



Cover Page

Order ID : N2487

Project ID : 442890_Paterson, NJ

Client : AEI Consultants

Lab Sample Number

N2487-01
N2487-02
N2487-03
N2487-04
N2487-05

Client Sample Number

UST-1-PB
UST-1-N
UST-1-E
UST-1-S
UST-1-W

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: 5/4/2022



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CASE NARRATIVE

AEI Consultants

Project Name: 442890_Paterson, NJ

Project # N/A

Chemtech Project # N2487

Test Name: EPH_NF

A. Number of Samples and Date of Receipt:

5 Solid samples were received on 04/20/2022.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: EPH_NF, SPLP BNA Group1, SPLP Extraction and SVOCMS Group1. This data package contains results for EPH_NF.

C. Analytical Techniques:

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

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the acceptable requirements.

The RPD met criteria.

The Blank Spike met requirements for all samples.

The Blank Spike Duplicate met requirements for all samples.

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

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

E. Additional Comments:

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

F. Manual Integration Comments:

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

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



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above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

DATA REPORTING QUALIFIERS- ORGANIC

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

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

APPENDIX A**QA REVIEW GENERAL DOCUMENTATION**

Project #: N2487

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓**COVER PAGE:**

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

✓

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

✓**CHAIN OF CUSTODY:**

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓**ANALYTICAL:**

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓1st Level QA Review Signature: JAYESH RAMANI

Date: 05/04/2022

2nd Level QA Review Signature: _____

Date: _____



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LAB CHRONICLE

OrderID: N2487	OrderDate: 4/20/2022 10:25:00 AM
Client: AEI Consultants	Project: 442890_Paterson, NJ
Contact: Mason Luster	Location: N11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
N2487-01	UST-1-PB	Solid	EPH_NF	NJEPH	04/19/22	04/21/22	04/23/22	04/20/22
N2487-02	UST-1-N	Solid	EPH_NF	NJEPH	04/19/22	04/21/22	04/23/22	04/20/22
N2487-03	UST-1-E	Solid	EPH_NF	NJEPH	04/19/22	04/21/22	04/23/22	04/20/22
N2487-04	UST-1-S	Solid	EPH_NF	NJEPH	04/19/22	04/21/22	04/23/22	04/20/22
N2487-05	UST-1-W	Solid	EPH_NF	NJEPH	04/19/22	04/21/22	04/23/22	04/20/22

QC
SUMMARY



SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: AEIC01
Lab Code: CHEM CASE No.: N2487 SAS No.: N2487 SDG No.: N2487
Run Number: FC042222AL

Client SAMPLE NO.	1-chlorooctadecane (SURR)	ortho-Terphenyl (SURR)		TOT OUT
UST-1-PB	76	77		0
UST-1-N	87	89		0
UST-1-NMS	73	72		0
UST-1-NMSD	78	76		0
UST-1-E	71	74		0
UST-1-S	61	64		0
UST-1-W	62	63		0
PB144264BL	87	88		0
PB144264BS	100	95		0
PB144264BSD	96	91		0

QC LIMITS

1-chlorooctadecane (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

1-chlorooctadecane (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_NF MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:

Chemtech

Client:

AEI Consultants

Lab Code:

CHEM

Cas No:

N2487

SAS No :

N2487

SDG No:

N2487

Sample No :

N2487-02MS

Datafile:

FC059381.D

Client ID :

UST-1-NMS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C28-C40	35.3	1.24	37.8	103		(40-140)
Aliphatic C9-C28	117.5	11.4	105	80		(40-140)



SOLID EPH_NF MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:

Chemtech

Client:

AEI Consultants

Lab Code:

CHEM

Cas No:

N2487

SAS No :

N2487

SDG No:

N2487

Sample No :

N2487-02MSD

Datafile:

FC059382.D

Client ID :

UST-1-NMSD

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aliphatic C28-C40	35.2	1.24	39.3	108		4.74 (40-140)	25
Aliphatic C9-C28	117.4	11.4	110	84		5.5 (40-140)	25



SOLID EPH_NF LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name:

Chemtech

Client:

AEI Consultants

Lab Code:

CHEM

Cas No:

N2487

SAS No :

N2487

SDG No:

N2487

Sample No :

PB144264BS

Datafile:

FC059376.D

Client ID :

PB144264BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C28-C40	30.0	28.5	95		(40-140)
Aliphatic C9-C28	99.9	91.5	92		(40-140)



SOLID EPH_NF LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name:

Chemtech

Client:

AEI Consultants

Lab Code:

CHEM

Cas No:

N2487

SAS No :

N2487

SDG No:

N2487

Sample No :

PB144264BSD

Datafile:

FC059377.D

Client ID :

PB144264BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aliphatic C28-C40	30.0	27.3	91		4.4 (40-140)	50
Aliphatic C9-C28	100.1	88.5	88		3.5 (40-140)	50



4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB144264BL

Lab Name: CHEMTECH

Contract: AEIC01

Lab Code: CHEM Case No.: N2487

SAS No.: N2487 SDG NO.: N2487

Instrument ID: FID_C

Lab Sample ID: PB144264BL

Matrix: (soil/water) Solid

Date Extracted: 4/21/2022 9:36:00 A

Level: (low/med) low

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

EPA SAMPLE NO.	LAB SAMPLE ID
PB144264BS	PB144264BS
PB144264BSD	PB144264BSD
UST-1-PB	N2487-01
UST-1-N	N2487-02
UST-1-NMS	N2487-02MS
UST-1-NMSD	N2487-02MSD
UST-1-E	N2487-03
UST-1-S	N2487-04
UST-1-W	N2487-05

COMMENTS: _____

SAMPLE DATA

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-PB	SDG No.:	N2487
Lab Sample ID:	N2487-01	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	21.3
Sample Wt/Vol:	30.04	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 4:54	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	1.24	J	1	1.21	2.54	mg/kg	FC059378.D
Aliphatic C9-C28	Aliphatic C9-C28	6.56		1	1.31	5.08	mg/kg	FC059378.D
Total AliphaticEPH	Total AliphaticEPH	7.80			2.52	7.62	mg/kg	
Total EPH	Total EPH	7.80			2.52	7.62	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-PB	SDG No.:	N2487
Lab Sample ID:	N2487-01	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	21.3
Sample Wt/Vol:	30.04	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059378.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	6.56		1.31	5.08	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.24	J	1.21	2.54	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	37.8		40 - 140	76%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	38.6		40 - 140	77%	SPK: 50



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Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-01	Acq On:	23 Apr 2022 4:54
Client Sample ID:	UST-1-PB	Operator:	UA/NP
Data file:	FC059378.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	2.862	6.099	285655	2.243	300	ug/ml
Aliphatic C12-C16	6.100	9.471	10696919	77.596	200	ug/ml
Aliphatic C16-C21	9.472	12.813	525507	3.518	300	ug/ml
Aliphatic C21-C28	12.814	16.454	885243	5.739	400	ug/ml
Aliphatic C28-C40	16.455	21.124	1722038	14.651	600	ug/ml
Aliphatic EPH	2.862	21.124	14115362	103.747		ug/ml
ortho-Terphenyl (SURR)	11.097	11.097	6199146	38.58		ug/ml
1-chlorooctadecane (SURR)	12.542	12.542	4937369	37.81		ug/ml
Aliphatic C9-C28	2.862	16.454	12393324	89.096	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059378.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 4:54
 Operator : UA/NP
 Sample : N2487-01
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-PB

Integration File: sample.E
 Quant Time: Apr 23 05:20:40 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.097	6199146	38.578 ug/ml
Spiked Amount 50.000		Recovery =	77.16%
12) S 1-chlorooctadecane (S...	12.542	4937369	37.810 ug/ml
Spiked Amount 50.000		Recovery =	75.62%

Target Compounds

(f)=RT Delta > 1/2 Window

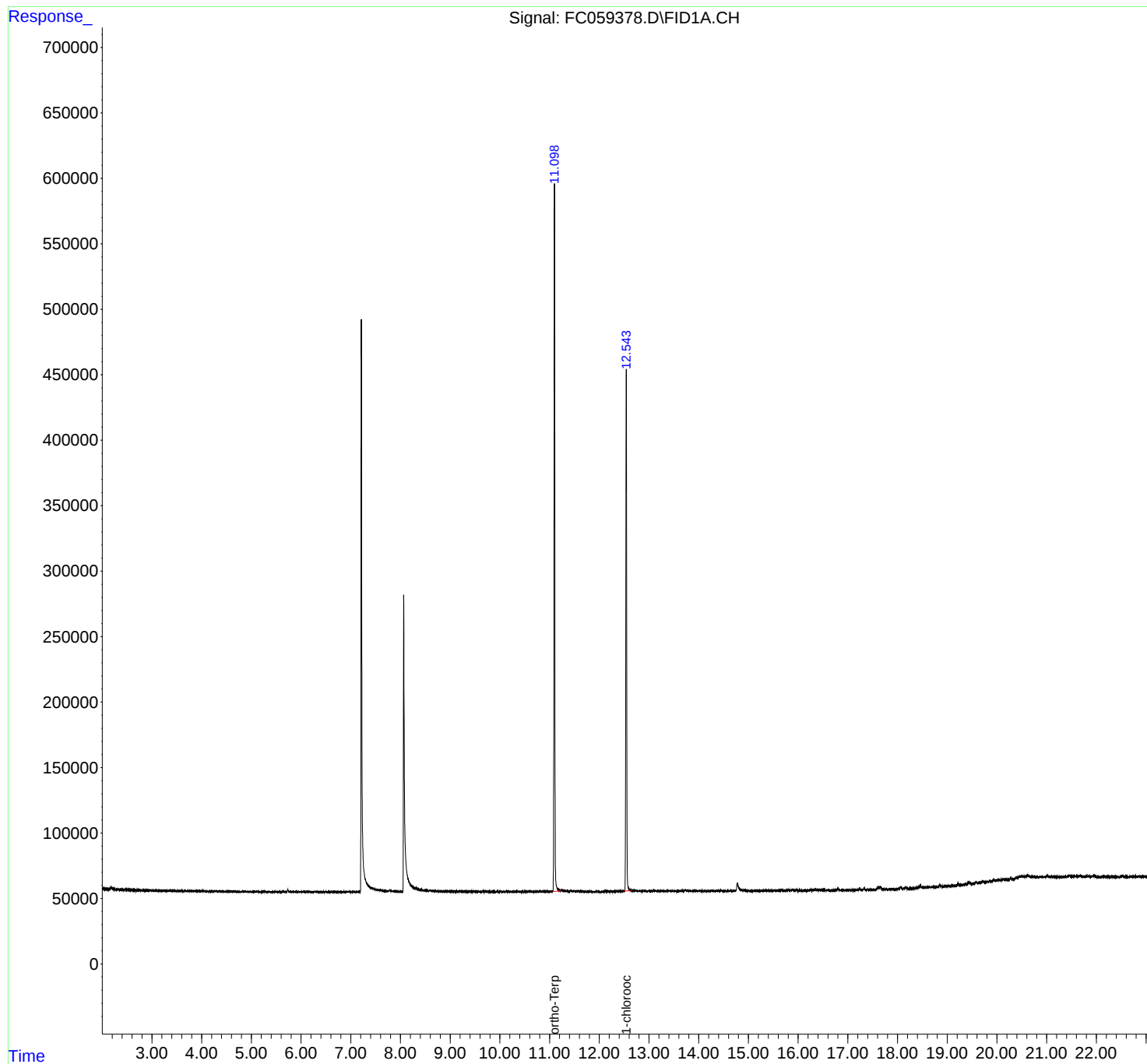
(m)=manual int.

