS Vial : 61 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	7.751	7.720	7.822	BB	763333	7195070	98.35%	37.517%
2	8.616	8.569	8.654	BV	474139	4667252	63.80%	24.337%
3	11.658	11.595	11.705	BV	668880	7315586	100.00%	38.146%
Sum of corrected areas:							19177908	

Aromatic EPH 040725.M Fri Apr 11 01:33:06 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BS	SDG No.:	Q1744
Lab Sample ID:	PB167513BS	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
04/08/25 10:10	04/10/25 22:14	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	5.72		1	0.14	1.00	mg/kg FC068561.D
Aliphatic C12-C16	Aliphatic C12-C16	5.43		1	0.11	0.67	mg/kg FC068561.D
Aliphatic C16-C21	Aliphatic C16-C21	9.70		1	0.13	1.00	mg/kg FC068561.D
Aliphatic C21-C28	Aliphatic C21-C28	13.1		1	0.53	1.33	mg/kg FC068561.D
Aliphatic C28-C40	Aliphatic C28-C40	19.1		1	1.18	2.00	mg/kg FC068561.D
Aromatic C10-C12	Aromatic C10-C12	4.16		1	0.12	0.67	mg/kg FD049270.D
Aromatic C12-C16	Aromatic C12-C16	7.05		1	0.23	1.00	mg/kg FD049270.D
Aromatic C16-C21	Aromatic C16-C21	15.0		1	0.40	1.67	mg/kg FD049270.D
Aromatic C21-C36	Aromatic C21-C36	26.7		1	1.19	2.66	mg/kg FD049270.D
Total AliphaticEPH	Total AliphaticEPH	53.0			2.09	5.99	mg/kg
Total AromaticEPH	Total AromaticEPH	52.9			1.94	6.00	mg/kg
Total EPH	Total EPH	106			4.03	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:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BS	SDG No.:	Q1744
Lab Sample ID:	PB167513BS	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
FC068561.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.72		0.14	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.43		0.11	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	9.70		0.13	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	13.1		0.53	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	19.1		1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	37.4		40 - 140	75%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167513BS	Acq On:	10 Apr 2025 22:14
Client Sample ID:	PB167513BS	Operator:	YP/AJ
Data file:	FC068561.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	3.345	6.644	9042394	85.887	300	ug/ml
Aliphatic C12-C16	6.645	10.043	8338947	81.497	200	ug/ml
Aliphatic C16-C21	10.044	13.409	14390551	145.629	300	ug/ml
Aliphatic C21-C28	13.410	17.073	18583668	197.31	400	ug/ml
Aliphatic C28-C40	17.074	22.075	25756434	286.556	600	ug/ml
Aliphatic EPH	3.345	22.075	76111994	796.878		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.144	13.144	3476251	37.42		ug/ml
Aliphatic C9-C28	3.345	17.073	50355560	510.323	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068561.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 22:14
 Operator : YP/AJ
 Sample : PB167513BS
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB167513BS

Integration File: autoint1.e
 Quant Time: Apr 11 03:46:08 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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...	13.144	3476251	37.422 ug/ml
Spiked Amount 50.000		Recovery =	74.84%
Target Compounds			
1) T n-Nonane (C9)	3.444	2511662	23.847 ug/ml
2) T n-Decane (C10)	4.519	3059850	29.042 ug/ml
4) T n-Dodecane (C12)	6.544	3470882	33.005 ug/ml
6) T n-Tetradecane (C14)	8.342	3939789	38.323 ug/ml
7) T n-Hexadecane (C16)	9.945	4399158	43.196 ug/ml
8) T n-Octadecane (C18)	11.388	4700659	46.711 ug/ml
10) T n-Eicosane (C20)	12.699	4936821	50.191 ug/ml
11) T n-Heneicosane (C21)	13.312	4753071	48.771 ug/ml
13) T n-Docosane (C22)	13.898	4760902	49.287 ug/ml
14) T n-Tetracosane (C24)	15.002	4703534	49.415 ug/ml
15) T n-Hexacosane (C26)	16.024	4586371	49.102 ug/ml
16) T n-Octacosane (C28)	16.976	4532861	49.508 ug/ml
17) T n-Tricontane (C30)	17.864	4546284	49.453 ug/ml
18) T n-Dotriacontane (C32)	18.699	4463677	48.662 ug/ml
19) T n-Tetratriacontane (C34)	19.482	4363368	48.840 ug/ml
20) T n-Hexatriacontane (C36)	20.224	4179719	46.660 ug/ml
21) T n-Octatriacontane (C38)	20.999	4119074	46.589 ug/ml
22) T n-Tetracontane (C40)	21.974	4084312	46.252 ug/ml

(f)=RT Delta > 1/2 Window

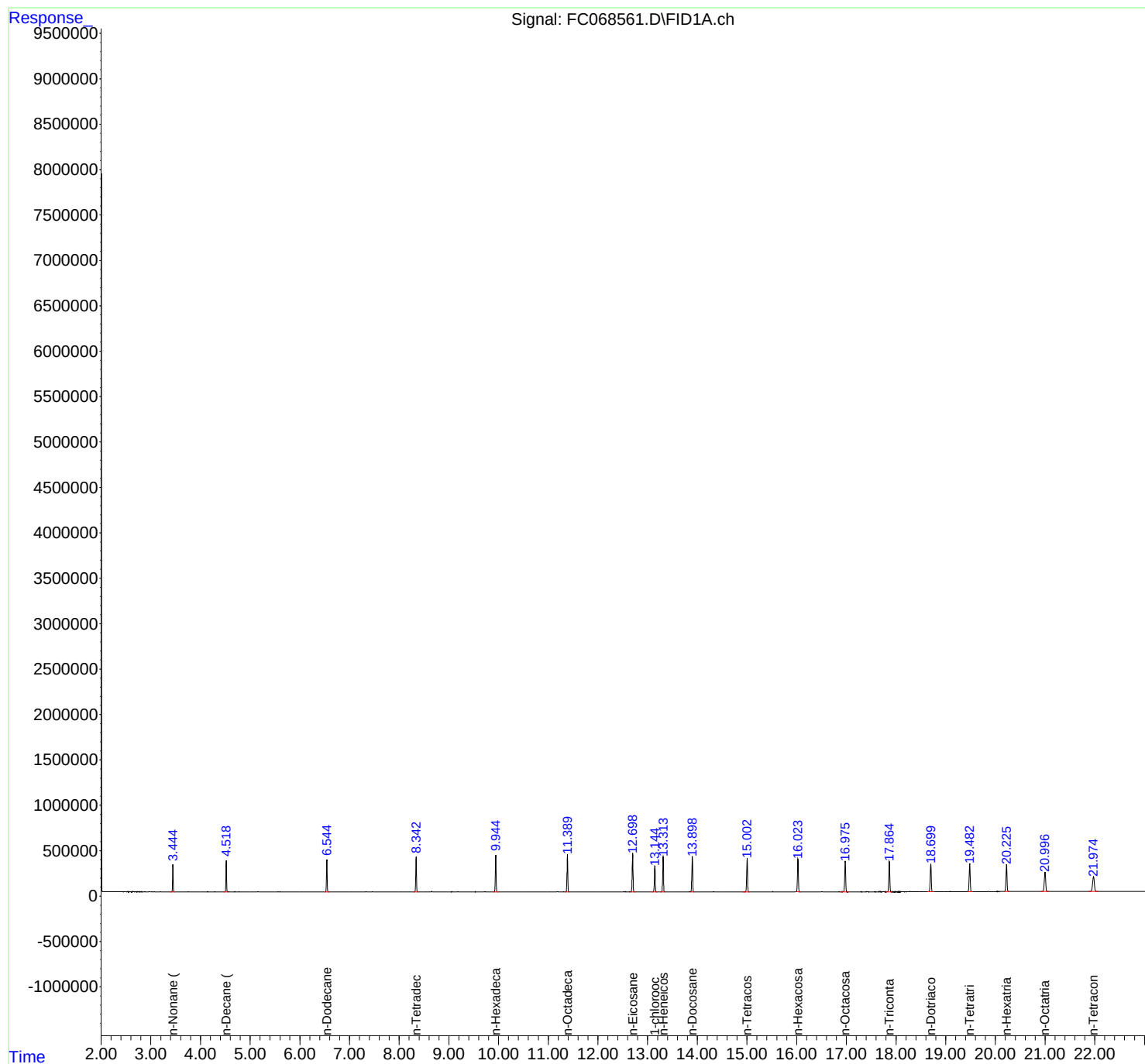
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068561.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 22:14
Operator : YP/AJ
Sample : PB167513BS
Misc :
ALS Vial : 20 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167513BS

Integration File: autoint1.e
Quant Time: Apr 11 03:46:08 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068561.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 22:14
 Sample : PB167513BS
 Misc :
 ALS Vial : 20 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	3.444	3.394	3.489	BB	301119	2511662	50.88%	3.156%
2	4.519	4.465	4.554	BV	345587	3059850	61.98%	3.845%
3	6.544	6.490	6.590	BB	357527	3470882	70.31%	4.361%
4	8.342	8.282	8.389	BB	385247	3939789	79.80%	4.950%
5	9.945	9.895	9.999	BB	406440	4399158	89.11%	5.527%
6	11.388	11.344	11.422	BB	412854	4700659	95.22%	5.906%
7	12.699	12.655	12.750	PB	426124	4936821	100.00%	6.203%
8	13.144	13.087	13.197	BB	286891	3476251	70.41%	4.368%
9	13.312	13.250	13.347	BB	388951	4753071	96.28%	5.972%
10	13.898	13.860	13.945	VB	391043	4760902	96.44%	5.982%
11	15.002	14.907	15.054	BB	373498	4703534	95.27%	5.910%
12	16.024	15.990	16.075	BB	364156	4586371	92.90%	5.763%
13	16.976	16.885	17.050	BB	333913	4532861	91.82%	5.695%
14	17.864	17.797	17.924	BB	332447	4546284	92.09%	5.712%
15	18.699	18.629	18.757	BB	306772	4463677	90.42%	5.608%
16	19.482	19.440	19.539	BB	309022	4363368	88.38%	5.482%
17	20.224	20.180	20.275	BB	292884	4179719	84.66%	5.252%
18	20.999	20.917	21.077	BB	210569	4119074	83.44%	5.175%
19	21.974	21.872	22.070	BB	163394	4084312	82.73%	5.132%
Sum of corrected areas:							79588246	

Aliphatic EPH 040925.M Fri Apr 11 04:48:26 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BS	SDG No.:	Q1744
Lab Sample ID:	PB167513BS	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
FD049270.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	4.16		0.12	0.67	mg/kg
Aromatic C12-C16	Aromatic C12-C16	7.05		0.23	1.00	mg/kg
Aromatic C16-C21	Aromatic C16-C21	15.0		0.40	1.67	mg/kg
Aromatic C21-C36	Aromatic C21-C36	26.7		1.19	2.66	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	48.0		40 - 140	96%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	48.7		40 - 140	97%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	41.3		40 - 140	83%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	PB167513BS	Acq On:	10 Apr 2025 15:25
Client Sample ID:	PB167513BS	Operator:	YP/AJ
Data file:	FD049270.D	Misc:	
Instrument:	FID_D	ALS Vial:	62
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	9786368	62.416	200	ug/ml
Aromatic C12-C16	6.186	8.813	18016061	105.837	300	ug/ml
Aromatic C16-C21	8.814	13.102	37740425	225.045	500	ug/ml
Aromatic C21-C36	13.103	18.519	55456489	401.45	800	ug/ml
Aromatic EPH	4.440	18.519	120999343	794.748		ug/ml
2-Bromonaphthalene (SURRE)	7.751	7.751	7104793	47.96		ug/ml
2-Fluorobiphenyl (SURRE)	8.617	8.617	4968091	48.71		ug/ml
ortho-Terphenyl (SURRE)	11.658	11.658	7270035	41.26		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049270.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 15:25
 Operator : YP/AJ
 Sample : PB167513BS
 Misc :
 ALS Vial : 62 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 PB167513BS

Integration File: autoint1.e
 Quant Time: Apr 11 01:03:03 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.751	7104793	47.962 ug/ml
Spiked Amount 50.000		Recovery =	95.92%
6) S 2-Fluorobiphenyl (SURR)	8.617	4968091	48.705 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	97.41%
11) S ortho-Terphenyl (SURR)	11.658	7270035	41.264 ug/ml
Spiked Amount 50.000		Recovery =	82.53%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.543	4533934	30.257 ug/ml
2) T Naphthalene (C11.7)	6.087	5252434	32.079 ug/ml
3) T 2-Methylnaphthalene (...)	7.140	5132521	31.731 ug/ml
5) T Acenaphthylene (C15.06)	8.420	6241909	35.337 ug/ml
7) T Acenaphthene (C15.5)	8.716	6641631	38.550 ug/ml
8) T Fluorene (C16.55)	9.497	6963247	39.931 ug/ml
9) T Phenanthrene (C19.36)	10.896	7511361	43.769 ug/ml
10) T Anthracene (C19.43)	10.971	7462992	47.506 ug/ml
12) T Fluoranthene (C21.85)	12.710	7880228	46.621 ug/ml
13) T Pyrene (C20.8)	13.009	7922597	47.238 ug/ml
14) T Benzo[a]anthracene (C...	14.878	7268586	50.566 ug/ml
15) T Chrysene (C27.41)	14.923	7766084	53.821 ug/ml
16) T benzo[b]fluoranthene ...	16.429	6964167	50.058 ug/ml
17) T Bnezo[k]fluoranthene ...	16.465	6921495	50.608 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.810	6658431	51.205 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.176	6939023	56.288 ug/ml
20) T Dibenz[a,h]anthracene...	18.214	6406338	50.664 ug/ml
21) T Benzo[g,h,i]perylene ...	18.434	6532365	50.038 ug/ml

(f)=RT Delta > 1/2 Window

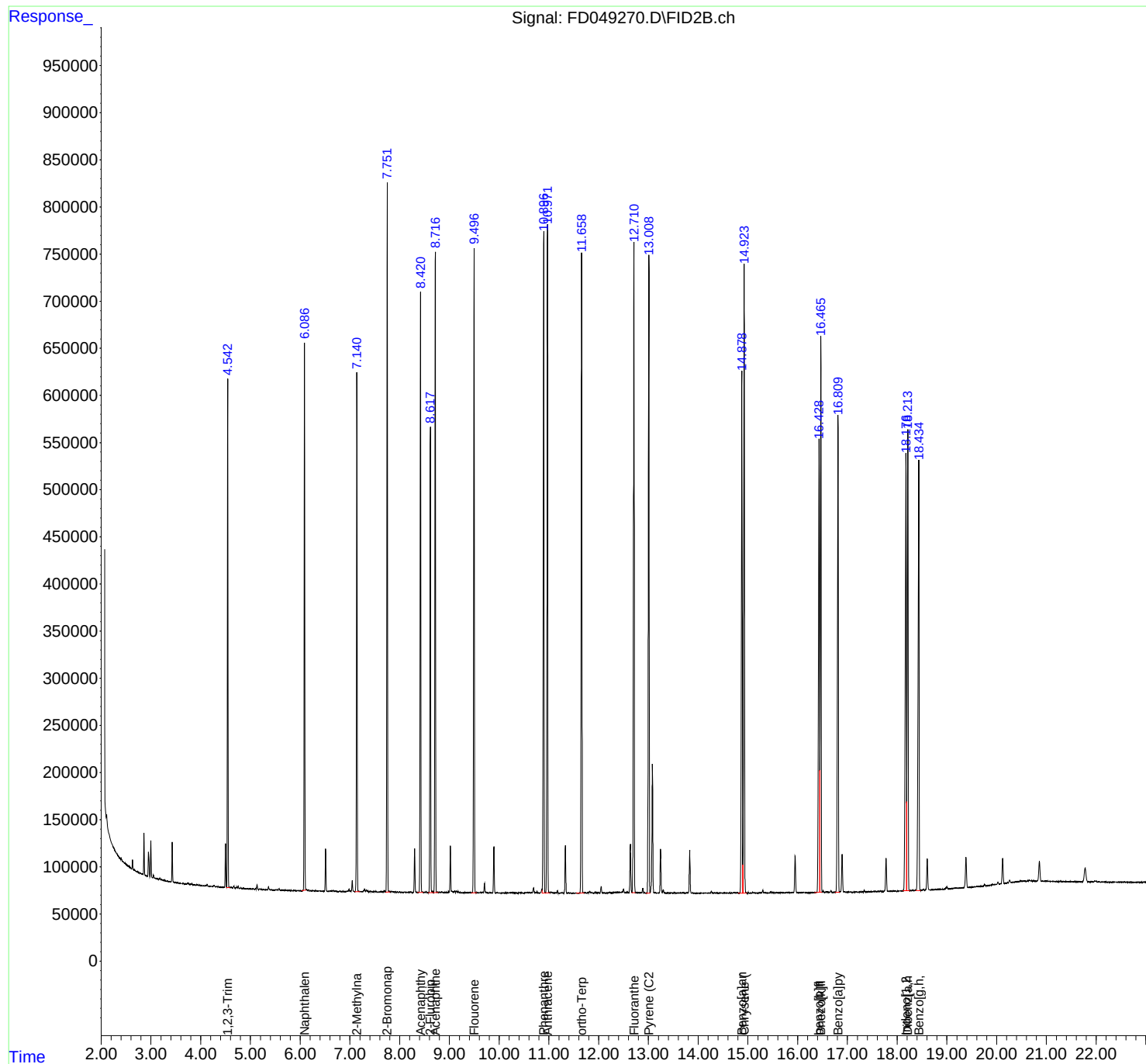
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049270.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 15:25
Operator : YP/AJ
Sample : PB167513BS
Misc :
ALS Vial : 62 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
PB167513BS

Integration File: autoint1.e
Quant Time: Apr 11 01:03:03 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049270.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 15:25
Sample : PB167513BS
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.543	4.520	4.587	VB	538988	4533934	57.23%	3.231%
2	6.087	6.035	6.118	BV	580691	5252434	66.30%	3.743%
3	7.140	7.100	7.202	BV	550996	5132521	64.78%	3.657%
4	7.751	7.720	7.812	BB	752552	7104793	89.68%	5.062%
5	8.420	8.354	8.474	BB	638411	6241909	78.79%	4.448%
6	8.617	8.570	8.660	BV	493427	4968091	62.71%	3.540%
7	8.716	8.685	8.779	VB	679198	6641631	83.83%	4.732%
8	9.497	9.435	9.554	BB	683945	6963247	87.89%	4.962%
9	10.896	10.865	10.935	VV	700351	7511361	94.81%	5.352%
10	10.971	10.935	11.020	VV	711104	7462992	94.20%	5.318%
11	11.658	11.544	11.705	BB	678299	7270035	91.76%	5.180%
12	12.710	12.669	12.737	VB	691584	7880228	99.47%	5.615%
13	13.009	12.945	13.034	BV	676474	7922597	100.00%	5.645%
14	14.878	14.805	14.897	BV	551805	7268586	91.75%	5.179%
15	14.923	14.897	14.984	VB	668372	7766084	98.02%	5.534%
16	16.429	16.335	16.444	BV	481095	6964167	87.90%	4.962%
17	16.465	16.444	16.490	VV	590760	6921495	87.36%	4.932%
18	16.810	16.750	16.841	BV	505267	6658431	84.04%	4.744%
19	18.176	18.110	18.190	BV	463013	6939023	87.59%	4.944%
20	18.214	18.190	18.255	VB	489678	6406338	80.86%	4.565%
21	18.434	18.370	18.474	BV	456444	6532365	82.45%	4.655%
Sum of corrected areas:						140342260		

Aromatic EPH 040725.M Fri Apr 11 01:34:36 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BSD	SDG No.:	Q1744
Lab Sample ID:	PB167513BSD	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 :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FD049271.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	3.95		0.12	0.67	mg/kg
Aromatic C12-C16	Aromatic C12-C16	6.67		0.23	1.00	mg/kg
Aromatic C16-C21	Aromatic C16-C21	14.2		0.40	1.67	mg/kg
Aromatic C21-C36	Aromatic C21-C36	25.8		1.19	2.67	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	45.1		40 - 140	90%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	46.1		40 - 140	92%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	38.6		40 - 140	77%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	PB167513BSD	Acq On:	10 Apr 2025 16:01
Client Sample ID:	PB167513BSD	Operator:	YP/AJ
Data file:	FD049271.D	Misc:	
Instrument:	FID_D	ALS Vial:	63
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	9301714	59.325	200	ug/ml
Aromatic C12-C16	6.186	8.813	17048886	100.155	300	ug/ml
Aromatic C16-C21	8.814	13.102	35679919	212.759	500	ug/ml
Aromatic C21-C36	13.103	18.519	53517642	387.415	800	ug/ml
Aromatic EPH	4.440	18.519	115548161	759.653		ug/ml
2-Bromonaphthalene (SURR)	7.750	7.750	6686285	45.14		ug/ml
2-Fluorobiphenyl (SURR)	8.617	8.617	4699720	46.07		ug/ml
ortho-Terphenyl (SURR)	11.657	11.657	6796630	38.58		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049271.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 16:01
 Operator : YP/AJ
 Sample : PB167513BSD
 Misc :
 ALS Vial : 63 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 PB167513BSD

Integration File: autoint1.e
 Quant Time: Apr 11 01:03:28 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.750	6686285	45.137 ug/ml
Spiked Amount 50.000		Recovery =	90.27%
6) S 2-Fluorobiphenyl (SURR)	8.617	4699720	46.074 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	92.15%
11) S ortho-Terphenyl (SURR)	11.657	6796630	38.577 ug/ml
Spiked Amount 50.000		Recovery =	77.15%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.542	4288364	28.618 ug/ml
2) T Naphthalene (C11.7)	6.086	5013350	30.619 ug/ml
3) T 2-Methylnaphthalene (...)	7.140	4859873	30.045 ug/ml
5) T Acenaphthylene (C15.06)	8.419	5905050	33.430 ug/ml
7) T Acenaphthene (C15.5)	8.716	6283963	36.474 ug/ml
8) T Fluorene (C16.55)	9.496	6570594	37.680 ug/ml
9) T Phenanthrene (C19.36)	10.895	7099181	41.367 ug/ml
10) T Anthracene (C19.43)	10.971	7063026	44.960 ug/ml
12) T Fluoranthene (C21.85)	12.709	7454671	44.103 ug/ml
13) T Pyrene (C20.8)	13.008	7492447	44.673 ug/ml
14) T Benzo[a]anthracene (C...	14.877	6956927	48.398 ug/ml
15) T Chrysene (C27.41)	14.922	7407680	51.337 ug/ml
16) T benzo[b]fluoranthene ...	16.428	6715936	48.274 ug/ml
17) T Bnezo[k]fluoranthene ...	16.465	6664102	48.726 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.810	6444018	49.556 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.175	6738227	54.660 ug/ml
20) T Dibenz[a,h]anthracene...	18.214	6260702	49.513 ug/ml
21) T Benzo[g,h,i]perylene ...	18.433	6330050	48.488 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049271.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 16:01
Sample : PB167513BSD
Misc :
ALS Vial : 63 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.542	4.519	4.590	VB	504901	4288364	57.24%	3.207%
2	6.086	6.037	6.150	BB	555073	5013350	66.91%	3.749%
3	7.140	7.100	7.197	PB	508931	4859873	64.86%	3.634%
4	7.750	7.719	7.815	BB	700818	6686285	89.24%	5.000%
5	8.419	8.359	8.474	BV	607684	5905050	78.81%	4.416%
6	8.617	8.555	8.684	BV	469396	4699720	62.73%	3.514%
7	8.716	8.684	8.775	VB	640256	6283963	83.87%	4.699%
8	9.497	9.424	9.542	BB	655414	6570594	87.70%	4.913%
9	10.895	10.863	10.934	VV	664850	7099181	94.75%	5.309%
10	10.971	10.934	11.024	VV	660930	7063026	94.27%	5.282%
11	11.657	11.559	11.702	BV	629038	6796630	90.71%	5.082%
12	12.709	12.669	12.765	VB	645086	7454671	99.50%	5.574%
13	13.008	12.937	13.034	BV	666253	7492447	100.00%	5.603%
14	14.877	14.800	14.896	BV	519498	6956927	92.85%	5.202%
15	14.922	14.896	14.969	VB	634429	7407680	98.87%	5.539%
16	16.428	16.352	16.444	BV	468371	6715936	89.64%	5.022%
17	16.465	16.444	16.492	VV	566554	6664102	88.94%	4.983%
18	16.810	16.705	16.838	BV	494552	6444018	86.01%	4.819%
19	18.175	18.110	18.189	BV	454792	6738227	89.93%	5.039%
20	18.214	18.189	18.274	VB	482378	6260702	83.56%	4.682%
21	18.433	18.370	18.474	BB	441559	6330050	84.49%	4.733%
Sum of corrected areas:						133730796		

Aromatic EPH 040725.M Fri Apr 11 01:35:46 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BSD	SDG No.:	Q1744
Lab Sample ID:	PB167513BSD	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
04/08/25 10:10	04/10/25 22:51	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	5.89		1	0.14	1.00	mg/kg FC068562.D
Aliphatic C12-C16	Aliphatic C12-C16	5.49		1	0.11	0.67	mg/kg FC068562.D
Aliphatic C16-C21	Aliphatic C16-C21	9.61		1	0.13	1.00	mg/kg FC068562.D
Aliphatic C21-C28	Aliphatic C21-C28	12.9		1	0.53	1.33	mg/kg FC068562.D
Aliphatic C28-C40	Aliphatic C28-C40	19.4		1	1.18	2.00	mg/kg FC068562.D
Aromatic C10-C12	Aromatic C10-C12	3.95		1	0.12	0.67	mg/kg FD049271.D
Aromatic C12-C16	Aromatic C12-C16	6.67		1	0.23	1.00	mg/kg FD049271.D
Aromatic C16-C21	Aromatic C16-C21	14.2		1	0.40	1.67	mg/kg FD049271.D
Aromatic C21-C36	Aromatic C21-C36	25.8		1	1.19	2.67	mg/kg FD049271.D
Total AliphaticEPH	Total AliphaticEPH	53.3			2.09	6.00	mg/kg
Total AromaticEPH	Total AromaticEPH	50.6			1.94	6.01	mg/kg
Total EPH	Total EPH	104			4.03	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:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	PB167513BSD	SDG No.:	Q1744
Lab Sample ID:	PB167513BSD	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 :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068562.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.89		0.14	1.00	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	5.49		0.11	0.67	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	9.61		0.13	1.00	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	12.9		0.53	1.33	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	19.4		1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	36.4		40 - 140	73%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167513BSD	Acq On:	10 Apr 2025 22:51
Client Sample ID:	PB167513BSD	Operator:	YP/AJ
Data file:	FC068562.D	Misc:	
Instrument:	FID_C	ALS Vial:	21
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.345	6.644	9299361	88.328	300	ug/ml
Aliphatic C12-C16	6.645	10.043	8429399	82.381	200	ug/ml
Aliphatic C16-C21	10.044	13.409	14243382	144.14	300	ug/ml
Aliphatic C21-C28	13.410	17.073	18255682	193.827	400	ug/ml
Aliphatic C28-C40	17.074	22.075	26143226	290.859	600	ug/ml
Aliphatic EPH	3.345	22.075	76371050	799.535		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.144	13.144	3378740	36.37		ug/ml
Aliphatic C9-C28	3.345	17.073	50227824	508.676	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068562.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 22:51
 Operator : YP/AJ
 Sample : PB167513BSD
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB167513BSD

Integration File: autoint1.e
 Quant Time: Apr 11 03:46:35 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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...	13.144	3378740	36.372 ug/ml
Spiked Amount 50.000		Recovery =	72.74%
Target Compounds			
1) T n-Nonane (C9)	3.445	2590000	24.591 ug/ml
2) T n-Decane (C10)	4.520	3152325	29.920 ug/ml
4) T n-Dodecane (C12)	6.544	3557036	33.824 ug/ml
6) T n-Tetradecane (C14)	8.342	3996243	38.872 ug/ml
7) T n-Hexadecane (C16)	9.945	4433156	43.530 ug/ml
8) T n-Octadecane (C18)	11.388	4682520	46.531 ug/ml
10) T n-Eicosane (C20)	12.699	4879459	49.608 ug/ml
11) T n-Heneicosane (C21)	13.311	4681403	48.036 ug/ml
13) T n-Docosane (C22)	13.898	4675280	48.401 ug/ml
14) T n-Tetracosane (C24)	15.002	4605982	48.390 ug/ml
15) T n-Hexacosane (C26)	16.023	4493132	48.104 ug/ml
16) T n-Octacosane (C28)	16.975	4481288	48.945 ug/ml
17) T n-Tricontane (C30)	17.864	4533322	49.312 ug/ml
18) T n-Dotriacontane (C32)	18.698	4498769	49.044 ug/ml
19) T n-Tetratriacontane (C34)	19.483	4437893	49.675 ug/ml
20) T n-Hexatriacontane (C36)	20.224	4269087	47.657 ug/ml
21) T n-Octatriacontane (C38)	20.999	4217418	47.702 ug/ml
22) T n-Tetracontane (C40)	21.975	4186737	47.412 ug/ml

(f)=RT Delta > 1/2 Window

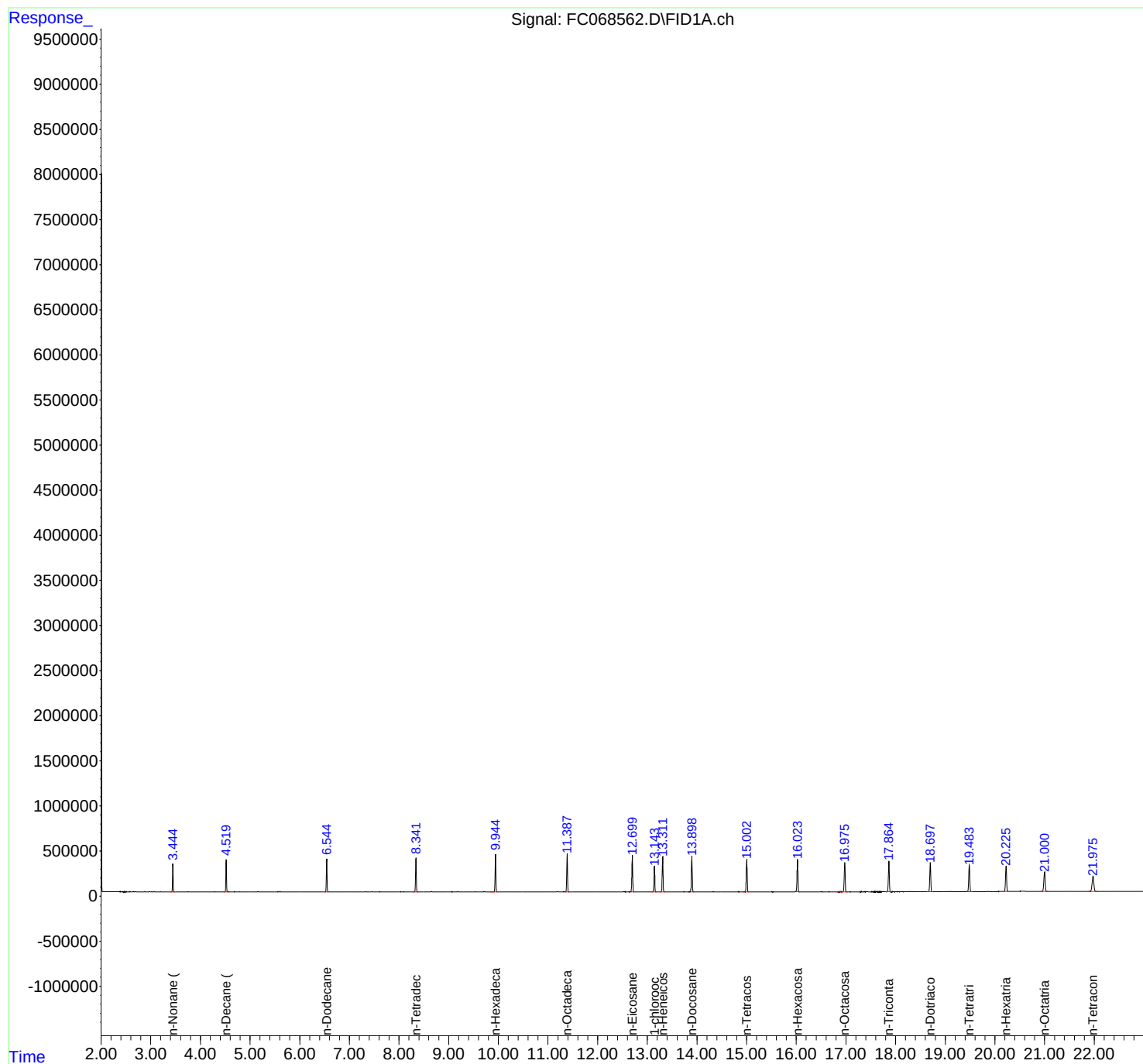
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068562.D
Signal(s) : FID1A.ch
Acq On : 10 Apr 2025 22:51
Operator : YP/AJ
Sample : PB167513BSD
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167513BSD

Integration File: autoint1.e
Quant Time: Apr 11 03:46:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068562.D
 Signal(s) : FID1A.ch
 Acq On : 10 Apr 2025 22:51
 Sample : PB167513BSD
 Misc :
 ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	3.445	3.395	3.488	BB	311051	2590000	53.08%	3.248%
2	4.520	4.465	4.555	BV	360380	3152325	64.60%	3.953%
3	6.544	6.492	6.577	BB	368696	3557036	72.90%	4.460%
4	8.342	8.280	8.387	BB	379510	3996243	81.90%	5.011%
5	9.945	9.823	9.992	BB	417831	4433156	90.85%	5.559%
6	11.388	11.347	11.437	BB	422975	4682520	95.96%	5.872%
7	12.699	12.663	12.738	BB	402700	4879459	100.00%	6.118%
8	13.144	13.075	13.190	BB	289729	3378740	69.24%	4.237%
9	13.311	13.250	13.352	BB	394244	4681403	95.94%	5.870%
10	13.898	13.862	13.942	VB	400411	4675280	95.82%	5.862%
11	15.002	14.913	15.047	BB	365565	4605982	94.40%	5.776%
12	16.023	15.990	16.070	BB	359806	4493132	92.08%	5.634%
13	16.975	16.818	17.033	BB	326442	4481288	91.84%	5.619%
14	17.864	17.795	17.917	BB	341396	4533322	92.91%	5.684%
15	18.698	18.628	18.752	BB	324430	4498769	92.20%	5.641%
16	19.483	19.440	19.540	BB	294081	4437893	90.95%	5.565%
17	20.224	20.180	20.267	BB	284624	4269087	87.49%	5.353%
18	20.999	20.917	21.075	BB	214407	4217418	86.43%	5.288%
19	21.975	21.878	22.075	BB	171086	4186737	85.80%	5.250%
Sum of corrected areas:						79749786		

Aliphatic EPH 040925.M Fri Apr 11 04:49:07 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MS	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
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
04/08/25 10:10	04/11/25 1:55	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C9-C12	Aliphatic C9-C12	5.46		1	0.16	1.12	mg/kg	FC068567.D
Aliphatic C12-C16	Aliphatic C12-C16	7.54		1	0.12	0.75	mg/kg	FC068567.D
Aliphatic C16-C21	Aliphatic C16-C21	10.3		1	0.14	1.12	mg/kg	FC068567.D
Aliphatic C21-C28	Aliphatic C21-C28	13.2		1	0.59	1.49	mg/kg	FC068567.D
Aliphatic C28-C40	Aliphatic C28-C40	20.9		1	1.32	2.24	mg/kg	FC068567.D
Aromatic C10-C12	Aromatic C10-C12	3.09		1	0.13	0.75	mg/kg	FD049276.D
Aromatic C12-C16	Aromatic C12-C16	6.86		1	0.26	1.12	mg/kg	FD049276.D
Aromatic C16-C21	Aromatic C16-C21	18.3		1	0.45	1.86	mg/kg	FD049276.D
Aromatic C21-C36	Aromatic C21-C36	30.2		1	1.33	2.98	mg/kg	FD049276.D
Total AliphaticEPH	Total AliphaticEPH	57.4			2.34	6.72	mg/kg	
Total AromaticEPH	Total AromaticEPH	58.5			2.17	6.71	mg/kg	
Total EPH	Total EPH	116			4.51	13.4	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:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MS	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
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
FC068567.D	1	04/08/25	04/11/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.46		0.16	1.12	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	7.54		0.12	0.75	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	10.3		0.14	1.12	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	13.2		0.59	1.49	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	20.9		1.32	2.24	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	40.0		40 - 140	80%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1746-01MS	Acq On:	11 Apr 2025 01:55
Client Sample ID:	B-149-SB01MS	Operator:	YP/AJ
Data file:	FC068567.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	3.345	6.644	7702838	73.164	300	ug/ml
Aliphatic C12-C16	6.645	10.043	10348107	101.132	200	ug/ml
Aliphatic C16-C21	10.044	13.409	13666430	138.301	300	ug/ml
Aliphatic C21-C28	13.410	17.073	16611483	176.37	400	ug/ml
Aliphatic C28-C40	17.074	22.075	25202936	280.398	600	ug/ml
Aliphatic EPH	3.345	22.075	73531794	769.365		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.145	13.145	3712633	39.97		ug/ml
Aliphatic C9-C28	3.345	17.073	48328858	488.967	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068567.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 01:55
 Operator : YP/AJ
 Sample : Q1746-01MS
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 B-149-SB01MS

Integration File: autoint1.e
 Quant Time: Apr 11 03:48:01 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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...	13.145	3712633	39.966 ug/ml
Spiked Amount 50.000		Recovery =	79.93%
Target Compounds			
1) T n-Nonane (C9)	3.445	1597930	15.172 ug/ml
2) T n-Decane (C10)	4.519	2034608	19.311 ug/ml
4) T n-Dodecane (C12)	6.544	2670472	25.394 ug/ml
6) T n-Tetradecane (C14)	8.342	3370380	32.784 ug/ml
7) T n-Hexadecane (C16)	9.945	3951267	38.798 ug/ml
8) T n-Octadecane (C18)	11.387	4052107	40.266 ug/ml
10) T n-Eicosane (C20)	12.698	4152640	42.219 ug/ml
11) T n-Heneicosane (C21)	13.311	3974185	40.779 ug/ml
13) T n-Docosane (C22)	13.897	3941290	40.802 ug/ml
14) T n-Tetracosane (C24)	15.002	4003738	42.063 ug/ml
15) T n-Hexacosane (C26)	16.025	3808744	40.777 ug/ml
16) T n-Octacosane (C28)	16.975	3785529	41.346 ug/ml
17) T n-Tricontane (C30)	17.864	3836308	41.730 ug/ml
18) T n-Dotriacontane (C32)	18.697	3807746	41.511 ug/ml
19) T n-Tetratriacontane (C34)	19.482	3799314	42.527 ug/ml
20) T n-Hexatriacontane (C36)	20.223	3701952	41.326 ug/ml
21) T n-Octatriacontane (C38)	20.998	3710211	41.965 ug/ml
22) T n-Tetracontane (C40)	21.974	3584183	40.588 ug/ml

(f)=RT Delta > 1/2 Window

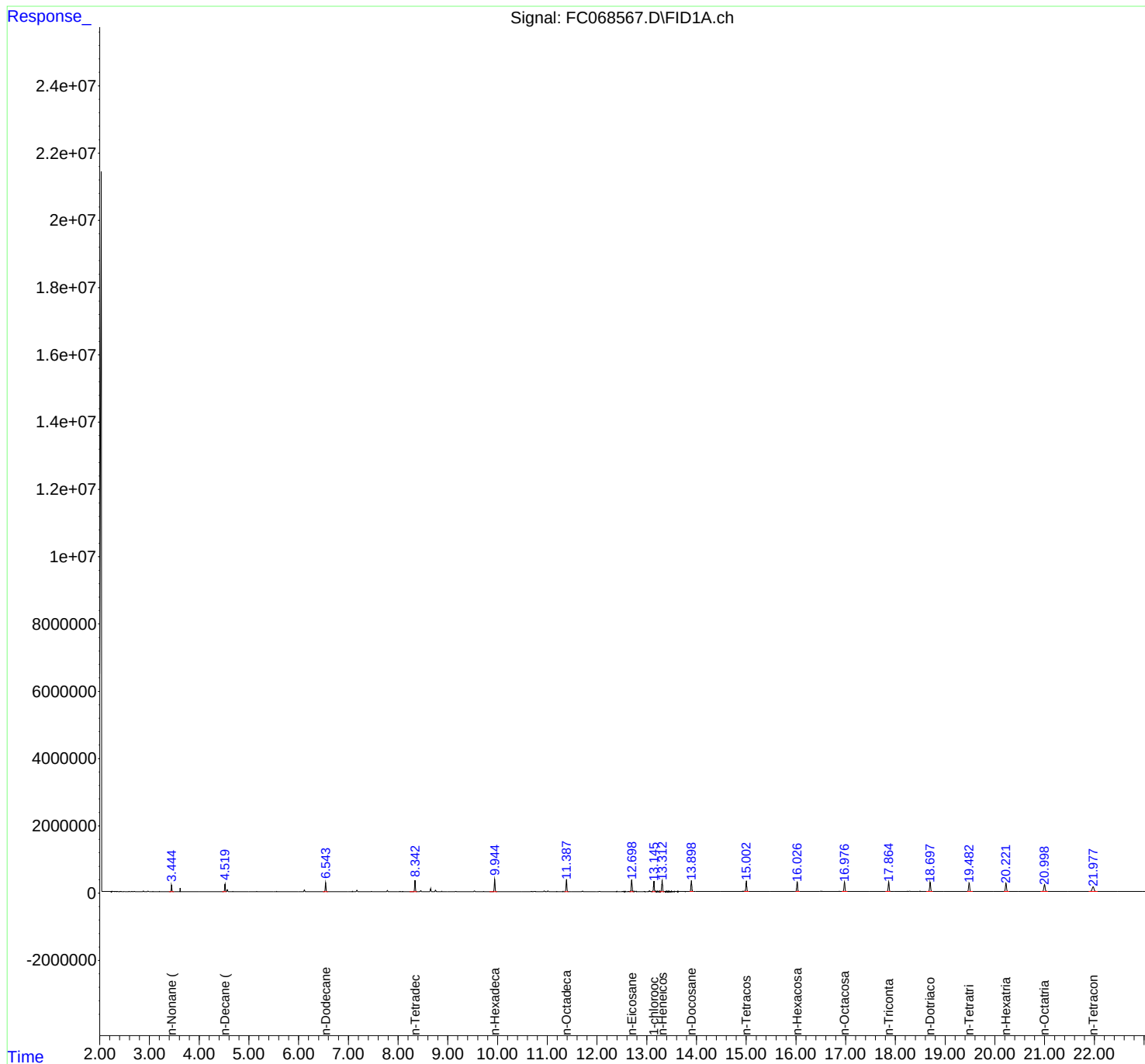
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068567.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 01:55
Operator : YP/AJ
Sample : Q1746-01MS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-149-SB01MS

Integration File: autoint1.e
Quant Time: Apr 11 03:48:01 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068567.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 01:55
 Sample : Q1746-01MS
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	2.361	2.321	2.398	BV	1365	4748	0.11%	0.006%
2	2.426	2.398	2.474	PV	4816	45725	1.10%	0.059%
3	2.490	2.474	2.509	PV	891	6940	0.17%	0.009%
4	2.519	2.509	2.560	VV	173	1376	0.03%	0.002%
5	2.589	2.560	2.624	VV	1995	17602	0.42%	0.023%
6	2.648	2.624	2.670	PV	6597	50846	1.22%	0.065%
7	2.697	2.670	2.741	VV	6964	63820	1.53%	0.082%
8	2.750	2.741	2.762	VV	167	1337	0.03%	0.002%
9	2.778	2.762	2.803	VV	566	4873	0.12%	0.006%
10	2.814	2.803	2.849	VV	359	3072	0.07%	0.004%
11	2.879	2.849	2.944	PV	20966	161183	3.88%	0.207%
12	2.969	2.944	3.002	VV	11148	135487	3.26%	0.174%
13	3.019	3.002	3.051	VV	789	7354	0.18%	0.009%
14	3.069	3.051	3.097	PV	1338	12015	0.29%	0.015%
15	3.107	3.097	3.132	VV	124	1035	0.02%	0.001%
16	3.147	3.132	3.177	PV	178	2409	0.06%	0.003%
17	3.197	3.177	3.247	VV	1337	12550	0.30%	0.016%
18	3.270	3.247	3.311	VV	183	3395	0.08%	0.004%
19	3.345	3.311	3.385	PV	126	2601	0.06%	0.003%
20	3.394	3.385	3.405	PV	120	928	0.02%	0.001%
21	3.445	3.405	3.518	VV	194805	1602269	38.53%	2.059%
22	3.524	3.518	3.535	VV	92	722	0.02%	0.001%
23	3.577	3.535	3.596	VV	259	4816	0.12%	0.006%
24	3.603	3.596	3.615	VV	148	1203	0.03%	0.002%
25	3.618	3.615	3.635	VV	39712	74567	1.79%	0.096%
26	3.649	3.635	3.683	VV	174	3011	0.07%	0.004%
27	3.724	3.683	3.744	VV	277	5268	0.13%	0.007%
28	3.770	3.744	3.808	VV	330	6923	0.17%	0.009%
29	3.824	3.808	3.855	VV	227	4384	0.11%	0.006%
30	3.861	3.855	3.881	VV	247	2669	0.06%	0.003%
31	3.893	3.881	3.931	VV	242	3646	0.09%	0.005%
32	3.946	3.931	3.981	VV	315	5066	0.12%	0.007%
33	3.991	3.981	4.011	VV	212	2621	0.06%	0.003%
34	4.028	4.011	4.087	VV	311	6598	0.16%	0.008%
35	4.120	4.087	4.132	VV	396	5946	0.14%	0.008%
36	4.148	4.132	4.200	VV	810	10240	0.25%	0.013%

					rteres			
37	4.214	4.200	4.245	VV	266	3491	0.08%	0.004%
38	4.289	4.245	4.314	PV	653	11882	0.29%	0.015%
39	4.329	4.314	4.408	VV	193	7323	0.18%	0.009%
40	4.442	4.408	4.495	VV	207	7242	0.17%	0.009%
41	4.519	4.495	4.545	VV	226717	2040410	49.07%	2.622%
42	4.565	4.545	4.607	VV	55709	491726	11.83%	0.632%
43	4.627	4.607	4.652	VV	1085	13835	0.33%	0.018%
44	4.675	4.652	4.710	VV	1516	22820	0.55%	0.029%
45	4.747	4.710	4.760	VV	689	9292	0.22%	0.012%
46	4.776	4.760	4.798	VV	1215	12431	0.30%	0.016%
47	4.809	4.798	4.841	VV	218	3426	0.08%	0.004%
48	4.862	4.841	4.877	VV	139	2192	0.05%	0.003%
49	4.900	4.877	4.916	VV	191	2852	0.07%	0.004%
50	4.941	4.916	4.955	VV	238	3299	0.08%	0.004%
51	4.970	4.955	4.991	VV	189	2802	0.07%	0.004%
52	5.000	4.991	5.041	VV	250	3050	0.07%	0.004%
53	5.056	5.041	5.065	VV	140	1158	0.03%	0.001%
54	5.083	5.065	5.105	VV	222	2660	0.06%	0.003%
55	5.131	5.105	5.140	VV	478	4639	0.11%	0.006%
56	5.157	5.140	5.191	VV	2001	22870	0.55%	0.029%
57	5.215	5.191	5.233	VV	385	5029	0.12%	0.006%
58	5.244	5.233	5.254	VV	165	1445	0.03%	0.002%
59	5.264	5.254	5.311	VV	198	2758	0.07%	0.004%
60	5.349	5.311	5.373	VV	188	4199	0.10%	0.005%
61	5.384	5.373	5.418	VV	284	3650	0.09%	0.005%
62	5.460	5.418	5.474	VV	177	3828	0.09%	0.005%
63	5.481	5.474	5.495	VV	103	999	0.02%	0.001%
64	5.560	5.495	5.581	VV	1649	20321	0.49%	0.026%
65	5.602	5.581	5.643	VV	834	11003	0.26%	0.014%
66	5.659	5.643	5.678	VV	206	2456	0.06%	0.003%
67	5.688	5.678	5.704	VV	132	1367	0.03%	0.002%
68	5.751	5.704	5.780	VV	383	7219	0.17%	0.009%
69	5.804	5.780	5.825	VV	162	2790	0.07%	0.004%
70	5.851	5.825	5.885	VV	335	6530	0.16%	0.008%
71	5.910	5.885	5.966	VV	181	5796	0.14%	0.007%
72	5.977	5.966	5.992	VV	197	1646	0.04%	0.002%
73	6.015	5.992	6.037	PV	175	2599	0.06%	0.003%
74	6.064	6.037	6.074	VV	216	2527	0.06%	0.003%
75	6.116	6.074	6.146	VV	51996	481571	11.58%	0.619%
76	6.160	6.146	6.181	VV	369	5186	0.12%	0.007%
77	6.203	6.181	6.238	VV	676	10149	0.24%	0.013%
78	6.264	6.238	6.282	VV	429	6387	0.15%	0.008%
79	6.334	6.282	6.371	VV	263	8912	0.21%	0.011%
80	6.385	6.371	6.405	VV	191	2787	0.07%	0.004%
81	6.431	6.405	6.452	VV	262	4151	0.10%	0.005%
82	6.475	6.452	6.508	VV	191	4649	0.11%	0.006%
83	6.544	6.508	6.603	VV	272886	2675802	64.35%	3.439%
84	6.629	6.603	6.647	VV	289	4204	0.10%	0.005%
85	6.663	6.647	6.675	VV	267	2566	0.06%	0.003%
86	6.693	6.675	6.714	VV	1066	11591	0.28%	0.015%
87	6.729	6.714	6.747	VV	311	4244	0.10%	0.005%
88	6.766	6.747	6.783	VV	341	4443	0.11%	0.006%
89	6.804	6.783	6.850	VV	131	4468	0.11%	0.006%

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90	6.873	6.850	6.920	VV	212	6013	0.14%	0.008%
91	6.942	6.920	6.968	VV	193	3897	0.09%	0.005%
92	6.987	6.968	7.016	VV	312	4510	0.11%	0.006%
93	7.041	7.016	7.061	VV	554	8321	0.20%	0.011%
94	7.081	7.061	7.133	VV	1529	23312	0.56%	0.030%
95	7.173	7.133	7.227	VV	44120	433371	10.42%	0.557%
96	7.248	7.227	7.271	VV	642	8117	0.20%	0.010%
97	7.273	7.271	7.290	VV	209	1212	0.03%	0.002%
98	7.330	7.290	7.354	VV	1063	16535	0.40%	0.021%
99	7.389	7.354	7.417	VV	228	5902	0.14%	0.008%
100	7.438	7.417	7.446	VV	281	3396	0.08%	0.004%
101	7.468	7.446	7.513	VV	2657	29627	0.71%	0.038%
102	7.537	7.513	7.548	VV	236	3528	0.08%	0.005%
103	7.561	7.548	7.581	VV	438	4496	0.11%	0.006%
104	7.597	7.581	7.625	VV	109	1903	0.05%	0.002%
105	7.652	7.625	7.670	VV	202	4056	0.10%	0.005%
106	7.680	7.670	7.713	VV	143	1784	0.04%	0.002%
107	7.731	7.713	7.755	VV	493	5543	0.13%	0.007%
108	7.785	7.755	7.874	VV	34243	332774	8.00%	0.428%
109	7.896	7.874	7.935	VV	360	7831	0.19%	0.010%
110	7.951	7.935	7.973	VV	260	3381	0.08%	0.004%
111	7.991	7.973	8.015	VV	304	3972	0.10%	0.005%
112	8.036	8.015	8.075	VV	1994	24223	0.58%	0.031%
113	8.093	8.075	8.116	VV	1687	18136	0.44%	0.023%
114	8.128	8.116	8.137	VV	222	1777	0.04%	0.002%
115	8.162	8.137	8.180	VV	520	7053	0.17%	0.009%
116	8.196	8.180	8.221	VV	245	4300	0.10%	0.006%
117	8.248	8.221	8.268	VV	691	9865	0.24%	0.013%
118	8.274	8.268	8.287	VV	305	2997	0.07%	0.004%
119	8.342	8.287	8.408	VV	330756	3377738	81.24%	4.341%
120	8.457	8.408	8.515	VV	28561	297777	7.16%	0.383%
121	8.532	8.515	8.557	VV	423	6661	0.16%	0.009%
122	8.572	8.557	8.606	VV	411	5748	0.14%	0.007%
123	8.615	8.606	8.622	VV	86	365	0.01%	0.000%
124	8.655	8.622	8.685	PV	82566	806389	19.39%	1.036%
125	8.693	8.685	8.725	VV	410	7294	0.18%	0.009%
126	8.754	8.725	8.792	VV	43798	439600	10.57%	0.565%
127	8.806	8.792	8.819	VV	409	5553	0.13%	0.007%
128	8.831	8.819	8.853	VV	392	6950	0.17%	0.009%
129	8.878	8.853	8.918	VV	1515	23180	0.56%	0.030%
130	8.939	8.918	8.981	VV	271	5323	0.13%	0.007%
131	8.997	8.981	9.013	VV	270	2674	0.06%	0.003%
132	9.028	9.013	9.041	VV	237	2167	0.05%	0.003%
133	9.063	9.041	9.082	VV	1238	15038	0.36%	0.019%
134	9.102	9.082	9.135	VV	629	12398	0.30%	0.016%
135	9.163	9.135	9.211	VV	2456	46275	1.11%	0.059%
136	9.221	9.211	9.238	VV	284	3233	0.08%	0.004%
137	9.251	9.238	9.288	VV	319	4603	0.11%	0.006%
138	9.304	9.288	9.336	VV	276	3579	0.09%	0.005%
139	9.353	9.336	9.367	VV	124	1701	0.04%	0.002%
140	9.421	9.367	9.434	VV	323	6786	0.16%	0.009%
141	9.465	9.434	9.507	VV	513	10308	0.25%	0.013%

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142	9.537	9.507	9.567	VV	21311	223344	5.37%	0.287%
143	9.582	9.567	9.601	VV	664	9141	0.22%	0.012%
144	9.621	9.601	9.645	VV	384	7055	0.17%	0.009%
145	9.672	9.645	9.701	VV	575	10953	0.26%	0.014%
146	9.723	9.701	9.741	VV	1992	22127	0.53%	0.028%
147	9.753	9.741	9.775	VV	717	7629	0.18%	0.010%
148	9.782	9.775	9.798	VV	187	1554	0.04%	0.002%
149	9.815	9.798	9.843	VV	651	7742	0.19%	0.010%
150	9.865	9.843	9.905	VV	414	9447	0.23%	0.012%
151	9.945	9.905	9.994	VV	366226	3942971	94.83%	5.067%
152	10.027	9.994	10.039	VV	297	5660	0.14%	0.007%
153	10.045	10.039	10.082	VV	250	3714	0.09%	0.005%
154	10.095	10.082	10.108	VV	116	996	0.02%	0.001%
155	10.115	10.108	10.190	VV	130	2178	0.05%	0.003%
156	10.222	10.190	10.236	PV	204	1729	0.04%	0.002%
157	10.265	10.236	10.301	PV	256	5605	0.13%	0.007%
158	10.333	10.301	10.357	VV	1087	16490	0.40%	0.021%
159	10.377	10.357	10.396	VV	378	6128	0.15%	0.008%
160	10.423	10.396	10.457	VV	381	8246	0.20%	0.011%
161	10.477	10.457	10.521	VV	348	6631	0.16%	0.009%
162	10.542	10.521	10.558	VV	225	3762	0.09%	0.005%
163	10.575	10.558	10.598	VV	276	5544	0.13%	0.007%
164	10.614	10.598	10.644	VV	371	7834	0.19%	0.010%
165	10.681	10.644	10.712	VV	2627	36933	0.89%	0.047%
166	10.752	10.712	10.788	VV	2160	51950	1.25%	0.067%
167	10.813	10.788	10.859	VV	572	12353	0.30%	0.016%
168	10.869	10.859	10.914	VV	199	6198	0.15%	0.008%
169	10.940	10.914	10.979	VV	19379	206014	4.95%	0.265%
170	11.014	10.979	11.042	VV	20793	214639	5.16%	0.276%
171	11.055	11.042	11.071	VV	382	5346	0.13%	0.007%
172	11.078	11.071	11.089	VV	359	3612	0.09%	0.005%
173	11.097	11.089	11.121	VV	343	5649	0.14%	0.007%
174	11.136	11.121	11.161	VV	324	4475	0.11%	0.006%
175	11.189	11.161	11.227	VV	1091	13837	0.33%	0.018%
176	11.248	11.227	11.266	VV	66	847	0.02%	0.001%
177	11.316	11.266	11.346	PV	973	13939	0.34%	0.018%
178	11.387	11.346	11.448	VV	357492	4058010	97.60%	5.215%
179	11.478	11.448	11.524	VV	883	14237	0.34%	0.018%
180	11.542	11.524	11.559	PV	197	1907	0.05%	0.002%
181	11.576	11.559	11.588	VV	102	907	0.02%	0.001%
182	11.595	11.588	11.603	VV	59	508	0.01%	0.001%
183	11.709	11.603	11.735	VV	12394	140366	3.38%	0.180%
184	11.743	11.735	11.759	VV	415	3939	0.09%	0.005%
185	11.780	11.759	11.806	VV	606	9107	0.22%	0.012%
186	11.839	11.806	11.858	VV	401	8846	0.21%	0.011%
187	11.869	11.858	11.885	VV	389	4610	0.11%	0.006%
188	11.898	11.885	11.918	VV	285	3656	0.09%	0.005%
189	11.935	11.918	11.958	VV	188	4093	0.10%	0.005%
190	11.960	11.958	11.969	VV	230	958	0.02%	0.001%
191	12.054	11.969	12.088	VV	3079	51211	1.23%	0.066%
192	12.104	12.088	12.127	VV	350	5947	0.14%	0.008%
193	12.150	12.127	12.171	VV	563	8629	0.21%	0.011%
194	12.214	12.171	12.238	VV	276	8029	0.19%	0.010%

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195	12.277	12.238	12.305	VV	574	12031	0.29%	0.015%
196	12.346	12.305	12.375	VV	558	15509	0.37%	0.020%
197	12.392	12.375	12.407	VV	758	9641	0.23%	0.012%
198	12.419	12.407	12.455	VV	423	9918	0.24%	0.013%
199	12.467	12.455	12.479	VV	524	6073	0.15%	0.008%
200	12.521	12.479	12.548	VV	1320	31527	0.76%	0.041%
201	12.558	12.548	12.599	VV	831	12289	0.30%	0.016%
202	12.637	12.599	12.660	VV	865	15501	0.37%	0.020%
203	12.698	12.660	12.733	VV	353622	4157981	100.00%	5.343%
204	12.759	12.733	12.808	VV	14344	170674	4.10%	0.219%
205	12.818	12.808	12.836	VV	306	3960	0.10%	0.005%
206	12.843	12.836	12.890	VV	173	3461	0.08%	0.004%
207	12.949	12.890	13.009	VV	635	16474	0.40%	0.021%
208	13.019	13.009	13.030	VV	220	2268	0.05%	0.003%
209	13.059	13.030	13.086	VV	18174	202416	4.87%	0.260%
210	13.145	13.086	13.180	VV	313804	3730316	89.71%	4.794%
211	13.194	13.180	13.221	VV	479	8887	0.21%	0.011%
212	13.228	13.221	13.234	VV	378	2329	0.06%	0.003%
213	13.245	13.234	13.268	VV	392	6744	0.16%	0.009%
214	13.311	13.268	13.347	VV	333983	3989556	95.95%	5.127%
215	13.363	13.347	13.376	VV	554	7792	0.19%	0.010%
216	13.380	13.376	13.438	VV	426	11790	0.28%	0.015%
217	13.448	13.438	13.456	VV	292	2508	0.06%	0.003%
218	13.481	13.456	13.505	VV	363	7315	0.18%	0.009%
219	13.543	13.505	13.558	VV	483	12082	0.29%	0.016%
220	13.579	13.558	13.627	VV	469	14492	0.35%	0.019%
221	13.654	13.627	13.670	VV	542	10053	0.24%	0.013%
222	13.688	13.670	13.715	VV	798	13845	0.33%	0.018%
223	13.738	13.715	13.778	VV	1130	23216	0.56%	0.030%
224	13.810	13.778	13.825	VV	402	9671	0.23%	0.012%
225	13.843	13.825	13.860	VV	885	13480	0.32%	0.017%
226	13.897	13.860	13.941	VV	324231	3955508	95.13%	5.083%
227	13.955	13.941	13.976	VV	529	8733	0.21%	0.011%
228	13.987	13.976	14.008	VV	379	5367	0.13%	0.007%
229	14.033	14.008	14.086	VV	318	11109	0.27%	0.014%
230	14.123	14.086	14.168	VV	619	19802	0.48%	0.025%
231	14.191	14.168	14.242	VV	354	13684	0.33%	0.018%
232	14.258	14.242	14.275	VV	345	5873	0.14%	0.008%
233	14.331	14.275	14.358	VV	1410	31156	0.75%	0.040%
234	14.369	14.358	14.385	VV	430	5763	0.14%	0.007%
235	14.392	14.385	14.408	VV	360	4734	0.11%	0.006%
236	14.416	14.408	14.432	VV	496	5706	0.14%	0.007%
237	14.458	14.432	14.482	VV	1666	24080	0.58%	0.031%
238	14.530	14.482	14.548	VV	413	11491	0.28%	0.015%
239	14.560	14.548	14.578	VV	433	6165	0.15%	0.008%
240	14.582	14.578	14.608	VV	401	5621	0.14%	0.007%
241	14.624	14.608	14.641	VV	318	4898	0.12%	0.006%
242	14.659	14.641	14.703	VV	418	11154	0.27%	0.014%
243	14.725	14.703	14.798	VV	476	17902	0.43%	0.023%
244	14.854	14.798	14.878	VV	490	16702	0.40%	0.021%
245	14.936	14.878	14.957	VV	9767	119333	2.87%	0.153%
246	15.002	14.957	15.125	VV	316467	4025807	96.82%	5.173%

					rteres			
247	15.144	15.125	15.157	VV	151	2502	0.06%	0.003%
248	15.198	15.157	15.213	VV	331	6759	0.16%	0.009%
249	15.246	15.213	15.262	VV	303	7014	0.17%	0.009%
250	15.270	15.262	15.298	VV	263	3264	0.08%	0.004%
251	15.334	15.298	15.360	VV	399	8884	0.21%	0.011%
252	15.386	15.360	15.408	VV	319	5816	0.14%	0.007%
253	15.426	15.408	15.445	VV	286	4970	0.12%	0.006%
254	15.450	15.445	15.468	VV	259	2628	0.06%	0.003%
255	15.481	15.468	15.498	VV	207	2867	0.07%	0.004%
256	15.519	15.498	15.575	VV	2053	31726	0.76%	0.041%
257	15.577	15.575	15.590	VV	251	1545	0.04%	0.002%
258	15.608	15.590	15.655	VV	245	4986	0.12%	0.006%
259	15.670	15.655	15.682	VV	249	2658	0.06%	0.003%
260	15.701	15.682	15.738	VV	335	6693	0.16%	0.009%
261	15.750	15.738	15.778	VV	283	5388	0.13%	0.007%
262	15.789	15.778	15.811	VV	257	3935	0.09%	0.005%
263	15.854	15.811	15.898	VV	370	11703	0.28%	0.015%
264	15.911	15.898	15.928	VV	231	3076	0.07%	0.004%
265	15.948	15.928	15.958	VV	210	2593	0.06%	0.003%
266	16.024	15.958	16.098	VV	288666	3847135	92.52%	4.944%
267	16.120	16.098	16.135	VV	193	1870	0.04%	0.002%
268	16.145	16.135	16.165	PV	91	788	0.02%	0.001%
269	16.189	16.165	16.209	VV	333	5931	0.14%	0.008%
270	16.243	16.209	16.288	VV	372	9776	0.24%	0.013%
271	16.313	16.288	16.321	VV	282	3918	0.09%	0.005%
272	16.336	16.321	16.360	VV	349	5431	0.13%	0.007%
273	16.395	16.360	16.437	VV	356	9894	0.24%	0.013%
274	16.493	16.437	16.508	VV	8157	112602	2.71%	0.145%
275	16.523	16.508	16.561	VV	7511	101820	2.45%	0.131%
276	16.576	16.561	16.614	VV	310	7716	0.19%	0.010%
277	16.667	16.614	16.715	VV	532	23143	0.56%	0.030%
278	16.750	16.715	16.767	VV	457	10901	0.26%	0.014%
279	16.783	16.767	16.798	VV	402	6350	0.15%	0.008%
280	16.812	16.798	16.833	VV	478	8437	0.20%	0.011%
281	16.873	16.833	16.907	VV	7177	101829	2.45%	0.131%
282	16.975	16.907	17.035	VV	282540	3806798	91.55%	4.892%
283	17.052	17.035	17.082	VV	440	10887	0.26%	0.014%
284	17.119	17.082	17.153	VV	520	17469	0.42%	0.022%
285	17.230	17.153	17.271	VV	608	31759	0.76%	0.041%
286	17.298	17.271	17.347	VV	822	21683	0.52%	0.028%
287	17.422	17.347	17.461	VV	2866	61191	1.47%	0.079%
288	17.467	17.461	17.488	VV	467	5620	0.14%	0.007%
289	17.554	17.488	17.582	VV	790	24312	0.58%	0.031%
290	17.603	17.582	17.618	VV	342	6213	0.15%	0.008%
291	17.629	17.618	17.634	VV	358	2581	0.06%	0.003%
292	17.647	17.634	17.678	VV	457	8417	0.20%	0.011%
293	17.685	17.678	17.698	VV	273	2771	0.07%	0.004%
294	17.752	17.698	17.797	VV	3316	64106	1.54%	0.082%
295	17.864	17.797	17.902	VV	287729	3852341	92.65%	4.951%
296	17.915	17.902	17.935	VV	413	5821	0.14%	0.007%
297	17.952	17.935	17.975	VV	323	6731	0.16%	0.009%
298	18.022	17.975	18.096	VV	1431	43473	1.05%	0.056%
299	18.129	18.096	18.161	VV	303	8754	0.21%	0.011%

					rteres			
300	18.242	18.161	18.261	VV	5814	84228	2.03%	0.108%
301	18.284	18.261	18.330	VV	9504	125960	3.03%	0.162%
302	18.388	18.330	18.448	PV	1170	28992	0.70%	0.037%
303	18.497	18.448	18.530	VV	5384	71081	1.71%	0.091%
304	18.549	18.530	18.571	VV	358	6297	0.15%	0.008%
305	18.591	18.571	18.606	VV	300	4428	0.11%	0.006%
306	18.615	18.606	18.626	VV	168	1207	0.03%	0.002%
307	18.697	18.626	18.778	PV	269072	3814394	91.74%	4.902%
308	18.814	18.778	18.838	VV	791	14442	0.35%	0.019%
309	18.863	18.838	18.905	VV	664	14384	0.35%	0.018%
310	18.919	18.905	18.935	VV	261	3802	0.09%	0.005%
311	18.949	18.935	18.968	VV	320	5036	0.12%	0.006%
312	18.985	18.968	19.021	VV	291	7565	0.18%	0.010%
313	19.093	19.021	19.121	VV	4723	77663	1.87%	0.100%
314	19.142	19.121	19.183	VV	535	12648	0.30%	0.016%
315	19.210	19.183	19.242	VV	530	12974	0.31%	0.017%
316	19.276	19.242	19.309	VV	509	14496	0.35%	0.019%
317	19.345	19.309	19.368	VV	550	14853	0.36%	0.019%
318	19.482	19.368	19.570	VV	252656	3859492	92.82%	4.960%
319	19.633	19.570	19.652	VV	919	34616	0.83%	0.044%
320	19.726	19.652	19.741	VV	923	41627	1.00%	0.053%
321	19.788	19.741	19.808	VV	981	35408	0.85%	0.046%
322	19.853	19.808	19.891	VV	2328	66566	1.60%	0.086%
323	20.032	19.891	20.055	VV	1446	119037	2.86%	0.153%
324	20.126	20.055	20.158	VV	2072	100114	2.41%	0.129%
325	20.223	20.158	20.285	VV	250821	3837761	92.30%	4.932%
326	20.306	20.285	20.327	VV	2034	48012	1.15%	0.062%
327	20.361	20.327	20.372	VV	2083	53855	1.30%	0.069%
328	20.389	20.372	20.414	VV	2149	50511	1.21%	0.065%
329	20.444	20.414	20.461	VV	2032	56726	1.36%	0.073%
330	20.500	20.461	20.518	VV	2049	66708	1.60%	0.086%
331	20.585	20.518	20.630	VV	2925	142540	3.43%	0.183%
332	20.735	20.630	20.757	VV	2089	144113	3.47%	0.185%
333	20.784	20.757	20.871	VV	2011	121783	2.93%	0.156%
334	20.880	20.871	20.922	VV	1611	47309	1.14%	0.061%
335	20.998	20.922	21.088	VV	204860	3850908	92.61%	4.949%
336	21.097	21.088	21.138	VV	1433	40839	0.98%	0.052%
337	21.147	21.138	21.188	VV	1291	37977	0.91%	0.049%
338	21.196	21.188	21.201	VV	1264	9792	0.24%	0.013%
339	21.209	21.201	21.231	VV	1204	21275	0.51%	0.027%
340	21.243	21.231	21.301	VV	1213	47326	1.14%	0.061%
341	21.340	21.301	21.401	VV	1137	59782	1.44%	0.077%
342	21.448	21.401	21.490	VV	1523	59316	1.43%	0.076%
343	21.502	21.490	21.541	VV	844	23494	0.57%	0.030%
344	21.549	21.541	21.558	VV	823	7633	0.18%	0.010%
345	21.597	21.558	21.627	VV	811	31046	0.75%	0.040%
346	21.639	21.627	21.678	VV	747	22424	0.54%	0.029%
347	21.689	21.678	21.726	VV	757	19679	0.47%	0.025%
348	21.741	21.726	21.778	VV	659	17107	0.41%	0.022%
349	21.815	21.778	21.824	VV	492	13142	0.32%	0.017%
350	21.832	21.824	21.895	VV	494	18319	0.44%	0.024%
351	21.975	21.895	22.103	VV	141554	3619007	87.04%	4.651%

					rteres			
352	22.131	22.103	22.142	VV	258	5066	0.12%	0.007%
353	22.152	22.142	22.165	VV	197	2510	0.06%	0.003%
354	22.179	22.165	22.218	VV	172	4378	0.11%	0.006%
355	22.236	22.218	22.272	VV	162	4103	0.10%	0.005%
356	22.281	22.272	22.302	VV	125	1522	0.04%	0.002%
357	22.323	22.302	22.331	VV	109	1280	0.03%	0.002%
					Sum of corrected areas:	77816733		

Aliphatic EPH 040925.M Fri Apr 11 04:58:41 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MS	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
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
FD049276.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	3.09		0.13	0.75	mg/kg
Aromatic C12-C16	Aromatic C12-C16	6.86		0.26	1.12	mg/kg
Aromatic C16-C21	Aromatic C16-C21	18.3		0.45	1.86	mg/kg
Aromatic C21-C36	Aromatic C21-C36	30.2		1.33	2.98	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	37.3		40 - 140	75%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	31.3		40 - 140	63%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	31.3		40 - 140	63%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	Q1746-01MS	Acq On:	10 Apr 2025 19:07
Client Sample ID:	B-149-SB01MS	Operator:	YP/AJ
Data file:	FD049276.D	Misc:	
Instrument:	FID_D	ALS Vial:	68
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	6502884	41.475	200	ug/ml
Aromatic C12-C16	6.186	8.813	15663652	92.017	300	ug/ml
Aromatic C16-C21	8.814	13.102	41109336	245.134	500	ug/ml
Aromatic C21-C36	13.103	18.519	55857007	404.349	800	ug/ml
Aromatic EPH	4.440	18.519	119132879	782.975		ug/ml
2-Bromonaphthalene (SURRE)	7.750	7.750	5519783	37.26		ug/ml
2-Fluorobiphenyl (SURRE)	8.615	8.615	3189374	31.27		ug/ml
ortho-Terphenyl (SURRE)	11.658	11.658	5506873	31.26		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049276.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 19:07
 Operator : YP/AJ
 Sample : Q1746-01MS
 Misc :
 ALS Vial : 68 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 B-149-SB01MS

Integration File: autoint1.e
 Quant Time: Apr 11 01:05:02 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.750	5519783	37.262 ug/ml
Spiked Amount 50.000		Recovery =	74.52%
6) S 2-Fluorobiphenyl (SURR)	8.615	3189374	31.268 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	62.54%
11) S ortho-Terphenyl (SURR)	11.658	5506873	31.256 ug/ml
Spiked Amount 50.000		Recovery =	62.51%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.541	2233228	14.903 ug/ml
2) T Naphthalene (C11.7)	6.086	3179791	19.420 ug/ml
3) T 2-Methylnaphthalene (...)	7.139	3544934	21.916 ug/ml
5) T Acenaphthylene (C15.06)	8.419	5104656	28.899 ug/ml
7) T Acenaphthene (C15.5)	8.715	5084253	29.511 ug/ml
8) T Fluorene (C16.55)	9.496	5959872	34.177 ug/ml
9) T Phenanthrene (C19.36)	10.895	6459746	37.641 ug/ml
10) T Anthracene (C19.43)	10.970	6192020	39.415 ug/ml
12) T Fluoranthene (C21.85)	12.709	6940271	41.060 ug/ml
13) T Pyrene (C20.8)	13.008	6682851	39.846 ug/ml
14) T Benzo[a]anthracene (C...	14.877	6258466	43.539 ug/ml
15) T Chrysene (C27.41)	14.922	6789279	47.052 ug/ml
16) T benzo[b]fluoranthene ...	16.428	6006098	43.171 ug/ml
17) T Bnezo[k]fluoranthene ...	16.463	5846624	42.749 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.809	5592066	43.004 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.174	5965719	48.393 ug/ml
20) T Dibenz[a,h]anthracene...	18.213	5470332	43.262 ug/ml
21) T Benzo[g,h,i]perylene ...	18.432	5548772	42.503 ug/ml

(f)=RT Delta > 1/2 Window

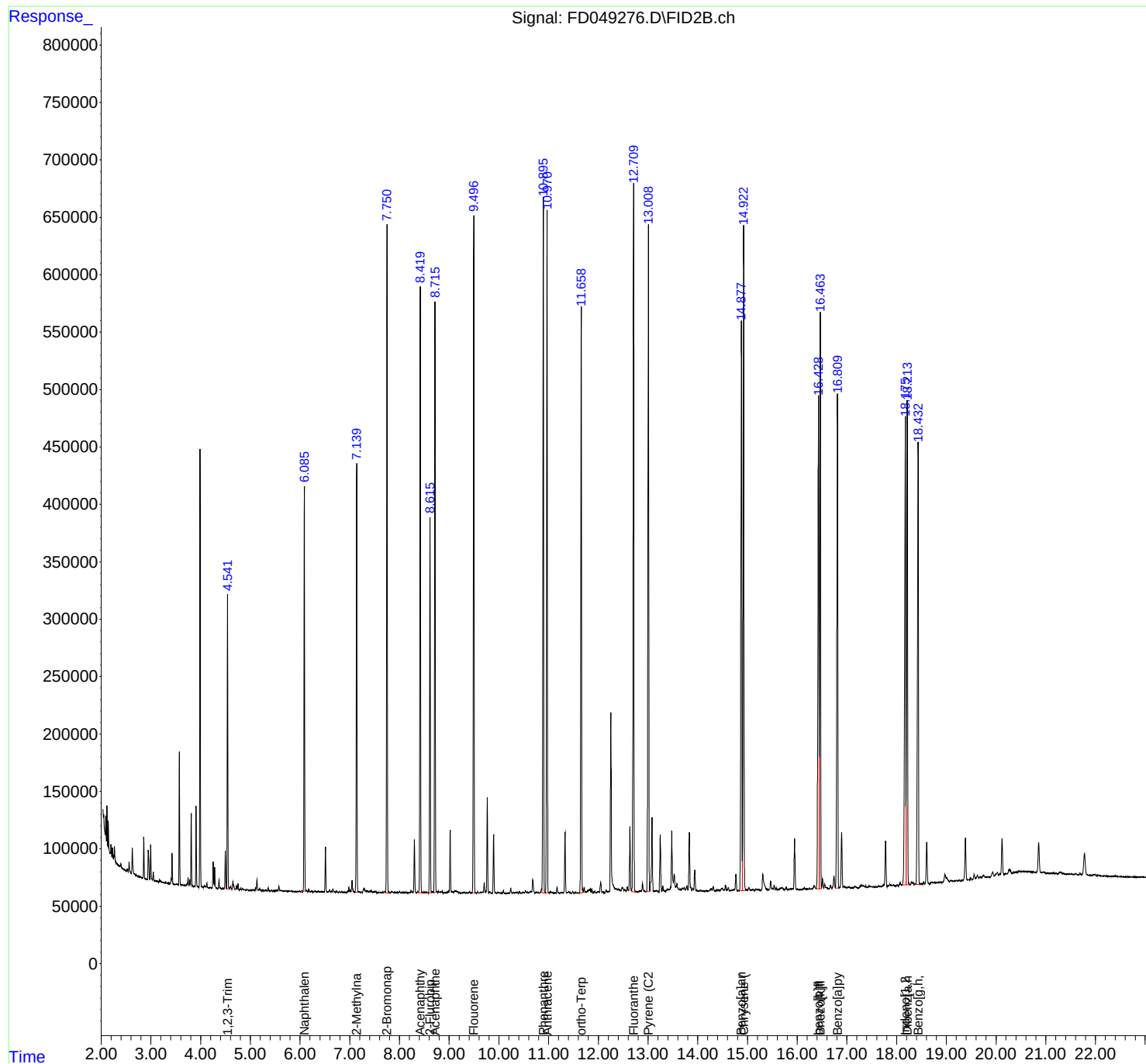
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049276.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 19:07
Operator : YP/AJ
Sample : Q1746-01MS
Misc :
ALS Vial : 68 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
B-149-SB01MS

Integration File: autoint1.e
Quant Time: Apr 11 01:05:02 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049276.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 19:07
 Sample : Q1746-01MS
 Misc :
 ALS Vial : 68 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.073	4.042	4.086	BV	1590	12825	0.18%	0.009%
2	4.098	4.086	4.111	VV	1333	13210	0.19%	0.009%
3	4.126	4.111	4.175	VV	3992	37866	0.54%	0.026%
4	4.190	4.175	4.217	PV	494	6815	0.10%	0.005%
5	4.253	4.227	4.269	VV	23066	252123	3.61%	0.174%
6	4.283	4.269	4.319	VV	18477	175339	2.51%	0.121%
7	4.321	4.319	4.332	VV	357	1311	0.02%	0.001%
8	4.369	4.342	4.408	VV	7575	68736	0.98%	0.047%
9	4.413	4.408	4.424	VV	191	1010	0.01%	0.001%
10	4.432	4.424	4.440	PV	238	1207	0.02%	0.001%
11	4.455	4.440	4.472	VV	487	5280	0.08%	0.004%
12	4.497	4.472	4.518	VV	32928	295672	4.24%	0.203%
13	4.541	4.518	4.580	VV	257174	2239790	32.09%	1.541%
14	4.604	4.580	4.627	VV	2193	35335	0.51%	0.024%
15	4.648	4.627	4.660	VV	6863	69796	1.00%	0.048%
16	4.665	4.660	4.694	VV	3915	34940	0.50%	0.024%
17	4.722	4.694	4.736	VV	3334	34563	0.50%	0.024%
18	4.752	4.736	4.779	VV	5404	49716	0.71%	0.034%
19	4.788	4.779	4.791	PV	268	1044	0.01%	0.001%
20	4.804	4.791	4.820	VV	1686	14665	0.21%	0.010%
21	4.840	4.820	4.866	VV	1674	21049	0.30%	0.014%
22	4.871	4.866	4.880	VV	601	4401	0.06%	0.003%
23	4.885	4.880	4.908	VV	535	5399	0.08%	0.004%
24	4.915	4.908	4.925	VV	401	2700	0.04%	0.002%
25	4.944	4.925	4.993	VV	751	11609	0.17%	0.008%
26	5.006	4.993	5.019	PV	303	2866	0.04%	0.002%
27	5.023	5.019	5.035	VV	239	1579	0.02%	0.001%
28	5.058	5.035	5.084	VV	782	12919	0.19%	0.009%
29	5.106	5.084	5.116	VV	2493	26349	0.38%	0.018%
30	5.133	5.116	5.165	VV	9664	108627	1.56%	0.075%
31	5.190	5.165	5.208	VV	1896	24906	0.36%	0.017%
32	5.213	5.208	5.224	VV	302	1973	0.03%	0.001%
33	5.255	5.224	5.272	VV	613	9934	0.14%	0.007%
34	5.307	5.272	5.313	VV	652	8838	0.13%	0.006%
35	5.324	5.313	5.344	VV	799	10291	0.15%	0.007%
36	5.359	5.344	5.399	VV	2808	32985	0.47%	0.023%