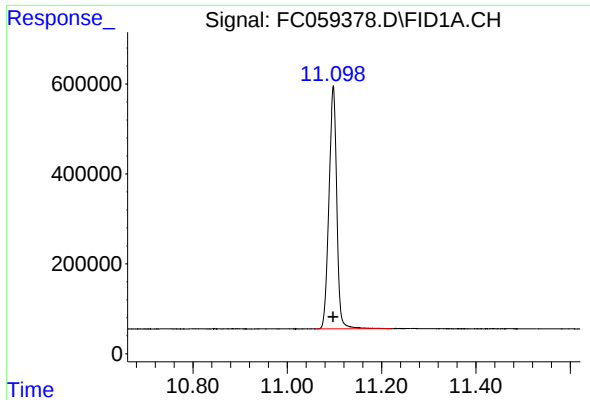
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059378.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 4:54
Operator : UA/NP
Sample : N2487-01
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
UST-1-PB

Integration File: sample.E
Quant Time: Apr 23 05:20:40 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

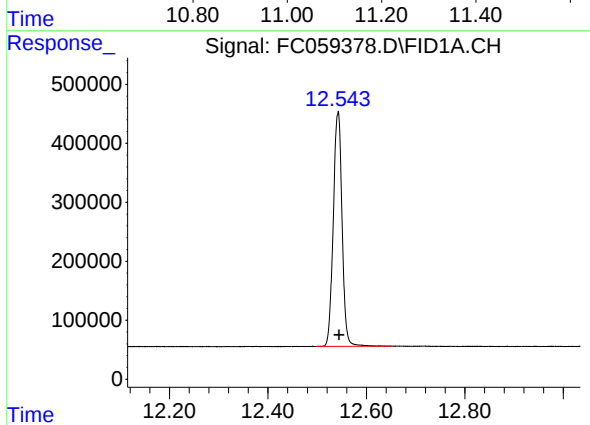




#9 ortho-Terphenyl (SURR)

R.T.: 11.097 min
Delta R.T.: 0.000 min
Response: 6199146
Conc: 38.58 ug/ml

Instrument :
FID_C
ClientSampleId :
UST-1-PB



#12 1-chlorooctadecane (SURR)

R.T.: 12.542 min
Delta R.T.: -0.002 min
Response: 4937369
Conc: 37.81 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059378.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 4:54
 Sample : N2487-01
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.933	2.905	2.958	BV	118	1535	0.02%	0.006%
2	2.968	2.958	3.061	VV	97	2705	0.04%	0.011%
3	3.098	3.061	3.110	PV	116	2120	0.03%	0.008%
4	3.122	3.110	3.178	VV	146	4975	0.08%	0.020%
5	3.191	3.178	3.202	VV	124	1573	0.03%	0.006%
6	3.231	3.202	3.244	VV	170	2558	0.04%	0.010%
7	3.259	3.244	3.278	VV	158	1942	0.03%	0.008%
8	3.299	3.278	3.331	VV	132	2012	0.03%	0.008%
9	3.343	3.331	3.352	PV	58	474	0.01%	0.002%
10	3.372	3.352	3.390	VV	135	1677	0.03%	0.007%
11	3.401	3.390	3.441	VV	190	3263	0.05%	0.013%
12	3.446	3.441	3.455	VV	168	1029	0.02%	0.004%
13	3.470	3.455	3.515	VV	234	5712	0.09%	0.022%
14	3.535	3.515	3.555	VV	214	2611	0.04%	0.010%
15	3.604	3.555	3.645	PV	392	10023	0.16%	0.039%
16	3.654	3.645	3.685	VV	172	1798	0.03%	0.007%
17	3.741	3.685	3.752	PV	239	5307	0.08%	0.021%
18	3.761	3.752	3.807	VV	192	4517	0.07%	0.018%
19	3.830	3.807	3.898	VV	252	7078	0.11%	0.028%
20	3.918	3.898	3.931	VV	195	2894	0.05%	0.011%
21	3.944	3.931	3.987	VV	205	4198	0.07%	0.017%
22	4.007	3.987	4.026	VV	234	4086	0.07%	0.016%
23	4.032	4.026	4.041	VV	203	1444	0.02%	0.006%
24	4.046	4.041	4.082	VV	208	3523	0.06%	0.014%
25	4.112	4.082	4.136	VV	199	3916	0.06%	0.015%
26	4.175	4.136	4.187	VV	288	4678	0.07%	0.018%
27	4.201	4.187	4.251	VV	324	8593	0.14%	0.034%
28	4.277	4.251	4.324	VV	402	9741	0.16%	0.038%
29	4.342	4.324	4.368	VV	306	4447	0.07%	0.017%
30	4.392	4.368	4.413	VV	341	4769	0.08%	0.019%
31	4.426	4.413	4.452	VV	265	3550	0.06%	0.014%
32	4.463	4.452	4.509	PV	176	3809	0.06%	0.015%
33	4.524	4.509	4.545	VV	235	3552	0.06%	0.014%
34	4.558	4.545	4.589	VV	293	4889	0.08%	0.019%
35	4.601	4.589	4.622	VV	251	2939	0.05%	0.012%
36	4.665	4.622	4.705	VV	251	8266	0.13%	0.032%

					rteres			
37	4.731	4.705	4.762	VV	179	2764	0.04%	0.011%
38	4.780	4.762	4.838	VV	203	3800	0.06%	0.015%
39	4.857	4.838	4.871	VV	158	2628	0.04%	0.010%
40	4.893	4.871	4.971	VV	318	8259	0.13%	0.032%
41	4.979	4.971	5.007	VV	143	2013	0.03%	0.008%
42	5.024	5.007	5.061	VV	204	5257	0.08%	0.021%
43	5.102	5.061	5.198	VV	305	16652	0.27%	0.065%
44	5.204	5.198	5.213	VV	45	604	0.01%	0.002%
45	5.233	5.213	5.308	VV	172	4697	0.07%	0.018%
46	5.339	5.308	5.349	VV	189	2505	0.04%	0.010%
47	5.362	5.349	5.379	VV	196	2235	0.04%	0.009%
48	5.413	5.379	5.425	PV	120	1727	0.03%	0.007%
49	5.476	5.425	5.508	VV	280	7158	0.11%	0.028%
50	5.564	5.508	5.605	VV	336	9760	0.16%	0.038%
51	5.613	5.605	5.625	VV	153	2111	0.03%	0.008%
52	5.638	5.625	5.647	VV	270	2350	0.04%	0.009%
53	5.658	5.647	5.686	VV	231	3835	0.06%	0.015%
54	5.733	5.686	5.758	VV	1944	26065	0.41%	0.102%
55	5.773	5.758	5.803	VV	333	6516	0.10%	0.026%
56	5.820	5.803	5.835	VV	248	3036	0.05%	0.012%
57	5.844	5.835	5.880	VV	198	3861	0.06%	0.015%
58	5.915	5.880	5.989	VV	387	13385	0.21%	0.053%
59	6.025	5.989	6.038	VV	287	5708	0.09%	0.022%
60	6.054	6.038	6.071	VV	262	3594	0.06%	0.014%
61	6.085	6.071	6.101	VV	229	2932	0.05%	0.012%
62	6.115	6.101	6.130	VV	200	2347	0.04%	0.009%
63	6.147	6.130	6.181	VV	245	5578	0.09%	0.022%
64	6.194	6.181	6.263	VV	202	7155	0.11%	0.028%
65	6.305	6.263	6.330	VV	297	7876	0.13%	0.031%
66	6.342	6.330	6.361	PV	203	1725	0.03%	0.007%
67	6.382	6.361	6.416	PV	214	4227	0.07%	0.017%
68	6.451	6.416	6.465	VV	288	5371	0.09%	0.021%
69	6.505	6.465	6.635	VV	331	16796	0.27%	0.066%
70	6.683	6.635	6.745	VV	231	6899	0.11%	0.027%
71	6.769	6.745	6.831	PV	192	4050	0.06%	0.016%
72	6.858	6.831	6.895	VV	219	2829	0.05%	0.011%
73	6.926	6.895	6.985	PV	339	10891	0.17%	0.043%
74	6.995	6.985	7.099	VV	264	12459	0.20%	0.049%
75	7.131	7.099	7.158	VV	412	9170	0.15%	0.036%
76	7.213	7.158	7.585	VV	424654	5971775	95.07%	23.477%
77	7.597	7.585	7.675	VV	1483	62587	1.00%	0.246%
78	7.688	7.675	7.757	VV	1034	45348	0.72%	0.178%
79	7.785	7.757	7.911	VV	1679	75808	1.21%	0.298%
80	7.938	7.911	7.995	VV	629	22145	0.35%	0.087%
81	8.019	7.995	8.041	VV	485	11268	0.18%	0.044%
82	8.066	8.041	8.565	VV	220621	4098176	65.24%	16.111%
83	8.609	8.565	8.775	VV	1306	112454	1.79%	0.442%
84	8.793	8.775	8.847	VV	714	26538	0.42%	0.104%
85	8.886	8.847	8.933	VV	602	26176	0.42%	0.103%
86	8.950	8.933	8.989	VV	572	17095	0.27%	0.067%
87	9.031	8.989	9.113	VV	575	36256	0.58%	0.143%
88	9.135	9.113	9.161	VV	499	11762	0.19%	0.046%
89	9.191	9.161	9.251	VV	699	24965	0.40%	0.098%

					rteres			
90	9.283	9.251	9.301	VV	610	12839	0.20%	0.050%
91	9.316	9.301	9.345	VV	449	10403	0.17%	0.041%
92	9.385	9.345	9.484	VV	581	33951	0.54%	0.133%
93	9.506	9.484	9.548	VV	397	11026	0.18%	0.043%
94	9.559	9.548	9.595	VV	646	5791	0.09%	0.023%
95	9.616	9.595	9.637	VV	301	4849	0.08%	0.019%
96	9.674	9.637	9.697	VV	375	8300	0.13%	0.033%
97	9.717	9.697	9.778	VV	340	11834	0.19%	0.047%
98	9.887	9.778	9.917	VV	388	22917	0.36%	0.090%
99	9.961	9.917	9.981	VV	341	8875	0.14%	0.035%
100	10.014	9.981	10.065	VV	354	12881	0.21%	0.051%
101	10.111	10.065	10.153	VV	520	15674	0.25%	0.062%
102	10.175	10.153	10.198	VV	448	7693	0.12%	0.030%
103	10.221	10.198	10.265	VV	363	9931	0.16%	0.039%
104	10.316	10.265	10.401	VV	350	18699	0.30%	0.074%
105	10.414	10.401	10.511	VV	265	14386	0.23%	0.057%
106	10.550	10.511	10.611	VV	406	15883	0.25%	0.062%
107	10.618	10.611	10.725	VV	382	17484	0.28%	0.069%
108	10.742	10.725	10.788	VV	448	12608	0.20%	0.050%
109	10.810	10.788	10.853	VV	583	16096	0.26%	0.063%
110	10.891	10.853	10.921	VV	672	17700	0.28%	0.070%
111	10.963	10.921	11.025	VV	494	22602	0.36%	0.089%
112	11.097	11.025	11.248	VV	546544	6281573	100.00%	24.695%
113	11.263	11.248	11.415	VV	1233	77313	1.23%	0.304%
114	11.433	11.415	11.458	VV	688	16652	0.27%	0.065%
115	11.473	11.458	11.535	VV	788	25451	0.41%	0.100%
116	11.563	11.535	11.658	VV	512	25298	0.40%	0.099%
117	11.687	11.658	11.748	VV	221	8275	0.13%	0.033%
118	11.762	11.748	11.776	VV	222	2495	0.04%	0.010%
119	11.795	11.776	11.820	VV	212	4122	0.07%	0.016%
120	11.838	11.820	11.873	VV	207	4424	0.07%	0.017%
121	11.891	11.873	11.909	PV	211	2615	0.04%	0.010%
122	11.937	11.909	11.968	VV	171	4651	0.07%	0.018%
123	12.007	11.968	12.027	VV	194	3672	0.06%	0.014%
124	12.104	12.027	12.159	VV	441	19809	0.32%	0.078%
125	12.177	12.159	12.305	VV	385	20246	0.32%	0.080%
126	12.374	12.305	12.412	VV	473	19448	0.31%	0.076%
127	12.542	12.412	12.694	VV	396607	5039698	80.23%	19.813%
128	12.715	12.694	12.791	VV	860	35807	0.57%	0.141%
129	12.824	12.791	12.905	VV	540	29639	0.47%	0.117%
130	12.941	12.905	12.958	VV	524	12502	0.20%	0.049%
131	13.053	12.958	13.074	VV	518	28901	0.46%	0.114%
132	13.109	13.074	13.188	VV	726	36694	0.58%	0.144%
133	13.293	13.188	13.345	VV	517	38905	0.62%	0.153%
134	13.361	13.345	13.411	VV	431	14838	0.24%	0.058%
135	13.421	13.411	13.494	VV	480	18784	0.30%	0.074%
136	13.539	13.494	13.601	VV	441	20781	0.33%	0.082%
137	13.734	13.601	13.803	VV	1128	59793	0.95%	0.235%
138	13.844	13.803	13.897	VV	483	21884	0.35%	0.086%
139	13.954	13.897	14.055	VV	554	33736	0.54%	0.133%
140	14.071	14.055	14.107	VV	340	7632	0.12%	0.030%
141	14.123	14.107	14.150	VV	272	5215	0.08%	0.021%

					rteres			
142	14.171	14.150	14.195	VV	269	5639	0.09%	0.022%
143	14.209	14.195	14.242	VV	381	8636	0.14%	0.034%
144	14.259	14.242	14.281	VV	350	6976	0.11%	0.027%
145	14.296	14.281	14.328	VV	367	7525	0.12%	0.030%
146	14.369	14.328	14.428	VV	444	16053	0.26%	0.063%
147	14.448	14.428	14.561	VV	731	23019	0.37%	0.090%
148	14.590	14.561	14.658	PV	340	9936	0.16%	0.039%
149	14.675	14.658	14.697	VV	249	3752	0.06%	0.015%
150	14.776	14.697	14.891	VV	5950	193189	3.08%	0.759%
151	14.907	14.891	14.996	VV	648	26931	0.43%	0.106%
152	15.011	14.996	15.058	VV	303	5808	0.09%	0.023%
153	15.176	15.058	15.246	VV	310	18680	0.30%	0.073%
154	15.411	15.246	15.429	PV	473	20486	0.33%	0.081%
155	15.441	15.429	15.455	VV	233	3336	0.05%	0.013%
156	15.494	15.455	15.521	VV	390	10204	0.16%	0.040%
157	15.542	15.521	15.575	VV	371	8481	0.14%	0.033%
158	15.592	15.575	15.625	VV	423	7569	0.12%	0.030%
159	15.663	15.625	15.705	VV	377	14684	0.23%	0.058%
160	15.719	15.705	15.761	VV	505	9499	0.15%	0.037%
161	15.806	15.761	15.858	VV	643	24467	0.39%	0.096%
162	15.886	15.858	15.942	VV	665	23076	0.37%	0.091%
163	15.973	15.942	16.011	VV	561	16081	0.26%	0.063%
164	16.023	16.011	16.051	VV	288	4699	0.07%	0.018%
165	16.068	16.051	16.125	VV	127	4247	0.07%	0.017%
166	16.144	16.125	16.160	VV	218	2223	0.04%	0.009%
167	16.353	16.160	16.415	VV	1055	65992	1.05%	0.259%
168	16.433	16.415	16.458	VV	675	14751	0.23%	0.058%
169	16.475	16.458	16.515	VV	498	14687	0.23%	0.058%
170	16.530	16.515	16.571	VV	493	11705	0.19%	0.046%
171	16.599	16.571	16.621	VV	331	7735	0.12%	0.030%
172	16.627	16.621	16.705	VV	394	6731	0.11%	0.026%
173	16.743	16.705	16.758	PV	406	7430	0.12%	0.029%
174	16.800	16.758	16.856	VV	1456	30736	0.49%	0.121%
175	16.889	16.856	16.935	VV	331	9040	0.14%	0.036%
176	16.968	16.935	16.988	VV	294	6334	0.10%	0.025%
177	17.040	16.988	17.071	VV	285	7048	0.11%	0.028%
178	17.113	17.071	17.165	PV	146	4515	0.07%	0.018%
179	17.236	17.165	17.297	VV	1433	29777	0.47%	0.117%
180	17.328	17.297	17.371	PV	1518	25637	0.41%	0.101%
181	17.392	17.371	17.411	VV	270	4109	0.07%	0.016%
182	17.452	17.411	17.485	VV	240	5351	0.09%	0.021%
183	17.510	17.485	17.535	VV	132	3617	0.06%	0.014%
184	17.605	17.535	17.628	VV	1719	44835	0.71%	0.176%
185	17.654	17.628	17.705	VV	2454	55659	0.89%	0.219%
186	17.755	17.705	17.794	VV	412	12134	0.19%	0.048%
187	17.815	17.794	17.835	VV	155	2475	0.04%	0.010%
188	17.855	17.835	17.888	PV	211	4565	0.07%	0.018%
189	17.912	17.888	17.960	VV	444	8251	0.13%	0.032%
190	18.064	17.960	18.111	PV	1905	39528	0.63%	0.155%
191	18.166	18.111	18.228	VV	1275	31176	0.50%	0.123%
192	18.256	18.228	18.285	VV	269	3881	0.06%	0.015%
193	18.312	18.285	18.348	PV	223	3329	0.05%	0.013%
194	18.458	18.348	18.541	PV	2016	78719	1.25%	0.309%

					rteres			
195	18.582	18.541	18.605	VV	456	13246	0.21%	0.052%
196	18.641	18.605	18.681	VV	679	16909	0.27%	0.066%
197	18.715	18.681	18.795	VV	328	10980	0.17%	0.043%
198	18.845	18.795	18.915	VV	1560	36570	0.58%	0.144%
199	18.954	18.915	19.005	VV	509	13996	0.22%	0.055%
200	19.036	19.005	19.058	VV	218	4615	0.07%	0.018%
201	19.149	19.058	19.172	PV	248	10676	0.17%	0.042%
202	19.217	19.172	19.296	PV	1464	32107	0.51%	0.126%
203	19.430	19.296	19.465	VV	1265	54919	0.87%	0.216%
204	19.480	19.465	19.501	VV	540	10666	0.17%	0.042%
205	19.581	19.501	19.611	VV	1503	42410	0.68%	0.167%
206	19.644	19.611	19.666	VV	593	17210	0.27%	0.068%
207	19.713	19.666	19.757	VV	1658	44791	0.71%	0.176%
208	19.935	19.757	19.965	VV	1854	112186	1.79%	0.441%
209	20.179	19.965	20.221	VV	1262	183305	2.92%	0.721%
210	20.278	20.221	20.305	VV	1908	59090	0.94%	0.232%
211	20.545	20.305	20.572	VV	2253	290261	4.62%	1.141%
212	20.624	20.572	20.675	VV	2752	129700	2.06%	0.510%
213	20.697	20.675	20.725	VV	1592	41697	0.66%	0.164%
214	20.747	20.725	20.824	VV	1186	58635	0.93%	0.231%
215	20.855	20.824	20.878	VV	723	23038	0.37%	0.091%
216	20.931	20.878	20.975	VV	529	27125	0.43%	0.107%
217	21.016	20.975	21.061	VV	1062	28902	0.46%	0.114%
Sum of corrected areas:					25436638			

Aliphatic EPH 042122.M Mon Apr 25 11:32:45 2022

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-N	SDG No.:	N2487
Lab Sample ID:	N2487-02	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	15
Sample Wt/Vol:	30.09	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 5:32	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	1.24	J	1	1.11	2.35	mg/kg	FC059379.D
Aliphatic C9-C28	Aliphatic C9-C28	11.4		1	1.21	4.68	mg/kg	FC059379.D
Total AliphaticEPH	Total AliphaticEPH	12.6			2.32	7.03	mg/kg	
Total EPH	Total EPH	12.6			2.32	7.03	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-N	SDG No.:	N2487
Lab Sample ID:	N2487-02	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	15
Sample Wt/Vol:	30.09	Units:	g
Soil Aliquot Vol:		Final Vol:	2000
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059379.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	11.4		1.21	4.68	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.24	J	1.11	2.35	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	43.7		40 - 140	87%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	44.4		40 - 140	89%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-02	Acq On:	23 Apr 2022 5:32
Client Sample ID:	UST-1-N	Operator:	UA/NP
Data file:	FC059379.D	Misc:	
Instrument:	FID_C	ALS Vial:	28
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	377380	2.963	300	ug/ml
Aliphatic C12-C16	6.100	9.471	11556231	83.83	200	ug/ml
Aliphatic C16-C21	9.472	12.813	8170825	54.696	300	ug/ml
Aliphatic C21-C28	12.814	16.454	1109862	7.195	400	ug/ml
Aliphatic C28-C40	16.455	21.124	1864200	15.861	600	ug/ml
Aliphatic EPH	2.862	21.124	23078498	164.545		ug/ml
ortho-Terphenyl (SURR)	11.098	11.098	7130787	44.38		ug/ml
1-chlorooctadecane (SURR)	12.543	12.543	5705295	43.69		ug/ml
Aliphatic C9-C28	2.862	16.454	21214298	148.684	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059379.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 5:32
 Operator : UA/NP
 Sample : N2487-02
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-N

Integration File: sample.E
 Quant Time: Apr 23 06:55:29 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.098	7130787	44.376 ug/ml
Spiked Amount 50.000		Recovery =	88.75%
12) S 1-chlorooctadecane (S...	12.543	5705295	43.691 ug/ml
Spiked Amount 50.000		Recovery =	87.38%

Target Compounds

(f)=RT Delta > 1/2 Window

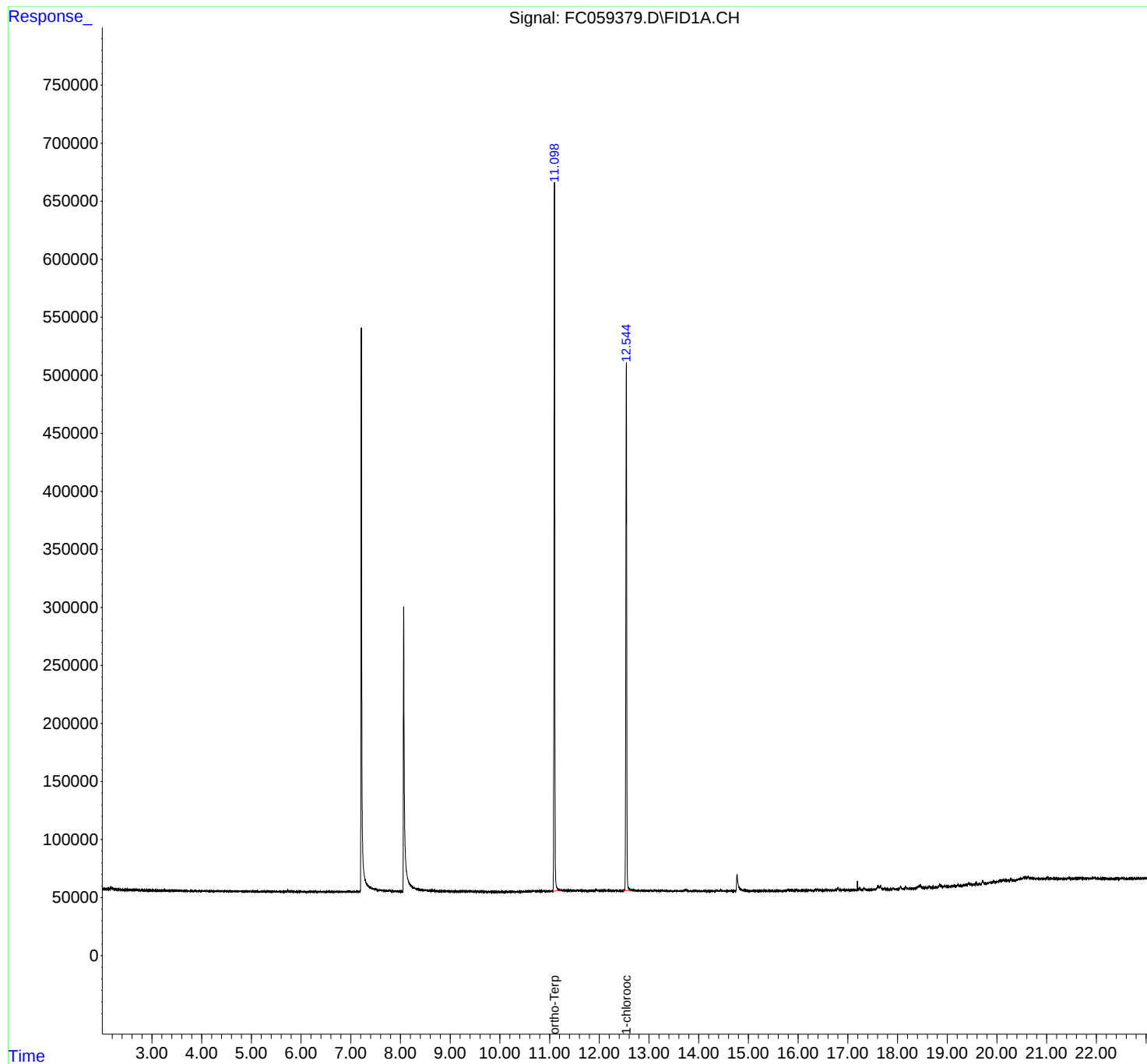
(m)=manual int.