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37	5.419	5.399	5.431	VV	499	5964	0.09%	0.004%
38	5.436	5.431	5.473	VV	353	4674	0.07%	0.003%
39	5.499	5.473	5.512	PV	652	6995	0.10%	0.005%
40	5.534	5.512	5.552	VV	1307	14227	0.20%	0.010%
41	5.575	5.552	5.618	VV	4693	63595	0.91%	0.044%
42	5.632	5.618	5.667	VV	1098	16294	0.23%	0.011%
43	5.699	5.667	5.748	VV	813	21588	0.31%	0.015%
44	5.774	5.748	5.795	VV	636	9634	0.14%	0.007%
45	5.801	5.795	5.804	VV	226	1019	0.01%	0.001%
46	5.820	5.804	5.840	VV	559	7721	0.11%	0.005%
47	5.846	5.840	5.849	VV	296	1098	0.02%	0.001%
48	5.855	5.849	5.865	VV	334	2305	0.03%	0.002%
49	5.870	5.865	5.904	VV	323	3961	0.06%	0.003%
50	5.910	5.904	5.930	VV	288	1712	0.02%	0.001%
51	5.939	5.930	5.956	PV	364	3591	0.05%	0.002%
52	5.962	5.956	5.975	VV	268	2329	0.03%	0.002%
53	5.984	5.975	5.988	VV	392	2369	0.03%	0.002%
54	5.994	5.988	6.015	VV	573	4704	0.07%	0.003%
55	6.021	6.015	6.045	VV	445	6303	0.09%	0.004%
56	6.086	6.045	6.117	VV	353130	3205088	45.92%	2.206%
57	6.131	6.117	6.155	VV	1428	19849	0.28%	0.014%
58	6.173	6.155	6.212	VV	2286	30638	0.44%	0.021%
59	6.231	6.212	6.273	VV	740	15924	0.23%	0.011%
60	6.304	6.273	6.343	VV	903	18215	0.26%	0.013%
61	6.347	6.343	6.350	VV	320	1197	0.02%	0.001%
62	6.364	6.350	6.386	VV	838	11857	0.17%	0.008%
63	6.390	6.386	6.412	VV	429	5425	0.08%	0.004%
64	6.416	6.412	6.422	VV	350	1588	0.02%	0.001%
65	6.426	6.422	6.432	VV	315	1380	0.02%	0.001%
66	6.438	6.432	6.445	VV	346	1785	0.03%	0.001%
67	6.461	6.445	6.487	VV	321	5365	0.08%	0.004%
68	6.512	6.487	6.560	VV	39583	387583	5.55%	0.267%
69	6.562	6.560	6.567	VV	508	1531	0.02%	0.001%
70	6.595	6.567	6.616	VV	1887	26731	0.38%	0.018%
71	6.633	6.616	6.647	VV	1135	12169	0.17%	0.008%
72	6.661	6.647	6.681	VV	3050	33834	0.48%	0.023%
73	6.692	6.681	6.716	VV	922	11412	0.16%	0.008%
74	6.733	6.716	6.753	VV	1503	17535	0.25%	0.012%
75	6.766	6.753	6.775	VV	518	4390	0.06%	0.003%
76	6.790	6.775	6.816	VV	583	8069	0.12%	0.006%
77	6.838	6.816	6.852	VV	600	7828	0.11%	0.005%
78	6.887	6.852	6.901	VV	415	8580	0.12%	0.006%
79	6.908	6.901	6.927	VV	398	2725	0.04%	0.002%
80	6.954	6.927	6.967	PV	1169	15023	0.22%	0.010%
81	6.981	6.967	6.994	VV	4534	42925	0.61%	0.030%
82	7.006	6.994	7.028	VV	2103	31674	0.45%	0.022%
83	7.047	7.028	7.102	VV	10905	138968	1.99%	0.096%
84	7.139	7.102	7.174	VV	373824	3566626	51.10%	2.455%
85	7.185	7.174	7.210	VV	962	15265	0.22%	0.011%
86	7.224	7.210	7.233	VV	656	7212	0.10%	0.005%
87	7.241	7.233	7.258	VV	719	7897	0.11%	0.005%
88	7.277	7.258	7.283	VV	3227	30760	0.44%	0.021%
89	7.294	7.283	7.313	VV	4004	47824	0.69%	0.033%

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90	7.329	7.313	7.342	VV	2206	27684	0.40%	0.019%
91	7.355	7.342	7.385	VV	1768	30586	0.44%	0.021%
92	7.403	7.385	7.416	VV	1839	21622	0.31%	0.015%
93	7.430	7.416	7.454	VV	2104	26840	0.38%	0.018%
94	7.478	7.454	7.486	VV	923	13083	0.19%	0.009%
95	7.498	7.486	7.508	VV	1130	12788	0.18%	0.009%
96	7.525	7.508	7.545	VV	1520	20523	0.29%	0.014%
97	7.550	7.545	7.566	VV	330	2861	0.04%	0.002%
98	7.573	7.566	7.583	VV	334	2712	0.04%	0.002%
99	7.589	7.583	7.598	VV	473	3009	0.04%	0.002%
100	7.607	7.598	7.627	VV	620	7106	0.10%	0.005%
101	7.634	7.627	7.639	VV	369	1829	0.03%	0.001%
102	7.648	7.639	7.653	VV	554	3387	0.05%	0.002%
103	7.660	7.653	7.678	VV	765	7078	0.10%	0.005%
104	7.694	7.678	7.713	VV	1607	19387	0.28%	0.013%
105	7.750	7.713	7.795	VV	582343	5522516	79.12%	3.801%
106	7.798	7.795	7.814	VV	439	3275	0.05%	0.002%
107	7.839	7.814	7.850	VV	1026	14467	0.21%	0.010%
108	7.859	7.850	7.878	VV	1073	12191	0.17%	0.008%
109	7.889	7.878	7.904	VV	541	6209	0.09%	0.004%
110	7.922	7.904	7.935	VV	434	5543	0.08%	0.004%
111	7.956	7.935	7.980	VV	695	8797	0.13%	0.006%
112	7.998	7.980	8.020	VV	1438	16945	0.24%	0.012%
113	8.024	8.020	8.039	VV	528	3926	0.06%	0.003%
114	8.055	8.039	8.072	VV	654	6657	0.10%	0.005%
115	8.090	8.072	8.100	VV	553	6456	0.09%	0.004%
116	8.111	8.100	8.120	VV	560	5383	0.08%	0.004%
117	8.127	8.120	8.160	VV	679	6990	0.10%	0.005%
118	8.209	8.160	8.218	VV	825	12473	0.18%	0.009%
119	8.233	8.218	8.246	VV	1728	18300	0.26%	0.013%
120	8.260	8.246	8.276	VV	1301	15762	0.23%	0.011%
121	8.301	8.276	8.328	VV	46557	480432	6.88%	0.331%
122	8.333	8.328	8.348	VV	567	4502	0.06%	0.003%
123	8.365	8.348	8.380	VV	1542	17224	0.25%	0.012%
124	8.419	8.380	8.479	VV	526435	5117568	73.32%	3.522%
125	8.493	8.479	8.498	VV	799	6861	0.10%	0.005%
126	8.506	8.498	8.522	VV	887	8811	0.13%	0.006%
127	8.534	8.522	8.551	VV	764	9141	0.13%	0.006%
128	8.557	8.551	8.573	VV	279	2537	0.04%	0.002%
129	8.615	8.573	8.642	VV	326991	3198495	45.82%	2.201%
130	8.668	8.642	8.684	VV	1332	22695	0.33%	0.016%
131	8.715	8.684	8.747	VV	514972	5110864	73.22%	3.517%
132	8.758	8.747	8.775	VV	1379	19606	0.28%	0.013%
133	8.789	8.775	8.803	VV	1424	18980	0.27%	0.013%
134	8.809	8.803	8.823	VV	1161	11265	0.16%	0.008%
135	8.838	8.823	8.847	VV	1373	15610	0.22%	0.011%
136	8.860	8.847	8.880	VV	1523	18625	0.27%	0.013%
137	8.903	8.880	8.918	VV	778	9934	0.14%	0.007%
138	8.926	8.918	8.938	VV	590	5187	0.07%	0.004%
139	8.952	8.938	8.968	VV	989	11132	0.16%	0.008%
140	8.981	8.968	8.997	VV	2099	22028	0.32%	0.015%
141	9.021	8.997	9.046	VV	54824	549418	7.87%	0.378%

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142	9.054	9.046	9.089	VV	1434	24974	0.36%	0.017%
143	9.107	9.089	9.112	VV	2047	18983	0.27%	0.013%
144	9.115	9.112	9.127	VV	2051	15761	0.23%	0.011%
145	9.138	9.127	9.167	VV	2429	39988	0.57%	0.028%
146	9.174	9.167	9.194	VV	1521	15561	0.22%	0.011%
147	9.207	9.194	9.229	VV	707	8848	0.13%	0.006%
148	9.271	9.229	9.289	PV	830	12613	0.18%	0.009%
149	9.305	9.289	9.329	VV	1124	13388	0.19%	0.009%
150	9.343	9.329	9.352	VV	682	7231	0.10%	0.005%
151	9.358	9.352	9.380	VV	676	6713	0.10%	0.005%
152	9.386	9.380	9.390	VV	339	1682	0.02%	0.001%
153	9.407	9.390	9.436	VV	1309	21282	0.30%	0.015%
154	9.452	9.436	9.463	VV	549	6558	0.09%	0.005%
155	9.496	9.463	9.552	VV	591745	5970397	85.54%	4.109%
156	9.573	9.552	9.600	VV	1458	20706	0.30%	0.014%
157	9.625	9.600	9.633	VV	765	11002	0.16%	0.008%
158	9.640	9.633	9.653	VV	734	8296	0.12%	0.006%
159	9.666	9.653	9.685	VV	1413	19367	0.28%	0.013%
160	9.705	9.685	9.725	VV	9010	98873	1.42%	0.068%
161	9.736	9.725	9.745	VV	2074	18691	0.27%	0.013%
162	9.768	9.745	9.797	VV	83088	827439	11.85%	0.569%
163	9.812	9.797	9.850	VV	1459	25902	0.37%	0.018%
164	9.895	9.850	9.926	VV	51203	570081	8.17%	0.392%
165	9.935	9.926	9.954	VV	706	7462	0.11%	0.005%
166	9.974	9.954	9.987	VV	917	12495	0.18%	0.009%
167	10.000	9.987	10.048	VV	740	16000	0.23%	0.011%
168	10.065	10.048	10.070	VV	615	5260	0.08%	0.004%
169	10.092	10.070	10.119	VV	2497	29885	0.43%	0.021%
170	10.129	10.119	10.155	PV	193	2050	0.03%	0.001%
171	10.180	10.155	10.188	PV	450	4291	0.06%	0.003%
172	10.193	10.188	10.200	VV	179	1175	0.02%	0.001%
173	10.206	10.200	10.211	VV	316	1832	0.03%	0.001%
174	10.240	10.211	10.274	VV	4505	57701	0.83%	0.040%
175	10.288	10.274	10.308	VV	887	12318	0.18%	0.008%
176	10.339	10.308	10.359	VV	884	20028	0.29%	0.014%
177	10.369	10.359	10.390	VV	1103	14021	0.20%	0.010%
178	10.416	10.390	10.446	VV	1274	22242	0.32%	0.015%
179	10.451	10.446	10.457	VV	325	2062	0.03%	0.001%
180	10.487	10.457	10.514	VV	1046	23290	0.33%	0.016%
181	10.537	10.514	10.568	VV	2487	39502	0.57%	0.027%
182	10.576	10.568	10.580	VV	770	5090	0.07%	0.004%
183	10.586	10.580	10.603	VV	948	9673	0.14%	0.007%
184	10.628	10.603	10.643	VV	1841	28365	0.41%	0.020%
185	10.654	10.643	10.664	VV	1605	16983	0.24%	0.012%
186	10.683	10.664	10.728	VV	11874	183093	2.62%	0.126%
187	10.764	10.728	10.782	VV	1225	26043	0.37%	0.018%
188	10.789	10.782	10.810	VV	908	10246	0.15%	0.007%
189	10.857	10.810	10.865	VV	3981	53012	0.76%	0.036%
190	10.895	10.865	10.933	VV	606745	6476751	92.79%	4.457%
191	10.970	10.933	11.012	VV	595420	6214362	89.03%	4.277%
192	11.041	11.012	11.079	VV	1362	33222	0.48%	0.023%
193	11.084	11.079	11.116	VV	696	8349	0.12%	0.006%
194	11.135	11.116	11.148	VV	356	4196	0.06%	0.003%

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195	11.171	11.148	11.217	VV	5927	68245	0.98%	0.047%
196	11.224	11.217	11.230	VV	333	1966	0.03%	0.001%
197	11.236	11.230	11.240	VV	397	2199	0.03%	0.002%
198	11.265	11.240	11.282	VV	694	13476	0.19%	0.009%
199	11.291	11.282	11.298	VV	548	4176	0.06%	0.003%
200	11.332	11.298	11.359	VV	53254	589693	8.45%	0.406%
201	11.407	11.359	11.454	VV	1241	40246	0.58%	0.028%
202	11.490	11.463	11.506	VV	1292	17566	0.25%	0.012%
203	11.533	11.506	11.538	VV	720	8453	0.12%	0.006%
204	11.542	11.538	11.563	VV	637	4222	0.06%	0.003%
205	11.576	11.563	11.592	VV	718	6833	0.10%	0.005%
206	11.658	11.592	11.682	PV	512741	5516751	79.04%	3.797%
207	11.689	11.682	11.703	VV	3620	32113	0.46%	0.022%
208	11.719	11.703	11.740	VV	4817	57323	0.82%	0.039%
209	11.757	11.740	11.767	VV	1060	15454	0.22%	0.011%
210	11.784	11.767	11.795	VV	2540	32292	0.46%	0.022%
211	11.805	11.795	11.823	VV	3023	43965	0.63%	0.030%
212	11.836	11.823	11.852	VV	3922	44445	0.64%	0.031%
213	11.867	11.852	11.897	VV	3821	45537	0.65%	0.031%
214	11.906	11.897	11.912	VV	456	2353	0.03%	0.002%
215	11.931	11.912	11.958	VV	1530	22019	0.32%	0.015%
216	11.999	11.958	12.016	VV	1409	30334	0.43%	0.021%
217	12.049	12.016	12.080	VV	9373	147340	2.11%	0.101%
218	12.093	12.080	12.114	VV	1259	15754	0.23%	0.011%
219	12.158	12.114	12.175	PV	2836	41319	0.59%	0.028%
220	12.218	12.175	12.225	VV	1524	34797	0.50%	0.024%
221	12.253	12.225	12.353	VV	156944	2151951	30.83%	1.481%
222	12.357	12.353	12.373	VV	3461	37701	0.54%	0.026%
223	12.383	12.373	12.395	VV	3035	36716	0.53%	0.025%
224	12.404	12.395	12.421	VV	3050	44009	0.63%	0.030%
225	12.426	12.421	12.445	VV	2609	32599	0.47%	0.022%
226	12.478	12.445	12.520	VV	4721	136631	1.96%	0.094%
227	12.533	12.520	12.555	VV	3055	46203	0.66%	0.032%
228	12.584	12.555	12.604	VV	5125	86949	1.25%	0.060%
229	12.636	12.604	12.672	VV	57441	729316	10.45%	0.502%
230	12.709	12.672	12.783	VV	614120	6979819	100.00%	4.803%
231	12.801	12.783	12.813	VV	765	10721	0.15%	0.007%
232	12.839	12.813	12.847	VV	1355	20505	0.29%	0.014%
233	12.859	12.847	12.867	VV	1409	14999	0.21%	0.010%
234	12.888	12.867	12.932	VV	8097	121463	1.74%	0.084%
235	12.936	12.932	12.953	VV	1074	11058	0.16%	0.008%
236	12.957	12.953	12.967	VV	833	5869	0.08%	0.004%
237	13.008	12.967	13.034	VV	580090	6710982	96.15%	4.618%
238	13.080	13.034	13.113	VV	65170	872456	12.50%	0.600%
239	13.134	13.113	13.143	VV	1321	20254	0.29%	0.014%
240	13.148	13.143	13.156	VV	1383	9115	0.13%	0.006%
241	13.170	13.156	13.193	VV	1770	26495	0.38%	0.018%
242	13.200	13.193	13.219	VV	638	7538	0.11%	0.005%
243	13.245	13.219	13.278	VV	49650	620982	8.90%	0.427%
244	13.298	13.278	13.317	VV	5429	70806	1.01%	0.049%
245	13.329	13.317	13.348	VV	1417	18653	0.27%	0.013%
246	13.391	13.348	13.407	VV	2760	62049	0.89%	0.043%

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247	13.419	13.407	13.432	VV	2459	33591	0.48%	0.023%
248	13.477	13.432	13.508	VV	53076	725674	10.40%	0.499%
249	13.527	13.508	13.556	VV	15750	270388	3.87%	0.186%
250	13.581	13.556	13.635	VV	7500	193644	2.77%	0.133%
251	13.650	13.635	13.672	VV	2709	47788	0.68%	0.033%
252	13.694	13.672	13.713	VV	3446	67225	0.96%	0.046%
253	13.729	13.713	13.749	VV	4054	60247	0.86%	0.041%
254	13.781	13.749	13.802	VV	5123	93634	1.34%	0.064%
255	13.830	13.802	13.880	VV	51609	695353	9.96%	0.479%
256	13.900	13.880	13.915	VV	3332	45138	0.65%	0.031%
257	13.939	13.915	13.964	VV	18950	236932	3.39%	0.163%
258	13.971	13.964	13.990	VV	1199	14338	0.21%	0.010%
259	14.006	13.990	14.024	VV	822	12689	0.18%	0.009%
260	14.060	14.024	14.100	VV	1159	32944	0.47%	0.023%
261	14.108	14.100	14.130	VV	731	7638	0.11%	0.005%
262	14.133	14.130	14.150	VV	345	3071	0.04%	0.002%
263	14.164	14.150	14.177	VV	676	8387	0.12%	0.006%
264	14.180	14.177	14.184	VV	499	2202	0.03%	0.002%
265	14.190	14.184	14.208	VV	647	6456	0.09%	0.004%
266	14.221	14.208	14.231	VV	799	8561	0.12%	0.006%
267	14.267	14.231	14.292	VV	2624	56592	0.81%	0.039%
268	14.311	14.292	14.345	VV	4301	65705	0.94%	0.045%
269	14.361	14.345	14.370	VV	767	9590	0.14%	0.007%
270	14.393	14.370	14.405	VV	1176	19733	0.28%	0.014%
271	14.414	14.405	14.446	VV	1368	23609	0.34%	0.016%
272	14.493	14.446	14.516	VV	2813	72750	1.04%	0.050%
273	14.524	14.516	14.535	VV	1181	12668	0.18%	0.009%
274	14.557	14.535	14.577	VV	5562	68945	0.99%	0.047%
275	14.613	14.577	14.649	VV	3464	63450	0.91%	0.044%
276	14.679	14.649	14.703	VV	1036	23165	0.33%	0.016%
277	14.721	14.703	14.727	VV	1164	14406	0.21%	0.010%
278	14.766	14.727	14.807	VV	14875	202704	2.90%	0.139%
279	14.812	14.807	14.833	VV	699	7420	0.11%	0.005%
280	14.877	14.833	14.896	VV	495854	6268513	89.81%	4.314%
281	14.922	14.896	14.989	VV	579672	6812334	97.60%	4.688%
282	15.027	14.989	15.080	VV	3074	68945	0.99%	0.047%
283	15.104	15.080	15.141	VV	1361	28551	0.41%	0.020%
284	15.168	15.141	15.176	PV	1568	17984	0.26%	0.012%
285	15.181	15.176	15.197	VV	1208	13444	0.19%	0.009%
286	15.203	15.197	15.258	VV	1186	26940	0.39%	0.019%
287	15.308	15.258	15.412	VV	14201	372275	5.33%	0.256%
288	15.415	15.412	15.427	VV	679	5610	0.08%	0.004%
289	15.467	15.427	15.488	VV	7891	119742	1.72%	0.082%
290	15.494	15.488	15.500	VV	1573	10040	0.14%	0.007%
291	15.502	15.500	15.516	VV	1500	12647	0.18%	0.009%
292	15.536	15.516	15.558	VV	4417	59358	0.85%	0.041%
293	15.574	15.558	15.601	VV	2313	31799	0.46%	0.022%
294	15.618	15.601	15.625	VV	948	10745	0.15%	0.007%
295	15.674	15.625	15.690	VV	2337	55494	0.80%	0.038%
296	15.698	15.690	15.731	VV	2161	33206	0.48%	0.023%
297	15.736	15.731	15.741	VV	521	2343	0.03%	0.002%
298	15.745	15.741	15.754	VV	444	3554	0.05%	0.002%
299	15.778	15.754	15.806	VV	2652	40381	0.58%	0.028%

					rteres			
300	15.816	15.806	15.832	VV	722	8213	0.12%	0.006%
301	15.857	15.832	15.871	VV	1314	19386	0.28%	0.013%
302	15.887	15.871	15.914	VV	1093	21895	0.31%	0.015%
303	15.947	15.914	15.990	VV	44795	579960	8.31%	0.399%
304	16.006	15.990	16.024	VV	723	9104	0.13%	0.006%
305	16.038	16.024	16.058	VV	310	2813	0.04%	0.002%
306	16.064	16.058	16.095	VV	270	3242	0.05%	0.002%
307	16.145	16.095	16.189	VV	1614	36428	0.52%	0.025%
308	16.201	16.189	16.219	PV	591	7027	0.10%	0.005%
309	16.250	16.219	16.269	VV	881	16857	0.24%	0.012%
310	16.285	16.269	16.300	VV	631	8257	0.12%	0.006%
311	16.345	16.300	16.378	VV	3025	74811	1.07%	0.051%
312	16.428	16.378	16.443	VV	429509	6023826	86.30%	4.146%
313	16.463	16.443	16.487	VV	501851	5860145	83.96%	4.033%
314	16.509	16.487	16.532	VV	8692	116510	1.67%	0.080%
315	16.553	16.532	16.579	VV	4228	67603	0.97%	0.047%
316	16.583	16.579	16.638	VV	1317	24117	0.35%	0.017%
317	16.669	16.638	16.689	VV	3267	43911	0.63%	0.030%
318	16.738	16.689	16.767	VV	11355	186960	2.68%	0.129%
319	16.809	16.767	16.839	VV	431780	5617329	80.48%	3.866%
320	16.892	16.839	16.927	VV	48913	688322	9.86%	0.474%
321	16.944	16.927	16.957	VV	1862	27473	0.39%	0.019%
322	16.965	16.957	16.988	VV	1462	19986	0.29%	0.014%
323	17.007	16.988	17.015	VV	779	11074	0.16%	0.008%
324	17.036	17.015	17.087	VV	1197	33509	0.48%	0.023%
325	17.097	17.087	17.122	VV	663	8725	0.12%	0.006%
326	17.161	17.122	17.197	VV	1559	43298	0.62%	0.030%
327	17.200	17.197	17.229	VV	749	7015	0.10%	0.005%
328	17.292	17.229	17.307	PV	2411	58368	0.84%	0.040%
329	17.317	17.307	17.324	VV	1898	17991	0.26%	0.012%
330	17.335	17.324	17.357	VV	1968	30834	0.44%	0.021%
331	17.374	17.357	17.399	VV	1445	22983	0.33%	0.016%
332	17.408	17.399	17.421	VV	644	8419	0.12%	0.006%
333	17.449	17.421	17.475	VV	1554	33214	0.48%	0.023%
334	17.493	17.475	17.509	VV	838	12785	0.18%	0.009%
335	17.514	17.509	17.524	VV	520	4375	0.06%	0.003%
336	17.537	17.524	17.549	VV	585	7156	0.10%	0.005%
337	17.567	17.549	17.595	VV	617	10904	0.16%	0.008%
338	17.599	17.595	17.602	VV	383	1217	0.02%	0.001%
339	17.605	17.602	17.611	VV	305	1174	0.02%	0.001%
340	17.638	17.611	17.652	VV	690	11128	0.16%	0.008%
341	17.672	17.652	17.685	VV	649	9065	0.13%	0.006%
342	17.738	17.685	17.744	VV	1686	30620	0.44%	0.021%
343	17.776	17.744	17.808	VV	40024	545370	7.81%	0.375%
344	17.839	17.808	17.845	VV	940	14991	0.21%	0.010%
345	17.864	17.845	17.878	VV	1895	28598	0.41%	0.020%
346	17.887	17.878	17.906	VV	1481	17940	0.26%	0.012%
347	17.926	17.906	17.935	VV	1366	17984	0.26%	0.012%
348	17.940	17.935	17.978	VV	1313	22523	0.32%	0.016%
349	18.012	17.978	18.037	VV	1214	25035	0.36%	0.017%
350	18.069	18.037	18.103	VV	2975	58145	0.83%	0.040%
351	18.174	18.103	18.189	VV	410783	6013271	86.15%	4.138%

					rteres			
352	18.213	18.189	18.273	VV	424330	5511679	78.97%	3.793%
353	18.295	18.273	18.310	VV	3260	46873	0.67%	0.032%
354	18.327	18.310	18.354	VV	3043	52259	0.75%	0.036%
355	18.356	18.354	18.362	VV	1099	5141	0.07%	0.004%
356	18.373	18.362	18.378	VV	995	8935	0.13%	0.006%
357	18.432	18.378	18.479	VV	385009	5598326	80.21%	3.853%
358	18.496	18.479	18.518	VV	1363	25474	0.36%	0.018%
359	18.542	18.518	18.563	VV	2838	45538	0.65%	0.031%
360	18.604	18.563	18.639	VV	37076	545799	7.82%	0.376%
361	18.643	18.639	18.667	VV	1310	16323	0.23%	0.011%
362	18.702	18.667	18.737	VV	2432	69697	1.00%	0.048%
363	18.754	18.737	18.794	VV	1604	50663	0.73%	0.035%
364	18.803	18.794	18.815	VV	1571	18147	0.26%	0.012%
365	18.840	18.815	18.857	VV	1895	38314	0.55%	0.026%
366	18.881	18.857	18.899	VV	1795	39864	0.57%	0.027%
367	18.924	18.899	18.930	VV	1878	30614	0.44%	0.021%
368	18.934	18.930	18.938	VV	1909	8619	0.12%	0.006%
369	18.970	18.938	19.070	VV	7890	343041	4.91%	0.236%
370	19.087	19.070	19.093	VV	2746	35101	0.50%	0.024%
371	19.098	19.093	19.121	VV	2902	41589	0.60%	0.029%
372	19.130	19.121	19.142	VV	2210	26998	0.39%	0.019%
373	19.147	19.142	19.156	VV	2052	17245	0.25%	0.012%
374	19.198	19.156	19.220	VV	2824	86032	1.23%	0.059%
375	19.260	19.220	19.281	VV	2492	82790	1.19%	0.057%
376	19.289	19.281	19.310	VV	2376	39914	0.57%	0.027%
377	19.330	19.310	19.336	VV	2341	34718	0.50%	0.024%
378	19.383	19.336	19.416	VV	39314	657215	9.42%	0.452%
379	19.424	19.416	19.435	VV	2843	30872	0.44%	0.021%
380	19.449	19.435	19.461	VV	2939	43875	0.63%	0.030%
381	19.490	19.461	19.520	VV	4331	115745	1.66%	0.080%
382	19.559	19.520	19.584	VV	7029	173241	2.48%	0.119%
383	19.623	19.584	19.654	VV	6158	195317	2.80%	0.134%
384	19.680	19.654	19.698	VV	4800	116985	1.68%	0.081%
385	19.753	19.698	19.785	VV	5978	251047	3.60%	0.173%
386	19.800	19.785	19.820	VV	4376	89225	1.28%	0.061%
387	19.839	19.820	19.870	VV	4744	129615	1.86%	0.089%
388	19.875	19.870	19.880	VV	4104	23125	0.33%	0.016%
389	19.933	19.880	19.965	VV	8353	308300	4.42%	0.212%
390	20.026	19.965	20.051	VV	7957	326261	4.67%	0.225%
391	20.077	20.051	20.089	VV	6500	138994	1.99%	0.096%
392	20.120	20.089	20.154	VV	37054	667500	9.56%	0.459%
393	20.199	20.154	20.203	VV	6423	186063	2.67%	0.128%
394	20.207	20.203	20.216	VV	6447	46314	0.66%	0.032%
395	20.262	20.216	20.276	VV	10255	290167	4.16%	0.200%
396	20.286	20.276	20.325	VV	9536	228905	3.28%	0.158%
397	20.367	20.325	20.381	VV	7193	235140	3.37%	0.162%
398	20.409	20.381	20.420	VV	7438	168212	2.41%	0.116%
399	20.469	20.420	20.495	VV	8106	349318	5.00%	0.240%
400	20.533	20.495	20.555	VV	7746	274009	3.93%	0.189%
401	20.564	20.555	20.595	VV	7788	182780	2.62%	0.126%
402	20.598	20.595	20.608	VV	7574	59180	0.85%	0.041%
403	20.620	20.608	20.632	VV	7499	103670	1.49%	0.071%
404	20.651	20.632	20.660	VV	7491	125544	1.80%	0.086%

					rteres			
405	20.664	20.660	20.700	VV	7516	169791	2.43%	0.117%
406	20.704	20.700	20.709	VV	6927	33945	0.49%	0.023%
407	20.714	20.709	20.727	VV	6951	76022	1.09%	0.052%
408	20.736	20.727	20.745	VV	6973	71833	1.03%	0.049%
409	20.752	20.745	20.764	VV	6857	78901	1.13%	0.054%
410	20.770	20.764	20.780	VV	6859	63035	0.90%	0.043%
411	20.788	20.780	20.808	VV	6634	108454	1.55%	0.075%
412	20.857	20.808	20.899	VV	31796	771335	11.05%	0.531%
413	20.904	20.899	20.907	VV	5840	28151	0.40%	0.019%
414	20.915	20.907	20.927	VV	6076	72804	1.04%	0.050%
415	20.930	20.927	20.950	VV	6279	86031	1.23%	0.059%
416	20.962	20.950	21.021	VV	6374	241350	3.46%	0.166%
417	21.035	21.021	21.067	VV	5333	141234	2.02%	0.097%
418	21.112	21.067	21.133	VV	5110	193575	2.77%	0.133%
419	21.150	21.133	21.161	VV	5139	81185	1.16%	0.056%
420	21.165	21.161	21.190	VV	4946	83746	1.20%	0.058%
421	21.195	21.190	21.212	VV	4600	57281	0.82%	0.039%
422	21.215	21.212	21.250	VV	4578	100337	1.44%	0.069%
423	21.276	21.250	21.281	VV	5062	88500	1.27%	0.061%
424	21.303	21.281	21.344	VV	5284	178447	2.56%	0.123%
425	21.350	21.344	21.399	VV	4318	131229	1.88%	0.090%
426	21.405	21.399	21.423	VV	3665	50540	0.72%	0.035%
427	21.428	21.423	21.443	VV	3537	40846	0.59%	0.028%
428	21.465	21.443	21.474	VV	3650	65844	0.94%	0.045%
429	21.478	21.474	21.502	VV	3613	54710	0.78%	0.038%
430	21.521	21.502	21.558	VV	3557	108150	1.55%	0.074%
431	21.565	21.558	21.571	VV	2887	23335	0.33%	0.016%
432	21.606	21.571	21.658	VV	3614	152702	2.19%	0.105%
433	21.686	21.658	21.724	VV	3486	107607	1.54%	0.074%
434	21.778	21.724	21.850	VV	20718	580008	8.31%	0.399%
435	21.853	21.850	21.858	VV	1855	8650	0.12%	0.006%
436	21.865	21.858	21.872	VV	1696	13325	0.19%	0.009%
437	21.878	21.872	21.895	VV	1813	22839	0.33%	0.016%
438	21.916	21.895	21.932	VV	1719	35508	0.51%	0.024%
439	21.969	21.932	21.977	VV	1824	44343	0.64%	0.031%
440	21.990	21.977	22.018	VV	1874	38952	0.56%	0.027%
441	22.026	22.018	22.034	VV	1224	10928	0.16%	0.008%
442	22.046	22.034	22.074	VV	1375	26905	0.39%	0.019%
443	22.082	22.074	22.108	VV	954	17007	0.24%	0.012%
444	22.112	22.108	22.146	VV	678	10389	0.15%	0.007%
445	22.171	22.146	22.177	VV	499	6349	0.09%	0.004%
446	22.182	22.177	22.195	VV	441	3094	0.04%	0.002%
Sum of corrected areas:					145307937			

Aromatic EPH 040725.M Fri Apr 11 01:42:09 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MSD	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
Sample Wt/Vol:	30.06 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FD049277.D	1	04/08/25	04/10/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aromatic C10-C12	Aromatic C10-C12	3.09		0.13	0.75	mg/kg
Aromatic C12-C16	Aromatic C12-C16	6.69		0.26	1.12	mg/kg
Aromatic C16-C21	Aromatic C16-C21	18.0		0.45	1.86	mg/kg
Aromatic C21-C36	Aromatic C21-C36	30.0		1.33	2.98	mg/kg
SURROGATES						
580-13-2	2-Bromonaphthalene (SURR)	36.5		40 - 140	73%	SPK: 50
321-60-8	2-Fluorobiphenyl (SURR)	30.6		40 - 140	61%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	30.6		40 - 140	61%	SPK: 50

Quantitation Report For Aromatic EPH Range.

Lab Sample ID:	Q1746-01MSD	Acq On:	10 Apr 2025 19:45
Client Sample ID:	B-149-SB01MSD	Operator:	YP/AJ
Data file:	FD049277.D	Misc:	
Instrument:	FID_D	ALS Vial:	69
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aromatic C10-C12	4.440	6.185	6505753	41.493	200	ug/ml
Aromatic C12-C16	6.186	8.813	15286302	89.801	300	ug/ml
Aromatic C16-C21	8.814	13.102	40540836	241.744	500	ug/ml
Aromatic C21-C36	13.103	18.519	55547232	402.107	800	ug/ml
Aromatic EPH	4.440	18.519	117880123	775.144		ug/ml
2-Bromonaphthalene (SURRE)	7.749	7.749	5402290	36.47		ug/ml
2-Fluorobiphenyl (SURRE)	8.615	8.615	3125160	30.64		ug/ml
ortho-Terphenyl (SURRE)	11.657	11.657	5397335	30.63		ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049277.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 19:45
 Operator : YP/AJ
 Sample : Q1746-01MSD
 Misc :
 ALS Vial : 69 Sample Multiplier: 1

Instrument :
 FID_D
 ClientSampleId :
 B-149-SB01MSD

Integration File: autoint1.e
 Quant Time: Apr 11 01:05:24 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 05:25:12 2025
 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...	7.749	5402290	36.469 ug/ml
Spiked Amount 50.000		Recovery =	72.94%
6) S 2-Fluorobiphenyl (SURR)	8.615	3125160	30.638 ug/ml
Spiked Amount 50.000 Range 0 - 131		Recovery =	61.28%
11) S ortho-Terphenyl (SURR)	11.657	5397335	30.635 ug/ml
Spiked Amount 50.000		Recovery =	61.27%
Target Compounds			
1) T 1,2,3-Trimethylbenzen...	4.541	2191469	14.624 ug/ml
2) T Naphthalene (C11.7)	6.085	3107334	18.978 ug/ml
3) T 2-Methylnaphthalene (...)	7.139	3471583	21.463 ug/ml
5) T Acenaphthylene (C15.06)	8.419	4992986	28.267 ug/ml
7) T Acenaphthene (C15.5)	8.715	4962706	28.805 ug/ml
8) T Fluorene (C16.55)	9.496	5818239	33.365 ug/ml
9) T Phenanthrene (C19.36)	10.894	6340780	36.948 ug/ml
10) T Anthracene (C19.43)	10.970	6087215	38.748 ug/ml
12) T Fluoranthene (C21.85)	12.709	6875608	40.677 ug/ml
13) T Pyrene (C20.8)	13.008	6637585	39.576 ug/ml
14) T Benzo[a]anthracene (C...	14.878	6247616	43.463 ug/ml
15) T Chrysene (C27.41)	14.923	6757556	46.832 ug/ml
16) T benzo[b]fluoranthene ...	16.428	5992863	43.076 ug/ml
17) T Bnezo[k]fluoranthene ...	16.464	5821762	42.567 ug/ml
18) T Benzo[a]pyrene (C31.34)	16.808	5577777	42.894 ug/ml
19) T Indeno[1,2,3-cd]pyren...	18.174	5942171	48.202 ug/ml
20) T Dibenz[a,h]anthracene...	18.212	5441286	43.032 ug/ml
21) T Benzo[g,h,i]perylene ...	18.432	5514184	42.238 ug/ml

(f)=RT Delta > 1/2 Window

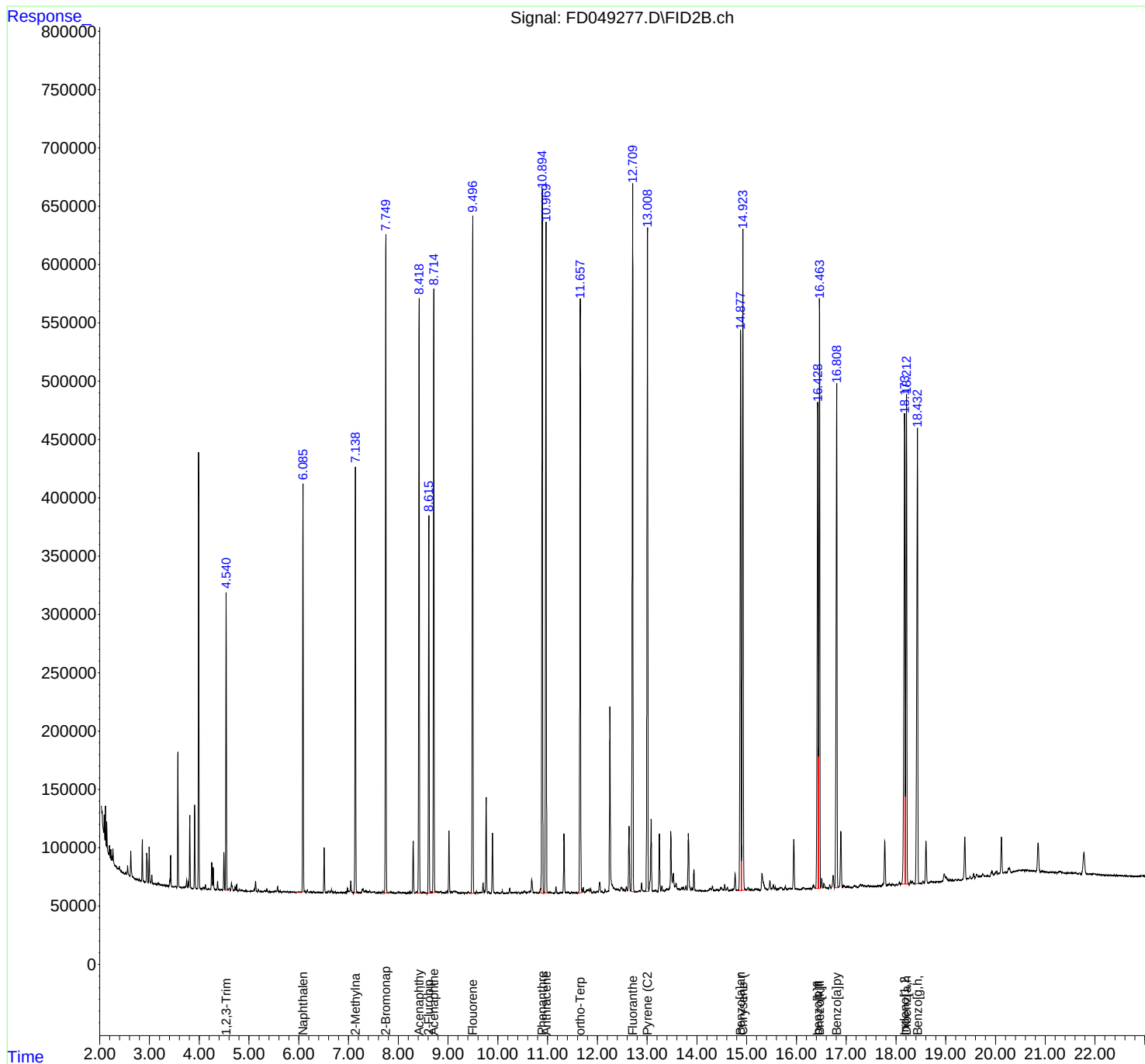
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
Data File : FD049277.D
Signal(s) : FID2B.ch
Acq On : 10 Apr 2025 19:45
Operator : YP/AJ
Sample : Q1746-01MSD
Misc :
ALS Vial : 69 Sample Multiplier: 1