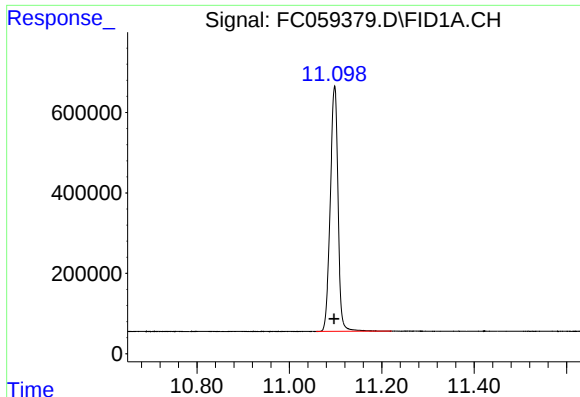
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059379.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 5:32
Operator : UA/NP
Sample : N2487-02
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
UST-1-N

Integration File: sample.E
Quant Time: Apr 23 06:55:29 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

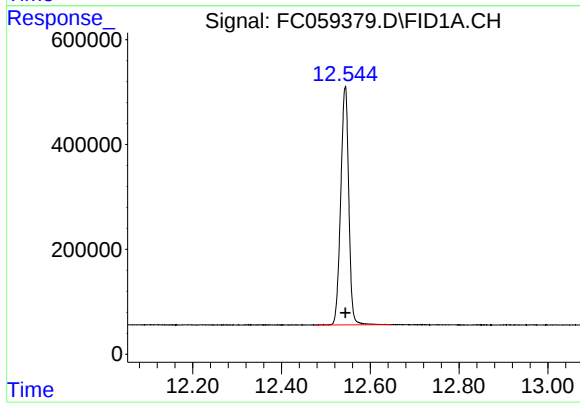




#9 ortho-Terphenyl (SURR)

R.T.: 11.098 min
Delta R.T.: 0.000 min
Response: 7130787
Conc: 44.38 ug/ml

Instrument :
FID_C
ClientSampleId :
UST-1-N



#12 1-chlorooctadecane (SURR)

R.T.: 12.543 min
Delta R.T.: -0.001 min
Response: 5705295
Conc: 43.69 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059379.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 5:32
Sample : N2487-02
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.996	2.976	3.016	PV	161	2613	0.04%	0.009%
2	3.023	3.016	3.057	VV	267	3750	0.05%	0.013%
3	3.065	3.057	3.096	VV	175	2617	0.04%	0.009%
4	3.131	3.096	3.191	PV	260	9351	0.13%	0.032%
5	3.197	3.191	3.243	VV	235	5049	0.07%	0.017%
6	3.258	3.243	3.282	VV	191	3279	0.05%	0.011%
7	3.306	3.282	3.365	VV	195	5567	0.08%	0.019%
8	3.388	3.365	3.464	VV	235	11595	0.16%	0.040%
9	3.473	3.464	3.495	VV	237	4010	0.06%	0.014%
10	3.532	3.495	3.592	VV	356	12572	0.17%	0.043%
11	3.607	3.592	3.648	VV	383	6160	0.09%	0.021%
12	3.678	3.648	3.687	VV	420	4068	0.06%	0.014%
13	3.703	3.687	3.762	VV	261	7774	0.11%	0.027%
14	3.784	3.762	3.813	VV	250	5620	0.08%	0.019%
15	3.825	3.813	3.842	VV	279	3339	0.05%	0.012%
16	3.875	3.842	3.893	PV	237	4984	0.07%	0.017%
17	3.905	3.893	3.931	VV	234	3562	0.05%	0.012%
18	3.950	3.931	3.986	VV	295	5534	0.08%	0.019%
19	4.030	3.986	4.084	VV	276	8971	0.12%	0.031%
20	4.096	4.084	4.138	VV	230	5031	0.07%	0.017%
21	4.155	4.138	4.165	VV	188	2136	0.03%	0.007%
22	4.198	4.165	4.243	VV	336	8897	0.12%	0.031%
23	4.281	4.243	4.298	VV	385	8211	0.11%	0.028%
24	4.310	4.298	4.332	VV	316	5235	0.07%	0.018%
25	4.367	4.332	4.435	VV	306	11347	0.16%	0.039%
26	4.468	4.435	4.494	VV	291	6694	0.09%	0.023%
27	4.509	4.494	4.517	VV	238	2820	0.04%	0.010%
28	4.528	4.517	4.561	VV	314	4986	0.07%	0.017%
29	4.577	4.561	4.593	VV	298	3316	0.05%	0.011%
30	4.613	4.593	4.627	VV	190	3003	0.04%	0.010%
31	4.648	4.627	4.657	VV	203	2858	0.04%	0.010%
32	4.668	4.657	4.703	VV	274	5279	0.07%	0.018%
33	4.715	4.703	4.750	VV	257	6124	0.08%	0.021%
34	4.794	4.750	4.825	VV	355	10904	0.15%	0.038%
35	4.845	4.825	4.892	VV	264	6207	0.09%	0.021%
36	4.923	4.892	4.959	VV	284	8903	0.12%	0.031%

					rteres			
37	4.969	4.959	5.024	VV	303	8293	0.11%	0.029%
38	5.035	5.024	5.054	VV	183	2376	0.03%	0.008%
39	5.079	5.054	5.093	VV	199	3504	0.05%	0.012%
40	5.111	5.093	5.154	VV	197	4223	0.06%	0.015%
41	5.231	5.154	5.295	PV	364	13653	0.19%	0.047%
42	5.316	5.295	5.335	VV	275	4948	0.07%	0.017%
43	5.350	5.335	5.410	VV	364	10838	0.15%	0.037%
44	5.430	5.410	5.451	VV	268	5921	0.08%	0.020%
45	5.463	5.451	5.548	VV	384	13963	0.19%	0.048%
46	5.599	5.548	5.618	VV	306	8973	0.12%	0.031%
47	5.647	5.618	5.705	VV	428	13278	0.18%	0.046%
48	5.734	5.705	5.761	VV	1494	22123	0.31%	0.076%
49	5.783	5.761	5.901	VV	340	21256	0.29%	0.073%
50	6.004	5.901	6.062	VV	399	25888	0.36%	0.089%
51	6.077	6.062	6.115	VV	279	5777	0.08%	0.020%
52	6.153	6.115	6.184	PV	327	9559	0.13%	0.033%
53	6.215	6.184	6.235	VV	343	8247	0.11%	0.028%
54	6.293	6.235	6.342	VV	415	19253	0.27%	0.066%
55	6.389	6.342	6.412	VV	400	12345	0.17%	0.043%
56	6.427	6.412	6.455	VV	360	5529	0.08%	0.019%
57	6.471	6.455	6.488	VV	317	4092	0.06%	0.014%
58	6.557	6.488	6.599	VV	304	16584	0.23%	0.057%
59	6.611	6.599	6.658	VV	338	7592	0.10%	0.026%
60	6.688	6.658	6.709	VV	357	8433	0.12%	0.029%
61	6.737	6.709	6.828	VV	350	15733	0.22%	0.054%
62	6.850	6.828	6.886	VV	294	6881	0.10%	0.024%
63	6.940	6.886	7.003	VV	363	22424	0.31%	0.077%
64	7.033	7.003	7.108	VV	317	17997	0.25%	0.062%
65	7.128	7.108	7.143	VV	462	7441	0.10%	0.026%
66	7.213	7.143	7.666	VV	478906	6419711	88.72%	22.145%
67	7.680	7.666	7.731	VV	1054	38531	0.53%	0.133%
68	7.784	7.731	7.931	VV	1549	104208	1.44%	0.359%
69	7.946	7.931	7.991	VV	680	19756	0.27%	0.068%
70	8.015	7.991	8.038	VV	527	12839	0.18%	0.044%
71	8.065	8.038	8.464	VV	238518	4291839	59.31%	14.805%
72	8.507	8.464	8.581	VV	1613	99413	1.37%	0.343%
73	8.600	8.581	8.780	VV	1301	125826	1.74%	0.434%
74	8.797	8.780	8.878	VV	812	44579	0.62%	0.154%
75	8.895	8.878	8.975	VV	742	37874	0.52%	0.131%
76	8.977	8.975	9.026	VV	724	17133	0.24%	0.059%
77	9.055	9.026	9.105	VV	720	27393	0.38%	0.094%
78	9.137	9.105	9.175	VV	618	22107	0.31%	0.076%
79	9.193	9.175	9.261	VV	733	31477	0.44%	0.109%
80	9.276	9.261	9.355	VV	705	30747	0.42%	0.106%
81	9.376	9.355	9.439	VV	718	29003	0.40%	0.100%
82	9.457	9.439	9.601	VV	559	41685	0.58%	0.144%
83	9.615	9.601	9.647	VV	415	8204	0.11%	0.028%
84	9.714	9.647	9.827	VV	355	19774	0.27%	0.068%
85	9.863	9.827	9.925	PV	199	8452	0.12%	0.029%
86	9.962	9.925	9.987	VV	242	5918	0.08%	0.020%
87	10.023	9.987	10.069	VV	294	10086	0.14%	0.035%
88	10.111	10.069	10.135	VV	289	6405	0.09%	0.022%
89	10.170	10.135	10.241	PV	261	9566	0.13%	0.033%

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90	10.248	10.241	10.294	VV	228	3135	0.04%	0.011%
91	10.321	10.294	10.408	VV	318	10855	0.15%	0.037%
92	10.475	10.408	10.497	VV	318	13058	0.18%	0.045%
93	10.528	10.497	10.563	VV	470	15683	0.22%	0.054%
94	10.679	10.563	10.703	VV	782	43816	0.61%	0.151%
95	10.758	10.703	10.781	VV	677	25134	0.35%	0.087%
96	10.813	10.781	10.861	VV	783	26841	0.37%	0.093%
97	10.890	10.861	10.935	VV	758	24040	0.33%	0.083%
98	10.951	10.935	10.980	VV	576	13898	0.19%	0.048%
99	11.000	10.980	11.053	VV	672	23848	0.33%	0.082%
100	11.097	11.053	11.241	VV	614759	7235860	100.00%	24.960%
101	11.271	11.241	11.316	VV	1338	53204	0.74%	0.184%
102	11.361	11.316	11.398	VV	1145	51679	0.71%	0.178%
103	11.422	11.398	11.524	VV	1272	77255	1.07%	0.266%
104	11.565	11.524	11.613	VV	1078	50320	0.70%	0.174%
105	11.680	11.613	11.781	VV	975	84794	1.17%	0.292%
106	11.798	11.781	11.812	VV	923	15358	0.21%	0.053%
107	11.838	11.812	11.910	VV	943	49539	0.68%	0.171%
108	11.925	11.910	11.965	VV	1123	32568	0.45%	0.112%
109	11.984	11.965	12.016	VV	1046	27949	0.39%	0.096%
110	12.111	12.016	12.170	VV	1083	83834	1.16%	0.289%
111	12.187	12.170	12.411	VV	925	112335	1.55%	0.387%
112	12.429	12.411	12.473	VV	731	27417	0.38%	0.095%
113	12.543	12.473	12.823	VV	456457	5911111	81.69%	20.390%
114	12.844	12.823	12.887	VV	759	25594	0.35%	0.088%
115	12.908	12.887	12.950	VV	792	24931	0.34%	0.086%
116	12.964	12.950	13.002	VV	728	20264	0.28%	0.070%
117	13.016	13.002	13.068	VV	728	24661	0.34%	0.085%
118	13.110	13.068	13.152	VV	827	35445	0.49%	0.122%
119	13.169	13.152	13.198	VV	622	16260	0.22%	0.056%
120	13.263	13.198	13.390	VV	694	61222	0.85%	0.211%
121	13.433	13.390	13.481	VV	467	20944	0.29%	0.072%
122	13.516	13.481	13.538	VV	445	12911	0.18%	0.045%
123	13.558	13.538	13.603	VV	449	15004	0.21%	0.052%
124	13.642	13.603	13.667	VV	498	15772	0.22%	0.054%
125	13.730	13.667	13.845	VV	1448	70706	0.98%	0.244%
126	13.862	13.845	13.882	VV	350	7323	0.10%	0.025%
127	13.911	13.882	14.061	VV	411	32361	0.45%	0.112%
128	14.094	14.061	14.152	VV	361	13334	0.18%	0.046%
129	14.168	14.152	14.230	VV	208	7511	0.10%	0.026%
130	14.280	14.230	14.336	VV	318	13675	0.19%	0.047%
131	14.363	14.336	14.416	VV	523	15824	0.22%	0.055%
132	14.445	14.416	14.496	VV	1133	24766	0.34%	0.085%
133	14.518	14.496	14.554	VV	250	6095	0.08%	0.021%
134	14.618	14.554	14.704	VV	374	17518	0.24%	0.060%
135	14.772	14.704	14.903	VV	14362	362879	5.02%	1.252%
136	14.921	14.903	14.999	VV	888	31802	0.44%	0.110%
137	15.024	14.999	15.065	VV	249	7486	0.10%	0.026%
138	15.082	15.065	15.209	VV	307	11639	0.16%	0.040%
139	15.230	15.209	15.275	VV	134	3277	0.05%	0.011%
140	15.309	15.275	15.368	VV	299	9751	0.13%	0.034%
141	15.409	15.368	15.454	VV	422	12243	0.17%	0.042%