Instrument :
FID_D
ClientSampleId :
B-149-SB01MSD

Integration File: autoint1.e
Quant Time: Apr 11 01:05:24 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 05:25:12 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD041025AR\
 Data File : FD049277.D
 Signal(s) : FID2B.ch
 Acq On : 10 Apr 2025 19:45
 Sample : Q1746-01MSD
 Misc :
 ALS Vial : 69 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 040725.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	4.072	4.042	4.085	BV	1489	11893	0.17%	0.008%
2	4.098	4.085	4.112	VV	1422	13595	0.20%	0.009%
3	4.125	4.112	4.157	VV	3910	35286	0.51%	0.025%
4	4.164	4.157	4.179	PV	290	1438	0.02%	0.001%
5	4.193	4.179	4.217	VV	472	5959	0.09%	0.004%
6	4.252	4.217	4.269	VV	23490	255301	3.69%	0.178%
7	4.283	4.269	4.333	VV	19067	178257	2.58%	0.124%
8	4.342	4.333	4.352	PV	339	2177	0.03%	0.002%
9	4.369	4.352	4.387	VV	7738	63527	0.92%	0.044%
10	4.392	4.387	4.437	VV	601	9748	0.14%	0.007%
11	4.455	4.437	4.474	VV	571	8244	0.12%	0.006%
12	4.497	4.474	4.518	VV	32630	292312	4.23%	0.203%
13	4.541	4.518	4.578	VV	255261	2201519	31.86%	1.532%
14	4.604	4.578	4.626	VV	2222	35587	0.52%	0.025%
15	4.648	4.626	4.660	VV	6859	71628	1.04%	0.050%
16	4.665	4.660	4.692	VV	3940	34036	0.49%	0.024%
17	4.699	4.692	4.705	VV	431	2415	0.03%	0.002%
18	4.721	4.705	4.737	VV	3443	34479	0.50%	0.024%
19	4.751	4.737	4.774	VV	5444	52255	0.76%	0.036%
20	4.804	4.774	4.823	VV	1517	18037	0.26%	0.013%
21	4.839	4.823	4.861	PV	1508	18323	0.27%	0.013%
22	4.867	4.861	4.904	VV	782	11210	0.16%	0.008%
23	4.908	4.904	4.912	VV	321	1224	0.02%	0.001%
24	4.916	4.912	4.925	VV	383	2305	0.03%	0.002%
25	4.940	4.925	4.960	VV	748	8321	0.12%	0.006%
26	4.969	4.960	4.987	VV	313	2035	0.03%	0.001%
27	5.003	4.996	5.014	VV	269	1923	0.03%	0.001%
28	5.022	5.014	5.029	VV	213	1470	0.02%	0.001%
29	5.033	5.029	5.041	VV	291	1762	0.03%	0.001%
30	5.059	5.041	5.081	VV	654	11127	0.16%	0.008%
31	5.106	5.081	5.117	VV	2579	27799	0.40%	0.019%
32	5.133	5.117	5.167	VV	9196	102408	1.48%	0.071%
33	5.189	5.167	5.216	VV	2021	26206	0.38%	0.018%
34	5.220	5.216	5.232	VV	643	4080	0.06%	0.003%
35	5.247	5.232	5.270	VV	633	9200	0.13%	0.006%
36	5.286	5.270	5.290	VV	441	3699	0.05%	0.003%

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37	5.324	5.290	5.339	VV	1215	25143	0.36%	0.017%
38	5.359	5.339	5.387	VV	3054	38770	0.56%	0.027%
39	5.425	5.387	5.446	PV	716	17451	0.25%	0.012%
40	5.456	5.446	5.473	VV	623	8313	0.12%	0.006%
41	5.478	5.473	5.490	VV	581	5419	0.08%	0.004%
42	5.500	5.490	5.517	VV	956	12101	0.18%	0.008%
43	5.533	5.517	5.551	VV	1650	21131	0.31%	0.015%
44	5.575	5.551	5.606	VV	5144	67821	0.98%	0.047%
45	5.629	5.606	5.674	VV	1437	28609	0.41%	0.020%
46	5.695	5.674	5.751	VV	940	28625	0.41%	0.020%
47	5.775	5.751	5.810	VV	963	17027	0.25%	0.012%
48	5.830	5.810	5.844	VV	680	9820	0.14%	0.007%
49	5.874	5.844	5.906	VV	638	16846	0.24%	0.012%
50	5.913	5.906	5.949	VV	451	8691	0.13%	0.006%
51	5.977	5.949	5.992	VV	612	10469	0.15%	0.007%
52	5.994	5.992	6.009	VV	550	4359	0.06%	0.003%
53	6.019	6.009	6.027	VV	526	3971	0.06%	0.003%
54	6.035	6.027	6.045	VV	608	4617	0.07%	0.003%
55	6.085	6.045	6.120	VV	349656	3144806	45.51%	2.188%
56	6.130	6.120	6.153	VV	1401	17574	0.25%	0.012%
57	6.173	6.153	6.199	VV	2550	30586	0.44%	0.021%
58	6.231	6.199	6.244	VV	794	13961	0.20%	0.010%
59	6.248	6.244	6.272	VV	624	4927	0.07%	0.003%
60	6.307	6.272	6.334	VV	915	17790	0.26%	0.012%
61	6.337	6.334	6.346	VV	245	1452	0.02%	0.001%
62	6.364	6.346	6.384	VV	857	10601	0.15%	0.007%
63	6.396	6.384	6.415	VV	467	5103	0.07%	0.004%
64	6.430	6.415	6.462	VV	354	5267	0.08%	0.004%
65	6.471	6.462	6.484	PV	126	1482	0.02%	0.001%
66	6.511	6.484	6.543	VV	38962	377705	5.47%	0.263%
67	6.555	6.543	6.569	VV	460	4878	0.07%	0.003%
68	6.595	6.569	6.618	VV	1808	25029	0.36%	0.017%
69	6.630	6.618	6.644	VV	1114	11818	0.17%	0.008%
70	6.661	6.644	6.684	VV	2831	32098	0.46%	0.022%
71	6.694	6.684	6.713	VV	1002	10860	0.16%	0.008%
72	6.733	6.713	6.758	VV	1442	16565	0.24%	0.012%
73	6.771	6.758	6.795	VV	248	4251	0.06%	0.003%
74	6.803	6.795	6.819	VV	279	2251	0.03%	0.002%
75	6.827	6.819	6.835	VV	372	2026	0.03%	0.001%
76	6.838	6.835	6.851	VV	305	1942	0.03%	0.001%
77	6.871	6.851	6.880	VV	361	3423	0.05%	0.002%
78	6.887	6.880	6.900	VV	526	3327	0.05%	0.002%
79	6.907	6.900	6.931	VV	398	4709	0.07%	0.003%
80	6.953	6.931	6.965	VV	1360	14418	0.21%	0.010%
81	6.980	6.965	6.995	VV	4346	40008	0.58%	0.028%
82	7.006	6.995	7.023	VV	1922	23875	0.35%	0.017%
83	7.046	7.023	7.102	VV	10463	127751	1.85%	0.089%
84	7.139	7.102	7.177	VV	365155	3488574	50.49%	2.427%
85	7.184	7.177	7.205	VV	844	10173	0.15%	0.007%
86	7.215	7.205	7.229	VV	514	6092	0.09%	0.004%
87	7.241	7.229	7.254	VV	548	5713	0.08%	0.004%
88	7.276	7.254	7.282	VV	3093	28473	0.41%	0.020%
89	7.294	7.282	7.312	VV	3694	44996	0.65%	0.031%

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90	7.330	7.312	7.342	VV	2080	26349	0.38%	0.018%
91	7.354	7.342	7.388	VV	1920	30480	0.44%	0.021%
92	7.402	7.388	7.414	VV	1552	16980	0.25%	0.012%
93	7.430	7.414	7.454	VV	2006	26630	0.39%	0.019%
94	7.472	7.454	7.482	VV	889	11914	0.17%	0.008%
95	7.498	7.482	7.510	VV	1101	15060	0.22%	0.010%
96	7.524	7.510	7.566	VV	1656	22312	0.32%	0.016%
97	7.580	7.566	7.597	VV	506	6134	0.09%	0.004%
98	7.613	7.597	7.625	VV	765	7971	0.12%	0.006%
99	7.630	7.625	7.634	VV	459	1980	0.03%	0.001%
100	7.660	7.634	7.678	VV	728	14495	0.21%	0.010%
101	7.694	7.678	7.712	VV	1888	21774	0.32%	0.015%
102	7.749	7.712	7.800	VV	565900	5412187	78.33%	3.766%
103	7.804	7.800	7.812	VV	434	2308	0.03%	0.002%
104	7.833	7.812	7.849	VV	1187	16820	0.24%	0.012%
105	7.859	7.849	7.876	VV	1248	12278	0.18%	0.009%
106	7.883	7.876	7.902	VV	534	5702	0.08%	0.004%
107	7.917	7.902	7.935	VV	498	4992	0.07%	0.003%
108	7.958	7.935	7.974	VV	442	6288	0.09%	0.004%
109	7.997	7.974	8.040	VV	1537	27007	0.39%	0.019%
110	8.055	8.040	8.072	VV	610	7646	0.11%	0.005%
111	8.085	8.072	8.100	VV	611	7792	0.11%	0.005%
112	8.114	8.100	8.121	VV	739	7805	0.11%	0.005%
113	8.126	8.121	8.169	VV	720	9520	0.14%	0.007%
114	8.200	8.169	8.217	PV	684	12303	0.18%	0.009%
115	8.232	8.217	8.245	VV	1765	19094	0.28%	0.013%
116	8.258	8.245	8.274	VV	1221	14101	0.20%	0.010%
117	8.300	8.274	8.327	VV	44869	471776	6.83%	0.328%
118	8.334	8.327	8.343	VV	427	3216	0.05%	0.002%
119	8.364	8.343	8.379	VV	1632	18217	0.26%	0.013%
120	8.419	8.379	8.475	VV	510073	5002227	72.39%	3.481%
121	8.499	8.475	8.522	VV	1025	17395	0.25%	0.012%
122	8.536	8.522	8.557	VV	829	11103	0.16%	0.008%
123	8.562	8.557	8.577	VV	266	2184	0.03%	0.002%
124	8.615	8.577	8.655	VV	323963	3138040	45.41%	2.183%
125	8.666	8.655	8.681	VV	1332	14467	0.21%	0.010%
126	8.715	8.681	8.744	VV	519156	4988204	72.19%	3.471%
127	8.760	8.744	8.775	VV	1568	22807	0.33%	0.016%
128	8.788	8.775	8.804	VV	1385	19299	0.28%	0.013%
129	8.810	8.804	8.817	VV	1131	8134	0.12%	0.006%
130	8.819	8.817	8.822	VV	1037	3005	0.04%	0.002%
131	8.838	8.822	8.843	VV	1348	14958	0.22%	0.010%
132	8.858	8.843	8.880	VV	1583	22309	0.32%	0.016%
133	8.904	8.880	8.918	VV	783	12181	0.18%	0.008%
134	8.925	8.918	8.937	VV	616	5197	0.08%	0.004%
135	8.951	8.937	8.964	VV	860	10832	0.16%	0.008%
136	8.981	8.964	8.997	VV	2390	25810	0.37%	0.018%
137	9.020	8.997	9.043	VV	53729	541239	7.83%	0.377%
138	9.055	9.043	9.068	VV	1723	20906	0.30%	0.015%
139	9.073	9.068	9.088	VV	1224	11179	0.16%	0.008%
140	9.108	9.088	9.127	VV	1993	35279	0.51%	0.025%
141	9.142	9.127	9.164	VV	2227	37377	0.54%	0.026%

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142	9.173	9.164	9.191	VV	1485	16576	0.24%	0.012%
143	9.208	9.191	9.229	VV	706	8546	0.12%	0.006%
144	9.270	9.229	9.287	VV	769	13133	0.19%	0.009%
145	9.306	9.287	9.329	VV	1057	12557	0.18%	0.009%
146	9.344	9.329	9.349	PV	651	4432	0.06%	0.003%
147	9.353	9.349	9.379	VV	646	7617	0.11%	0.005%
148	9.408	9.379	9.437	VV	1356	26429	0.38%	0.018%
149	9.456	9.437	9.462	VV	619	6829	0.10%	0.005%
150	9.496	9.462	9.545	VV	576835	5829034	84.36%	4.056%
151	9.571	9.545	9.603	VV	1376	24989	0.36%	0.017%
152	9.624	9.603	9.633	VV	770	10867	0.16%	0.008%
153	9.664	9.633	9.670	VV	1267	19456	0.28%	0.014%
154	9.671	9.670	9.685	VV	1182	8337	0.12%	0.006%
155	9.705	9.685	9.727	VV	8937	98548	1.43%	0.069%
156	9.738	9.727	9.745	VV	1856	16564	0.24%	0.012%
157	9.767	9.745	9.795	VV	82658	810423	11.73%	0.564%
158	9.814	9.795	9.844	VV	1472	25083	0.36%	0.017%
159	9.849	9.844	9.856	VV	320	1789	0.03%	0.001%
160	9.895	9.856	9.926	VV	51929	559642	8.10%	0.389%
161	9.936	9.926	9.955	VV	713	7793	0.11%	0.005%
162	9.975	9.955	9.990	VV	920	11874	0.17%	0.008%
163	9.999	9.990	10.033	VV	639	10470	0.15%	0.007%
164	10.051	10.033	10.057	VV	299	2968	0.04%	0.002%
165	10.071	10.057	10.077	VV	638	6393	0.09%	0.004%
166	10.092	10.077	10.125	VV	2404	27360	0.40%	0.019%
167	10.128	10.125	10.139	VV	158	1030	0.01%	0.001%
168	10.175	10.155	10.192	PV	531	6213	0.09%	0.004%
169	10.197	10.192	10.207	VV	371	2701	0.04%	0.002%
170	10.240	10.207	10.272	VV	4465	60205	0.87%	0.042%
171	10.293	10.272	10.306	VV	981	12764	0.18%	0.009%
172	10.336	10.306	10.347	VV	989	17235	0.25%	0.012%
173	10.365	10.347	10.393	VV	1059	19758	0.29%	0.014%
174	10.417	10.393	10.438	VV	1372	21140	0.31%	0.015%
175	10.445	10.438	10.459	VV	396	3690	0.05%	0.003%
176	10.486	10.459	10.492	VV	1051	12951	0.19%	0.009%
177	10.496	10.492	10.507	VV	917	6967	0.10%	0.005%
178	10.538	10.507	10.574	VV	2360	47625	0.69%	0.033%
179	10.584	10.574	10.597	VV	937	11030	0.16%	0.008%
180	10.628	10.597	10.642	VV	1901	33084	0.48%	0.023%
181	10.655	10.642	10.662	VV	1760	17150	0.25%	0.012%
182	10.682	10.662	10.736	VV	11889	184945	2.68%	0.129%
183	10.765	10.736	10.783	VV	1115	21043	0.30%	0.015%
184	10.791	10.783	10.809	VV	806	7258	0.11%	0.005%
185	10.835	10.809	10.840	VV	1138	12868	0.19%	0.009%
186	10.857	10.840	10.864	VV	4008	39448	0.57%	0.027%
187	10.894	10.864	10.933	VV	604718	6355277	91.97%	4.422%
188	10.970	10.933	11.010	VV	575600	6108822	88.41%	4.251%
189	11.015	11.010	11.027	VV	749	6340	0.09%	0.004%
190	11.042	11.027	11.070	VV	1305	21998	0.32%	0.015%
191	11.074	11.070	11.101	VV	637	8105	0.12%	0.006%
192	11.133	11.101	11.139	VV	374	5983	0.09%	0.004%
193	11.142	11.139	11.150	VV	352	1794	0.03%	0.001%
194	11.170	11.150	11.214	VV	5791	64279	0.93%	0.045%

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195	11.256	11.223	11.270	PV	827	13472	0.19%	0.009%
196	11.273	11.270	11.292	VV	757	7697	0.11%	0.005%
197	11.296	11.292	11.300	VV	598	2695	0.04%	0.002%
198	11.332	11.300	11.362	VV	51254	583941	8.45%	0.406%
199	11.377	11.362	11.382	VV	777	6899	0.10%	0.005%
200	11.405	11.382	11.453	VV	1173	29832	0.43%	0.021%
201	11.489	11.453	11.506	PV	1239	17791	0.26%	0.012%
202	11.532	11.506	11.555	VV	760	13139	0.19%	0.009%
203	11.577	11.555	11.596	VV	693	8101	0.12%	0.006%
204	11.657	11.596	11.682	PV	510328	5407899	78.26%	3.763%
205	11.687	11.682	11.702	VV	3541	31679	0.46%	0.022%
206	11.719	11.702	11.745	VV	4951	61271	0.89%	0.043%
207	11.751	11.745	11.755	VV	991	5791	0.08%	0.004%
208	11.783	11.755	11.793	VV	2477	35008	0.51%	0.024%
209	11.805	11.793	11.821	VV	2827	42002	0.61%	0.029%
210	11.836	11.821	11.850	VV	3727	45341	0.66%	0.032%
211	11.867	11.850	11.891	VV	3853	46530	0.67%	0.032%
212	11.903	11.891	11.910	VV	361	3206	0.05%	0.002%
213	11.931	11.910	11.965	VV	1627	26289	0.38%	0.018%
214	11.999	11.965	12.015	VV	1541	30356	0.44%	0.021%
215	12.048	12.015	12.075	VV	9248	144859	2.10%	0.101%
216	12.091	12.075	12.119	VV	1304	18996	0.27%	0.013%
217	12.156	12.119	12.180	VV	2728	39539	0.57%	0.028%
218	12.220	12.180	12.229	VV	1557	34222	0.50%	0.024%
219	12.254	12.229	12.392	VV	159490	2202689	31.88%	1.533%
220	12.405	12.392	12.421	VV	3027	46668	0.68%	0.032%
221	12.426	12.421	12.449	VV	2457	36563	0.53%	0.025%
222	12.478	12.449	12.517	VV	4680	125377	1.81%	0.087%
223	12.534	12.517	12.558	VV	2893	49218	0.71%	0.034%
224	12.585	12.558	12.607	VV	4803	83751	1.21%	0.058%
225	12.636	12.607	12.669	VV	56823	708003	10.25%	0.493%
226	12.709	12.669	12.753	VV	608240	6909809	100.00%	4.808%
227	12.758	12.753	12.783	VV	679	10595	0.15%	0.007%
228	12.799	12.783	12.815	VV	687	11247	0.16%	0.008%
229	12.836	12.815	12.848	VV	1384	19413	0.28%	0.014%
230	12.860	12.848	12.868	VV	1377	14125	0.20%	0.010%
231	12.889	12.868	12.930	VV	7984	117114	1.69%	0.081%
232	12.935	12.930	12.953	VV	986	12081	0.17%	0.008%
233	12.958	12.953	12.968	VV	833	6930	0.10%	0.005%
234	13.008	12.968	13.034	VV	570884	6662004	96.41%	4.635%
235	13.080	13.034	13.114	VV	62676	856909	12.40%	0.596%
236	13.135	13.114	13.153	VV	1187	22591	0.33%	0.016%
237	13.168	13.153	13.197	VV	1693	26764	0.39%	0.019%
238	13.201	13.197	13.214	VV	579	4610	0.07%	0.003%
239	13.245	13.214	13.278	VV	49997	610844	8.84%	0.425%
240	13.298	13.278	13.317	VV	5251	66013	0.96%	0.046%
241	13.328	13.317	13.346	VV	1325	16118	0.23%	0.011%
242	13.393	13.346	13.408	VV	2689	62683	0.91%	0.044%
243	13.418	13.408	13.435	VV	2271	31750	0.46%	0.022%
244	13.477	13.435	13.508	VV	52057	714563	10.34%	0.497%
245	13.527	13.508	13.553	VV	15968	257068	3.72%	0.179%
246	13.582	13.553	13.632	VV	7319	193856	2.81%	0.135%

					rteres			
247	13.649	13.632	13.668	VV	2483	45729	0.66%	0.032%
248	13.692	13.668	13.714	VV	3445	71407	1.03%	0.050%
249	13.729	13.714	13.750	VV	3941	57921	0.84%	0.040%
250	13.782	13.750	13.801	VV	5093	87135	1.26%	0.061%
251	13.830	13.801	13.881	VV	49726	679354	9.83%	0.473%
252	13.899	13.881	13.915	VV	3080	44685	0.65%	0.031%
253	13.940	13.915	13.992	VV	18486	251467	3.64%	0.175%
254	14.009	13.992	14.024	VV	864	12535	0.18%	0.009%
255	14.064	14.024	14.090	VV	1093	25643	0.37%	0.018%
256	14.102	14.090	14.120	VV	708	8993	0.13%	0.006%
257	14.126	14.120	14.147	VV	486	3977	0.06%	0.003%
258	14.173	14.147	14.187	VV	633	9397	0.14%	0.007%
259	14.268	14.187	14.292	VV	2540	70110	1.01%	0.049%
260	14.312	14.292	14.344	VV	4459	67238	0.97%	0.047%
261	14.393	14.344	14.405	VV	1065	26994	0.39%	0.019%
262	14.421	14.405	14.449	VV	1261	22422	0.32%	0.016%
263	14.494	14.449	14.515	VV	2828	71065	1.03%	0.049%
264	14.522	14.515	14.534	VV	1162	11922	0.17%	0.008%
265	14.558	14.534	14.578	VV	5464	70534	1.02%	0.049%
266	14.612	14.578	14.640	VV	3221	56242	0.81%	0.039%
267	14.682	14.640	14.695	VV	832	16627	0.24%	0.012%
268	14.767	14.695	14.806	VV	14933	218855	3.17%	0.152%
269	14.822	14.806	14.835	VV	645	6996	0.10%	0.005%
270	14.878	14.835	14.896	VV	479461	6253771	90.51%	4.351%
271	14.923	14.896	14.987	VV	570055	6782085	98.15%	4.719%
272	15.029	14.987	15.085	VV	2933	69918	1.01%	0.049%
273	15.101	15.085	15.141	VV	1135	21638	0.31%	0.015%
274	15.166	15.141	15.177	PV	1428	18201	0.26%	0.013%
275	15.184	15.177	15.194	VV	1209	12306	0.18%	0.009%
276	15.202	15.194	15.223	VV	1374	18834	0.27%	0.013%
277	15.228	15.223	15.249	VV	1001	9029	0.13%	0.006%
278	15.253	15.249	15.264	VV	321	1874	0.03%	0.001%
279	15.308	15.264	15.421	VV	14261	378168	5.47%	0.263%
280	15.466	15.421	15.489	VV	7987	127064	1.84%	0.088%
281	15.495	15.489	15.515	VV	1494	22224	0.32%	0.015%
282	15.537	15.515	15.559	VV	4621	63888	0.92%	0.044%
283	15.574	15.559	15.593	VV	2458	31010	0.45%	0.022%
284	15.619	15.593	15.635	VV	886	17561	0.25%	0.012%
285	15.674	15.635	15.689	VV	2426	49133	0.71%	0.034%
286	15.698	15.689	15.739	VV	2207	38168	0.55%	0.027%
287	15.776	15.739	15.815	VV	2651	48730	0.71%	0.034%
288	15.818	15.815	15.826	VV	679	3854	0.06%	0.003%
289	15.857	15.826	15.870	VV	1385	23503	0.34%	0.016%
290	15.883	15.870	15.915	VV	1389	26110	0.38%	0.018%
291	15.946	15.915	15.994	VV	42934	586030	8.48%	0.408%
292	16.009	15.994	16.049	VV	805	15729	0.23%	0.011%
293	16.069	16.057	16.077	PV	283	2240	0.03%	0.002%
294	16.093	16.077	16.098	VV	355	2893	0.04%	0.002%
295	16.147	16.098	16.187	VV	1741	46443	0.67%	0.032%
296	16.202	16.187	16.219	VV	566	8020	0.12%	0.006%
297	16.240	16.219	16.243	VV	737	8245	0.12%	0.006%
298	16.251	16.243	16.274	VV	795	9711	0.14%	0.007%
299	16.288	16.274	16.299	VV	554	6406	0.09%	0.004%

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300	16.347	16.299	16.382	VV	2955	74806	1.08%	0.052%
301	16.428	16.382	16.443	VV	416875	6010967	86.99%	4.182%
302	16.464	16.443	16.487	VV	505281	5835842	84.46%	4.061%
303	16.508	16.487	16.531	VV	8750	116074	1.68%	0.081%
304	16.553	16.531	16.578	VV	4390	70559	1.02%	0.049%
305	16.583	16.578	16.604	VV	1324	14600	0.21%	0.010%
306	16.610	16.604	16.634	VV	721	8556	0.12%	0.006%
307	16.668	16.634	16.689	VV	3125	43220	0.63%	0.030%
308	16.738	16.689	16.765	VV	10873	181696	2.63%	0.126%
309	16.808	16.765	16.839	VV	432459	5599806	81.04%	3.896%
310	16.892	16.839	16.922	VV	48683	683704	9.89%	0.476%
311	16.943	16.922	16.956	VV	1763	25858	0.37%	0.018%
312	16.966	16.956	16.989	VV	1305	17417	0.25%	0.012%
313	17.008	16.989	17.019	VV	861	11211	0.16%	0.008%
314	17.040	17.019	17.091	VV	1226	27268	0.39%	0.019%
315	17.102	17.091	17.120	VV	423	3273	0.05%	0.002%
316	17.162	17.120	17.187	VV	1665	36418	0.53%	0.025%
317	17.193	17.187	17.235	VV	820	12660	0.18%	0.009%
318	17.289	17.235	17.309	PV	2403	54850	0.79%	0.038%
319	17.317	17.309	17.356	VV	1829	42334	0.61%	0.029%
320	17.374	17.356	17.398	VV	1436	23233	0.34%	0.016%
321	17.407	17.398	17.412	VV	732	5129	0.07%	0.004%
322	17.418	17.412	17.423	VV	773	4518	0.07%	0.003%
323	17.449	17.423	17.474	VV	1506	27529	0.40%	0.019%
324	17.492	17.474	17.514	VV	647	11293	0.16%	0.008%
325	17.546	17.514	17.553	VV	539	9517	0.14%	0.007%
326	17.564	17.553	17.572	VV	484	4493	0.07%	0.003%
327	17.576	17.572	17.597	VV	378	3663	0.05%	0.003%
328	17.602	17.597	17.608	VV	308	1186	0.02%	0.001%
329	17.628	17.608	17.650	PV	557	9018	0.13%	0.006%
330	17.666	17.650	17.684	VV	543	7864	0.11%	0.005%
331	17.733	17.684	17.739	VV	1467	24582	0.36%	0.017%
332	17.775	17.739	17.807	VV	38709	544302	7.88%	0.379%
333	17.863	17.807	17.881	VV	1685	42567	0.62%	0.030%
334	17.886	17.881	17.907	VV	1199	12366	0.18%	0.009%
335	17.926	17.907	17.984	VV	1500	40046	0.58%	0.028%
336	18.007	17.984	18.039	VV	1066	20352	0.29%	0.014%
337	18.066	18.039	18.095	VV	2748	50234	0.73%	0.035%
338	18.174	18.095	18.188	VV	404221	6004467	86.90%	4.178%
339	18.212	18.188	18.268	VV	421147	5479884	79.31%	3.813%
340	18.294	18.268	18.310	VV	3440	51406	0.74%	0.036%
341	18.328	18.310	18.375	VV	3176	65760	0.95%	0.046%
342	18.432	18.375	18.478	VV	391312	5562721	80.50%	3.871%
343	18.496	18.478	18.517	VV	1234	23089	0.33%	0.016%
344	18.542	18.517	18.565	VV	2723	46368	0.67%	0.032%
345	18.603	18.565	18.661	VV	37064	551478	7.98%	0.384%
346	18.705	18.661	18.730	VV	2300	65988	0.95%	0.046%
347	18.735	18.730	18.747	VV	1573	14766	0.21%	0.010%
348	18.769	18.747	18.795	VV	1540	39306	0.57%	0.027%
349	18.836	18.795	18.860	VV	1825	55807	0.81%	0.039%
350	18.882	18.860	18.892	VV	1618	27531	0.40%	0.019%
351	18.896	18.892	18.902	VV	1248	7075	0.10%	0.005%

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352	18.969	18.902	19.006	VV	8063	253979	3.68%	0.177%
353	19.011	19.006	19.050	VV	4920	93066	1.35%	0.065%
354	19.055	19.050	19.066	VV	2451	20654	0.30%	0.014%
355	19.086	19.066	19.090	VV	2843	36055	0.52%	0.025%
356	19.099	19.090	19.127	VV	2650	53768	0.78%	0.037%
357	19.135	19.127	19.154	VV	2292	32487	0.47%	0.023%
358	19.168	19.154	19.174	VV	1991	23407	0.34%	0.016%
359	19.198	19.174	19.225	VV	2724	70411	1.02%	0.049%
360	19.254	19.225	19.283	VV	2511	78473	1.14%	0.055%
361	19.292	19.283	19.307	VV	2286	32077	0.46%	0.022%
362	19.310	19.307	19.315	VV	2195	9765	0.14%	0.007%
363	19.383	19.315	19.414	VV	38810	678076	9.81%	0.472%
364	19.421	19.414	19.440	VV	3089	45381	0.66%	0.032%
365	19.452	19.440	19.465	VV	3097	43408	0.63%	0.030%
366	19.490	19.465	19.522	VV	4660	121062	1.75%	0.084%
367	19.559	19.522	19.590	VV	6889	182508	2.64%	0.127%
368	19.625	19.590	19.652	VV	6021	179623	2.60%	0.125%
369	19.677	19.652	19.695	VV	4737	111916	1.62%	0.078%
370	19.750	19.695	19.777	VV	6126	244968	3.55%	0.170%
371	19.782	19.777	19.789	VV	4304	30412	0.44%	0.021%
372	19.806	19.789	19.823	VV	4614	87192	1.26%	0.061%
373	19.834	19.823	19.862	VV	4629	101466	1.47%	0.071%
374	19.868	19.862	19.873	VV	4280	26627	0.39%	0.019%
375	19.877	19.873	19.881	VV	4160	20365	0.29%	0.014%
376	19.932	19.881	19.968	VV	8500	322729	4.67%	0.225%
377	20.026	19.968	20.059	VV	8280	353626	5.12%	0.246%
378	20.074	20.059	20.087	VV	6546	105833	1.53%	0.074%
379	20.119	20.087	20.152	VV	37287	667286	9.66%	0.464%
380	20.198	20.152	20.229	VV	6972	303569	4.39%	0.211%
381	20.262	20.229	20.276	VV	10428	242538	3.51%	0.169%
382	20.284	20.276	20.325	VV	9528	231097	3.34%	0.161%
383	20.365	20.325	20.375	VV	7178	201857	2.92%	0.140%
384	20.399	20.375	20.410	VV	7255	151588	2.19%	0.105%
385	20.470	20.410	20.500	VV	8142	414791	6.00%	0.289%
386	20.505	20.500	20.525	VV	7806	117768	1.70%	0.082%
387	20.529	20.525	20.534	VV	7703	38398	0.56%	0.027%
388	20.544	20.534	20.555	VV	7922	99116	1.43%	0.069%
389	20.568	20.555	20.580	VV	8056	116857	1.69%	0.081%
390	20.586	20.580	20.592	VV	7626	53220	0.77%	0.037%
391	20.611	20.592	20.631	VV	7517	173231	2.51%	0.121%
392	20.658	20.631	20.694	VV	7673	271754	3.93%	0.189%
393	20.727	20.694	20.737	VV	6955	178894	2.59%	0.124%
394	20.768	20.737	20.774	VV	6848	150872	2.18%	0.105%
395	20.779	20.774	20.784	VV	6816	38890	0.56%	0.027%
396	20.788	20.784	20.811	VV	6713	106216	1.54%	0.074%
397	20.856	20.811	20.912	VV	30640	803645	11.63%	0.559%
398	20.937	20.912	20.943	VV	6114	112781	1.63%	0.078%
399	20.965	20.943	21.007	VV	6213	215905	3.12%	0.150%
400	21.029	21.007	21.064	VV	5378	175667	2.54%	0.122%
401	21.079	21.064	21.084	VV	4887	58833	0.85%	0.041%
402	21.104	21.084	21.128	VV	5017	128274	1.86%	0.089%
403	21.153	21.128	21.190	VV	5021	175624	2.54%	0.122%
404	21.197	21.190	21.240	VV	4504	127261	1.84%	0.089%

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405	21.279	21.240	21.287	VV	4953	127271	1.84%	0.089%
406	21.305	21.287	21.335	VV	5074	136279	1.97%	0.095%
407	21.346	21.335	21.402	VV	4314	151627	2.19%	0.106%
408	21.418	21.402	21.428	VV	3674	55495	0.80%	0.039%
409	21.447	21.428	21.462	VV	3572	70452	1.02%	0.049%
410	21.477	21.462	21.500	VV	3583	78275	1.13%	0.054%
411	21.524	21.500	21.567	VV	3496	127736	1.85%	0.089%
412	21.599	21.567	21.657	VV	3434	154511	2.24%	0.108%
413	21.685	21.657	21.716	VV	3196	92702	1.34%	0.065%
414	21.777	21.716	21.882	VV	20345	610685	8.84%	0.425%
415	21.948	21.882	21.960	VV	1577	71527	1.04%	0.050%
416	21.982	21.960	22.024	VV	1970	55105	0.80%	0.038%
417	22.051	22.024	22.170	VV	1126	49172	0.71%	0.034%
					Sum of corrected areas:		143719842	

Aromatic EPH 040725.M Fri Apr 11 01:44:01 2025

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MSD	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
Sample Wt/Vol:	30.06 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
04/08/25 10:10	04/11/25 2:32	PB167513

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C9-C12	Aliphatic C9-C12	5.41		1	0.16	1.12	mg/kg FC068568.D
Aliphatic C12-C16	Aliphatic C12-C16	7.48		1	0.12	0.75	mg/kg FC068568.D
Aliphatic C16-C21	Aliphatic C16-C21	10.0		1	0.14	1.12	mg/kg FC068568.D
Aliphatic C21-C28	Aliphatic C21-C28	12.9		1	0.59	1.49	mg/kg FC068568.D
Aliphatic C28-C40	Aliphatic C28-C40	20.9		1	1.32	2.24	mg/kg FC068568.D
Aromatic C10-C12	Aromatic C10-C12	3.09		1	0.13	0.75	mg/kg FD049277.D
Aromatic C12-C16	Aromatic C12-C16	6.69		1	0.26	1.12	mg/kg FD049277.D
Aromatic C16-C21	Aromatic C16-C21	18.0		1	0.45	1.86	mg/kg FD049277.D
Aromatic C21-C36	Aromatic C21-C36	30.0		1	1.33	2.98	mg/kg FD049277.D
Total AliphaticEPH	Total AliphaticEPH	56.7			2.34	6.71	mg/kg
Total AromaticEPH	Total AromaticEPH	57.8			2.17	6.71	mg/kg
Total EPH	Total EPH	114			4.50	13.4	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:	Portal Partners Tri-Venture	Date Collected:	
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	
Client Sample ID:	B-149-SB01MSD	SDG No.:	Q1744
Lab Sample ID:	Q1746-01MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	89.3
Sample Wt/Vol:	30.06 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068568.D	1	04/08/25	04/11/25	PB167513

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C12	Aliphatic C9-C12	5.41		0.16	1.12	mg/kg
Aliphatic C12-C16	Aliphatic C12-C16	7.48		0.12	0.75	mg/kg
Aliphatic C16-C21	Aliphatic C16-C21	10.0		0.14	1.12	mg/kg
Aliphatic C21-C28	Aliphatic C21-C28	12.9		0.59	1.49	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	20.9		1.32	2.24	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	40.4		40 - 140	81%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	0.00		40 - 140	0%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1746-01MSD	Acq On:	11 Apr 2025 02:32
Client Sample ID:	B-149-SB01MSD	Operator:	YP/AJ
Data file:	FC068568.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	3.345	6.644	7650872	72.67	300	ug/ml
Aliphatic C12-C16	6.645	10.043	10268534	100.355	200	ug/ml
Aliphatic C16-C21	10.044	13.409	13273967	134.329	300	ug/ml
Aliphatic C21-C28	13.410	17.073	16271859	172.764	400	ug/ml
Aliphatic C28-C40	17.074	22.075	25154299	279.857	600	ug/ml
Aliphatic EPH	3.345	22.075	72619531	759.975		ug/ml
ortho-Terphenyl (SURR)	0.000	0.000	0	0		ug/ml
1-chlorooctadecane (SURR)	13.148	13.148	3752451	40.4		ug/ml
Aliphatic C9-C28	3.345	17.073	47465232	480.118	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068568.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 02:32
 Operator : YP/AJ
 Sample : Q1746-01MSD
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 B-149-SB01MSD

Integration File: autoint1.e
 Quant Time: Apr 11 03:48:23 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
 Quant Title : GC Extractables
 QLast Update : Tue Apr 08 17:31:27 2025
 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...	13.148	3752451	40.395 ug/ml
Spiked Amount 50.000		Recovery =	80.79%
Target Compounds			
1) T n-Nonane (C9)	3.445	1615097	15.335 ug/ml
2) T n-Decane (C10)	4.520	2053613	19.491 ug/ml
4) T n-Dodecane (C12)	6.545	2675088	25.438 ug/ml
6) T n-Tetradecane (C14)	8.344	3338038	32.470 ug/ml
7) T n-Hexadecane (C16)	9.947	3862004	37.922 ug/ml
8) T n-Octadecane (C18)	11.390	3934684	39.099 ug/ml
10) T n-Eicosane (C20)	12.702	4025090	40.922 ug/ml
11) T n-Heneicosane (C21)	13.315	3854750	39.553 ug/ml
13) T n-Docosane (C22)	13.901	3832142	39.672 ug/ml
14) T n-Tetracosane (C24)	15.006	3919629	41.179 ug/ml
15) T n-Hexacosane (C26)	16.029	3759195	40.246 ug/ml
16) T n-Octacosane (C28)	16.980	3751347	40.973 ug/ml
17) T n-Tricontane (C30)	17.869	3816537	41.515 ug/ml
18) T n-Dotriacontane (C32)	18.702	3791590	41.335 ug/ml
19) T n-Tetratriacontane (C34)	19.488	3787523	42.395 ug/ml
20) T n-Hexatriacontane (C36)	20.229	3683800	41.123 ug/ml
21) T n-Octatriacontane (C38)	21.005	3682580	41.652 ug/ml
22) T n-Tetracontane (C40)	21.985	3559361	40.307 ug/ml

(f)=RT Delta > 1/2 Window

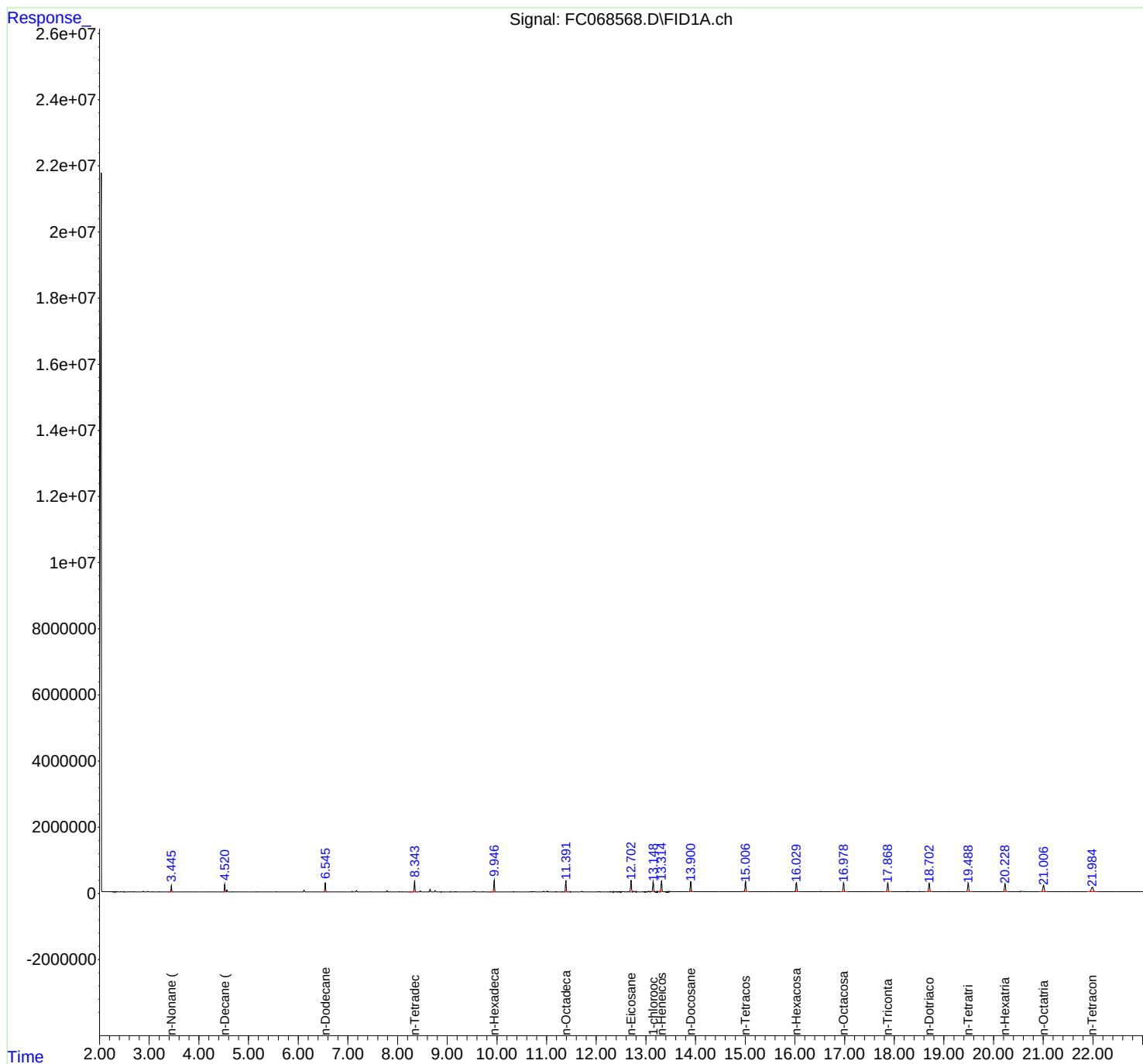
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
Data File : FC068568.D
Signal(s) : FID1A.ch
Acq On : 11 Apr 2025 02:32
Operator : YP/AJ
Sample : Q1746-01MSD
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
B-149-SB01MSD

Integration File: autoint1.e
Quant Time: Apr 11 03:48:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.M
Quant Title : GC Extractables
QLast Update : Tue Apr 08 17:31:27 2025
Response via : Initial Calibration
Integrator: ChemStation

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



Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC041125AL\
 Data File : FC068568.D
 Signal(s) : FID1A.ch
 Acq On : 11 Apr 2025 02:32
 Sample : Q1746-01MSD
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 040925.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	2.316	2.304	2.347	PH	1730	19634	0.49%	0.026%
2	2.361	2.347	2.399	PV	1734	12600	0.31%	0.016%
3	2.427	2.399	2.478	PV	4822	44714	1.11%	0.058%
4	2.491	2.478	2.508	VV	956	7256	0.18%	0.009%
5	2.519	2.508	2.561	VV	155	1737	0.04%	0.002%
6	2.590	2.561	2.624	VV	2050	18586	0.46%	0.024%
7	2.648	2.624	2.670	PV	6680	51638	1.28%	0.067%
8	2.697	2.670	2.740	VV	7136	66232	1.64%	0.086%
9	2.752	2.740	2.768	VV	213	2304	0.06%	0.003%
10	2.779	2.768	2.804	VV	543	5331	0.13%	0.007%
11	2.816	2.804	2.851	VV	251	2913	0.07%	0.004%
12	2.879	2.851	2.944	PV	20941	161947	4.02%	0.210%
13	2.970	2.944	3.004	VV	10712	137562	3.41%	0.179%
14	3.020	3.004	3.049	VV	859	8178	0.20%	0.011%
15	3.070	3.049	3.097	VV	1350	12369	0.31%	0.016%
16	3.109	3.097	3.130	VV	163	1644	0.04%	0.002%
17	3.149	3.130	3.172	VV	179	2349	0.06%	0.003%
18	3.198	3.172	3.248	VV	1308	11561	0.29%	0.015%
19	3.271	3.248	3.288	VV	209	2306	0.06%	0.003%
20	3.294	3.288	3.328	VV	152	1815	0.05%	0.002%
21	3.341	3.328	3.388	VV	126	2066	0.05%	0.003%
22	3.397	3.388	3.413	VV	117	905	0.02%	0.001%
23	3.445	3.413	3.516	PV	194996	1618488	40.14%	2.103%
24	3.551	3.516	3.564	PV	194	3187	0.08%	0.004%
25	3.576	3.564	3.589	VV	211	2880	0.07%	0.004%
26	3.598	3.589	3.620	VV	184	2294	0.06%	0.003%
27	3.629	3.620	3.637	VV	199	1324	0.03%	0.002%
28	3.650	3.637	3.685	VV	210	3435	0.09%	0.004%
29	3.724	3.685	3.745	PV	333	6264	0.16%	0.008%
30	3.769	3.745	3.807	VV	364	7924	0.20%	0.010%
31	3.824	3.807	3.851	VV	379	5478	0.14%	0.007%
32	3.861	3.851	3.877	VV	312	2615	0.06%	0.003%
33	3.896	3.877	3.909	VV	252	2659	0.07%	0.003%
34	3.921	3.909	3.934	VV	155	1741	0.04%	0.002%
35	3.947	3.934	3.959	VV	442	3762	0.09%	0.005%
36	3.967	3.959	3.988	VV	278	2391	0.06%	0.003%

					rteres			
37	3.998	3.988	4.017	VV	192	2662	0.07%	0.003%
38	4.033	4.017	4.094	VV	232	6022	0.15%	0.008%
39	4.121	4.094	4.133	VV	450	5756	0.14%	0.007%
40	4.148	4.133	4.167	VV	853	8662	0.21%	0.011%
41	4.179	4.167	4.197	VV	200	2917	0.07%	0.004%
42	4.216	4.197	4.260	VV	352	6140	0.15%	0.008%
43	4.292	4.260	4.321	VV	614	11004	0.27%	0.014%
44	4.328	4.321	4.356	VV	285	3480	0.09%	0.005%
45	4.369	4.356	4.409	VV	185	2910	0.07%	0.004%
46	4.480	4.409	4.490	PV	212	5637	0.14%	0.007%
47	4.520	4.490	4.545	VV	230288	2058440	51.05%	2.674%
48	4.566	4.545	4.608	VV	56601	494446	12.26%	0.642%
49	4.628	4.608	4.654	VV	1248	13978	0.35%	0.018%
50	4.675	4.654	4.711	VV	1565	22110	0.55%	0.029%
51	4.746	4.711	4.760	VV	711	9746	0.24%	0.013%
52	4.776	4.760	4.801	VV	1199	12266	0.30%	0.016%
53	4.808	4.801	4.848	VV	239	3968	0.10%	0.005%
54	4.855	4.848	4.888	VV	191	2477	0.06%	0.003%
55	4.896	4.888	4.924	VV	182	2501	0.06%	0.003%
56	4.943	4.924	4.987	VV	153	3976	0.10%	0.005%
57	5.004	4.987	5.033	VV	222	2554	0.06%	0.003%
58	5.056	5.033	5.066	PV	144	1413	0.04%	0.002%
59	5.079	5.066	5.107	VV	177	2203	0.05%	0.003%
60	5.131	5.107	5.140	VV	441	4052	0.10%	0.005%
61	5.158	5.140	5.188	VV	2003	22790	0.57%	0.030%
62	5.216	5.188	5.231	VV	456	5679	0.14%	0.007%
63	5.244	5.231	5.258	VV	233	2368	0.06%	0.003%
64	5.265	5.258	5.292	VV	180	2345	0.06%	0.003%
65	5.300	5.292	5.341	VV	106	1243	0.03%	0.002%
66	5.355	5.341	5.367	VV	164	1643	0.04%	0.002%
67	5.385	5.367	5.423	VV	322	4481	0.11%	0.006%
68	5.437	5.423	5.476	VV	164	2710	0.07%	0.004%
69	5.488	5.476	5.506	VV	72	908	0.02%	0.001%
70	5.527	5.506	5.541	PV	166	1923	0.05%	0.002%
71	5.561	5.541	5.584	VV	1602	16914	0.42%	0.022%
72	5.603	5.584	5.631	VV	868	10008	0.25%	0.013%
73	5.660	5.631	5.681	VV	192	2929	0.07%	0.004%
74	5.751	5.681	5.792	VV	272	7696	0.19%	0.010%
75	5.819	5.792	5.831	VV	128	1642	0.04%	0.002%
76	5.851	5.831	5.884	VV	281	5654	0.14%	0.007%
77	5.909	5.884	5.924	VV	144	2211	0.05%	0.003%
78	5.945	5.924	5.968	VV	130	2356	0.06%	0.003%
79	5.975	5.968	6.000	VV	118	1260	0.03%	0.002%
80	6.017	6.000	6.028	PV	80	803	0.02%	0.001%
81	6.072	6.028	6.084	VV	132	2407	0.06%	0.003%
82	6.117	6.084	6.150	VV	52321	479000	11.88%	0.622%
83	6.163	6.150	6.184	VV	335	3752	0.09%	0.005%
84	6.204	6.184	6.244	VV	606	8478	0.21%	0.011%
85	6.265	6.244	6.307	VV	353	6041	0.15%	0.008%
86	6.331	6.307	6.356	VV	213	4281	0.11%	0.006%
87	6.383	6.356	6.414	VV	152	4048	0.10%	0.005%
88	6.428	6.414	6.448	VV	141	2272	0.06%	0.003%
89	6.475	6.448	6.514	VV	218	5078	0.13%	0.007%

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90	6.545	6.514	6.614	VV	277616	2679913	66.47%	3.482%
91	6.631	6.614	6.648	VV	310	3372	0.08%	0.004%
92	6.694	6.648	6.714	VV	1046	13943	0.35%	0.018%
93	6.731	6.714	6.751	VV	280	4424	0.11%	0.006%
94	6.769	6.751	6.793	VV	314	4482	0.11%	0.006%
95	6.835	6.793	6.845	VV	154	2289	0.06%	0.003%
96	6.873	6.845	6.893	VV	244	3516	0.09%	0.005%
97	6.916	6.893	6.933	VV	163	2825	0.07%	0.004%
98	6.948	6.933	6.974	VV	193	3449	0.09%	0.004%
99	6.990	6.974	7.021	VV	338	4880	0.12%	0.006%
100	7.043	7.021	7.058	VV	538	7188	0.18%	0.009%
101	7.083	7.058	7.133	VV	1471	24209	0.60%	0.031%
102	7.174	7.133	7.230	VV	44230	434027	10.76%	0.564%
103	7.249	7.230	7.266	VV	711	7742	0.19%	0.010%
104	7.274	7.266	7.291	VV	231	2602	0.06%	0.003%
105	7.331	7.291	7.354	VV	1040	17348	0.43%	0.023%
106	7.365	7.354	7.377	VV	259	3036	0.08%	0.004%
107	7.392	7.377	7.418	VV	263	5109	0.13%	0.007%
108	7.438	7.418	7.451	VV	322	4955	0.12%	0.006%
109	7.470	7.451	7.504	VV	2615	29454	0.73%	0.038%
110	7.564	7.504	7.600	VV	464	12683	0.31%	0.016%
111	7.612	7.600	7.631	VV	144	2263	0.06%	0.003%
112	7.647	7.631	7.684	VV	333	5223	0.13%	0.007%
113	7.735	7.684	7.761	VV	546	9304	0.23%	0.012%
114	7.787	7.761	7.861	VV	33876	331821	8.23%	0.431%
115	7.895	7.861	7.907	VV	361	6368	0.16%	0.008%
116	7.921	7.907	7.940	VV	322	5075	0.13%	0.007%
117	7.950	7.940	7.974	VV	324	4314	0.11%	0.006%
118	7.992	7.974	8.012	VV	317	4772	0.12%	0.006%
119	8.038	8.012	8.074	VV	1942	25598	0.63%	0.033%
120	8.095	8.074	8.143	VV	1670	22528	0.56%	0.029%
121	8.164	8.143	8.181	VV	612	8056	0.20%	0.010%
122	8.199	8.181	8.228	VV	382	7112	0.18%	0.009%
123	8.250	8.228	8.266	VV	690	9171	0.23%	0.012%
124	8.273	8.266	8.285	VV	321	3093	0.08%	0.004%
125	8.302	8.285	8.310	VV	367	3944	0.10%	0.005%
126	8.344	8.310	8.414	VV	334602	3345641	82.98%	4.346%
127	8.459	8.414	8.514	VV	28670	295671	7.33%	0.384%
128	8.535	8.514	8.556	VV	346	6843	0.17%	0.009%
129	8.574	8.556	8.611	VV	453	6803	0.17%	0.009%
130	8.657	8.611	8.727	PV	82315	807180	20.02%	1.049%
131	8.756	8.727	8.783	VV	44367	435504	10.80%	0.566%
132	8.805	8.783	8.820	VV	418	8527	0.21%	0.011%
133	8.834	8.820	8.851	VV	511	7426	0.18%	0.010%
134	8.880	8.851	8.923	VV	1418	26690	0.66%	0.035%
135	8.936	8.923	8.965	VV	321	5890	0.15%	0.008%
136	8.997	8.965	9.013	VV	299	5217	0.13%	0.007%
137	9.030	9.013	9.041	VV	255	3485	0.09%	0.005%
138	9.065	9.041	9.085	VV	1302	16476	0.41%	0.021%
139	9.103	9.085	9.134	VV	626	12248	0.30%	0.016%
140	9.166	9.134	9.210	VV	2551	47455	1.18%	0.062%
141	9.221	9.210	9.237	VV	312	3801	0.09%	0.005%

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142	9.254	9.237	9.276	VV	398	5464	0.14%	0.007%
143	9.301	9.276	9.337	VV	253	5261	0.13%	0.007%
144	9.353	9.337	9.374	VV	183	2578	0.06%	0.003%
145	9.404	9.374	9.438	VV	282	7730	0.19%	0.010%
146	9.466	9.438	9.510	VV	565	12366	0.31%	0.016%
147	9.539	9.510	9.571	VV	21042	220923	5.48%	0.287%
148	9.585	9.571	9.601	VV	686	8265	0.20%	0.011%
149	9.624	9.601	9.648	VV	408	6695	0.17%	0.009%
150	9.677	9.648	9.702	VV	577	10830	0.27%	0.014%
151	9.725	9.702	9.743	VV	1997	21757	0.54%	0.028%
152	9.755	9.743	9.776	VV	699	7654	0.19%	0.010%
153	9.818	9.776	9.846	VV	682	9664	0.24%	0.013%
154	9.865	9.846	9.910	VV	405	9430	0.23%	0.012%
155	9.947	9.910	10.000	VV	356383	3858558	95.70%	5.013%
156	10.043	10.000	10.103	VV	302	9699	0.24%	0.013%
157	10.116	10.103	10.202	VV	110	2455	0.06%	0.003%
158	10.228	10.202	10.245	PV	137	1335	0.03%	0.002%
159	10.290	10.245	10.304	VV	248	4977	0.12%	0.006%
160	10.336	10.304	10.360	VV	1036	16013	0.40%	0.021%
161	10.381	10.360	10.399	VV	382	5788	0.14%	0.008%
162	10.422	10.399	10.452	VV	422	6998	0.17%	0.009%
163	10.479	10.452	10.514	VV	261	4956	0.12%	0.006%
164	10.548	10.514	10.575	VV	253	6555	0.16%	0.009%
165	10.587	10.575	10.596	VV	351	3201	0.08%	0.004%
166	10.616	10.596	10.648	VV	388	8454	0.21%	0.011%
167	10.683	10.648	10.715	VV	2678	36063	0.89%	0.047%
168	10.757	10.715	10.790	VV	2106	51184	1.27%	0.066%
169	10.815	10.790	10.844	VV	536	10914	0.27%	0.014%
170	10.862	10.844	10.886	VV	223	4204	0.10%	0.005%
171	10.906	10.886	10.918	VV	296	4277	0.11%	0.006%
172	10.943	10.918	10.979	VV	18986	202112	5.01%	0.263%
173	11.017	10.979	11.045	VV	19707	211345	5.24%	0.275%
174	11.080	11.045	11.128	VV	399	15880	0.39%	0.021%
175	11.140	11.128	11.170	VV	339	5272	0.13%	0.007%
176	11.192	11.170	11.229	VV	1172	13783	0.34%	0.018%
177	11.242	11.229	11.274	PV	283	2239	0.06%	0.003%
178	11.318	11.274	11.350	VV	961	14367	0.36%	0.019%
179	11.390	11.350	11.448	VV	352127	3942573	97.79%	5.122%
180	11.480	11.448	11.524	VV	871	14493	0.36%	0.019%
181	11.545	11.524	11.567	PV	242	2719	0.07%	0.004%
182	11.589	11.567	11.603	PV	108	1364	0.03%	0.002%
183	11.647	11.603	11.660	VV	108	2891	0.07%	0.004%
184	11.712	11.660	11.764	VV	12128	137430	3.41%	0.179%
185	11.781	11.764	11.806	VV	550	8341	0.21%	0.011%
186	11.842	11.806	11.854	VV	373	6703	0.17%	0.009%
187	11.871	11.854	11.894	VV	365	6468	0.16%	0.008%
188	11.900	11.894	11.918	VV	245	2451	0.06%	0.003%
189	11.938	11.918	11.961	VV	184	3948	0.10%	0.005%
190	11.992	11.961	12.004	VV	209	3910	0.10%	0.005%
191	12.058	12.004	12.091	VV	2806	45745	1.13%	0.059%
192	12.110	12.091	12.123	VV	334	4522	0.11%	0.006%
193	12.153	12.123	12.177	VV	512	8793	0.22%	0.011%
194	12.211	12.177	12.240	VV	233	6770	0.17%	0.009%

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195	12.280	12.240	12.309	VV	503	11665	0.29%	0.015%
196	12.353	12.309	12.374	VV	618	14923	0.37%	0.019%
197	12.395	12.374	12.411	VV	711	9526	0.24%	0.012%
198	12.434	12.411	12.458	VV	452	10421	0.26%	0.014%
199	12.471	12.458	12.482	VV	506	6526	0.16%	0.008%
200	12.489	12.482	12.499	VV	443	4237	0.11%	0.006%
201	12.524	12.499	12.596	VV	1240	36537	0.91%	0.047%
202	12.638	12.596	12.663	VV	866	16037	0.40%	0.021%
203	12.702	12.663	12.736	VV	349154	4031875	100.00%	5.238%
204	12.763	12.736	12.806	VV	14757	167684	4.16%	0.218%
205	12.818	12.806	12.886	VV	304	8295	0.21%	0.011%
206	12.909	12.886	12.927	VV	174	2231	0.06%	0.003%
207	12.952	12.927	12.984	VV	619	11394	0.28%	0.015%
208	12.990	12.984	13.007	VV	257	2674	0.07%	0.003%
209	13.022	13.007	13.032	VV	195	2416	0.06%	0.003%
210	13.062	13.032	13.108	VV	18114	204267	5.07%	0.265%
211	13.148	13.108	13.183	VV	319006	3765651	93.40%	4.892%
212	13.197	13.183	13.231	VV	483	9465	0.23%	0.012%
213	13.253	13.231	13.275	VV	381	8636	0.21%	0.011%
214	13.315	13.275	13.349	VV	326980	3870507	96.00%	5.028%
215	13.363	13.349	13.382	VV	509	8061	0.20%	0.010%
216	13.390	13.382	13.411	VV	326	5097	0.13%	0.007%
217	13.420	13.411	13.464	VV	308	6801	0.17%	0.009%
218	13.489	13.464	13.500	VV	292	4981	0.12%	0.006%
219	13.534	13.500	13.565	VV	478	14172	0.35%	0.018%
220	13.590	13.565	13.609	VV	461	9741	0.24%	0.013%
221	13.658	13.609	13.671	VV	492	13207	0.33%	0.017%
222	13.690	13.671	13.711	VV	695	11651	0.29%	0.015%
223	13.742	13.711	13.780	VV	1064	23403	0.58%	0.030%
224	13.804	13.780	13.823	VV	437	8920	0.22%	0.012%
225	13.846	13.823	13.863	VV	878	14042	0.35%	0.018%
226	13.901	13.863	13.948	VV	312402	3847462	95.43%	4.998%
227	13.959	13.948	14.021	VV	515	14777	0.37%	0.019%
228	14.038	14.021	14.069	VV	314	7487	0.19%	0.010%
229	14.125	14.069	14.165	VV	594	20883	0.52%	0.027%
230	14.185	14.165	14.209	VV	352	7843	0.19%	0.010%
231	14.227	14.209	14.248	VV	313	6674	0.17%	0.009%
232	14.266	14.248	14.275	VV	338	4881	0.12%	0.006%
233	14.333	14.275	14.394	VV	1469	38899	0.96%	0.051%
234	14.420	14.394	14.436	VV	530	9229	0.23%	0.012%
235	14.460	14.436	14.485	VV	1625	23417	0.58%	0.030%
236	14.534	14.485	14.551	VV	357	11723	0.29%	0.015%
237	14.561	14.551	14.578	VV	416	5245	0.13%	0.007%
238	14.590	14.578	14.618	VV	352	6526	0.16%	0.008%
239	14.626	14.618	14.646	VV	325	4446	0.11%	0.006%
240	14.666	14.646	14.698	VV	416	9292	0.23%	0.012%
241	14.732	14.698	14.778	VV	466	15641	0.39%	0.020%
242	14.787	14.778	14.800	VV	290	3404	0.08%	0.004%
243	14.818	14.800	14.827	VV	335	4721	0.12%	0.006%
244	14.859	14.827	14.884	VV	470	12161	0.30%	0.016%
245	14.891	14.884	14.904	VV	270	2660	0.07%	0.003%
246	14.940	14.904	14.961	VV	9430	116493	2.89%	0.151%

					rteres			
247	15.006	14.961	15.089	VV	297561	3936236	97.63%	5.114%
248	15.105	15.089	15.126	VV	216	2863	0.07%	0.004%
249	15.141	15.126	15.151	VV	131	1328	0.03%	0.002%
250	15.158	15.151	15.171	VV	73	785	0.02%	0.001%
251	15.192	15.171	15.234	VV	217	5802	0.14%	0.008%
252	15.248	15.234	15.271	VV	237	3199	0.08%	0.004%
253	15.279	15.271	15.298	VV	222	2246	0.06%	0.003%
254	15.344	15.298	15.360	VV	323	7326	0.18%	0.010%
255	15.383	15.360	15.418	VV	309	5492	0.14%	0.007%
256	15.435	15.418	15.471	VV	266	5245	0.13%	0.007%
257	15.482	15.471	15.494	VV	147	1629	0.04%	0.002%
258	15.524	15.494	15.600	VV	1792	30885	0.77%	0.040%
259	15.618	15.600	15.652	VV	170	2989	0.07%	0.004%
260	15.671	15.652	15.681	VV	148	1481	0.04%	0.002%
261	15.704	15.681	15.721	VV	256	3651	0.09%	0.005%
262	15.732	15.721	15.742	VV	172	1868	0.05%	0.002%
263	15.758	15.742	15.778	VV	236	3437	0.09%	0.004%
264	15.793	15.778	15.814	VV	199	3041	0.08%	0.004%
265	15.846	15.814	15.881	VV	283	6745	0.17%	0.009%
266	15.898	15.881	15.946	VV	199	5382	0.13%	0.007%
267	16.028	15.946	16.117	VV	285885	3786154	93.91%	4.919%
268	16.127	16.117	16.147	VV	172	1224	0.03%	0.002%
269	16.199	16.147	16.208	PV	286	4815	0.12%	0.006%
270	16.251	16.208	16.303	VV	349	10512	0.26%	0.014%
271	16.336	16.303	16.360	VV	390	6946	0.17%	0.009%
272	16.388	16.360	16.431	VV	274	8253	0.20%	0.011%
273	16.444	16.431	16.458	VV	114	1523	0.04%	0.002%
274	16.497	16.458	16.513	VV	7862	110118	2.73%	0.143%
275	16.527	16.513	16.574	VV	7824	101995	2.53%	0.133%
276	16.585	16.574	16.592	VV	256	2261	0.06%	0.003%
277	16.673	16.592	16.710	VV	568	25886	0.64%	0.034%
278	16.740	16.710	16.792	VV	458	17298	0.43%	0.022%
279	16.818	16.792	16.834	VV	413	8821	0.22%	0.011%
280	16.878	16.834	16.912	VV	7673	101774	2.52%	0.132%
281	16.980	16.912	17.049	VV	276472	3771867	93.55%	4.900%
282	17.094	17.049	17.113	VV	470	14156	0.35%	0.018%
283	17.124	17.113	17.153	VV	463	7397	0.18%	0.010%
284	17.233	17.153	17.274	VV	747	29960	0.74%	0.039%
285	17.307	17.274	17.352	VV	810	20403	0.51%	0.027%
286	17.427	17.352	17.454	VV	3022	58362	1.45%	0.076%
287	17.468	17.454	17.478	VV	364	4990	0.12%	0.006%
288	17.484	17.478	17.504	VV	376	3884	0.10%	0.005%
289	17.522	17.504	17.531	VV	318	4214	0.10%	0.005%
290	17.558	17.531	17.589	VV	729	17021	0.42%	0.022%
291	17.607	17.589	17.624	VV	276	4955	0.12%	0.006%
292	17.639	17.624	17.655	VV	381	5165	0.13%	0.007%
293	17.664	17.655	17.684	VV	272	3705	0.09%	0.005%
294	17.757	17.684	17.798	VV	3242	60993	1.51%	0.079%
295	17.869	17.798	17.908	VV	273746	3826952	94.92%	4.972%
296	17.921	17.908	17.938	VV	370	4790	0.12%	0.006%
297	17.959	17.938	17.980	VV	246	4855	0.12%	0.006%
298	18.028	17.980	18.110	VV	1329	37625	0.93%	0.049%
299	18.131	18.110	18.171	VV	324	7882	0.20%	0.010%

					rteres			
300	18.185	18.171	18.198	VV	240	3045	0.08%	0.004%
301	18.205	18.198	18.211	VV	226	1660	0.04%	0.002%
302	18.247	18.211	18.266	VV	5742	75148	1.86%	0.098%
303	18.288	18.266	18.338	VV	9524	129674	3.22%	0.168%
304	18.393	18.338	18.451	PV	1210	26975	0.67%	0.035%
305	18.502	18.451	18.531	VV	5280	70402	1.75%	0.091%
306	18.548	18.531	18.581	VV	433	7925	0.20%	0.010%
307	18.590	18.581	18.624	VV	281	4584	0.11%	0.006%
308	18.702	18.624	18.755	PV	255858	3793436	94.09%	4.928%
309	18.821	18.755	18.844	PV	672	12608	0.31%	0.016%
310	18.871	18.844	18.928	VV	586	14656	0.36%	0.019%
311	18.952	18.928	18.971	VV	340	5952	0.15%	0.008%
312	18.999	18.971	19.028	VV	270	6140	0.15%	0.008%
313	19.098	19.028	19.131	VV	4941	77222	1.92%	0.100%
314	19.148	19.131	19.191	VV	563	10119	0.25%	0.013%
315	19.220	19.191	19.258	VV	459	11316	0.28%	0.015%
316	19.277	19.258	19.290	VV	367	5236	0.13%	0.007%
317	19.301	19.290	19.308	VV	408	3629	0.09%	0.005%
318	19.315	19.308	19.321	VV	395	2795	0.07%	0.004%
319	19.331	19.321	19.374	VV	438	12590	0.31%	0.016%
320	19.391	19.374	19.404	VV	476	7905	0.20%	0.010%
321	19.418	19.404	19.441	VV	511	10243	0.25%	0.013%
322	19.488	19.441	19.558	VV	258286	3811274	94.53%	4.951%
323	19.634	19.558	19.659	VV	903	38183	0.95%	0.050%
324	19.665	19.659	19.672	VV	720	5541	0.14%	0.007%
325	19.725	19.672	19.757	VV	974	40354	1.00%	0.052%
326	19.776	19.757	19.820	VV	1016	33169	0.82%	0.043%
327	19.860	19.820	19.894	VV	2517	65771	1.63%	0.085%
328	19.939	19.894	19.943	VV	1153	31234	0.77%	0.041%
329	19.963	19.943	20.003	VV	1214	42493	1.05%	0.055%
330	20.041	20.003	20.068	VV	1457	51452	1.28%	0.067%
331	20.132	20.068	20.174	VV	2144	107784	2.67%	0.140%
332	20.229	20.174	20.283	VV	249332	3796257	94.16%	4.932%
333	20.315	20.283	20.333	VV	2004	57913	1.44%	0.075%
334	20.380	20.333	20.431	VV	2162	118184	2.93%	0.154%
335	20.446	20.431	20.471	VV	2130	48335	1.20%	0.063%
336	20.586	20.471	20.690	VV	5487	420313	10.42%	0.546%
337	20.738	20.690	20.761	VV	2032	80230	1.99%	0.104%
338	20.780	20.761	20.834	VV	1904	78175	1.94%	0.102%
339	20.854	20.834	20.943	VV	1715	99814	2.48%	0.130%
340	21.005	20.943	21.081	VV	202377	3797506	94.19%	4.933%
341	21.104	21.081	21.118	VV	1435	30406	0.75%	0.040%
342	21.128	21.118	21.202	VV	1384	63315	1.57%	0.082%
343	21.216	21.202	21.230	VV	1215	19720	0.49%	0.026%
344	21.260	21.230	21.308	VV	1175	51710	1.28%	0.067%
345	21.319	21.308	21.341	VV	1020	19071	0.47%	0.025%
346	21.352	21.341	21.412	VV	973	38832	0.96%	0.050%
347	21.461	21.412	21.547	VV	1517	78402	1.94%	0.102%
348	21.556	21.547	21.567	VV	771	9274	0.23%	0.012%
349	21.578	21.567	21.588	VV	808	9096	0.23%	0.012%
350	21.617	21.588	21.641	VV	799	23376	0.58%	0.030%
351	21.682	21.641	21.708	VV	753	27949	0.69%	0.036%

					rters				
352	21.718	21.708	21.780	VV	725	25506	0.63%	0.033%	
353	21.795	21.780	21.824	VV	572	12773	0.32%	0.017%	
354	21.847	21.824	21.907	VV	500	18874	0.47%	0.025%	
355	21.986	21.907	22.116	VV	134811	3591444	89.08%	4.666%	
356	22.124	22.116	22.142	VV	224	3205	0.08%	0.004%	
357	22.148	22.142	22.161	VV	222	2095	0.05%	0.003%	
358	22.179	22.161	22.238	VV	198	5979	0.15%	0.008%	
359	22.245	22.238	22.298	VV	127	2674	0.07%	0.003%	
					Sum of corrected areas:	76973876			

Aliphatic EPH 040925.M Fri Apr 11 04:59:20 2025



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

Manual Integration Report

Sequence:

FC040925AL

Instrument

FID_c

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:

FC041125AL

Instrument

FID_c

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
Q1746-05DL	FC068547.D	1-chlorooctadecane (SURR)	yogesh	4/11/2025 7:46:04 AM	mohammad	4/14/2025 12:39:51	Peak Integrated by Software
Q1760-05MS	FC068555.D	n-Nonane (C9)	yogesh	4/11/2025 7:46:07 AM	mohammad	4/14/2025 12:39:51	Peak Integrated by Software
Q1760-05MSD	FC068556.D	n-Decane (C10)	yogesh	4/11/2025 7:46:07 AM	mohammad	4/14/2025 12:39:51	Peak Integrated by Software

Manual Integration Report

Sequence:

FD040725AR

Instrument

FID_d

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
100 PPM AROMATIC HC	FD049232.D	Bnezo[k]fluoranthene (C30.14)	yogesh	4/8/2025 7:46:50 AM	mohammad	4/9/2025 2:58:56	Peak Integrated by Software
100 PPM AROMATIC HC	FD049232.D	Dibenz[a,h]anthracene (C30.36)	yogesh	4/8/2025 7:46:50 AM	mohammad	4/9/2025 2:58:56	Peak Integrated by Software



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

Manual Integration Report

Sequence:

FD041025AR

Instrument

FID_d

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason



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

Manual Integration Report

Sequence:

FE032925AL

Instrument

FID_e

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:

FE040825AL

Instrument

FID_e

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
Q1732-01DL	FE053229.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:50 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1732-01DL	FE053229.D	ortho-Terphenyl (SURRE)	yogesh	4/9/2025 8:19:50 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1732-02DL	FE053230.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:51 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1737-01DL	FE053231.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:52 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1738-01DL	FE053232.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:53 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1738-02DL	FE053233.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:55 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
20 PPM ALIPHATIC HC	FE053237.D	n-Tetracontane (C40)	yogesh	4/9/2025 8:19:57 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1740-01	FE053241.D	1-chlorooctadecane (SURRE)	yogesh	4/9/2025 8:19:58 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software
Q1740-01	FE053241.D	ortho-Terphenyl (SURRE)	yogesh	4/9/2025 8:19:58 AM	mohammad	4/10/2025 5:30:33	Peak Integrated by Software

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC040925AL

Review By	yogesh	Review On	4/8/2025 3:04:36 PM
Supervise By	mohammad	Supervise On	4/10/2025 5:31:03 AM
SubDirectory	FC040925AL	HP Acquire Method	HP Processing Method FC040925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC068513.D	08 Apr 2025 13:05	YP/AJ	Ok
2	I.BLK	FC068514.D	08 Apr 2025 13:42	YP/AJ	Ok
3	100 PPM ALIPHATIC HC STD1	FC068515.D	08 Apr 2025 14:19	YP/AJ	Ok
4	50 PPM ALIPHATIC HC STD2	FC068516.D	08 Apr 2025 14:56	YP/AJ	Ok
5	20 PPM ALIPHATIC HC STD3	FC068517.D	08 Apr 2025 15:34	YP/AJ	Ok
6	10 PPM ALIPHATIC HC STD4	FC068518.D	08 Apr 2025 16:12	YP/AJ	Ok
7	5 PPM ALIPHATIC HC STD5	FC068519.D	08 Apr 2025 16:48	YP/AJ	Ok
8	20 PPM ALIPHATIC HC STD ICV	FC068520.D	08 Apr 2025 17:26	YP/AJ	Ok
9	I.BLK	FC068521.D	08 Apr 2025 18:41	YP/AJ	Ok
10	20 PPM ALIPHATIC HC STD	FC068522.D	08 Apr 2025 19:18	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC041125AL

Review By	yogesh	Review On	4/10/2025 9:24:51 AM
Supervise By	mohammad	Supervise On	4/14/2025 12:39:51 AM
SubDirectory	FC041125AL	HP Acquire Method	HP Processing Method FC040925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC068544.D	10 Apr 2025 06:44	YP/AJ	Ok
2	I.BLK	FC068545.D	10 Apr 2025 07:20	YP/AJ	Ok
3	20 PPM ALIPHATIC HC STD	FC068546.D	10 Apr 2025 07:56	YP/AJ	Ok
4	Q1746-05DL	FC068547.D	10 Apr 2025 08:48	YP/AJ	Ok,M
5	I.BLK	FC068548.D	10 Apr 2025 10:02	YP/AJ	Ok
6	20 PPM ALIPHATIC HC STD	FC068549.D	10 Apr 2025 11:16	YP/AJ	Ok
7	PB167545BL	FC068550.D	10 Apr 2025 13:35	YP/AJ	Ok
8	PB167545BS	FC068551.D	10 Apr 2025 14:10	YP/AJ	Ok
9	PB167545BSD	FC068552.D	10 Apr 2025 14:48	YP/AJ	Ok
10	Q1760-05	FC068553.D	10 Apr 2025 15:25	YP/AJ	Dilution
11	Q1760-05D	FC068554.D	10 Apr 2025 16:01	YP/AJ	Ok
12	Q1760-05MS	FC068555.D	10 Apr 2025 16:38	YP/AJ	Ok,M
13	Q1760-05MSD	FC068556.D	10 Apr 2025 17:15	YP/AJ	Ok,M
14	Q1760-06	FC068557.D	10 Apr 2025 17:53	YP/AJ	Ok
15	I.BLK	FC068558.D	10 Apr 2025 19:07	YP/AJ	Ok
16	20 PPM ALIPHATIC HC STD	FC068559.D	10 Apr 2025 19:45	YP/AJ	Ok
17	PB167513BL	FC068560.D	10 Apr 2025 21:36	YP/AJ	Ok
18	PB167513BS	FC068561.D	10 Apr 2025 22:14	YP/AJ	Ok
19	PB167513BSD	FC068562.D	10 Apr 2025 22:51	YP/AJ	Ok
20	Q1744-01	FC068563.D	10 Apr 2025 23:28	YP/AJ	Ok
21	Q1744-03	FC068564.D	11 Apr 2025 00:05	YP/AJ	Ok

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC041125AL

Review By	yogesh	Review On	4/10/2025 9:24:51 AM
Supervise By	mohammad	Supervise On	4/14/2025 12:39:51 AM
SubDirectory	FC041125AL	HP Acquire Method	HP Processing Method FC040925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

22	Q1746-01	FC068565.D	11 Apr 2025 00:41	YP/AJ	Ok
23	Q1746-01D	FC068566.D	11 Apr 2025 01:18	YP/AJ	Ok
24	Q1746-01MS	FC068567.D	11 Apr 2025 01:55	YP/AJ	Ok
25	Q1746-01MSD	FC068568.D	11 Apr 2025 02:32	YP/AJ	Ok
26	Q1746-03	FC068569.D	11 Apr 2025 03:09	YP/AJ	Ok
27	I.BLK	FC068570.D	11 Apr 2025 03:46	YP/AJ	Ok
28	20 PPM ALIPHATIC HC STD	FC068571.D	11 Apr 2025 04:22	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD040725AR

Review By	yogesh	Review On	4/7/2025 3:22:24 PM
Supervise By	mohammad	Supervise On	4/9/2025 2:58:56 AM
SubDirectory	FD040725AR	HP Acquire Method	HP Processing Method FD040725AR
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23968,PP23970,PP23971,PP23972,PP23973		
CCC Internal Standard/PEM	PP23971		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23969,PP24199		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FD049230.D	07 Apr 2025 15:00	YP/AJ	Ok
2	I.BLK	FD049231.D	07 Apr 2025 15:38	YP/AJ	Ok
3	100 PPM AROMATIC HC STD1	FD049232.D	07 Apr 2025 16:15	YP/AJ	Ok,M
4	50 PPM AROMATIC HC STD2	FD049233.D	07 Apr 2025 16:52	YP/AJ	Ok
5	20 PPM AROMATIC HC STD3	FD049234.D	07 Apr 2025 17:30	YP/AJ	Ok
6	10 PPM AROMATIC HC STD4	FD049235.D	07 Apr 2025 18:08	YP/AJ	Ok
7	5 PPM AROMATIC HC STD5	FD049236.D	07 Apr 2025 18:45	YP/AJ	Ok
8	20 PPM AROMATIC HC STD ICV	FD049237.D	07 Apr 2025 19:23	YP/AJ	Ok
9	I.BLK	FD049238.D	07 Apr 2025 20:37	YP/AJ	Ok
10	20 PPM AROMATIC HC STD	FD049239.D	07 Apr 2025 21:15	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD041025AR

Review By	yogesh	Review On	4/10/2025 1:50:11 PM
Supervise By	mohammad	Supervise On	4/14/2025 12:40:36 AM
SubDirectory	FD041025AR	HP Acquire Method	HP Processing Method FD040725AR
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23968,PP23970,PP23971,PP23972,PP23973		
CCC Internal Standard/PEM	PP23971		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23969,PP24199		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FD049266.D	10 Apr 2025 06:44	YP/AJ	Ok
2	I.BLK	FD049267.D	10 Apr 2025 13:35	YP/AJ	Ok
3	20 PPM AROMATIC HC STD	FD049268.D	10 Apr 2025 14:10	YP/AJ	Ok
4	PB167513BL	FD049269.D	10 Apr 2025 14:48	YP/AJ	Ok
5	PB167513BS	FD049270.D	10 Apr 2025 15:25	YP/AJ	Ok
6	PB167513BSD	FD049271.D	10 Apr 2025 16:01	YP/AJ	Ok
7	Q1744-01	FD049272.D	10 Apr 2025 16:38	YP/AJ	Ok
8	Q1744-03	FD049273.D	10 Apr 2025 17:15	YP/AJ	Ok
9	Q1746-01	FD049274.D	10 Apr 2025 17:53	YP/AJ	Ok
10	Q1746-01D	FD049275.D	10 Apr 2025 18:31	YP/AJ	Ok
11	Q1746-01MS	FD049276.D	10 Apr 2025 19:07	YP/AJ	Ok
12	Q1746-01MSD	FD049277.D	10 Apr 2025 19:45	YP/AJ	Ok
13	Q1746-03	FD049278.D	10 Apr 2025 20:21	YP/AJ	Ok
14	I.BLK	FD049279.D	10 Apr 2025 21:00	YP/AJ	Ok
15	20 PPM AROMATIC HC STD	FD049280.D	10 Apr 2025 21:36	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE032925AL