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142	15.476	15.454	15.536	VV	244	8650	0.12%	0.030%
143	15.573	15.536	15.679	VV	273	11213	0.15%	0.039%
144	15.722	15.679	15.744	PV	238	5652	0.08%	0.019%
145	15.801	15.744	15.863	VV	986	37471	0.52%	0.129%
146	15.887	15.863	15.928	VV	679	17061	0.24%	0.059%
147	15.966	15.928	16.023	VV	729	19829	0.27%	0.068%
148	16.087	16.023	16.117	VV	248	9481	0.13%	0.033%
149	16.137	16.117	16.162	VV	292	4935	0.07%	0.017%
150	16.230	16.162	16.311	VV	378	21150	0.29%	0.073%
151	16.351	16.311	16.371	VV	937	17510	0.24%	0.060%
152	16.393	16.371	16.522	VV	1085	35712	0.49%	0.123%
153	16.545	16.522	16.567	VV	240	5584	0.08%	0.019%
154	16.610	16.567	16.697	VV	303	14342	0.20%	0.049%
155	16.737	16.697	16.770	PV	359	10137	0.14%	0.035%
156	16.800	16.770	16.859	VV	2272	42311	0.58%	0.146%
157	16.893	16.859	16.947	VV	459	13583	0.19%	0.047%
158	16.978	16.947	17.001	VV	155	2359	0.03%	0.008%
159	17.059	17.001	17.096	VV	164	5417	0.07%	0.019%
160	17.192	17.096	17.207	VV	1286	14642	0.20%	0.051%
161	17.234	17.207	17.296	VV	1868	33718	0.47%	0.116%
162	17.326	17.296	17.390	VV	1810	35849	0.50%	0.124%
163	17.421	17.390	17.476	VV	293	6079	0.08%	0.021%
164	17.517	17.476	17.534	PV	378	7481	0.10%	0.026%
165	17.601	17.534	17.632	VV	3142	87296	1.21%	0.301%
166	17.655	17.632	17.716	VV	3171	73126	1.01%	0.252%
167	17.742	17.716	17.815	VV	693	20339	0.28%	0.070%
168	17.912	17.815	17.990	VV	851	18623	0.26%	0.064%
169	18.063	17.990	18.106	VV	2402	45797	0.63%	0.158%
170	18.164	18.106	18.241	VV	1792	45427	0.63%	0.157%
171	18.456	18.241	18.571	PV	2739	136532	1.89%	0.471%
172	18.642	18.571	18.683	VV	1234	27405	0.38%	0.095%
173	18.847	18.683	18.910	VV	1671	61771	0.85%	0.213%
174	18.952	18.910	19.010	VV	777	24539	0.34%	0.085%
175	19.092	19.010	19.110	VV	284	6057	0.08%	0.021%
176	19.142	19.110	19.172	VV	515	8863	0.12%	0.031%
177	19.216	19.172	19.287	PV	1356	26573	0.37%	0.092%
178	19.433	19.287	19.466	VV	1478	51852	0.72%	0.179%
179	19.501	19.466	19.531	VV	332	10755	0.15%	0.037%
180	19.581	19.531	19.617	VV	1410	25011	0.35%	0.086%
181	19.652	19.617	19.674	VV	357	7168	0.10%	0.025%
182	19.713	19.674	19.776	VV	2881	57968	0.80%	0.200%
183	19.864	19.776	19.886	VV	779	36991	0.51%	0.128%
184	19.934	19.886	19.963	VV	1713	45762	0.63%	0.158%
185	20.115	19.963	20.143	VV	1795	147015	2.03%	0.507%
186	20.183	20.143	20.250	VV	1654	93019	1.29%	0.321%
187	20.278	20.250	20.325	VV	2297	65795	0.91%	0.227%
188	20.473	20.325	20.488	VV	2063	133625	1.85%	0.461%
189	20.565	20.488	20.594	VV	2556	143739	1.99%	0.496%
190	20.625	20.594	20.758	VV	3065	176130	2.43%	0.608%
191	20.786	20.758	20.803	VV	1050	25433	0.35%	0.088%
192	20.828	20.803	20.869	VV	827	27769	0.38%	0.096%
193	20.890	20.869	20.968	VV	573	21079	0.29%	0.073%
194	21.017	20.968	21.052	VV	959	21239	0.29%	0.073%

rters
Sum of corrected areas: 28989611

Aliphatic EPH 042122.M Mon Apr 25 11:33:11 2022

Report of Analysis

Client:	AEI Consultants		Date Collected:	04/19/22	
Project:	442890_Paterson, NJ		Date Received:	04/20/22	
Client Sample ID:	UST-1-E		SDG No.:	N2487	
Lab Sample ID:	N2487-03		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	20.7	
Sample Wt/Vol:	30.1	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 8:01	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	1.67	J	1	1.19	2.51	mg/kg	FC059383.D
Aliphatic C9-C28	Aliphatic C9-C28	7.25		1	1.30	5.04	mg/kg	FC059383.D
Total AliphaticEPH	Total AliphaticEPH	8.92			2.49	7.55	mg/kg	
Total EPH	Total EPH	8.92			2.49	7.55	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-E	SDG No.:	N2487
Lab Sample ID:	N2487-03	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	20.7
Sample Wt/Vol:	30.1	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059383.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	7.25		1.30	5.04	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.67	J	1.19	2.51	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	35.7		40 - 140	71%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	37.1		40 - 140	74%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-03	Acq On:	23 Apr 2022 8:01
Client Sample ID:	UST-1-E	Operator:	UA/NP
Data file:	FC059383.D	Misc:	
Instrument:	FID_C	ALS Vial:	32
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	324224	2.545	300	ug/ml
Aliphatic C12-C16	6.100	9.471	10184218	73.877	200	ug/ml
Aliphatic C16-C21	9.472	12.813	980310	6.562	300	ug/ml
Aliphatic C21-C28	12.814	16.454	939798	6.093	400	ug/ml
Aliphatic C28-C40	16.455	21.124	2339720	19.906	600	ug/ml
Aliphatic EPH	2.862	21.124	14768270	108.984		ug/ml
ortho-Terphenyl (SURR)	11.096	11.096	5961268	37.1		ug/ml
1-chlorooctadecane (SURR)	12.541	12.541	4662981	35.71		ug/ml
Aliphatic C9-C28	2.862	16.454	12428550	89.077	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059383.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 8:01
 Operator : UA/NP
 Sample : N2487-03
 Misc :
 ALS Vial : 32 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-E

Integration File: sample.E
 Quant Time: Apr 25 01:31:42 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.096	5961268	37.098 ug/ml
Spiked Amount 50.000		Recovery =	74.20%
12) S 1-chlorooctadecane (S...	12.541	4662981	35.709 ug/ml
Spiked Amount 50.000		Recovery =	71.42%

Target Compounds

(f)=RT Delta > 1/2 Window

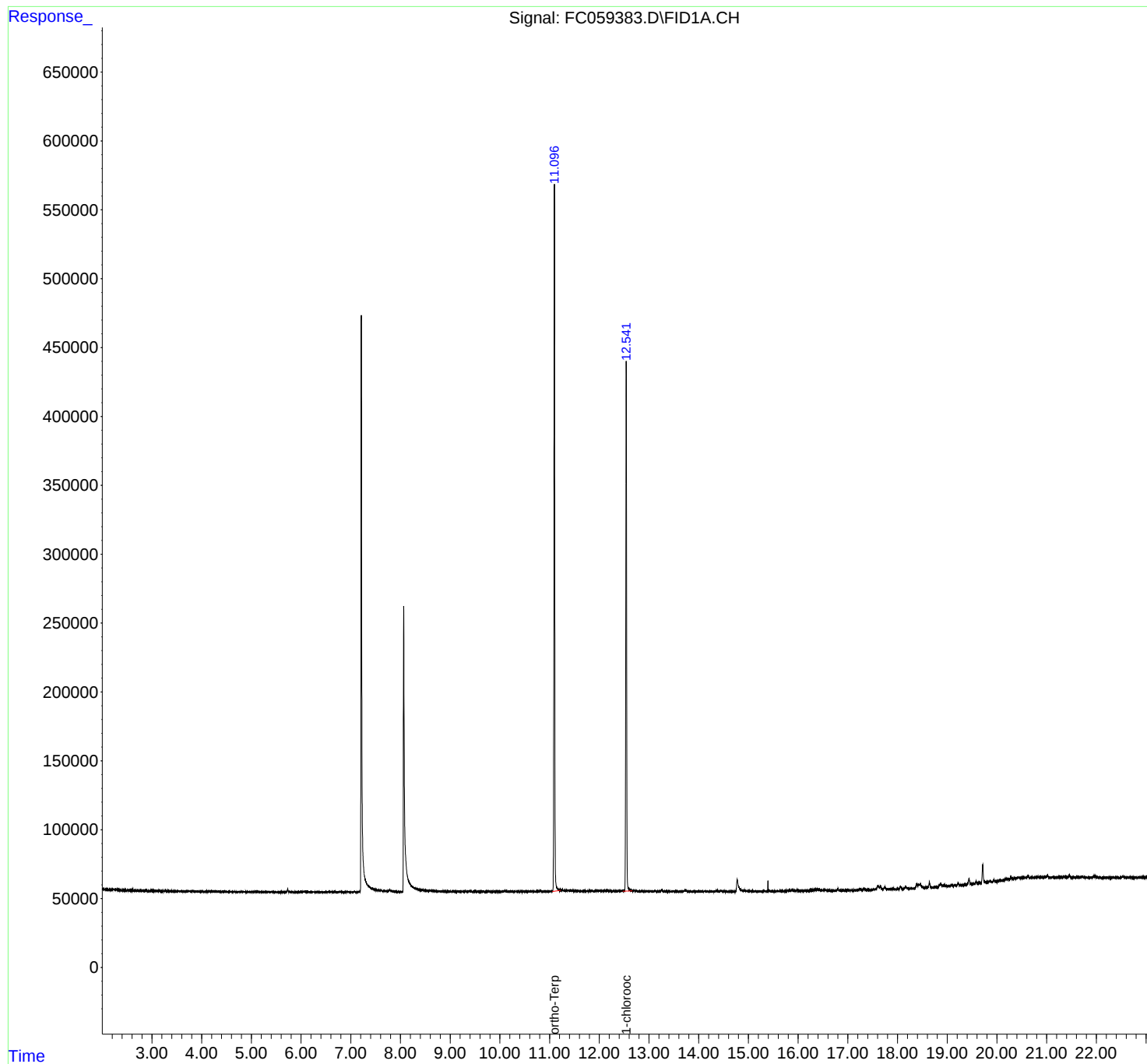
(m)=manual int.

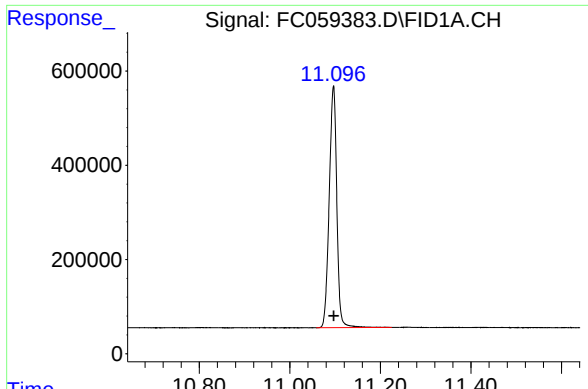
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059383.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 8:01
Operator : UA/NP
Sample : N2487-03
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
UST-1-E

Integration File: sample.E
Quant Time: Apr 25 01:31:42 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

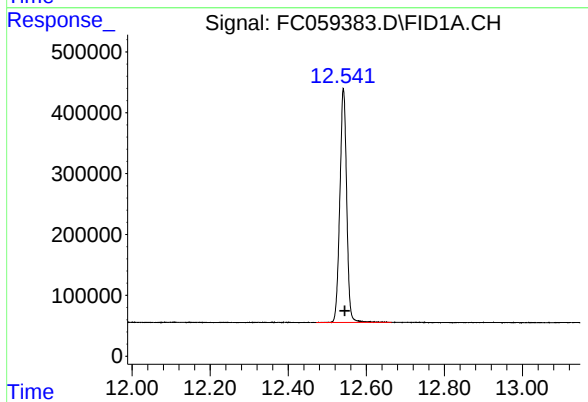




#9 ortho-Terphenyl (SURR)

R.T.: 11.096 min
Delta R.T.: 0.000 min
Response: 5961268
Conc: 37.10 ug/ml

Instrument :
FID_C
ClientSampleId :
UST-1-E



#12 1-chlorooctadecane (SURR)