Review By	yogesh	Review On	3/28/2025 1:29:33 PM
Supervise By	mohammad	Supervise On	4/1/2025 1:30:29 AM
SubDirectory	FE032925AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FE053055.D	28 Mar 2025 22:09	YP\AJ	Ok
2	I.BLK	FE053056.D	28 Mar 2025 22:39	YP\AJ	Ok
3	100 PPM ALIPHATIC HC STD1	FE053057.D	28 Mar 2025 23:09	YP\AJ	Ok
4	50 PPM ALIPHATIC HC STD2	FE053058.D	29 Mar 2025 00:09	YP\AJ	Ok
5	20 PPM ALIPHATIC HC STD3	FE053059.D	29 Mar 2025 00:39	YP\AJ	Ok
6	10 PPM ALIPHATIC HC STD4	FE053060.D	29 Mar 2025 01:09	YP\AJ	Ok
7	5 PPM ALIPHATIC HC STD5	FE053061.D	29 Mar 2025 01:39	YP\AJ	Ok
8	20 PPM ALIPHATIC HC STD ICV	FE053062.D	29 Mar 2025 02:10	YP\AJ	Ok
9	I.BLK	FE053063.D	29 Mar 2025 03:10	YP\AJ	Ok
10	20 PPM ALIPHATIC HC STD	FE053064.D	29 Mar 2025 03:40	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FE053226.D	08 Apr 2025 06:33	YP\AJ	Ok
2	I.BLK	FE053227.D	08 Apr 2025 07:03	YP\AJ	Ok
3	20 PPM ALIPHATIC HC STD	FE053228.D	08 Apr 2025 07:33	YP\AJ	Ok
4	Q1732-01DL	FE053229.D	08 Apr 2025 08:07	YP\AJ	Ok,M
5	Q1732-02DL	FE053230.D	08 Apr 2025 08:38	YP\AJ	Ok,M
6	Q1737-01DL	FE053231.D	08 Apr 2025 09:08	YP\AJ	Ok,M
7	Q1738-01DL	FE053232.D	08 Apr 2025 09:38	YP\AJ	Ok,M
8	Q1738-02DL	FE053233.D	08 Apr 2025 10:08	YP\AJ	Ok,M
9	Q1733-01DL	FE053234.D	08 Apr 2025 10:39	YP\AJ	Ok
10	Q1733-02DL	FE053235.D	08 Apr 2025 11:09	YP\AJ	Ok
11	I.BLK	FE053236.D	08 Apr 2025 12:09	YP\AJ	Ok
12	20 PPM ALIPHATIC HC STD	FE053237.D	08 Apr 2025 12:39	YP\AJ	Ok,M
13	PB167512BL	FE053238.D	08 Apr 2025 14:33	YP\AJ	Ok
14	PB167512BS	FE053239.D	08 Apr 2025 15:03	YP\AJ	Ok
15	PB167512BSD	FE053240.D	08 Apr 2025 15:33	YP\AJ	Ok
16	Q1740-01	FE053241.D	08 Apr 2025 16:03	YP\AJ	Ok,M
17	Q1740-02	FE053242.D	08 Apr 2025 16:33	YP\AJ	Ok
18	Q1742-01	FE053243.D	08 Apr 2025 17:03	YP\AJ	Ok
19	Q1742-02	FE053244.D	08 Apr 2025 19:38	YP\AJ	Ok
20	Q1743-01	FE053245.D	08 Apr 2025 20:08	YP\AJ	Ok
21	Q1743-02	FE053246.D	08 Apr 2025 20:38	YP\AJ	Ok

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179		

22	Q1745-01	FE053247.D	08 Apr 2025 21:08	YPIAJ	Ok
23	Q1745-01D	FE053248.D	08 Apr 2025 21:38	YPIAJ	Ok
24	Q1745-01MS	FE053249.D	08 Apr 2025 22:08	YPIAJ	Ok
25	Q1745-01MSD	FE053250.D	08 Apr 2025 22:38	YPIAJ	Ok
26	Q1745-02	FE053251.D	08 Apr 2025 23:09	YPIAJ	Ok
27	Q1745-09	FE053252.D	08 Apr 2025 23:39	YPIAJ	Ok
28	Q1745-10	FE053253.D	09 Apr 2025 00:09	YPIAJ	Ok
29	Q1747-01	FE053254.D	09 Apr 2025 00:39	YPIAJ	Dilution
30	Q1747-02	FE053255.D	09 Apr 2025 01:09	YPIAJ	Dilution
31	I.BLK	FE053256.D	09 Apr 2025 02:09	YPIAJ	Ok
32	20 PPM ALIPHATIC HC STD	FE053257.D	09 Apr 2025 02:39	YPIAJ	Ok
33	PB167513BL	FE053258.D	09 Apr 2025 03:39	YPIAJ	Not Ok
34	PB167513BS	FE053259.D	09 Apr 2025 04:09	YPIAJ	Not Ok
35	PB167513BSD	FE053260.D	09 Apr 2025 04:39	YPIAJ	Not Ok
36	Q1744-01	FE053261.D	09 Apr 2025 05:09	YPIAJ	Not Ok
37	Q1744-03	FE053262.D	09 Apr 2025 05:39	YPIAJ	Not Ok
38	Q1746-01	FE053263.D	09 Apr 2025 06:09	YPIAJ	Not Ok
39	Q1746-01D	FE053264.D	09 Apr 2025 06:39	YPIAJ	Not Ok
40	Q1746-01MS	FE053265.D	09 Apr 2025 07:09	YPIAJ	Not Ok
41	Q1746-01MSD	FE053266.D	09 Apr 2025 07:39	YPIAJ	Not Ok
42	Q1746-03	FE053267.D	09 Apr 2025 08:09	YPIAJ	Not Ok
43	Q1747-01DL	FE053268.D	09 Apr 2025 08:39	YPIAJ	Not Ok
44	Q1747-02DL	FE053269.D	09 Apr 2025 09:09	YPIAJ	Ok

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

45	I.BLK	FE053270.D	09 Apr 2025 09:40	YP\AJ	Ok
46	20 PPM ALIPHATIC HC STD	FE053271.D	09 Apr 2025 10:10	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC040925AL

Review By	yogesh	Review On	4/8/2025 3:04:36 PM
Supervise By	mohammad	Supervise On	4/10/2025 5:31:03 AM
SubDirectory	FC040925AL	HP Acquire Method	HP Processing Method FC040925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC	PP24176		
Internal Standard/PEM	PP24174,PP24179		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC068513.D	08 Apr 2025 13:05		YP/AJ	Ok
2	I.BLK	I.BLK	FC068514.D	08 Apr 2025 13:42		YP/AJ	Ok
3	100 PPM ALIPHATIC HC	100 PPM ALIPHATIC HC	FC068515.D	08 Apr 2025 14:19		YP/AJ	Ok
4	50 PPM ALIPHATIC HC	50 PPM ALIPHATIC HC	FC068516.D	08 Apr 2025 14:56		YP/AJ	Ok
5	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068517.D	08 Apr 2025 15:34		YP/AJ	Ok
6	10 PPM ALIPHATIC HC	10 PPM ALIPHATIC HC	FC068518.D	08 Apr 2025 16:12		YP/AJ	Ok
7	5 PPM ALIPHATIC HC	5 PPM ALIPHATIC HC	FC068519.D	08 Apr 2025 16:48		YP/AJ	Ok
8	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068520.D	08 Apr 2025 17:26		YP/AJ	Ok
9	I.BLK	I.BLK	FC068521.D	08 Apr 2025 18:41		YP/AJ	Ok
10	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068522.D	08 Apr 2025 19:18		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC041125AL

Review By	yogesh	Review On	4/10/2025 9:24:51 AM
Supervise By	mohammad	Supervise On	4/14/2025 12:39:51 AM
SubDirectory	FC041125AL	HP Acquire Method	HP Processing Method FC040925AL

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC068544.D	10 Apr 2025 06:44		YP/AJ	Ok
2	I.BLK	I.BLK	FC068545.D	10 Apr 2025 07:20		YP/AJ	Ok
3	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068546.D	10 Apr 2025 07:56		YP/AJ	Ok
4	Q1746-05DL	B-158-GW01DL	FC068547.D	10 Apr 2025 08:48		YP/AJ	Ok,M
5	I.BLK	I.BLK	FC068548.D	10 Apr 2025 10:02		YP/AJ	Ok
6	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068549.D	10 Apr 2025 11:16		YP/AJ	Ok
7	PB167545BL	PB167545BL	FC068550.D	10 Apr 2025 13:35		YP/AJ	Ok
8	PB167545BS	PB167545BS	FC068551.D	10 Apr 2025 14:10		YP/AJ	Ok
9	PB167545BSD	PB167545BSD	FC068552.D	10 Apr 2025 14:48		YP/AJ	Ok
10	Q1760-05	TP-15	FC068553.D	10 Apr 2025 15:25	need 5x dilution	YP/AJ	Dilution
11	Q1760-05D	Q1760-05D	FC068554.D	10 Apr 2025 16:01		YP/AJ	Ok
12	Q1760-05MS	TP-15MS	FC068555.D	10 Apr 2025 16:38	FC068553.D	YP/AJ	Ok,M
13	Q1760-05MSD	TP-15MSD	FC068556.D	10 Apr 2025 17:15	FC068553.D!FC068555.D	YP/AJ	Ok,M
14	Q1760-06	TP-15-EPH	FC068557.D	10 Apr 2025 17:53		YP/AJ	Ok
15	I.BLK	I.BLK	FC068558.D	10 Apr 2025 19:07		YP/AJ	Ok
16	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068559.D	10 Apr 2025 19:45		YP/AJ	Ok
17	PB167513BL	PB167513BL	FC068560.D	10 Apr 2025 21:36		YP/AJ	Ok

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC041125AL

Review By	yogesh	Review On	4/10/2025 9:24:51 AM
Supervise By	mohammad	Supervise On	4/14/2025 12:39:51 AM
SubDirectory	FC041125AL	HP Acquire Method	HP Processing Method FC040925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

18	PB167513BS	PB167513BS	FC068561.D	10 Apr 2025 22:14	naphthalene break down - 0.189, 2-methylnepthalene break down - 0.408	YP/AJ	Ok
19	PB167513BSD	PB167513BSD	FC068562.D	10 Apr 2025 22:51	naphthalene break down - 0.283, 2-methylnepthalene break down - 0.335	YP/AJ	Ok
20	Q1744-01	B-158-SB01	FC068563.D	10 Apr 2025 23:28		YP/AJ	Ok
21	Q1744-03	B-158-SB02	FC068564.D	11 Apr 2025 00:05		YP/AJ	Ok
22	Q1746-01	B-149-SB01	FC068565.D	11 Apr 2025 00:41		YP/AJ	Ok
23	Q1746-01D	Q1746-01D	FC068566.D	11 Apr 2025 01:18		YP/AJ	Ok
24	Q1746-01MS	B-149-SB01MS	FC068567.D	11 Apr 2025 01:55	FC068565.D	YP/AJ	Ok
25	Q1746-01MSD	B-149-SB01MSD	FC068568.D	11 Apr 2025 02:32	FC068565.D!FC068567.D	YP/AJ	Ok
26	Q1746-03	B-149-SB02	FC068569.D	11 Apr 2025 03:09		YP/AJ	Ok
27	I.BLK	I.BLK	FC068570.D	11 Apr 2025 03:46		YP/AJ	Ok
28	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068571.D	11 Apr 2025 04:22		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD040725AR

Review By	yogesh	Review On	4/7/2025 3:22:24 PM
Supervise By	mohammad	Supervise On	4/9/2025 2:58:56 AM
SubDirectory	FD040725AR	HP Acquire Method	HP Processing Method FD040725AR
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23968,PP23970,PP23971,PP23972,PP23973		
CCC	PP23971		
Internal Standard/PEM			
ICV/I.BLK	PP23969,PP24199		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FD049230.D	07 Apr 2025 15:00		YP/AJ	Ok
2	I.BLK	I.BLK	FD049231.D	07 Apr 2025 15:38		YP/AJ	Ok
3	100 PPM AROMATIC HC	100 PPM AROMATIC HC	FD049232.D	07 Apr 2025 16:15		YP/AJ	Ok,M
4	50 PPM AROMATIC HC	50 PPM AROMATIC HC	FD049233.D	07 Apr 2025 16:52		YP/AJ	Ok
5	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD049234.D	07 Apr 2025 17:30		YP/AJ	Ok
6	10 PPM AROMATIC HC	10 PPM AROMATIC HC	FD049235.D	07 Apr 2025 18:08		YP/AJ	Ok
7	5 PPM AROMATIC HC	5 PPM AROMATIC HC	FD049236.D	07 Apr 2025 18:45		YP/AJ	Ok
8	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD049237.D	07 Apr 2025 19:23		YP/AJ	Ok
9	I.BLK	I.BLK	FD049238.D	07 Apr 2025 20:37		YP/AJ	Ok
10	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD049239.D	07 Apr 2025 21:15		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_D

Daily Analysis Runlog For Sequence/QC Batch ID # FD041025AR

Review By	yogesh	Review On	4/10/2025 1:50:11 PM
Supervise By	mohammad	Supervise On	4/14/2025 12:40:36 AM
SubDirectory	FD041025AR	HP Acquire Method	HP Processing Method FD040725AR

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23968,PP23970,PP23971,PP23972,PP23973
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23971 PP23969,PP24199

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FD049266.D	10 Apr 2025 06:44		YP/AJ	Ok
2	I.BLK	I.BLK	FD049267.D	10 Apr 2025 13:35		YP/AJ	Ok
3	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD049268.D	10 Apr 2025 14:10		YP/AJ	Ok
4	PB167513BL	PB167513BL	FD049269.D	10 Apr 2025 14:48		YP/AJ	Ok
5	PB167513BS	PB167513BS	FD049270.D	10 Apr 2025 15:25	naphthalene break down - 0.189, 2-methylnepthalene break down - 0.408	YP/AJ	Ok
6	PB167513BSD	PB167513BSD	FD049271.D	10 Apr 2025 16:01	naphthalene break down - 0.283, 2-methylnepthalene break down - 0.335	YP/AJ	Ok
7	Q1744-01	B-158-SB01	FD049272.D	10 Apr 2025 16:38		YP/AJ	Ok
8	Q1744-03	B-158-SB02	FD049273.D	10 Apr 2025 17:15		YP/AJ	Ok
9	Q1746-01	B-149-SB01	FD049274.D	10 Apr 2025 17:53		YP/AJ	Ok
10	Q1746-01D	Q1746-01D	FD049275.D	10 Apr 2025 18:31		YP/AJ	Ok
11	Q1746-01MS	B-149-SB01MS	FD049276.D	10 Apr 2025 19:07	FD049274.D	YP/AJ	Ok
12	Q1746-01MSD	B-149-SB01MSD	FD049277.D	10 Apr 2025 19:45	FD049274.D!FD049276.D	YP/AJ	Ok
13	Q1746-03	B-149-SB02	FD049278.D	10 Apr 2025 20:21		YP/AJ	Ok
14	I.BLK	I.BLK	FD049279.D	10 Apr 2025 21:00		YP/AJ	Ok
15	20 PPM AROMATIC HC	20 PPM AROMATIC HC	FD049280.D	10 Apr 2025 21:36		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE032925AL

Review By	yogesh	Review On	3/28/2025 1:29:33 PM
Supervise By	mohammad	Supervise On	4/1/2025 1:30:29 AM
SubDirectory	FE032925AL	HP Acquire Method	HP Processing Method
			FE032925AL

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178
CCC	PP24176
Internal Standard/PEM	
ICV/I.BLK	PP24174,PP24179
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FE053055.D	28 Mar 2025 22:09		YP\AJ	Ok
2	I.BLK	I.BLK	FE053056.D	28 Mar 2025 22:39		YP\AJ	Ok
3	100 PPM ALIPHATIC HC	100 PPM ALIPHATIC HC	FE053057.D	28 Mar 2025 23:09		YP\AJ	Ok
4	50 PPM ALIPHATIC HC	50 PPM ALIPHATIC HC	FE053058.D	29 Mar 2025 00:09		YP\AJ	Ok
5	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053059.D	29 Mar 2025 00:39		YP\AJ	Ok
6	10 PPM ALIPHATIC HC	10 PPM ALIPHATIC HC	FE053060.D	29 Mar 2025 01:09		YP\AJ	Ok
7	5 PPM ALIPHATIC HC	5 PPM ALIPHATIC HC	FE053061.D	29 Mar 2025 01:39		YP\AJ	Ok
8	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053062.D	29 Mar 2025 02:10		YP\AJ	Ok
9	I.BLK	I.BLK	FE053063.D	29 Mar 2025 03:10		YP\AJ	Ok
10	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053064.D	29 Mar 2025 03:40		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FE053226.D	08 Apr 2025 06:33		YP\AJ	Ok
2	I.BLK	I.BLK	FE053227.D	08 Apr 2025 07:03		YP\AJ	Ok
3	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053228.D	08 Apr 2025 07:33		YP\AJ	Ok
4	Q1732-01DL	TT-8DL	FE053229.D	08 Apr 2025 08:07		YP\AJ	Ok,M
5	Q1732-02DL	TT-8-EPHDL	FE053230.D	08 Apr 2025 08:38		YP\AJ	Ok,M
6	Q1737-01DL	RT3069DL	FE053231.D	08 Apr 2025 09:08		YP\AJ	Ok,M
7	Q1738-01DL	OK-02-040425DL	FE053232.D	08 Apr 2025 09:38		YP\AJ	Ok,M
8	Q1738-02DL	OK-02-040425-E2DL	FE053233.D	08 Apr 2025 10:08		YP\AJ	Ok,M
9	Q1733-01DL	ETGI-328DL	FE053234.D	08 Apr 2025 10:39		YP\AJ	Ok
10	Q1733-02DL	ETGI-328-E2DL	FE053235.D	08 Apr 2025 11:09		YP\AJ	Ok
11	I.BLK	I.BLK	FE053236.D	08 Apr 2025 12:09		YP\AJ	Ok
12	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053237.D	08 Apr 2025 12:39		YP\AJ	Ok,M
13	PB167512BL	PB167512BL	FE053238.D	08 Apr 2025 14:33		YP\AJ	Ok
14	PB167512BS	PB167512BS	FE053239.D	08 Apr 2025 15:03		YP\AJ	Ok
15	PB167512BSD	PB167512BSD	FE053240.D	08 Apr 2025 15:33		YP\AJ	Ok
16	Q1740-01	TP-20	FE053241.D	08 Apr 2025 16:03		YP\AJ	Ok,M
17	Q1740-02	TP-20-EPH	FE053242.D	08 Apr 2025 16:33		YP\AJ	Ok
18	Q1742-01	TR-06-040725	FE053243.D	08 Apr 2025 17:03		YP\AJ	Ok

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC	PP24176		
Internal Standard/PEM	PP24174,PP24179		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

19	Q1742-02	TR-06-040725-E2	FE053244.D	08 Apr 2025 19:38		YPIAJ	Ok
20	Q1743-01	TP-16	FE053245.D	08 Apr 2025 20:08		YPIAJ	Ok
21	Q1743-02	TP-16-EPH	FE053246.D	08 Apr 2025 20:38		YPIAJ	Ok
22	Q1745-01	IB-6A-WC	FE053247.D	08 Apr 2025 21:08		YPIAJ	Ok
23	Q1745-01D	Q1745-01D	FE053248.D	08 Apr 2025 21:38		YPIAJ	Ok
24	Q1745-01MS	IB-6A-WCMS	FE053249.D	08 Apr 2025 22:08	FE053247.D	YPIAJ	Ok
25	Q1745-01MSD	IB-6A-WCMSD	FE053250.D	08 Apr 2025 22:38	FE053247.D!FE053249.D	YPIAJ	Ok
26	Q1745-02	IB-6A-EPH	FE053251.D	08 Apr 2025 23:09		YPIAJ	Ok
27	Q1745-09	IB-6.5-WC	FE053252.D	08 Apr 2025 23:39		YPIAJ	Ok
28	Q1745-10	IB-6.5-EPH	FE053253.D	09 Apr 2025 00:09		YPIAJ	Ok
29	Q1747-01	ARS20-0008	FE053254.D	09 Apr 2025 00:39	need 20x dilution	YPIAJ	Dilution
30	Q1747-02	ARS20-0008-E2	FE053255.D	09 Apr 2025 01:09	need 20x dilution	YPIAJ	Dilution
31	I.BLK	I.BLK	FE053256.D	09 Apr 2025 02:09		YPIAJ	Ok
32	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053257.D	09 Apr 2025 02:39		YPIAJ	Ok
33	PB167513BL	PB167513BL	FE053258.D	09 Apr 2025 03:39		YPIAJ	Not Ok
34	PB167513BS	PB167513BS	FE053259.D	09 Apr 2025 04:09		YPIAJ	Not Ok
35	PB167513BSD	PB167513BSD	FE053260.D	09 Apr 2025 04:39		YPIAJ	Not Ok
36	Q1744-01	B-158-SB01	FE053261.D	09 Apr 2025 05:09		YPIAJ	Not Ok
37	Q1744-03	B-158-SB02	FE053262.D	09 Apr 2025 05:39		YPIAJ	Not Ok

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QC Batch ID # FE040825AL

Review By	yogesh	Review On	4/8/2025 10:06:55 AM
Supervise By	mohammad	Supervise On	4/10/2025 5:30:33 AM
SubDirectory	FE040825AL	HP Acquire Method	HP Processing Method FE032925AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC	PP24176		
Internal Standard/PEM	PP24174,PP24179		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

38	Q1746-01	B-149-SB01	FE053263.D	09 Apr 2025 06:09		YP\AJ	Not Ok
39	Q1746-01D	Q1746-01D	FE053264.D	09 Apr 2025 06:39		YP\AJ	Not Ok
40	Q1746-01MS	B-149-SB01MS	FE053265.D	09 Apr 2025 07:09	FE053263.D	YP\AJ	Not Ok
41	Q1746-01MSD	B-149-SB01MSD	FE053266.D	09 Apr 2025 07:39	FE053263.D!FE053265.D	YP\AJ	Not Ok
42	Q1746-03	B-149-SB02	FE053267.D	09 Apr 2025 08:09		YP\AJ	Not Ok
43	Q1747-01DL	ARS20-0008DL	FE053268.D	09 Apr 2025 08:39	Not used	YP\AJ	Not Ok
44	Q1747-02DL	ARS20-0008-E2DL	FE053269.D	09 Apr 2025 09:09		YP\AJ	Ok
45	I.BLK	I.BLK	FE053270.D	09 Apr 2025 09:40		YP\AJ	Ok
46	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FE053271.D	09 Apr 2025 10:10		YP\AJ	Ok

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/8/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:05
In Date: 04/07/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:19
Out Date: 04/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135324

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
Q1740-01	TP-20	1	1.14	9.97	11.11	9.88	87.7	
Q1740-02	TP-20-E2	2	1.15	10.14	11.29	10.06	87.9	
Q1740-03	TP-20-VOC	3	1.18	11.96	13.14	11.9	89.6	
Q1742-01	TR-06-040725	17	1.14	10.11	11.25	10.00	87.6	
Q1742-02	TR-06-040725-E2	18	1.18	10.20	11.38	10.24	88.8	
Q1743-01	TP-16	4	1.14	10.15	11.29	10.74	94.6	
Q1743-02	TP-16-EPH	5	1.16	9.91	11.07	9.27	81.8	
Q1743-03	TP-16-VOC	6	1.14	10.34	11.48	10.84	93.8	
Q1744-01	B-158-SB01	7	1.12	9.66	10.78	9.81	90.0	
Q1744-03	B-158-SB02	8	1.18	10.73	11.91	7.19	56.0	
Q1745-01	IB-6A-WC	9	1.17	10.10	11.27	9.76	85.0	
Q1745-02	IB-6A-EPH	10	1.18	9.96	11.14	9.56	84.1	
Q1745-03	IB-6A-VOC	11	1.18	10.06	11.24	9.98	87.5	
Q1745-09	IB-6.5-WC	12	1.15	10.49	11.64	8.65	71.5	
Q1745-10	IB-6.5-EPH	13	1.18	10.26	11.44	8.46	71.0	
Q1745-11	IB-6.5-VOC	14	1.15	9.98	11.13	7.93	67.9	
Q1746-01	B-149-SB01	15	1.14	10.17	11.31	10.22	89.3	
Q1746-03	B-149-SB02	16	1.14	10.23	11.37	9.81	84.8	
Q1747-01	ARS20-0008	19	1.15	10.33	11.48	11.08	96.1	
Q1747-02	ARS20-0008-E2	20	1.19	10.08	11.27	10.8	95.3	

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

WORKLIST(Hardcopy Internal Chain)

135324

WorkList Name : %1-040725 WorkList ID : 188763 Department : Wet-Chemistry Date : 04-07-2025 08:21:09

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1740-01	TP-20	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1740-02	TP-20-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1740-03	TP-20-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L21	04/04/2025	Chemtech -SO
Q1742-01	TR-06-040725	Solid	Percent Solids	Cool 4 deg C	PSEG05		04/04/2025	Chemtech -SO
Q1742-02	TR-06-040725-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05		04/04/2025	Chemtech -SO
Q1743-01	TP-16	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1743-02	TP-16-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1743-03	TP-16-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L33	04/07/2025	Chemtech -SO
Q1744-01	B-158-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1744-03	B-158-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1745-01	IB-6A-WC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-02	IB-6A-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-03	IB-6A-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-09	IB-6.5-WC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-10	IB-6.5-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1745-11	IB-6.5-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/07/2025	Chemtech -SO
Q1746-01	B-149-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/05/2025	Chemtech -SO
Q1746-03	B-149-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	L41	04/06/2025	Chemtech -SO
Q1747-01	ARS20-0008	Solid	Percent Solids	Cool 4 deg C	PSEG03	I41	04/07/2025	Chemtech -SO
Q1747-02	ARS20-0008-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	I41	04/07/2025	Chemtech -SO

Date/Time 04/07/25 15:25
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

Date/Time 04/07/25
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

17.15
[Signature]

SOP ID:	MNJDEP-EPH-7		
Clean Up SOP #:	N/A	Extraction Start Date :	04/08/2025
Matrix :	Solid	Extraction Start Time :	10:10
Welgh By:	EH	Extraction By:	RJ
Balance check:	RJ	Filter By:	RJ
Balance ID:	EX-SC-2	pH Meter ID:	N/A
pH Strip Lot#:	N/A	Hood ID:	3,7
Extraction Method:	☐ Seperatory Funnel ☐ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet		
Extraction End Date :	04/08/2025		
Extraction End Time :	16:25		
Concentration By:	EH		
Supervisor By :	rajesh		

Standarded Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	100 PPM	PP24207
Surrogate	1.0ML	100 PPM	PP24432
Fractionation Surrogate	1.0ML	100 PPM	PP24403
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Methylene Chloride	N/A	EP2591
Baked Na2SO4	N/A	EP2599
Sand	N/A	E2865
Hexane	N/A	E3916
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
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210473.

KD Bath ID:	N/A	Envap ID:	NEVAP-02
KD Bath Temperature:	N/A	Envap Temperature:	40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/08/25	RP (Ext Lab)	Y P-pest IRB
16:30	Preparation Group	Analysis Group

Analytical Method: MNJDEP-EPH-7

Concentration Date: 04/08/2025

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB167513BL	PB167513BL	EPH	30.02	N/A	ritesh	Evelyn	2			U6-1
PB167513BS	PB167513BS	EPH	30.03	N/A	ritesh	Evelyn	2			2
PB167513BSD	PB167513BSD	EPH	30.01	N/A	ritesh	Evelyn	2			3
Q1744-01	B-158-SB01	EPH	30.07	N/A	ritesh	Evelyn	2	E		4
Q1744-03	B-158-SB02	EPH	30.05	N/A	ritesh	Evelyn	2	E		5
Q1746-01	B-149-SB01	EPH	30.02	N/A	ritesh	Evelyn	2	E		6
Q1746-01DUP	B-149-SB01DUP	EPH	30.04	N/A	ritesh	Evelyn	2	E		U3-1
Q1746-01MS	B-149-SB01MS	EPH	30.03	N/A	ritesh	Evelyn	2	E		2
Q1746-01MSD	B-149-SB01MSD	EPH	30.06	N/A	ritesh	Evelyn	2	E		3
Q1746-03	B-149-SB02	EPH	30.05	N/A	ritesh	Evelyn	2	F		4

* Extracts relinquished on the same date as received.

8/8/25

WORKLIST(Hardcopy Internal Chain)

167513
167510
E 071

Worklist Name : Q1743

Worklist ID : 188791

Department : Extraction

Date : 04-08-2025 08:13:55

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1740-01	TP-20	Solid	EPH_NF	Cool 4 deg C	PSEG03	L21	04/04/2025	NJEPH
Q1740-02	TP-20-E2	Solid	EPH_NF	Cool 4 deg C	PSEG03	L21	04/04/2025	NJEPH
Q1742-01	TR-06-040725	Solid	EPH_NF	Cool 4 deg C	PSEG05		04/04/2025	NJEPH
Q1742-02	TR-06-040725-E2	Solid	EPH_NF	Cool 4 deg C	PSEG05		04/04/2025	NJEPH
Q1743-01	TP-16	Solid	EPH_NF	Cool 4 deg C	PSEG03	L33	04/07/2025	NJEPH
Q1743-02	TP-16-EPH	Solid	EPH_NF	Cool 4 deg C	PSEG03	L33	04/07/2025	NJEPH
Q1744-01	B-158-SB01	Solid	EPH	Cool 4 deg C	PORT06	L41	04/05/2025	NJEPH
Q1744-03	B-158-SB02	Solid	EPH	Cool 4 deg C	PORT06	L41	04/05/2025	NJEPH
Q1745-01	IB-6A-WC	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH
Q1745-02	IB-6A-EPH	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH
Q1745-09	IB-6.5-WC	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH
Q1745-10	IB-6.5-EPH	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH
Q1746-01	B-149-SB01	Solid	EPH	Cool 4 deg C	PORT06	L41	04/05/2025	NJEPH
Q1746-03	B-149-SB02	Solid	EPH	Cool 4 deg C	PORT06	L41	04/06/2025	NJEPH
Q1747-01	ARSS20-0008	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH
Q1747-02	ARSS20-0008-E2	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	04/07/2025	NJEPH

Date/Time 04/08/25 10:05
 Raw Sample Received by: RJ (Sgt 103)
 Raw Sample Relinquished by: JP Sr

Date/Time 04/08/25 10:25
 Raw Sample Received by: JP Sr
 Raw Sample Relinquished by: RJ (Sgt 103)

Prep Standard - Chemical Standard Summary

Order ID : Q1744

Test : EPH

Prepbatch ID : PB167513,

Sequence ID/Qc Batch ID: FC041125AL,FD041025AR,

Standard ID :

EP2591,EP2599,PP23968,PP23969,PP23970,PP23971,PP23972,PP23973,PP24170,PP24174,PP24175,PP24176,PP
24177,PP24178,PP24179,PP24199,PP24207,PP24403,PP24432,

Chemical ID :

E2865,E3551,E3757,E3828,E3876,E3878,E3914,E3915,E3916,P10260,P11139,P12363,P12981,P12983,P12985,P129
86,P12987,P12988,P13279,P13465,P13472,P13638,P13639,P13640,P13641,P13642,P13644,P13646,P13647,P13650
,P13653,P13655,P13658,P13659,P13671,P13715,P13717,P13755,P13757,P13759,P13760,P13802,P13803,P13809,P
13828,P13836,P13840,P13842,P13846,P13855,P13858,P13859,P13860,W3177,

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>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2591	02/26/2025	08/14/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel
02/26/2025								

FROM 8000.00000ml of E3876 + 8000.00000ml of E3878 = Final Quantity: 16000.000 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	EP2599	04/07/2025	07/01/2025	Rajesh Parikh	Extraction_SC ALE_2	None	Riteshkumar Patel
(EX-SC-2)								

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	PP23968	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.25000ml of P13646 + 0.62500ml of P13465 + 1.25000ml of P10260 + 22.87500ml of E3828 = 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)	PP23969	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.25000ml of P13647 + 0.62500ml of P13472 + 1.25000ml of P11139 + 22.87500ml of E3828 = 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	PP23970	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.50000ml of E3828 + 0.50000ml of PP23968 = 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	PP23971	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.80000ml of E3828 + 0.20000ml of PP23968 = 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	PP23972	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23968 = 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	PP23973	11/14/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/21/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23970 = 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>
781	100 PPM Aliphatic HC Working STD (Restek)	PP24170	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.25000ml of P12981 + 0.25000ml of P13671 + 1.25000ml of P12363 + 23.25000ml of W3177 = 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)	PP24174	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.25000ml of P12983 + 0.25000ml of P13650 + 2.50000ml of P13279 + 22.00000ml of W3177 = 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	PP24175	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.50000ml of W3177 + 0.50000ml of PP24170 = 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	PP24176	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.80000ml of W3177 + 0.20000ml of PP24170 = 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	PP24177	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.90000ml of W3177 + 0.10000ml of PP24170 = 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	PP24178	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.90000ml of W3177 + 0.10000ml of PP24175 = 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)	PP24179	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.80000ml of W3177 + 0.20000ml of PP24174 = 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>
2946	20 PPM Aromatic HC STD ICV (Absolute)	PP24199	11/14/2024	05/09/2025	Yogesh Patel	None	None	Abdul Mirza
								03/06/2025

FROM 0.80000ml of E3878 + 0.20000ml of PP23969 = Final Quantity: 1.000 ml



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Fax : 908 789 8922

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Fax : 908 789 8922



<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	PP24432	04/01/2025	09/26/2025	Abdul Mirza	None	None	Yogesh Patel 04/02/2025
<u>FROM</u>	1.25000ml of P12985 + 1.25000ml of P12986 + 1.25000ml of P12987 + 1.25000ml of P12988 + 1.25000ml of P13653 + 1.25000ml of P13655 + 1.25000ml of P13658 + 1.25000ml of P13659 + 490.00000ml of E3915 = Final Quantity: 500.000 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	06/30/2025	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	07/01/2025	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 #
phenomenex	SI500025-30 / Cleanert SPE Silica, 5000 mg/25 ml	Z0513CK1	09/04/2025	09/04/2024 / Rajesh	04/03/2024 / Rajesh	E3757

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)	24G0862003	05/09/2025	11/09/2024 / Rajesh	11/04/2024 / Rajesh	E3828

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)	24H2762008	08/25/2025	02/25/2025 /	02/12/2025 / Rajesh	E3876

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)	24K1762005	08/14/2025	02/14/2025 / Rajesh	12/27/2024 / Rajesh	E3878

CHEMICAL RECEIPT LOG BOOK

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)	243570	09/19/2025	03/19/2025 / RUPESH	03/13/2025 / RUPESH	E3914

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)	24H2762008	09/26/2025	03/26/2025 / Rajesh	03/19/2025 / RUPESH	E3915

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)	243570	10/03/2025	04/03/2025 / Rajesh	03/31/2025 / Rajesh	E3916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30541 / Custom NJEPH Aromatics Calibration Standard	A0165529	05/14/2025	11/14/2024 / yogesh	01/26/2021 / dhaval	P10260

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	05/14/2025	11/14/2024 / yogesh	10/29/2021 / Abdul	P11139

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30540 / Custom NJEPH Aliphatics Calibration Standard	A0190424	08/03/2025	02/03/2025 / yogesh	03/16/2023 / Yogesh	P12363

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	A0204989	08/03/2025	02/03/2025 / yogesh	12/20/2023 / Yogesh	P12981

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	08/03/2025	02/03/2025 / yogesh	12/20/2023 / Yogesh	P12983

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/01/2025	04/01/2025 / Abdul	12/20/2023 / Yogesh	P12985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/01/2025	04/01/2025 / Abdul	12/20/2023 / Yogesh	P12986

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/01/2025	04/01/2025 / Abdul	12/20/2023 / Yogesh	P12987

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/01/2025	04/01/2025 / Abdul	12/20/2023 / Yogesh	P12988

CHEMICAL RECEIPT LOG BOOK

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	08/03/2025	02/03/2025 / yogesh	04/11/2024 / yogesh	P13279

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0210831	05/14/2025	11/14/2024 / yogesh	07/23/2024 / yogesh	P13465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0210831	05/14/2025	11/14/2024 / yogesh	07/23/2024 / yogesh	P13472

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13638

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13639

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13640

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13641

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13642

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	08/26/2025	02/26/2025 / yogesh	10/16/2024 / yogesh	P13644

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	05/14/2025	11/14/2024 / yogesh	10/16/2024 / yogesh	P13646

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	05/14/2025	11/14/2024 / yogesh	10/16/2024 / yogesh	P13647

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	08/03/2025	02/03/2025 / yogesh	10/16/2024 / yogesh	P13650

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	A0216631	10/01/2025	04/01/2025 / Abdul	10/16/2024 / yogesh	P13653

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/01/2025	04/01/2025 / Abdul	10/16/2024 / yogesh	P13655

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/01/2025	04/01/2025 / Abdul	10/16/2024 / yogesh	P13658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/01/2025	04/01/2025 / Abdul	10/16/2024 / yogesh	P13659

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	08/03/2025	02/03/2025 / yogesh	10/16/2024 / yogesh	P13671

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	08/26/2025	02/26/2025 / yogesh	10/24/2024 / yogesh	P13715

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	A0217838	08/26/2025	02/26/2025 / yogesh	10/24/2024 / yogesh	P13717

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0214879	09/20/2025	03/20/2025 / Abdul	11/01/2024 / yogesh	P13755

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0214879	09/20/2025	03/20/2025 / Abdul	11/01/2024 / yogesh	P13757

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0214879	09/20/2025	03/20/2025 / Abdul	11/01/2024 / yogesh	P13759

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0214879	09/20/2025	03/20/2025 / Abdul	11/01/2024 / yogesh	P13760

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13802

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	A0217408	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13803

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13809

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13828

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13836

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13840

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13842

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	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13846

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13855

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13858

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13859

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0217838	08/26/2025	02/26/2025 / yogesh	12/09/2024 / yogesh	P13860

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	08/22/2025	02/03/2025 / jignesh	01/31/2025 / jignesh	W3177



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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.

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)

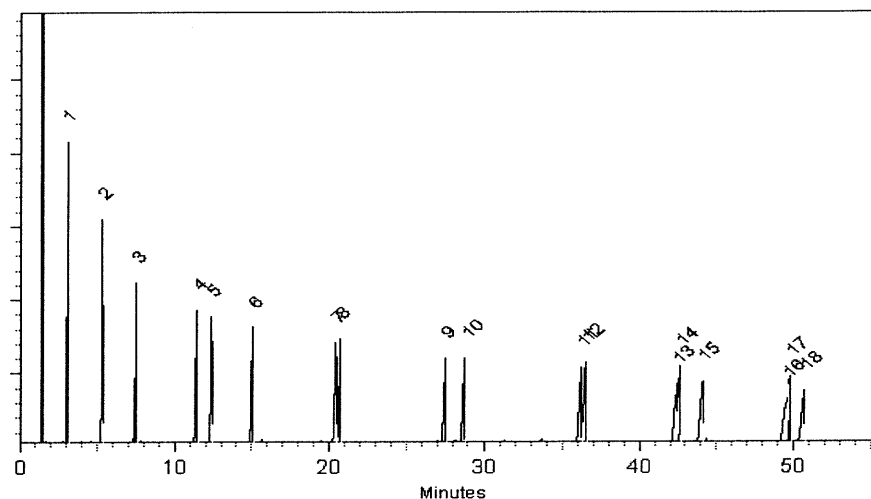
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

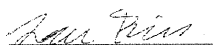
Inj. Temp:
250°C

Det. Temp:
330°C

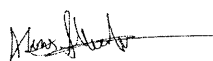
Det. Type:
FID



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

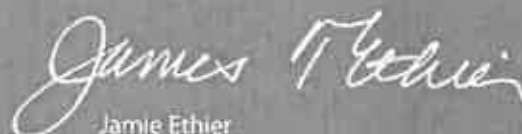
Certificate of Analysis

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

Cleanert EPH

5g/25ml 15/pkg

固相萃取产品

LOT#:Z0513CK1



MFG#:F04005



Made in China



CAT# SI500025-30

Agela Technologies

E 3757



Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)

 **avantor**™



Material No.: 9266-A4

Batch No.: 24J0862003

Manufactured Date: 2024-09-12

Expiration Date: 2025-12-12

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	1
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	0.2 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 3828



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

Methylene Chloride
ULTRA RESI-ANALYZED
For Organic Residue Analysis
(dichloromethane)



Material No.: 9266-A4
Batch No.: 24K1762005
Manufactured Date: 2024-10-08
Expiration Date: 2026-01-07
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.5 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	0.0
Chloride (Cl)	$\leq 10 \text{ ppm}$	$< 5 \text{ ppm}$
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 3878

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

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT - 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	H303	Quality Test / Release Date	11/07/2024
Lot Number	243570		
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Nov/2029
Chemical Origin	Organic - non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	69
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.669
EVAPORATION RESIDUE	ppm	<= 1	<1
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 195 NM	ABS. UNITS	<= 1	0.74
OPTICAL ABS AT 210 NM	ABS. UNITS	<= 0.25	0.17
OPTICAL ABS AT 220 NM	ABS. UNITS	<= 0.07	0.05
OPTICAL ABS AT 254 NM	ABS. UNITS	<= 0.005	0.001
PESTICIDE RESIDUE ANALYSIS	NG/L	<= 10	<10
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.375 - 1.385	1.379
SUITABILITY FOR GC/MS		= PASS TEST	PASS TEST
SULFUR COMPOUNDS	%	<= 0.005	<0.005
THIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
WATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001

Recd by RS on 3/14/25



E3914

Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	<0.1 %
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

Recd. by RS on 3/19/25

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3915

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

Certificate of Analysis

1 Reagent Lane
 Fair Lawn, NJ 07410
 201.796.7100 tel
 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT - 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	H303	Quality Test / Release Date	11/07/2024
Lot Number	243570		
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Nov/2029
Chemical Origin	Organic - non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A

Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	69
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.669
EVAPORATION RESIDUE	ppm	<= 1	<1
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 195 NM	ABS. UNITS	<= 1	0.74
OPTICAL ABS AT 210 NM	ABS. UNITS	<= 0.25	0.17
OPTICAL ABS AT 220 NM	ABS. UNITS	<= 0.07	0.05
OPTICAL ABS AT 254 NM	ABS. UNITS	<= 0.005	0.001
PESTICIDE RESIDUE ANALYSIS	NG/L	<= 10	<10
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.375 - 1.385	1.379
SUITABILITY FOR GC/MS		= PASS TEST	PASS TEST
SULFUR COMPOUNDS	%	<= 0.005	<0.005
THIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
WATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001

Harout Sahagian

Harout Sahagian - Quality Control Manager - Fair Lawn

Recd by RP on 3/31/25

E 3946

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
 If there are any questions with this certificate, please call at (800) 227-6701.
 *Based on suggested storage condition.



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

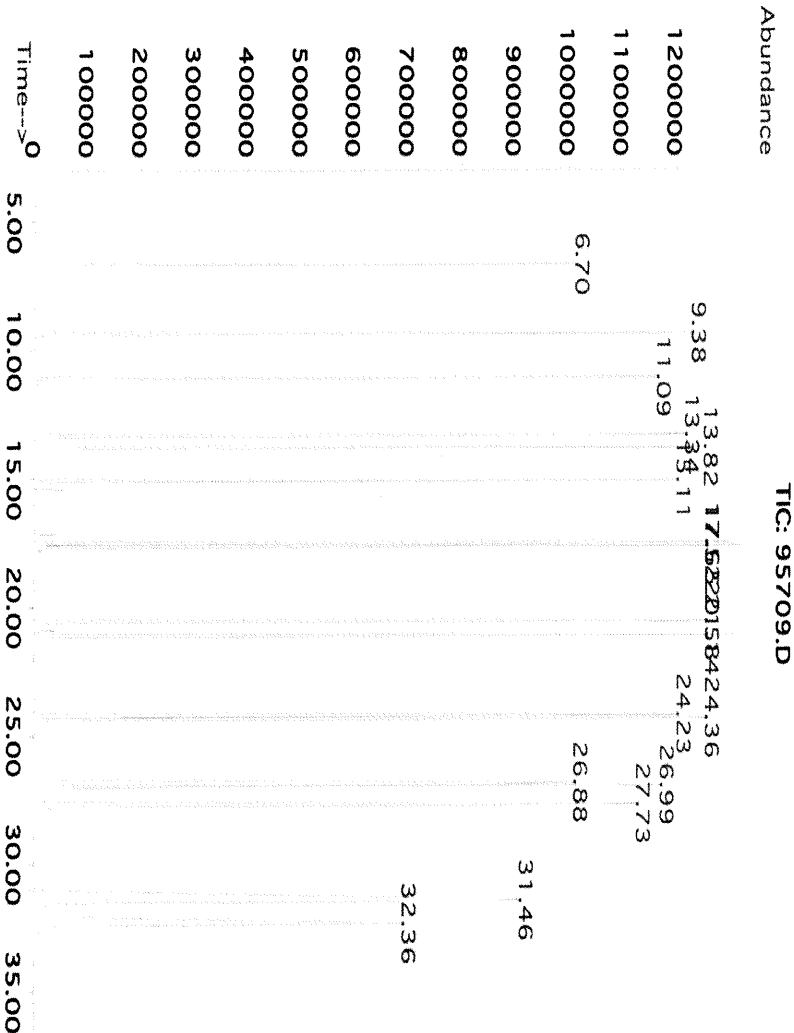
1. Acenaphthene	1	MKB14871V	2000	99	0.2	1.01003	1.01010	2000.1	8.1	83-32-9	N/A	ip-tral 600mg/kg
2. Acenaphthylene	3	012014	2000	98	0.2	1.02033	1.02053	2000.4	8.2	208-96-6	N/A	N/A
3. Anthracene	13	A0210580	2000	99	0.2	1.01003	1.01009	2000.1	8.1	120-12-7	0.2mg/m3 (8h)	ip-trus 430mg/kg
4. Benz(a)anthracene	28	JY2TD-JT	2000	98	0.2	1.02033	1.02051	2000.3	8.2	56-55-3	N/A	N/A
5. Benz(a)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.



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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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)

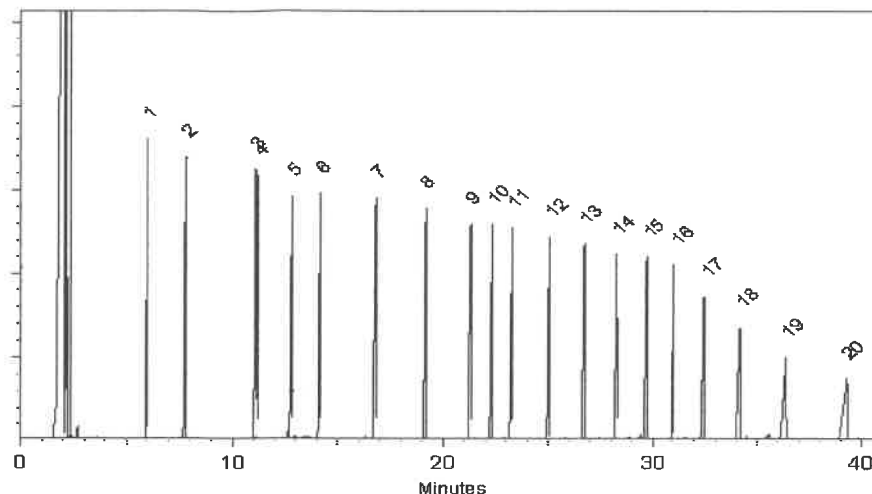
Carrier Gas:
hydrogen-constant pressure 10 psi.

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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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.:** 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:

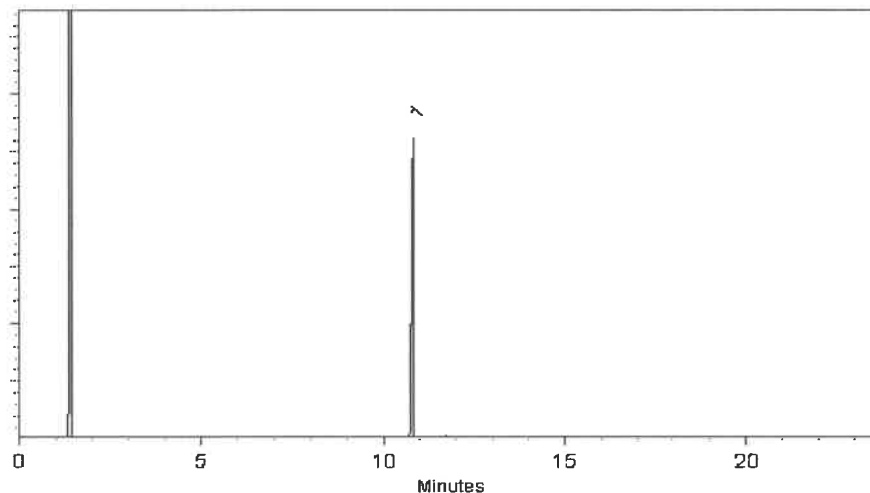
FID

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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chromatographic plus



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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:

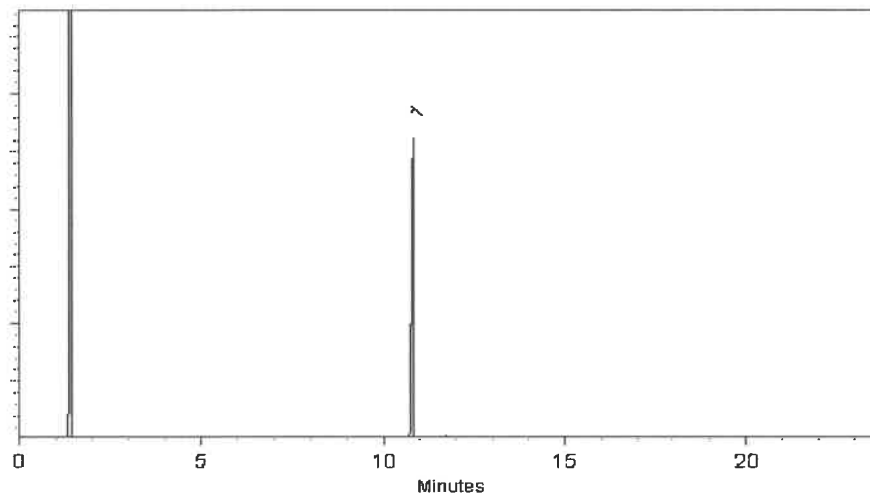
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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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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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:

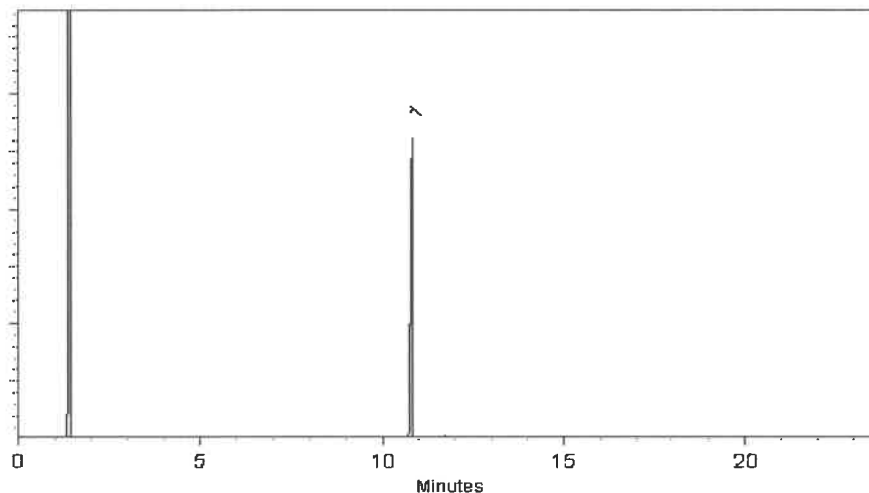
FID

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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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.:** 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:

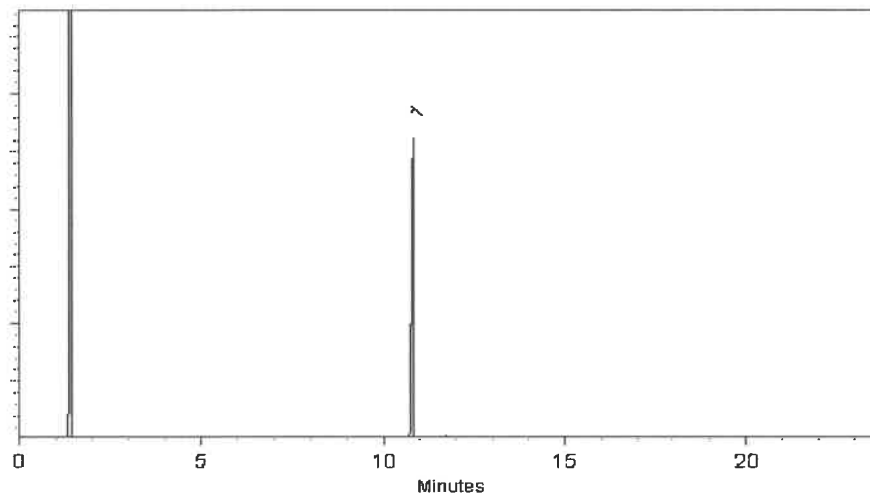
FID

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.



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

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Certificate of Analysis

chromatographic plus



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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)
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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:

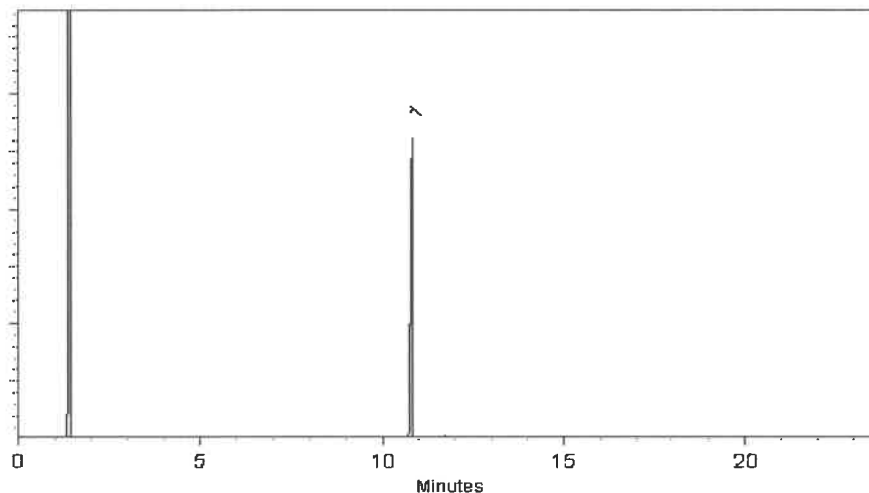
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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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:

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Purity Notes:

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Expiration Date: January 31, 2031 **Storage:** 10°C or colder

Ship: Ambient

P12960
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P12991 } Y.P.
12/21/2023

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Det. Type:

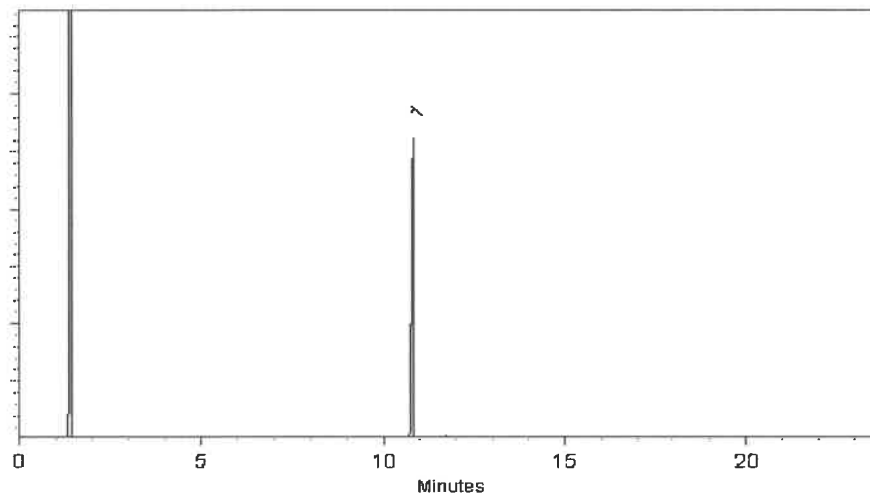
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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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

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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

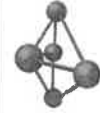
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CERTIFIED WEIGHT REPORT

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
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) orl-rat 1630mg/kg
3.	n-Nonane	95708	120222	1.00	25.00	1000.7	1000.7	1000	NA	0.013	NA	NA	NA	1000.0	4.2	111-84-2	200 ppm (1050mg/m ³ 8H) orl-rat 490mg/kg
4.	n-Decane	95708	120222	1.00	25.00	1000.9	1000.9	1000	NA	0.013	NA	NA	NA	1000.2	4.2	124-18-5	ivn-mus 218mg/kg
5.	n-Dodecane	95708	120222	1.00	25.00	1000.7	1000.7	1000	NA	0.013	NA	NA	NA	1000.0	4.2	112-40-3	N/A
6.	n-Tetradecane	95708	120222	1.00	25.00	1002.1	1002.1	1000	NA	0.013	NA	NA	NA	1001.3	4.2	629-59-4	ivn-mus 3494mg/kg
7.	n-Hexadecane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	0.013	NA	NA	NA	999.7	4.2	544-76-3	N/A
8.	n-Octadecane	95708	120222	1.00	25.00	1001.0	1001.0	1000	NA	0.013	NA	NA	NA	1000.3	4.1	589-45-3	N/A
9.	n-Eicosane	95708	120222	1.00	25.00	1001.0	1001.0	1000	NA	0.013	NA	NA	NA	1000.3	4.2	112-95-8	N/A
10.	n-Henicosane	95708	120222	1.00	25.00	1002.4	1002.4	1000	NA	0.013	NA	NA	NA	1001.6	4.2	629-94-7	N/A
11.	n-Docosane	95708	120222	1.00	25.00	1001.9	1001.9	1000	NA	0.013	NA	NA	NA	1001.2	4.2	629-97-0	N/A
12.	n-Tetracosane	95708	120222	1.00	25.00	1000.8	1000.8	1000	NA	0.013	NA	NA	NA	1000.1	4.2	646-31-1	N/A
13.	n-Hexacosane	95708	120222	1.00	25.00	1001.2	1001.2	1000	NA	0.013	NA	NA	NA	1000.4	4.2	630-01-3	N/A
14.	n-Octacosane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	0.013	NA	NA	NA	999.8	4.2	630-02-4	N/A
15.	n-Triacontane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	0.013	NA	NA	NA	999.8	4.2	638-68-6	N/A
16.	n-Dotriacontane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	0.013	NA	NA	NA	999.8	4.3	544-85-4	ivn-mus 100mg/kg
17.	n-Tetraacontane	95708	120222	1.00	25.00	1000.4	1000.4	1000	NA	0.013	NA	NA	NA	999.7	4.2	14167-59-0	N/A
18.	n-Hexatriacontane	95708	120222	1.00	25.00	1001.5	1001.5	1000	NA	0.013	NA	NA	NA	1000.8	4.2	630-06-8	N/A
19.	n-Octatriacontane	95708	120222	1.00	25.00	1000.3	1000.3	1000	NA	0.013	NA	NA	NA	999.6	4.3	7184-86-6	N/A
20.	n-Tetracontane	95708	120222	1.00	25.00	1000.6	1000.6	1000	NA	0.013	NA	NA	NA	999.9	4.3	4181-95-7	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.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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Catalog No. : 31480 **Lot No.:** A0210831
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 : March 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13h57
↓
P13h78 } Y.P.
67/23/24

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%	4,031.0 µg/mL	+/- 181.5871
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,037.5 µg/mL	+/- 181.8799

* 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:

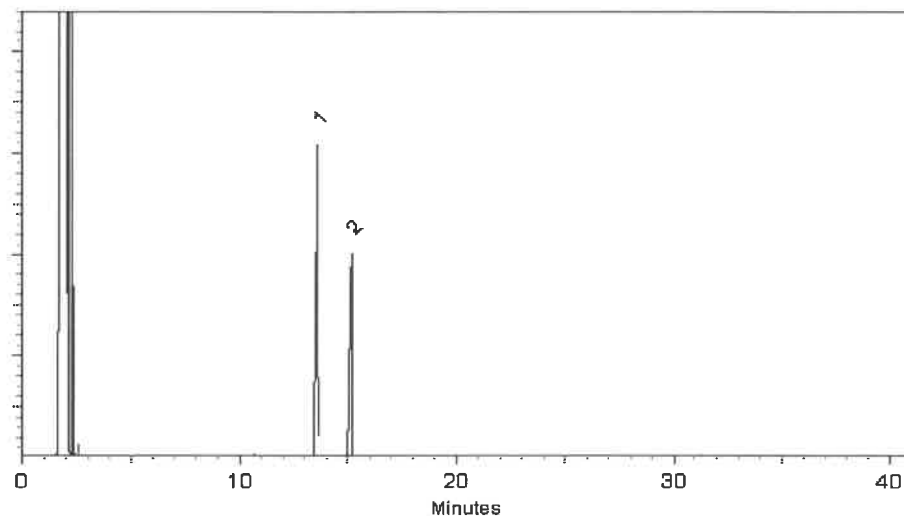
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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Stacey Wanner - Operations Technician I

Date Mixed: 29-Apr-2024

Balance Serial # B345965662

Dillan Murphy - Operations Technician I

Date Passed: 30-Apr-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

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Solvent: Hexane
CAS # 110-54-3
Purity 99%

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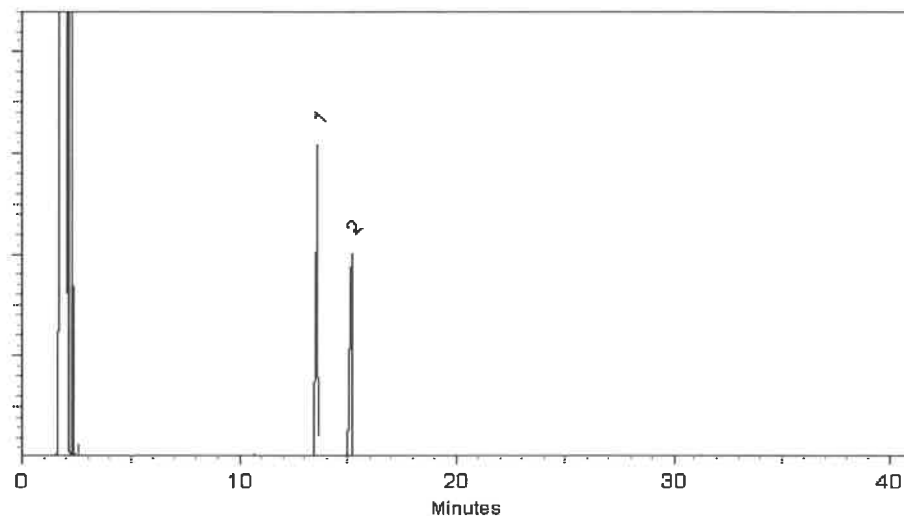
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- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound 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
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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.:** 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

P13625
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P13644 } Y.P.
10/16/24

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%	200.9 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

* 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:

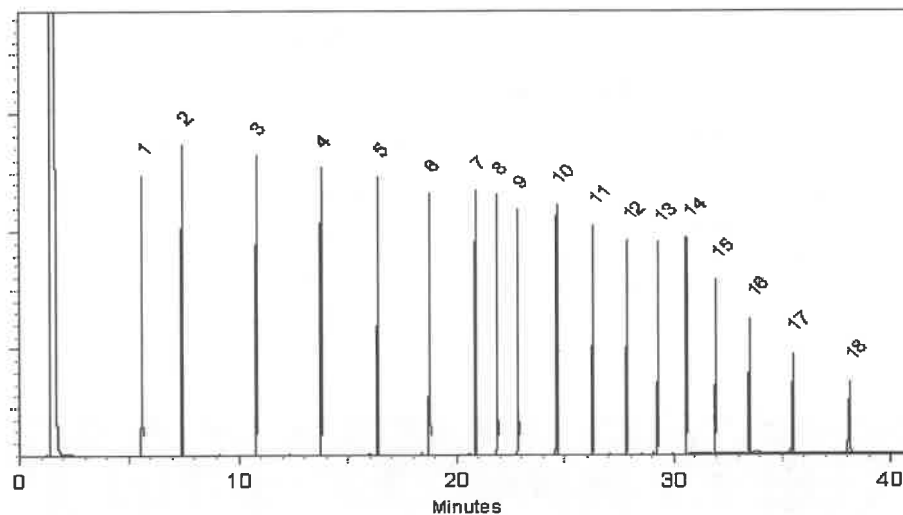
FID

Split Vent:

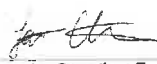
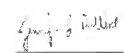
2 ml/min.

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:** 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.
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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

P13625
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P13644 } Y.P.
10/16/24

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%	200.9 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

* 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:

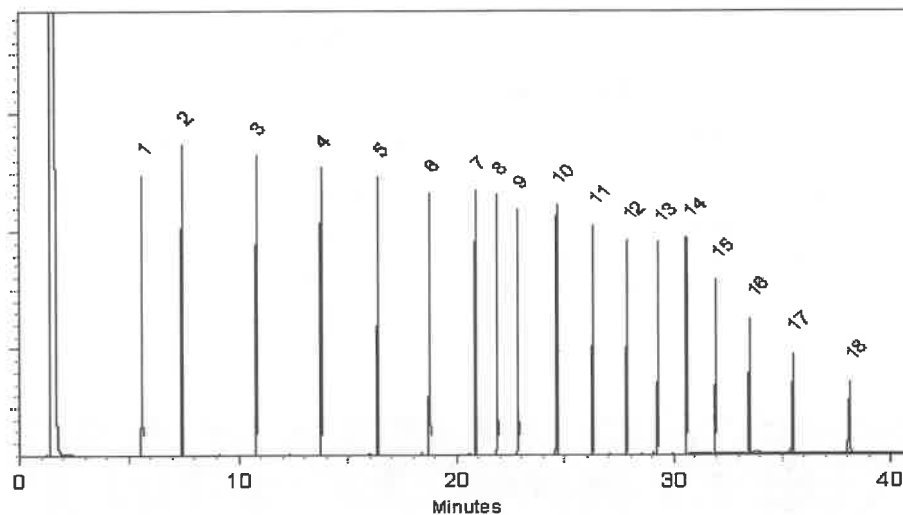
FID

Split Vent:

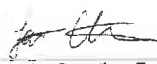
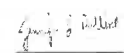
2 ml/min.

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:** 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.
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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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Certificate of Analysis

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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

P13625
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P13644 } Y.P.
10/16/24

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%	200.9 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

* 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:

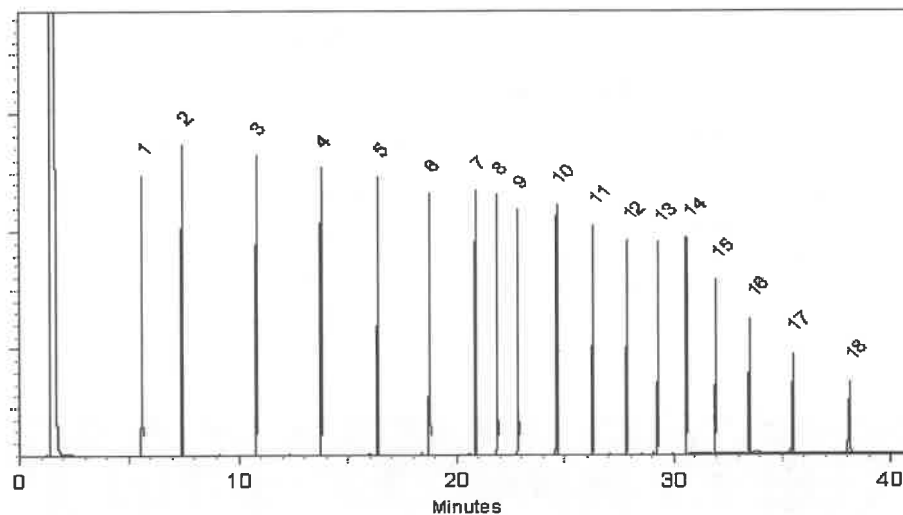
FID

Split Vent:

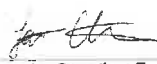
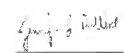
2 ml/min.

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:** 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:

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Manufacturing Notes:

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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

P13625
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P13644 } Y.P.
10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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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

* 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:

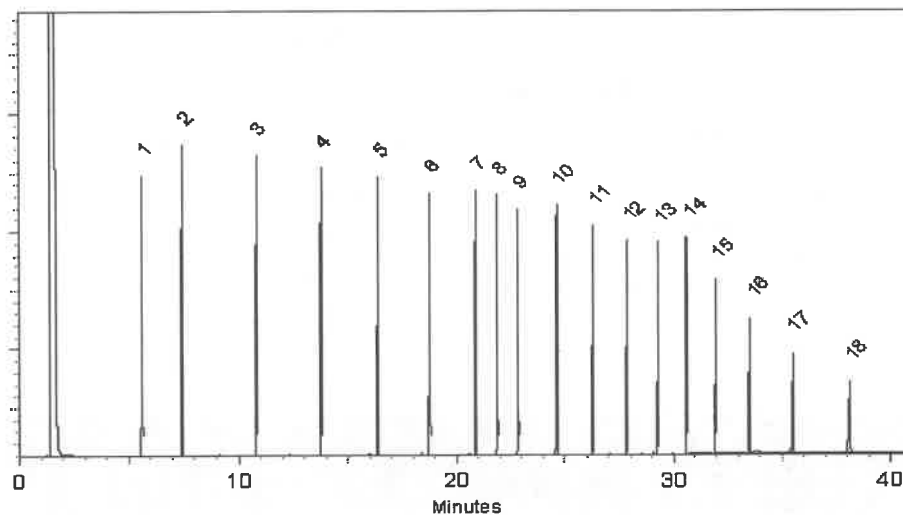
FID

Split Vent:

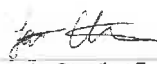
2 ml/min.

Inj. Vol

1µl

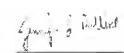


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 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

P13625
↓
P13644 } Y.P.
10/16/24

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%	200.9 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

* 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:

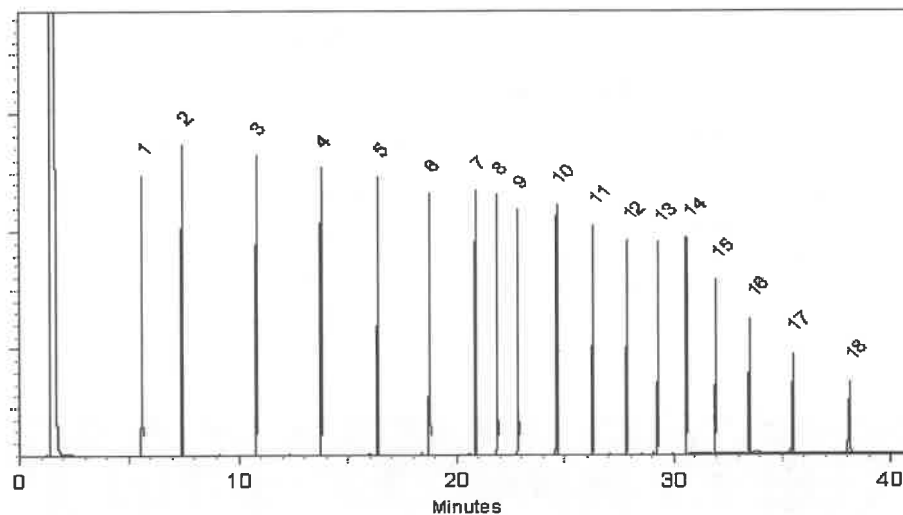
FID

Split Vent:

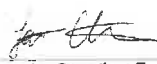
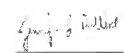
2 ml/min.

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:** 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

P13625
↓
P13644 } Y.P.
10/16/24

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%	200.9 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

* 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:

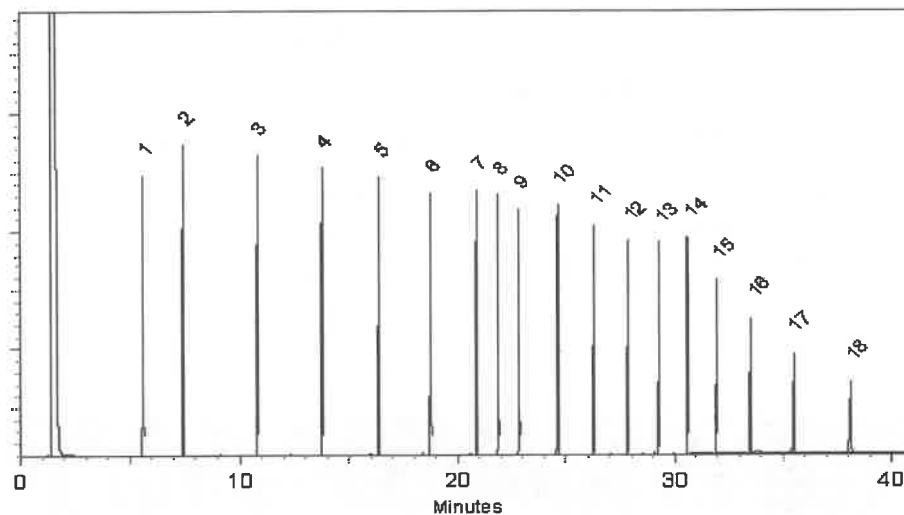
FID

Split Vent:

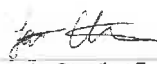
2 ml/min.

Inj. Vol

1µl

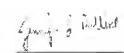


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Laith Clemente - Operations Technician I

Date Mixed: 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.
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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.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

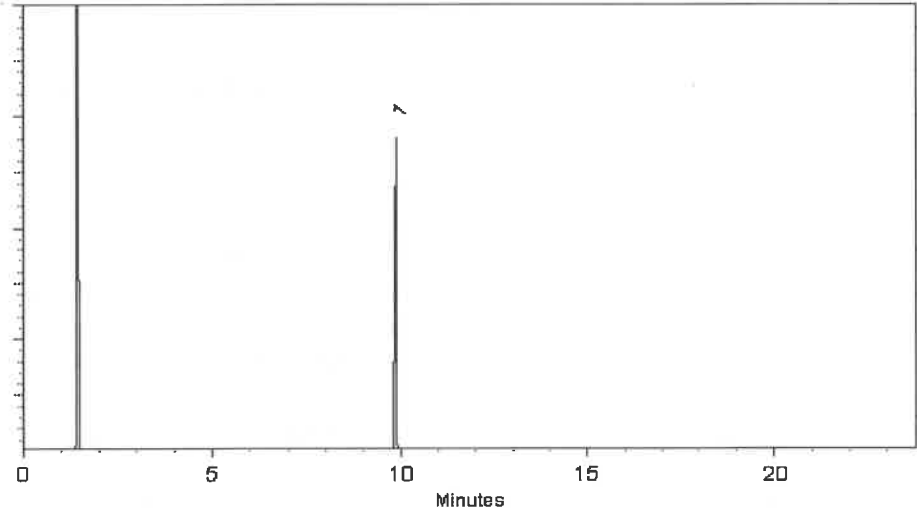
FID

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.

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-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. : 31097 **Lot No.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

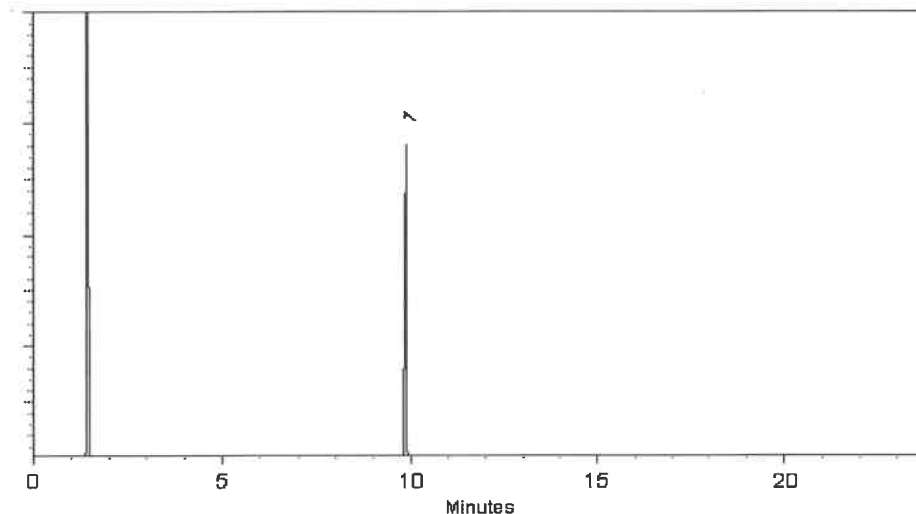
FID

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.

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-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 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%.

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Manufacturing Notes:

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Handling Notes:

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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.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

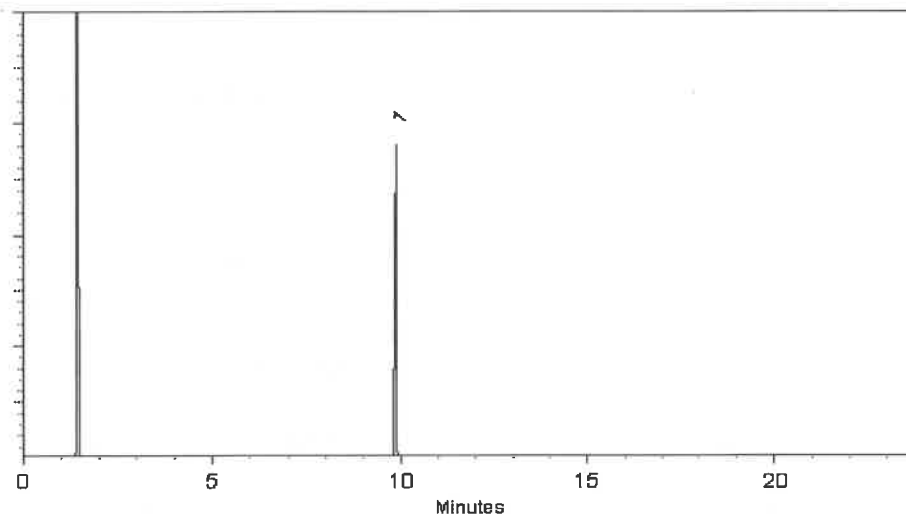
FID

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.

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-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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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.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

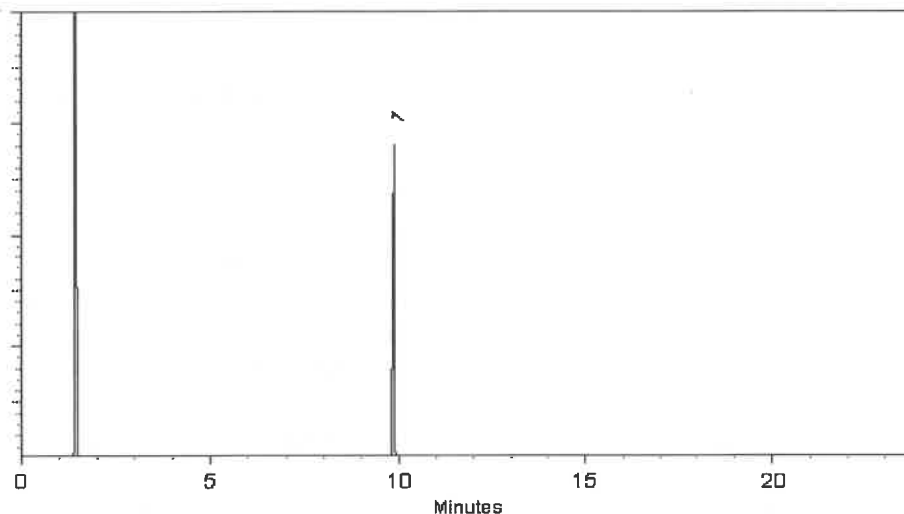
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Purity Notes:

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- Purity values are rounded to the nearest whole number.