R.T.: 12.541 min
Delta R.T.: -0.003 min
Response: 4662981
Conc: 35.71 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059383.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 8:01
 Sample : N2487-03
 Misc :
 ALS Vial : 32 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.949	2.905	2.976	BV	55	-1078	-0.02%	-0.004%
2	2.988	2.976	3.061	PV	153	2624	0.04%	0.010%
3	3.086	3.061	3.122	PV	196	4033	0.07%	0.016%
4	3.134	3.122	3.151	PV	212	1691	0.03%	0.007%
5	3.175	3.151	3.193	VV	151	2487	0.04%	0.010%
6	3.207	3.193	3.230	VV	222	2652	0.04%	0.010%
7	3.238	3.230	3.270	VV	111	2546	0.04%	0.010%
8	3.285	3.270	3.312	VV	163	1841	0.03%	0.007%
9	3.327	3.312	3.345	VV	125	1510	0.03%	0.006%
10	3.357	3.345	3.386	VV	149	1190	0.02%	0.005%
11	3.412	3.386	3.425	VV	163	2478	0.04%	0.010%
12	3.437	3.425	3.480	PV	174	2293	0.04%	0.009%
13	3.534	3.480	3.546	VV	260	5964	0.10%	0.023%
14	3.579	3.546	3.594	VV	273	5060	0.08%	0.020%
15	3.608	3.594	3.632	VV	373	5552	0.09%	0.022%
16	3.637	3.632	3.654	VV	238	1718	0.03%	0.007%
17	3.683	3.654	3.698	VV	175	2892	0.05%	0.011%
18	3.735	3.698	3.800	VV	286	9947	0.17%	0.039%
19	3.822	3.800	3.840	VV	264	4212	0.07%	0.017%
20	3.850	3.840	3.858	VV	189	1207	0.02%	0.005%
21	3.867	3.858	3.928	VV	240	6466	0.11%	0.025%
22	3.936	3.928	3.986	VV	214	4710	0.08%	0.018%
23	4.026	3.986	4.048	PV	274	5746	0.10%	0.023%
24	4.062	4.048	4.085	VV	235	3113	0.05%	0.012%
25	4.131	4.085	4.158	VV	358	10035	0.17%	0.039%
26	4.180	4.158	4.223	VV	396	12139	0.20%	0.048%
27	4.277	4.223	4.318	VV	503	16169	0.27%	0.063%
28	4.326	4.318	4.333	VV	261	1866	0.03%	0.007%
29	4.338	4.333	4.345	VV	209	1466	0.02%	0.006%
30	4.362	4.345	4.381	VV	424	5536	0.09%	0.022%
31	4.406	4.381	4.411	VV	185	2158	0.04%	0.008%
32	4.425	4.411	4.431	VV	197	2266	0.04%	0.009%
33	4.461	4.431	4.492	VV	272	7066	0.12%	0.028%
34	4.498	4.492	4.506	VV	193	1394	0.02%	0.005%
35	4.511	4.506	4.539	VV	185	3184	0.05%	0.012%
36	4.571	4.539	4.638	VV	404	12207	0.20%	0.048%

					rteres			
37	4.672	4.638	4.695	VV	307	5747	0.10%	0.023%
38	4.717	4.695	4.732	VV	194	2734	0.05%	0.011%
39	4.752	4.732	4.763	VV	225	3047	0.05%	0.012%
40	4.785	4.763	4.810	VV	254	5516	0.09%	0.022%
41	4.825	4.810	4.855	VV	151	2658	0.04%	0.010%
42	4.881	4.855	4.913	PV	254	5324	0.09%	0.021%
43	4.926	4.913	4.955	VV	223	4264	0.07%	0.017%
44	4.964	4.955	5.021	VV	240	7233	0.12%	0.028%
45	5.047	5.021	5.067	VV	323	5531	0.09%	0.022%
46	5.102	5.067	5.125	VV	284	7715	0.13%	0.030%
47	5.147	5.125	5.173	VV	256	5840	0.10%	0.023%
48	5.200	5.173	5.224	VV	333	6382	0.11%	0.025%
49	5.238	5.224	5.278	VV	350	6832	0.11%	0.027%
50	5.307	5.278	5.342	VV	290	6761	0.11%	0.026%
51	5.347	5.342	5.398	VV	215	5740	0.10%	0.022%
52	5.410	5.398	5.439	VV	246	3600	0.06%	0.014%
53	5.455	5.439	5.468	PV	184	2257	0.04%	0.009%
54	5.479	5.468	5.510	VV	179	3103	0.05%	0.012%
55	5.523	5.510	5.549	VV	203	2772	0.05%	0.011%
56	5.589	5.549	5.606	VV	207	4175	0.07%	0.016%
57	5.614	5.606	5.638	VV	121	1034	0.02%	0.004%
58	5.672	5.638	5.692	VV	164	3134	0.05%	0.012%
59	5.732	5.692	5.779	VV	2267	29439	0.49%	0.115%
60	5.803	5.779	5.814	VV	296	3539	0.06%	0.014%
61	5.828	5.814	5.872	VV	258	5236	0.09%	0.021%
62	5.888	5.872	5.928	VV	199	4587	0.08%	0.018%
63	5.934	5.928	5.964	VV	193	3067	0.05%	0.012%
64	6.057	5.964	6.100	VV	412	20617	0.34%	0.081%
65	6.133	6.100	6.162	VV	381	8884	0.15%	0.035%
66	6.170	6.162	6.197	VV	278	3157	0.05%	0.012%
67	6.212	6.197	6.256	VV	242	5550	0.09%	0.022%
68	6.273	6.256	6.288	VV	234	2738	0.05%	0.011%
69	6.296	6.288	6.308	VV	125	1128	0.02%	0.004%
70	6.332	6.308	6.365	VV	175	3884	0.06%	0.015%
71	6.414	6.365	6.455	VV	244	6712	0.11%	0.026%
72	6.481	6.455	6.491	VV	193	3434	0.06%	0.013%
73	6.529	6.491	6.542	VV	304	6922	0.11%	0.027%
74	6.550	6.542	6.588	VV	257	6013	0.10%	0.024%
75	6.595	6.588	6.628	VV	296	4790	0.08%	0.019%
76	6.639	6.628	6.675	VV	156	3058	0.05%	0.012%
77	6.689	6.675	6.722	VV	294	4757	0.08%	0.019%
78	6.743	6.722	6.772	VV	231	4949	0.08%	0.019%
79	6.773	6.772	6.848	VV	230	4734	0.08%	0.019%
80	6.873	6.848	6.897	VV	165	2297	0.04%	0.009%
81	6.924	6.897	6.997	VV	593	15217	0.25%	0.060%
82	7.010	6.997	7.022	VV	162	1269	0.02%	0.005%
83	7.029	7.022	7.036	PV	132	479	0.01%	0.002%
84	7.075	7.036	7.105	PV	302	5324	0.09%	0.021%
85	7.119	7.105	7.131	VV	113	1409	0.02%	0.006%
86	7.212	7.131	7.583	VV	418698	5668693	94.14%	22.209%
87	7.597	7.583	7.651	VV	1382	46474	0.77%	0.182%
88	7.663	7.651	7.728	VV	1002	42035	0.70%	0.165%
89	7.783	7.728	7.901	VV	1946	93693	1.56%	0.367%

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90	7.919	7.901	7.957	VV	421	13159	0.22%	0.052%
91	7.969	7.957	8.004	VV	391	8688	0.14%	0.034%
92	8.014	8.004	8.034	VV	352	4687	0.08%	0.018%
93	8.065	8.034	8.408	VV	206688	3779467	62.77%	14.807%
94	8.418	8.408	8.535	VV	1658	103461	1.72%	0.405%
95	8.548	8.535	8.576	VV	1261	25428	0.42%	0.100%
96	8.610	8.576	8.704	VV	1173	71034	1.18%	0.278%
97	8.730	8.704	8.754	VV	854	21383	0.36%	0.084%
98	8.770	8.754	8.795	VV	709	15541	0.26%	0.061%
99	8.801	8.795	8.811	VV	594	5239	0.09%	0.021%
100	8.822	8.811	8.845	VV	708	11750	0.20%	0.046%
101	8.852	8.845	8.879	VV	538	9852	0.16%	0.039%
102	8.914	8.879	8.949	VV	554	19649	0.33%	0.077%
103	8.960	8.949	8.978	VV	492	7426	0.12%	0.029%
104	9.057	8.978	9.095	VV	699	36930	0.61%	0.145%
105	9.103	9.095	9.139	VV	554	10256	0.17%	0.040%
106	9.188	9.139	9.232	VV	612	24155	0.40%	0.095%
107	9.248	9.232	9.265	VV	558	9553	0.16%	0.037%
108	9.305	9.265	9.321	VV	560	16000	0.27%	0.063%
109	9.381	9.321	9.405	VV	628	25011	0.42%	0.098%
110	9.416	9.405	9.439	VV	632	10918	0.18%	0.043%
111	9.449	9.439	9.468	VV	434	7031	0.12%	0.028%
112	9.481	9.468	9.492	VV	541	6434	0.11%	0.025%
113	9.501	9.492	9.518	VV	510	6328	0.11%	0.025%
114	9.526	9.518	9.533	VV	425	3440	0.06%	0.013%
115	9.538	9.533	9.557	VV	405	4397	0.07%	0.017%
116	9.568	9.557	9.598	VV	389	7116	0.12%	0.028%
117	9.606	9.598	9.622	VV	323	3975	0.07%	0.016%
118	9.631	9.622	9.643	VV	270	3214	0.05%	0.013%
119	9.671	9.643	9.687	VV	507	9039	0.15%	0.035%
120	9.698	9.687	9.733	VV	411	9018	0.15%	0.035%
121	9.762	9.733	9.800	VV	468	13991	0.23%	0.055%
122	9.819	9.800	9.828	VV	371	5090	0.08%	0.020%
123	9.847	9.828	9.865	VV	375	7100	0.12%	0.028%
124	9.894	9.865	9.917	VV	483	11202	0.19%	0.044%
125	9.944	9.917	9.987	VV	457	16786	0.28%	0.066%
126	9.997	9.987	10.015	VV	477	6703	0.11%	0.026%
127	10.026	10.015	10.068	VV	421	12154	0.20%	0.048%
128	10.105	10.068	10.162	VV	715	25867	0.43%	0.101%
129	10.176	10.162	10.186	VV	520	6670	0.11%	0.026%
130	10.196	10.186	10.218	VV	570	9169	0.15%	0.036%
131	10.228	10.218	10.255	VV	511	8699	0.14%	0.034%
132	10.261	10.255	10.270	VV	355	2844	0.05%	0.011%
133	10.282	10.270	10.298	VV	350	5393	0.09%	0.021%
134	10.319	10.298	10.352	VV	482	11785	0.20%	0.046%
135	10.361	10.352	10.400	VV	392	8461	0.14%	0.033%
136	10.431	10.400	10.452	VV	385	9022	0.15%	0.035%
137	10.518	10.452	10.540	VV	454	18230	0.30%	0.071%
138	10.551	10.540	10.568	VV	368	5154	0.09%	0.020%
139	10.633	10.568	10.716	VV	641	40265	0.67%	0.158%
140	10.742	10.716	10.774	VV	606	16231	0.27%	0.064%
141	10.804	10.774	10.868	VV	736	28331	0.47%	0.111%