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Manufacturing Notes:

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Handling Notes:

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Catalog No. : 31097 **Lot No.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

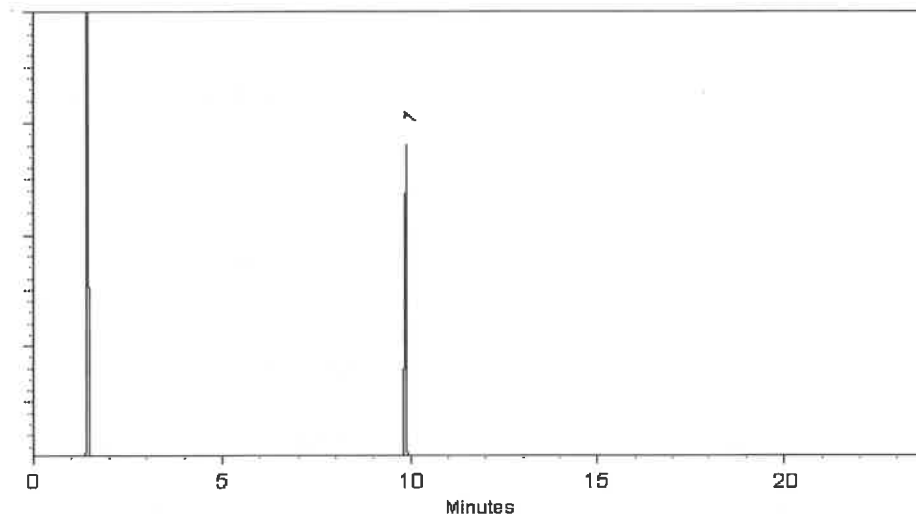
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Purity Notes:

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Manufacturing Notes:

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Catalog No. : 31097 **Lot No.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

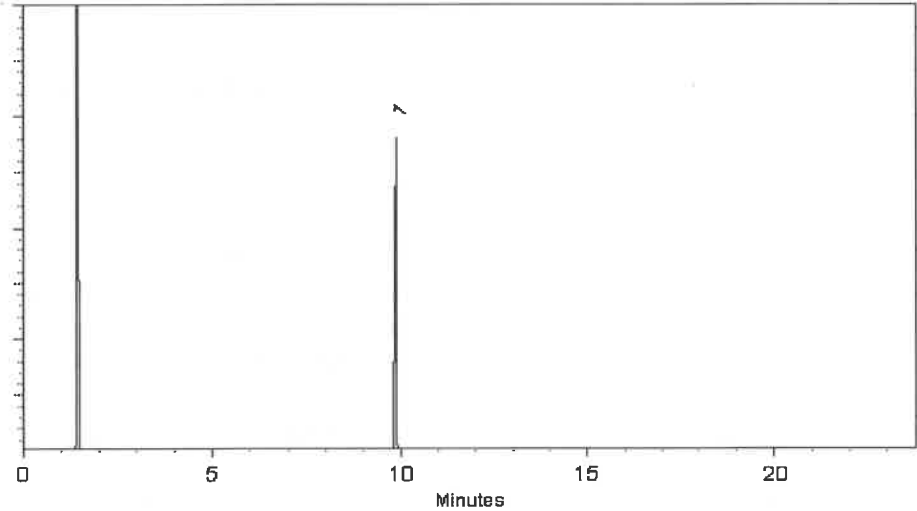
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

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Certificate of Analysis

chromatographic plus



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Catalog No. : 31097 **Lot No.:** A0216631
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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%	10,065.0 µg/mL	+/- 453.3336

* 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:

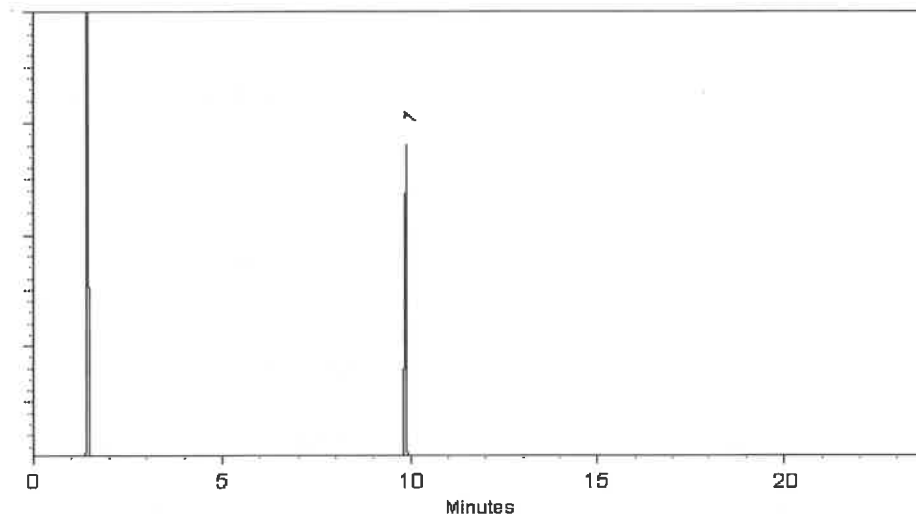
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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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 : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

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%

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Column:

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

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hydrogen-constant pressure 10 psi.

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330°C

Det. Type:

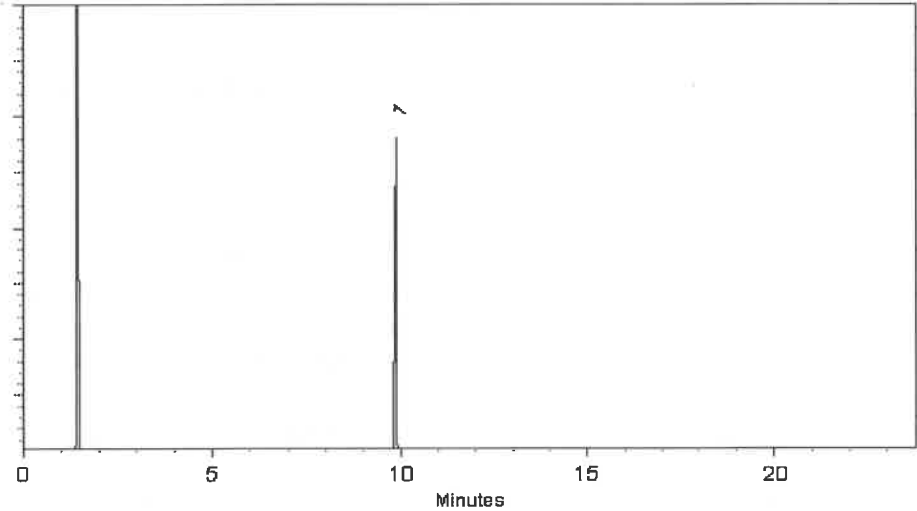
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Certificate of Analysis

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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

P13408
↓
P13716 } Y.P.
10/26/24

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
Rbx-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.)

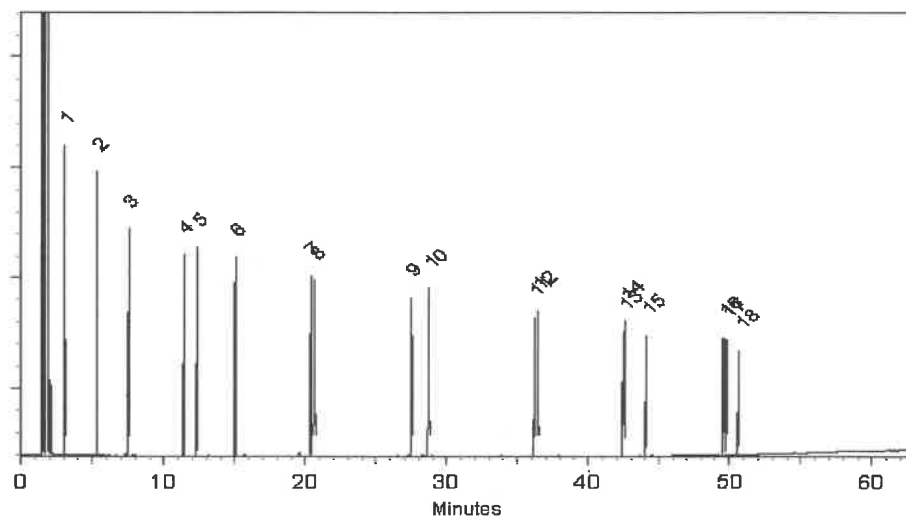
Inj. Temp:
250°C

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.: A0217838

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 : September 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

p137A } 7.P
↓
p13727 } 10/24/24

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKQC4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

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	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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.)

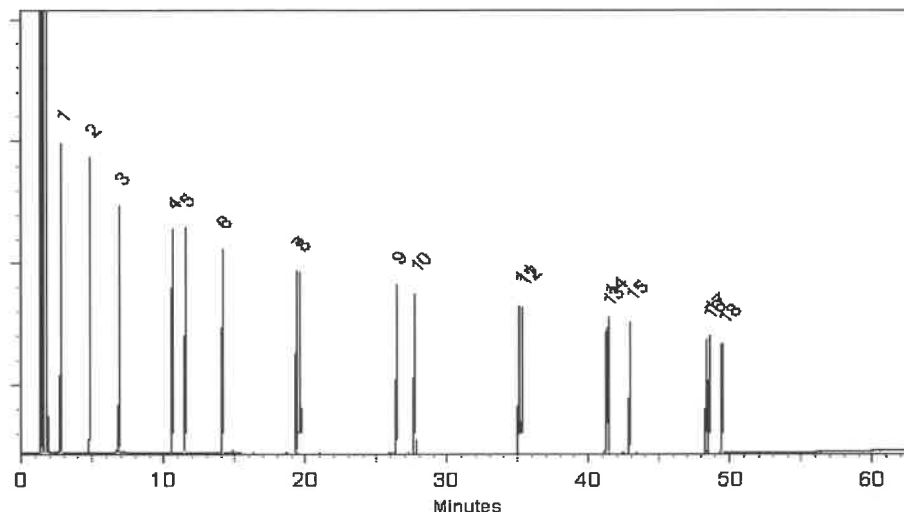
Inj. Temp:
250°C

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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. : 31480 **Lot No.:** A0214879
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 : July 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743
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P13772 } Y.P.
11/01/24

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%	4,009.0 µg/mL	+/- 180.5961
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,008.5 µg/mL	+/- 180.5736

* 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:

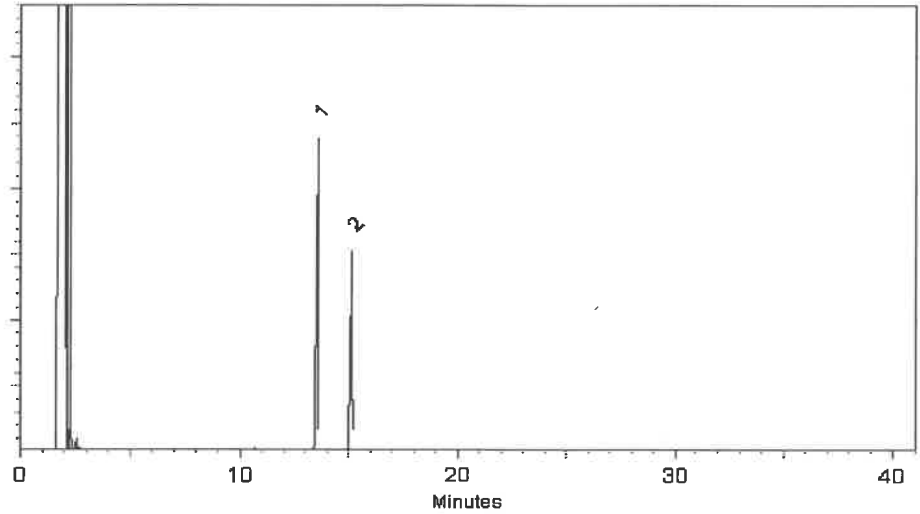
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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Scott McNeil - Operations Tech I

Date Mixed: 06-Aug-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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. : 31480 **Lot No.:** A0214879
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 : July 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743
↓
P13772 } Y.P.
11/01/24

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%	4,009.0 µg/mL	+/- 180.5961
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,008.5 µg/mL	+/- 180.5736

* 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:

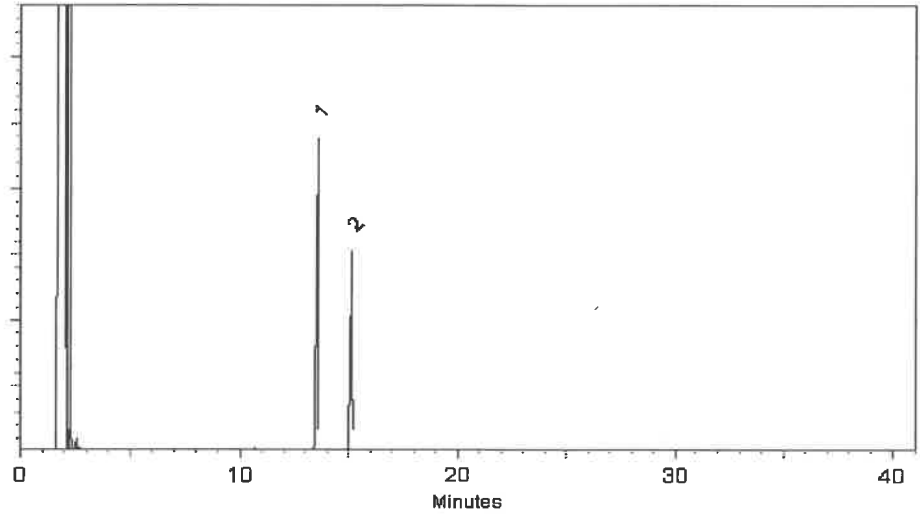
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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Scott McNeil - Operations Tech I

Date Mixed: 06-Aug-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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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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.:** A0214879
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 : July 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743
↓
P13772 } Y.P.
11/01/24

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%	4,009.0 µg/mL	+/- 180.5961
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,008.5 µg/mL	+/- 180.5736

* 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:

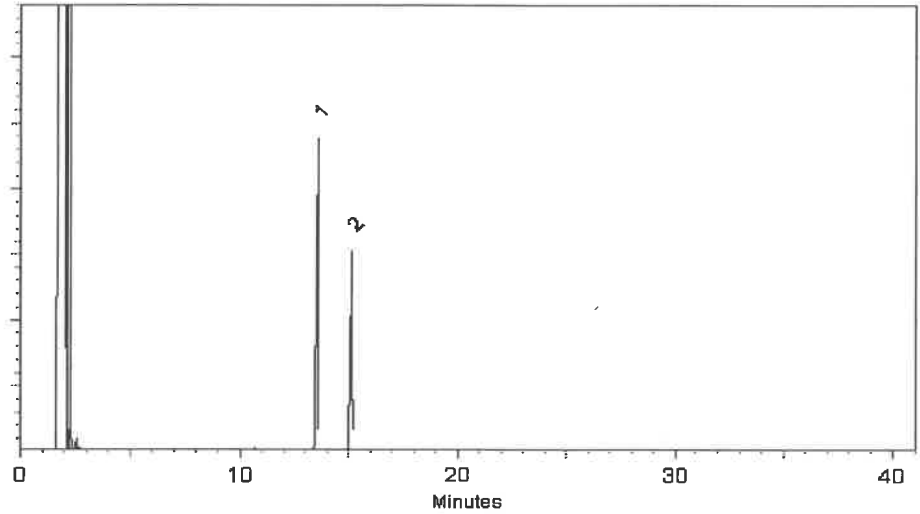
FID

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.

Scott McNeil - Operations Tech I

Date Mixed: 06-Aug-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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

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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. : 31480 **Lot No.:** A0214879
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 : July 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743
↓
P13772 } Y.P.
11/01/24

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%	4,009.0 µg/mL	+/- 180.5961
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,008.5 µg/mL	+/- 180.5736

* 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:

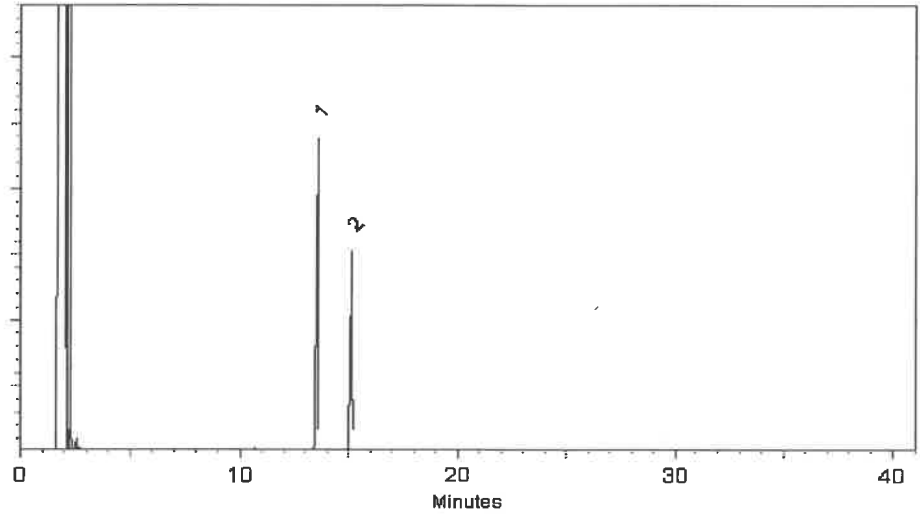
FID

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.

Scott McNeil - Operations Tech I

Date Mixed: 06-Aug-2024

Balance Serial # 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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

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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.:** A0217408

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, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13800
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P13829 } YIP
12/09/24

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%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* 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.)

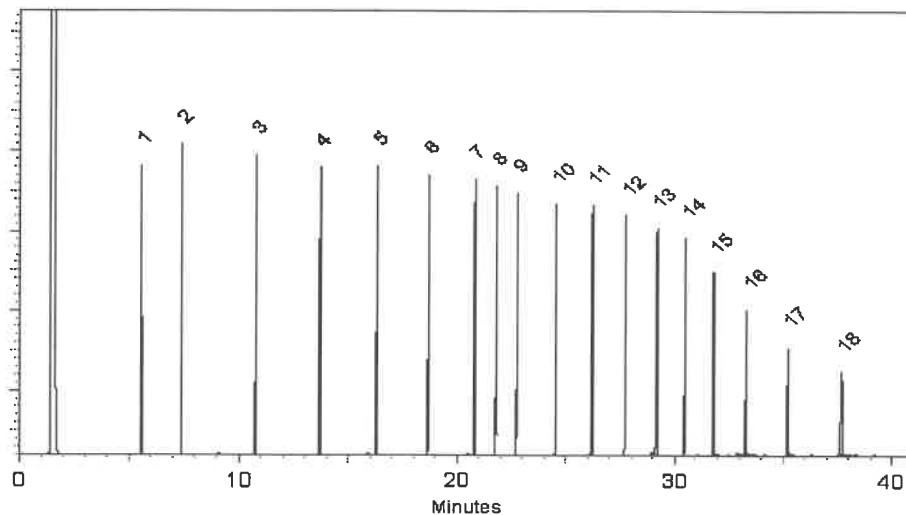
Inj. Temp:
 250°C

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.

Penelope S. Riglin
 Penelope Riglin - Operations Tech I

Date Mixed: 03-Oct-2024 **Balance Serial #** 1128353505

Jennifer Pollino
 Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-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.
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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.:** A0217408

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, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13800
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P13829 } YIP
12/09/24

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%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* 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.)

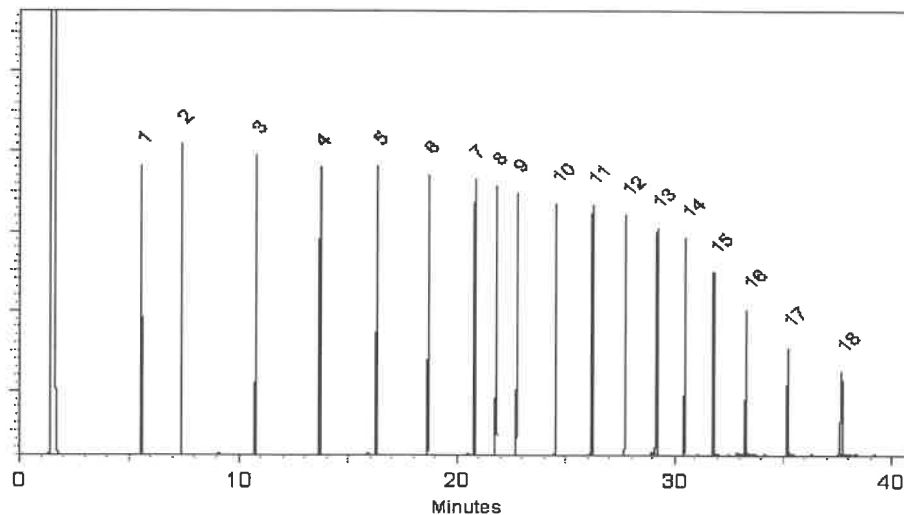
Inj. Temp:
250°C

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.

Penelope S. Riglin
Penelope Riglin - Operations Tech I

Date Mixed: 03-Oct-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-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.
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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.:** A0217408

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, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13800
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P13829 } YIP
12/09/24

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%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* 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.)

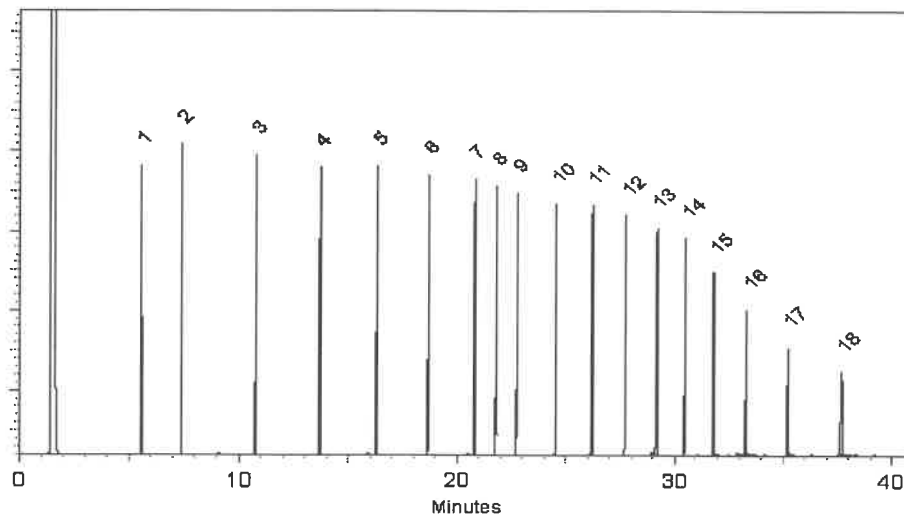
Inj. Temp:
 250°C

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.

Penelope S. Riglin
 Penelope Riglin - Operations Tech I

Date Mixed: 03-Oct-2024 **Balance Serial #** 1128353505

Jennifer Pollino
 Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Purity 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:

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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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CERTIFIED REFERENCE MATERIAL

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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.:** A0217408

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, 2031 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

P13800
↓
P13829 } YIP
12/09/24

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%	200.7 µg/mL	+/- 5.1839
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3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* 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.)

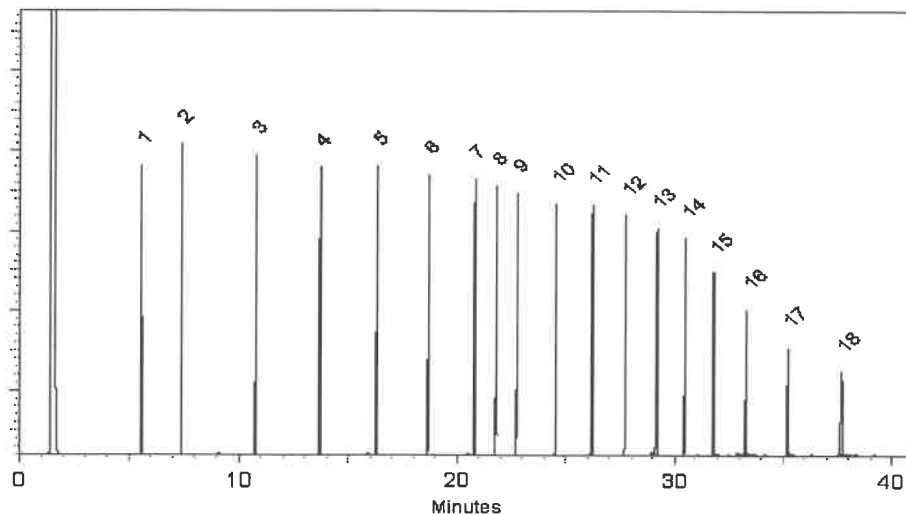
Inj. Temp:
 250°C

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.

Penelope S. Riglin
 Penelope Riglin - Operations Tech I

Date Mixed: 03-Oct-2024 **Balance Serial #** 1128353505

Jennifer Pollino
 Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-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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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.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

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	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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.)

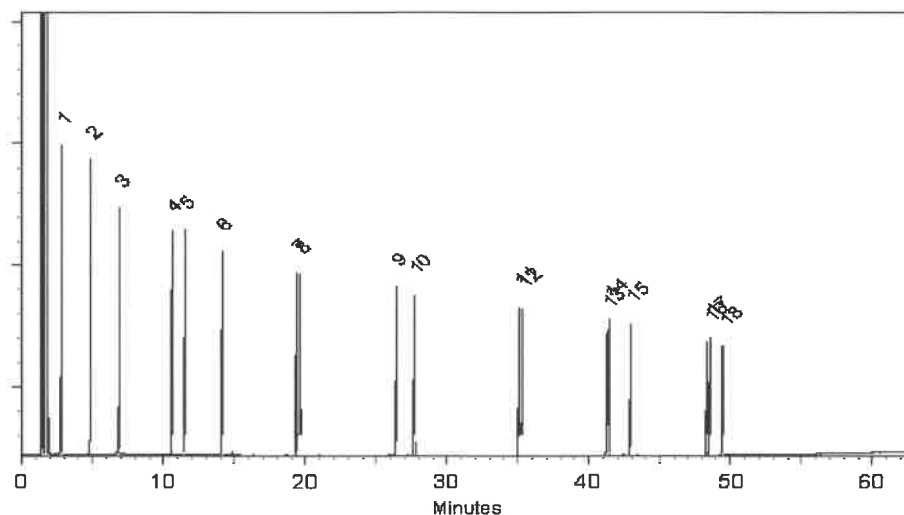
Inj. Temp:
250°C

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

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	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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.)

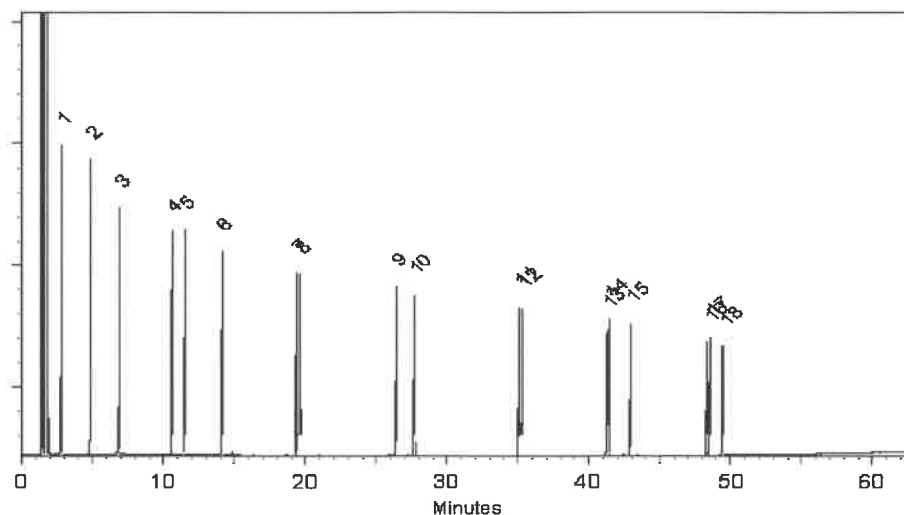
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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.
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- 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%.

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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. : 30543 **Lot No.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
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* 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.)

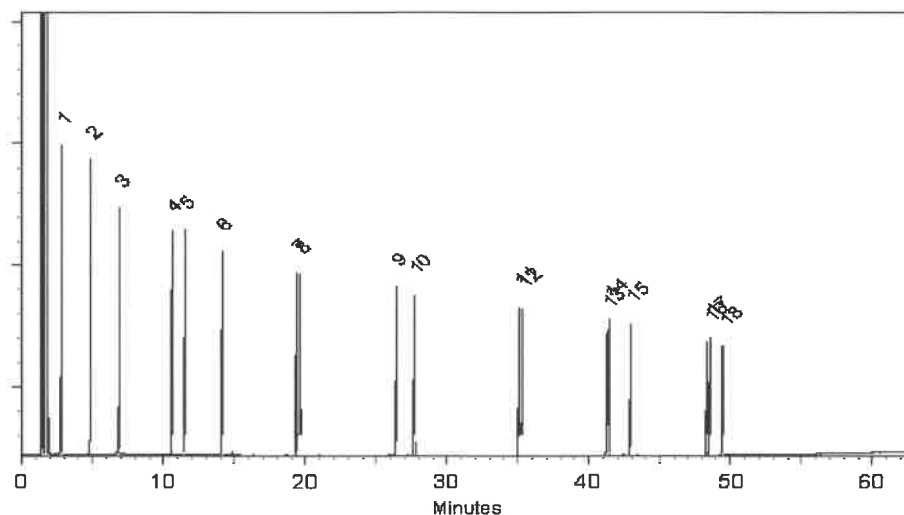
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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Purity Notes:

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Handling Notes:

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Catalog No. : 30543 **Lot No.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
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4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
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9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
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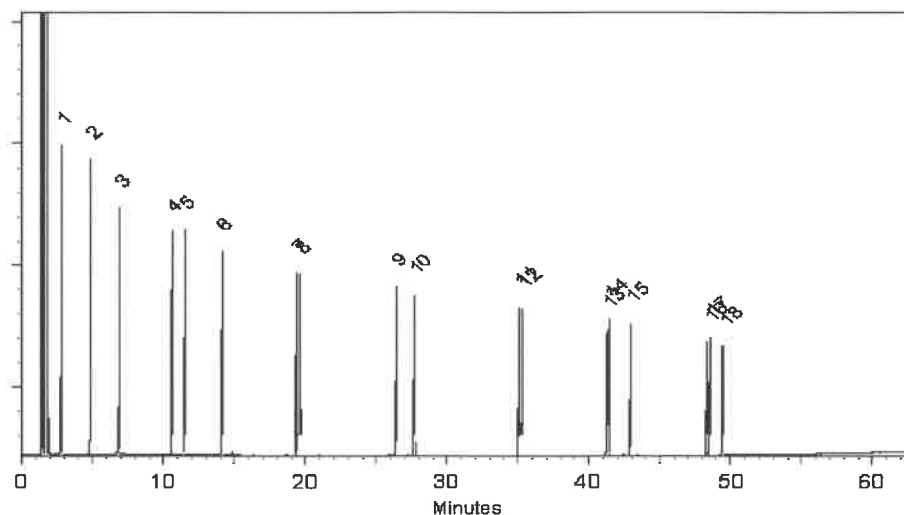
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* Expanded Uncertainty displayed in same units as Grav. Conc.

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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. : 30543 **Lot No.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

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	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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.)

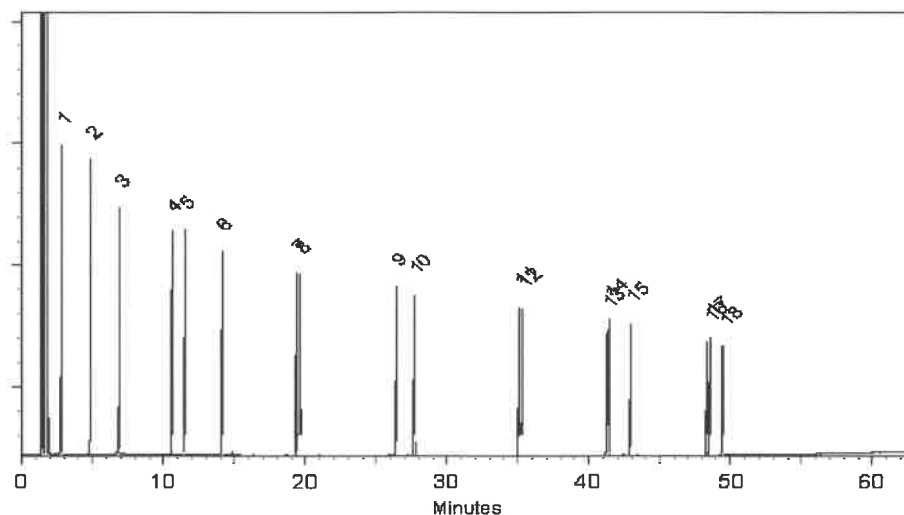
Inj. Temp:
250°C

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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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Certificate of Analysis

chromatographic plus



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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.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

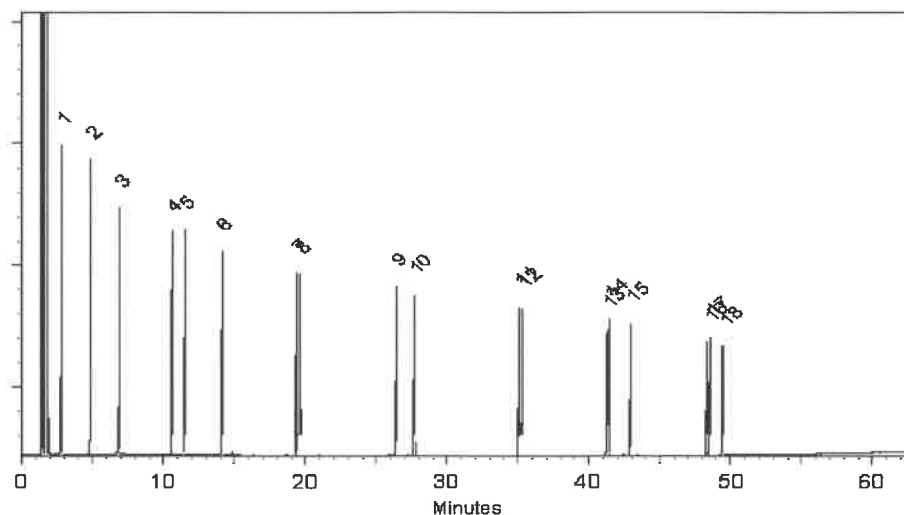
17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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



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Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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.
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- 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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Manufacturing Notes:

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Handling Notes:

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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. : 30543 **Lot No.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

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%	201.6 µg/mL	+/- 9.0835
2	Naphthalene	91-20-3	STBL1057	99%	200.0 µg/mL	+/- 9.0114
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0 µg/mL	+/- 9.0114
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* 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.)

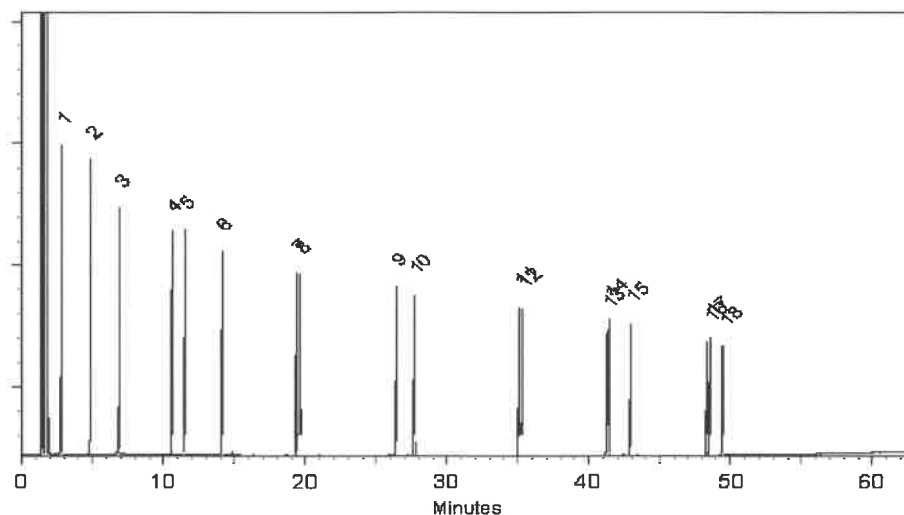
Inj. Temp:
250°C

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-2024

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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CERTIFIED REFERENCE MATERIAL

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chromatographic plus



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Catalog No. : 30543 **Lot No.:** A0217838

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 : September 30, 2030 **Storage:** 10°C or colder

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

P13835
2
P13860 } Y-P.
12/09/12

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
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3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	214935V18H	95%	199.1 µg/mL	+/- 8.9717
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.5 µg/mL	+/- 9.0784
7	Phenanthrene	85-01-8	MKCT3391	99%	201.2 µg/mL	+/- 9.0655
8	Anthracene	120-12-7	101492T18R	99%	200.0 µg/mL	+/- 9.0114
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCK2592	99%	200.0 µg/mL	+/- 9.0114
11	Benz(a)anthracene	56-55-3	I60012022BAA	99%	200.0 µg/mL	+/- 9.0114
12	Chrysene	218-01-9	RP240627ECS	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	052013B	99%	201.2 µg/mL	+/- 9.0655
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	201.6 µg/mL	+/- 9.0835
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	199.9 µg/mL	+/- 9.0078
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.0 µg/mL	+/- 8.9683

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18	Benzo(g,h,i)perylene	191-24-2	RP240625RSR	97%	199.0 µg/mL	+/- 8.9683

* 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.)

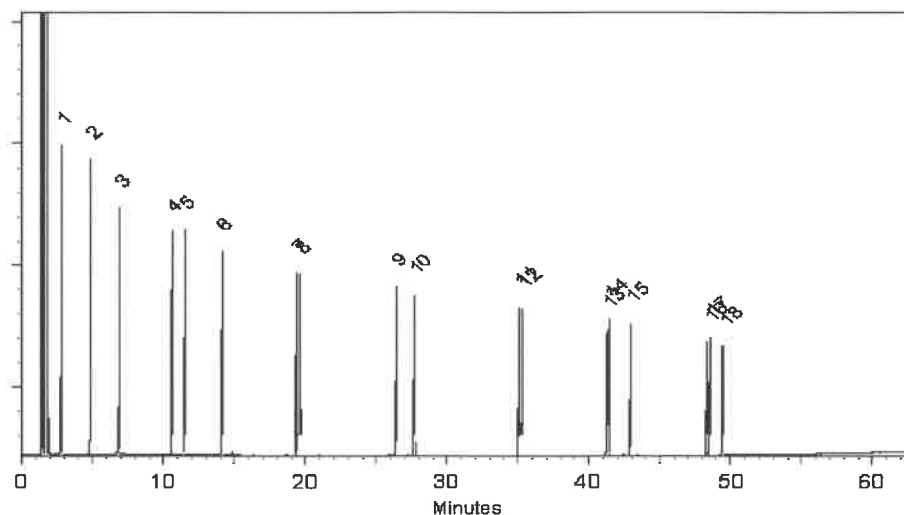
Inj. Temp:
250°C

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.

Rebecca Gingerich
Rebecca Gingerich - Operations Tech II

Date Mixed: 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Passed: 21-Oct-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.

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™



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

Jamie Croak
Director Quality Operations, Bioscience Production



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Gannett Fleming
ADDRESS: 1010 Adams Ave
CITY: Arlabon STATE: PA ZIP: 19405
ATTENTION: Joe Krupansky
PHONE: 610-301-8342 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Amtrak replacement of SR
PROJECT NO.: 950000818 LOCATION: Kearny, NJ
PROJECT MANAGER: Joe Krupansky
e-mail: QASOC@BEMSYS.com
PHONE: 610-301-8432 FAX:

CLIENT BILLING INFORMATION

BILL TO: Alliance PO#:
ADDRESS: 284 Sheffield St
CITY: Mountainside STATE: NJ ZIP: 07093
ATTENTION: Samavla Beasley PHONE: 908-788-3148

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 DAYS*

*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

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 BEMED0

1. Full TCLP Analysis
2. RCRA parameters
3. PCBs
4. TAL Metals
5. TCL-VOC+10
6. Cr(VI)
7. TCL-SVOCs-BVA+20
8. EPH
9.

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER	
1.	B-188-SB01	S		X	4/5/25	13:20	9	X	X	X	X	X	X	X	X			
2.	B-158-SB02	S		X	4/5/25	17:10	9	X	X	X	X	X	X	X	X			
3.	IB				NA	NA						X						
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>1040</u> <u>4-5-25</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>2.1</u> °C
RELINQUISHED BY SAMPLER: 2. <u>Natalie Zaca</u>	DATE/TIME: <u>1040</u> <u>4-7-25</u>	RECEIVED BY: 2. <u>[Signature]</u>	Comments: <u>IR. Gun #1</u> <u>"Adjust factor +1"</u>
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	Page ____ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1744 PORT06

Client Name : Portal Partners Tri-Venture

Client Contact : Joseph Krupansky

Invoice Name : Portal Partners Tri-Venture

Invoice Contact : Joseph Krupansky

Order Date : 4/7/2025 11:34:00 AM

Project Name : Amtrak Sawtooth Bridges 2

Receive DateTime : 4/7/2025 10:40:00 AM

Purchase Order :

Project Mgr :

Report Type : NJ Reduced

EDD Type : EXCEL NJCLEANUP

Hard Copy Date :

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1744-01	B-158-SB01	Solid	04/05/2025	13:20					
					VOC-TCLVOA-10				
Q1744-03	B-158-SB02	Solid	04/05/2025	17:10			8260D	10 Bus. Days	
					VOC-TCLVOA-10		8260D	10 Bus. Days	

Relinquished By : alDate / Time : 4-7-25 1255Received By : plDate / Time : 4-7-25 12:55

Storage Area : VOA Refridgerator Room