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142	10.886	10.868	10.903	VV	544	9008	0.15%	0.035%
143	10.912	10.903	10.970	VV	461	16635	0.28%	0.065%
144	10.982	10.970	11.020	VV	412	10880	0.18%	0.043%
145	11.035	11.020	11.057	VV	549	9026	0.15%	0.035%
146	11.096	11.057	11.202	VV	509185	6021373	100.00%	23.591%
147	11.212	11.202	11.237	VV	1350	25813	0.43%	0.101%
148	11.260	11.237	11.311	VV	1528	50923	0.85%	0.200%
149	11.354	11.311	11.398	VV	1026	47476	0.79%	0.186%
150	11.417	11.398	11.455	VV	1082	32394	0.54%	0.127%
151	11.469	11.455	11.507	VV	971	23829	0.40%	0.093%
152	11.536	11.507	11.544	VV	677	14543	0.24%	0.057%
153	11.554	11.544	11.568	VV	666	9148	0.15%	0.036%
154	11.573	11.568	11.619	VV	657	17933	0.30%	0.070%
155	11.624	11.619	11.655	VV	593	10856	0.18%	0.043%
156	11.682	11.655	11.693	VV	699	14008	0.23%	0.055%
157	11.700	11.693	11.712	VV	638	6735	0.11%	0.026%
158	11.718	11.712	11.774	VV	693	21284	0.35%	0.083%
159	11.795	11.774	11.818	VV	692	16646	0.28%	0.065%
160	11.840	11.818	11.872	VV	748	19048	0.32%	0.075%
161	11.881	11.872	11.891	VV	531	5688	0.09%	0.022%
162	11.914	11.891	11.932	VV	777	16786	0.28%	0.066%
163	11.941	11.932	11.986	VV	949	26424	0.44%	0.104%
164	11.999	11.986	12.038	VV	919	24691	0.41%	0.097%
165	12.044	12.038	12.060	VV	701	8893	0.15%	0.035%
166	12.109	12.060	12.122	VV	974	29546	0.49%	0.116%
167	12.132	12.122	12.209	VV	837	36278	0.60%	0.142%
168	12.240	12.209	12.270	VV	716	22200	0.37%	0.087%
169	12.322	12.270	12.347	VV	771	28628	0.48%	0.112%
170	12.376	12.347	12.428	VV	793	29804	0.49%	0.117%
171	12.465	12.428	12.472	VV	636	14317	0.24%	0.056%
172	12.541	12.472	12.665	VV	384014	4734527	78.63%	18.549%
173	12.675	12.665	12.695	VV	852	14761	0.25%	0.058%
174	12.707	12.695	12.732	VV	823	16009	0.27%	0.063%
175	12.743	12.732	12.769	VV	752	13106	0.22%	0.051%
176	12.783	12.769	12.823	VV	523	14886	0.25%	0.058%
177	12.867	12.823	12.975	VV	591	42144	0.70%	0.165%
178	12.987	12.975	13.075	VV	417	19348	0.32%	0.076%
179	13.106	13.075	13.128	VV	534	12494	0.21%	0.049%
180	13.136	13.128	13.198	VV	442	16155	0.27%	0.063%
181	13.215	13.198	13.235	VV	408	8257	0.14%	0.032%
182	13.260	13.235	13.318	VV	1431	33895	0.56%	0.133%
183	13.330	13.318	13.382	VV	420	10158	0.17%	0.040%
184	13.400	13.382	13.427	VV	305	6394	0.11%	0.025%
185	13.502	13.427	13.548	VV	328	18676	0.31%	0.073%
186	13.560	13.548	13.625	VV	298	7507	0.12%	0.029%
187	13.731	13.625	13.811	VV	1124	44313	0.74%	0.174%
188	13.827	13.811	13.843	VV	335	3992	0.07%	0.016%
189	13.858	13.843	13.925	VV	285	8267	0.14%	0.032%
190	13.991	13.925	14.025	VV	289	12491	0.21%	0.049%
191	14.069	14.025	14.122	VV	211	9706	0.16%	0.038%
192	14.133	14.122	14.207	VV	261	10406	0.17%	0.041%
193	14.241	14.207	14.286	VV	271	8590	0.14%	0.034%
194	14.363	14.286	14.418	VV	868	26081	0.43%	0.102%

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195	14.445	14.418	14.568	VV	845	20890	0.35%	0.082%
196	14.585	14.568	14.607	VV	277	3146	0.05%	0.012%
197	14.623	14.607	14.671	VV	193	4176	0.07%	0.016%
198	14.690	14.671	14.717	PV	198	2777	0.05%	0.011%
199	14.775	14.717	14.892	VV	8808	262781	4.36%	1.030%
200	14.919	14.892	15.028	VV	987	34692	0.58%	0.136%
201	15.045	15.028	15.065	VV	287	5065	0.08%	0.020%
202	15.081	15.065	15.158	VV	338	9329	0.15%	0.037%
203	15.184	15.158	15.257	VV	238	7949	0.13%	0.031%
204	15.327	15.257	15.378	PV	334	14289	0.24%	0.056%
205	15.393	15.378	15.542	VV	1984	25147	0.42%	0.099%
206	15.588	15.542	15.615	VV	220	7512	0.12%	0.029%
207	15.628	15.615	15.648	VV	214	3857	0.06%	0.015%
208	15.668	15.648	15.684	VV	310	5999	0.10%	0.024%
209	15.825	15.684	15.858	VV	722	46977	0.78%	0.184%
210	15.882	15.858	15.945	VV	781	27703	0.46%	0.109%
211	15.967	15.945	16.052	VV	599	20976	0.35%	0.082%
212	16.083	16.052	16.135	VV	316	8744	0.15%	0.034%
213	16.169	16.135	16.192	VV	262	6210	0.10%	0.024%
214	16.285	16.192	16.308	VV	704	36681	0.61%	0.144%
215	16.350	16.308	16.369	VV	1301	33545	0.56%	0.131%
216	16.391	16.369	16.468	VV	1444	52479	0.87%	0.206%
217	16.483	16.468	16.512	VV	643	14876	0.25%	0.058%
218	16.529	16.512	16.655	VV	699	36946	0.61%	0.145%
219	16.666	16.655	16.699	VV	342	5821	0.10%	0.023%
220	16.742	16.699	16.768	PV	328	9559	0.16%	0.037%
221	16.799	16.768	16.871	VV	1763	37835	0.63%	0.148%
222	16.895	16.871	16.952	VV	388	9635	0.16%	0.038%
223	16.970	16.952	16.995	VV	210	3530	0.06%	0.014%
224	17.027	16.995	17.052	VV	183	3577	0.06%	0.014%
225	17.080	17.052	17.098	PV	154	2537	0.04%	0.010%
226	17.134	17.098	17.170	VV	178	4176	0.07%	0.016%
227	17.235	17.170	17.293	PV	1295	29258	0.49%	0.115%
228	17.326	17.293	17.398	VV	1358	28679	0.48%	0.112%
229	17.421	17.398	17.452	VV	238	5451	0.09%	0.021%
230	17.604	17.452	17.635	PV	2687	91998	1.53%	0.360%
231	17.654	17.635	17.708	VV	2524	57146	0.95%	0.224%
232	17.738	17.708	17.808	VV	1830	49798	0.83%	0.195%
233	17.836	17.808	17.862	VV	257	7422	0.12%	0.029%
234	17.913	17.862	17.955	VV	597	15733	0.26%	0.062%
235	18.063	17.955	18.111	PV	1784	41710	0.69%	0.163%
236	18.165	18.111	18.280	VV	1588	43259	0.72%	0.169%
237	18.388	18.280	18.407	PV	2793	60326	1.00%	0.236%
238	18.456	18.407	18.578	VV	2847	135484	2.25%	0.531%
239	18.640	18.578	18.685	VV	3891	61935	1.03%	0.243%
240	18.719	18.685	18.732	VV	206	4458	0.07%	0.017%
241	18.868	18.732	18.900	PV	2646	71529	1.19%	0.280%
242	18.945	18.900	19.050	VV	1004	47726	0.79%	0.187%
243	19.092	19.050	19.122	VV	643	13997	0.23%	0.055%
244	19.144	19.122	19.173	VV	512	9329	0.15%	0.037%
245	19.218	19.173	19.318	VV	1594	40840	0.68%	0.160%
246	19.437	19.318	19.542	PV	4707	131934	2.19%	0.517%

						rteres		
247	19.581	19.542	19.622	VV	1781	41364	0.69%	0.162%
248	19.649	19.622	19.674	VV	798	18062	0.30%	0.071%
249	19.714	19.674	19.782	VV	14038	233299	3.87%	0.914%
250	19.861	19.782	19.900	VV	1413	57736	0.96%	0.226%
251	19.936	19.900	19.978	VV	1858	46007	0.76%	0.180%
252	20.190	19.978	20.242	VV	1944	186270	3.09%	0.730%
253	20.279	20.242	20.307	VV	2862	78759	1.31%	0.309%
254	20.413	20.307	20.495	VV	2075	202316	3.36%	0.793%
255	20.556	20.495	20.571	VV	1784	75398	1.25%	0.295%
256	20.624	20.571	20.677	VV	2545	109089	1.81%	0.427%
257	20.818	20.677	20.851	VV	1154	114303	1.90%	0.448%
258	20.868	20.851	20.895	VV	948	22312	0.37%	0.087%
259	21.017	20.895	21.090	VV	1552	78301	1.30%	0.307%
					Sum of corrected areas:	25524168		

Aliphatic EPH 042122.M Mon Apr 25 11:34:48 2022

Report of Analysis

Client:	AEI Consultants		Date Collected:	04/19/22	
Project:	442890_Paterson, NJ		Date Received:	04/20/22	
Client Sample ID:	UST-1-S		SDG No.:	N2487	
Lab Sample ID:	N2487-04		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	16.7	
Sample Wt/Vol:	30.06	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 8:38	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	5.92		1	1.14	2.40	mg/kg	FC059384.D
Aliphatic C9-C28	Aliphatic C9-C28	10.4		1	1.24	4.80	mg/kg	FC059384.D
Total AliphaticEPH	Total AliphaticEPH	16.4			2.38	7.20	mg/kg	
Total EPH	Total EPH	16.4			2.38	7.20	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-S	SDG No.:	N2487
Lab Sample ID:	N2487-04	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	16.7
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059384.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	10.4		1.24	4.80	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	5.92		1.14	2.40	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	30.7		40 - 140	61%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	32.0		40 - 140	64%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-04	Acq On:	23 Apr 2022 8:38
Client Sample ID:	UST-1-S	Operator:	UA/NP
Data file:	FC059384.D	Misc:	
Instrument:	FID_C	ALS Vial:	33
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	357973	2.81	300	ug/ml
Aliphatic C12-C16	6.100	9.471	11098136	80.507	200	ug/ml
Aliphatic C16-C21	9.472	12.813	6246624	41.815	300	ug/ml
Aliphatic C21-C28	12.814	16.454	1299792	8.427	400	ug/ml
Aliphatic C28-C40	16.455	21.124	8711413	74.117	600	ug/ml
Aliphatic EPH	2.862	21.124	27713938	207.676		ug/ml
ortho-Terphenyl (SURR)	11.096	11.096	5147483	32.03		ug/ml
1-chlorooctadecane (SURR)	12.541	12.541	4010619	30.71		ug/ml
Aliphatic C9-C28	2.862	16.454	19002525	133.559	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059384.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 8:38
 Operator : UA/NP
 Sample : N2487-04
 Misc :
 ALS Vial : 33 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-S

Integration File: sample.E
 Quant Time: Apr 25 01:31:51 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.096	5147483	32.033 ug/ml
Spiked Amount 50.000		Recovery =	64.07%
12) S 1-chlorooctadecane (S...	12.541	4010619	30.713 ug/ml
Spiked Amount 50.000		Recovery =	61.43%

Target Compounds

(f)=RT Delta > 1/2 Window

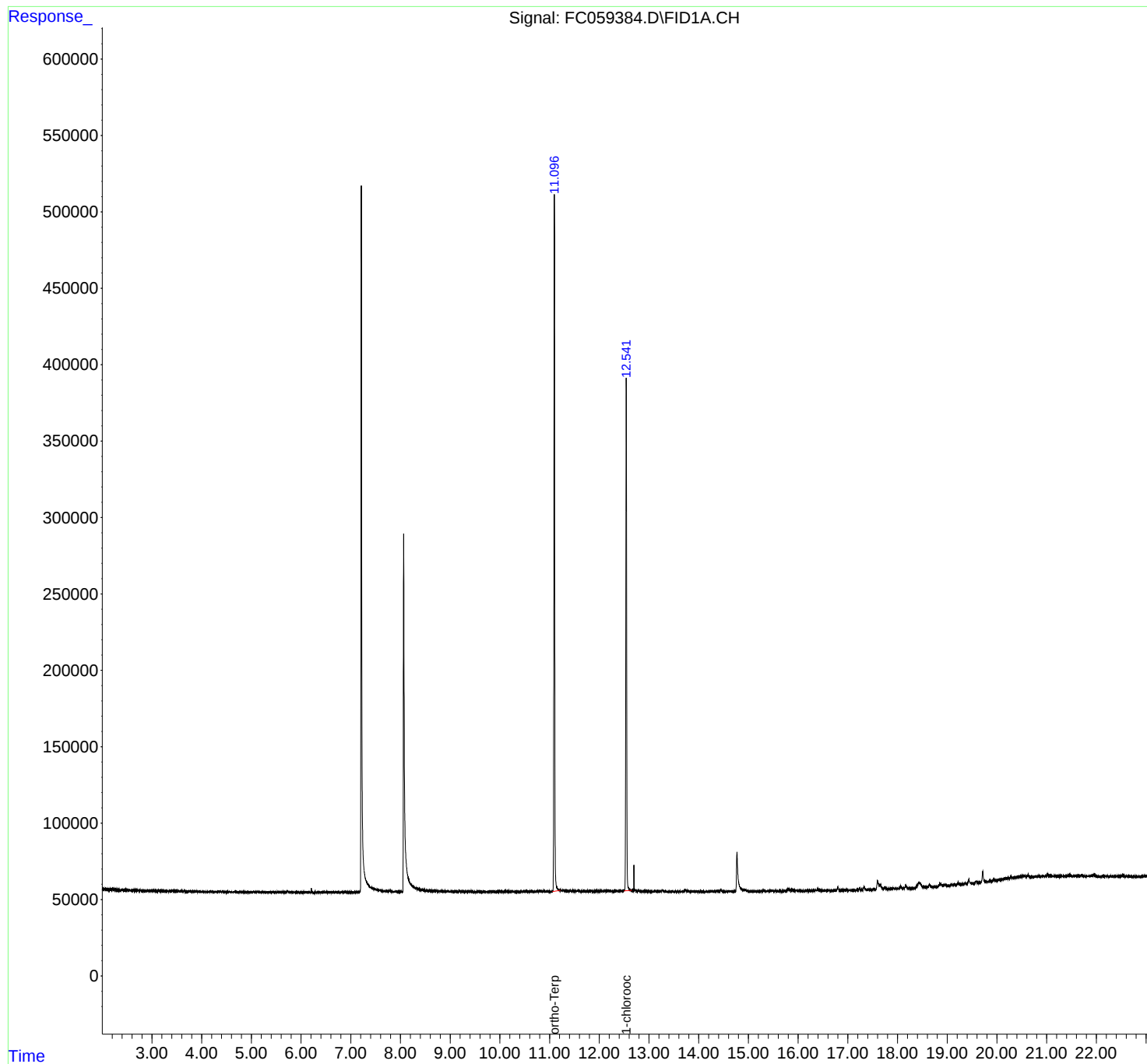
(m)=manual int.

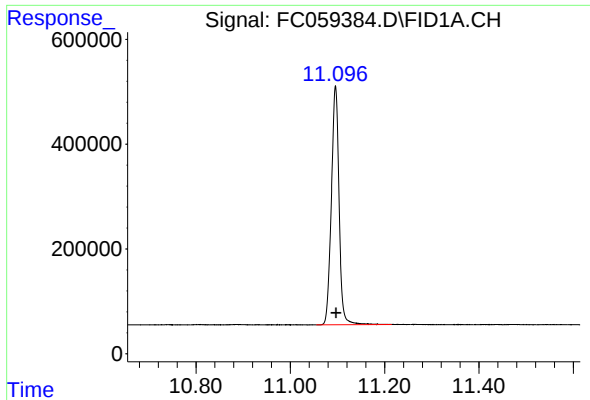
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059384.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 8:38
Operator : UA/NP
Sample : N2487-04
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
UST-1-S

Integration File: sample.E
Quant Time: Apr 25 01:31:51 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

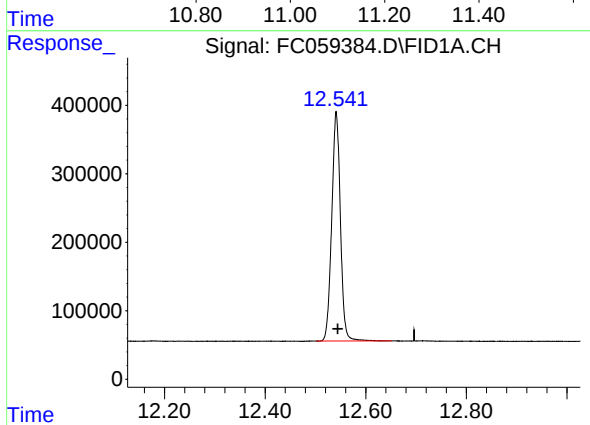




#9 ortho-Terphenyl (SURR)

R.T.: 11.096 min
Delta R.T.: -0.001 min
Response: 5147483
Conc: 32.03 ug/ml

Instrument :
FID_C
ClientSampleId :
UST-1-S



#12 1-chlorooctadecane (SURR)

R.T.: 12.541 min
Delta R.T.: -0.003 min
Response: 4010619
Conc: 30.71 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059384.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 8:38
 Sample : N2487-04
 Misc :
 ALS Vial : 33 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.925	2.905	2.955	BV	186	2477	0.04%	0.008%
2	2.967	2.955	3.005	VV	216	3947	0.06%	0.012%
3	3.054	3.005	3.068	PV	285	5437	0.09%	0.017%
4	3.075	3.068	3.122	VV	205	4675	0.08%	0.015%
5	3.144	3.122	3.163	VV	240	4173	0.07%	0.013%
6	3.175	3.163	3.184	PV	146	1029	0.02%	0.003%
7	3.196	3.184	3.205	VV	138	1442	0.02%	0.005%
8	3.233	3.205	3.284	VV	212	5908	0.10%	0.019%
9	3.296	3.284	3.337	VV	200	4217	0.07%	0.013%
10	3.356	3.337	3.375	VV	190	2878	0.05%	0.009%
11	3.398	3.375	3.431	VV	312	7598	0.12%	0.024%
12	3.451	3.431	3.464	VV	312	4501	0.07%	0.014%
13	3.484	3.464	3.533	VV	297	9731	0.16%	0.031%
14	3.541	3.533	3.557	VV	302	3445	0.06%	0.011%
15	3.571	3.557	3.589	VV	301	4542	0.07%	0.014%
16	3.605	3.589	3.632	VV	543	6560	0.11%	0.021%
17	3.647	3.632	3.677	VV	302	5562	0.09%	0.017%
18	3.688	3.677	3.721	VV	243	4750	0.08%	0.015%
19	3.743	3.721	3.773	VV	273	7844	0.13%	0.025%
20	3.781	3.773	3.795	VV	218	2330	0.04%	0.007%
21	3.806	3.795	3.815	VV	174	1786	0.03%	0.006%
22	3.821	3.815	3.893	VV	204	6264	0.10%	0.020%
23	3.904	3.893	3.935	VV	164	2814	0.05%	0.009%
24	3.945	3.935	3.975	VV	219	2941	0.05%	0.009%
25	3.986	3.975	3.998	VV	183	1942	0.03%	0.006%
26	4.013	3.998	4.036	VV	222	3360	0.05%	0.011%
27	4.050	4.036	4.061	VV	263	2289	0.04%	0.007%
28	4.094	4.061	4.128	VV	262	7317	0.12%	0.023%
29	4.183	4.128	4.256	VV	379	18591	0.30%	0.058%
30	4.278	4.256	4.308	PV	454	6227	0.10%	0.020%
31	4.368	4.308	4.387	VV	323	10087	0.16%	0.032%
32	4.420	4.387	4.430	VV	325	5925	0.10%	0.019%
33	4.435	4.430	4.443	VV	213	1668	0.03%	0.005%
34	4.468	4.443	4.507	VV	254	7042	0.11%	0.022%
35	4.536	4.507	4.558	VV	358	6765	0.11%	0.021%
36	4.567	4.558	4.622	VV	295	5998	0.10%	0.019%

					rteres			
37	4.690	4.622	4.702	VV	326	9437	0.15%	0.030%
38	4.711	4.702	4.731	VV	199	2203	0.04%	0.007%
39	4.751	4.731	4.775	VV	196	3474	0.06%	0.011%
40	4.797	4.775	4.815	VV	262	4248	0.07%	0.013%
41	4.841	4.815	4.874	VV	275	6246	0.10%	0.020%
42	4.885	4.874	4.932	VV	220	5806	0.09%	0.018%
43	5.005	4.932	5.024	PV	278	10214	0.16%	0.032%
44	5.038	5.024	5.072	VV	419	7400	0.12%	0.023%
45	5.082	5.072	5.142	VV	367	9849	0.16%	0.031%
46	5.165	5.142	5.201	VV	335	7733	0.12%	0.024%
47	5.211	5.201	5.220	VV	248	2278	0.04%	0.007%
48	5.227	5.220	5.242	VV	202	2297	0.04%	0.007%
49	5.266	5.242	5.296	VV	267	5362	0.09%	0.017%
50	5.321	5.296	5.352	VV	323	6062	0.10%	0.019%
51	5.359	5.352	5.366	VV	169	1405	0.02%	0.004%
52	5.385	5.366	5.412	VV	252	5037	0.08%	0.016%
53	5.446	5.412	5.485	VV	303	7485	0.12%	0.024%
54	5.504	5.485	5.522	VV	209	3652	0.06%	0.011%
55	5.529	5.522	5.540	VV	189	1798	0.03%	0.006%
56	5.564	5.540	5.585	VV	210	4815	0.08%	0.015%
57	5.596	5.585	5.606	VV	208	1910	0.03%	0.006%
58	5.639	5.606	5.691	VV	266	9689	0.16%	0.030%
59	5.732	5.691	5.766	VV	1163	17490	0.28%	0.055%
60	5.787	5.766	5.826	VV	248	5931	0.10%	0.019%
61	5.853	5.826	5.888	VV	264	7136	0.12%	0.022%
62	5.905	5.888	5.922	VV	237	4203	0.07%	0.013%
63	5.932	5.922	5.965	VV	260	4625	0.07%	0.015%
64	5.992	5.965	6.028	VV	268	5780	0.09%	0.018%
65	6.038	6.028	6.048	VV	187	1439	0.02%	0.005%
66	6.094	6.048	6.138	VV	241	8907	0.14%	0.028%
67	6.156	6.138	6.165	VV	232	2368	0.04%	0.007%
68	6.176	6.165	6.187	VV	213	2254	0.04%	0.007%
69	6.208	6.187	6.261	VV	1185	8384	0.14%	0.026%
70	6.277	6.261	6.302	PV	246	3584	0.06%	0.011%
71	6.318	6.302	6.331	VV	247	3049	0.05%	0.010%
72	6.349	6.331	6.387	VV	479	6829	0.11%	0.021%
73	6.406	6.387	6.418	VV	217	2820	0.05%	0.009%
74	6.443	6.418	6.458	VV	292	5024	0.08%	0.016%
75	6.465	6.458	6.485	VV	322	2861	0.05%	0.009%
76	6.523	6.485	6.546	VV	321	6873	0.11%	0.022%
77	6.554	6.546	6.580	VV	316	3850	0.06%	0.012%
78	6.593	6.580	6.603	VV	182	2364	0.04%	0.007%
79	6.616	6.603	6.646	VV	304	6361	0.10%	0.020%
80	6.698	6.646	6.790	VV	367	19880	0.32%	0.062%
81	6.816	6.790	6.839	VV	435	8401	0.14%	0.026%
82	6.925	6.839	6.955	VV	339	16445	0.27%	0.052%
83	6.975	6.955	6.991	VV	209	3956	0.06%	0.012%
84	7.042	6.991	7.118	VV	321	14435	0.23%	0.045%
85	7.155	7.118	7.163	VV	400	6888	0.11%	0.022%
86	7.179	7.163	7.187	VV	506	6093	0.10%	0.019%
87	7.212	7.187	7.659	VV	462736	6197086	100.00%	19.465%
88	7.674	7.659	7.741	VV	1059	44732	0.72%	0.140%
89	7.752	7.741	7.763	VV	841	10728	0.17%	0.034%

					rteres			
90	7.784	7.763	7.819	VV	1488	32664	0.53%	0.103%
91	7.831	7.819	7.853	VV	817	13305	0.21%	0.042%
92	7.864	7.853	7.880	VV	573	8532	0.14%	0.027%
93	7.899	7.880	7.936	VV	642	17966	0.29%	0.056%
94	7.944	7.936	7.979	VV	499	10767	0.17%	0.034%
95	7.989	7.979	8.003	VV	471	5288	0.09%	0.017%
96	8.018	8.003	8.032	VV	393	5792	0.09%	0.018%
97	8.064	8.032	8.458	VV	232540	4167288	67.25%	13.089%
98	8.462	8.458	8.570	VV	1612	89353	1.44%	0.281%
99	8.610	8.570	8.655	VV	1286	54566	0.88%	0.171%
100	8.684	8.655	8.712	VV	1067	31448	0.51%	0.099%
101	8.714	8.712	8.777	VV	966	32890	0.53%	0.103%
102	8.790	8.777	8.828	VV	832	22994	0.37%	0.072%
103	8.833	8.828	8.848	VV	804	8620	0.14%	0.027%
104	8.855	8.848	8.877	VV	801	12516	0.20%	0.039%
105	8.897	8.877	8.928	VV	768	19193	0.31%	0.060%
106	8.949	8.928	8.983	VV	720	20544	0.33%	0.065%
107	9.024	8.983	9.052	VV	717	24854	0.40%	0.078%
108	9.058	9.052	9.163	VV	619	38634	0.62%	0.121%
109	9.194	9.163	9.255	VV	851	30124	0.49%	0.095%
110	9.278	9.255	9.345	VV	439	23088	0.37%	0.073%
111	9.377	9.345	9.502	VV	667	42445	0.68%	0.133%
112	9.529	9.502	9.551	VV	403	10904	0.18%	0.034%
113	9.572	9.551	9.620	VV	453	14147	0.23%	0.044%
114	9.672	9.620	9.718	VV	625	22352	0.36%	0.070%
115	9.753	9.718	9.774	VV	525	13202	0.21%	0.041%
116	9.847	9.774	9.928	VV	467	27881	0.45%	0.088%
117	10.030	9.928	10.068	VV	541	34709	0.56%	0.109%
118	10.112	10.068	10.143	VV	622	22226	0.36%	0.070%
119	10.169	10.143	10.238	VV	707	26952	0.43%	0.085%
120	10.257	10.238	10.292	VV	394	12749	0.21%	0.040%
121	10.300	10.292	10.377	VV	434	15408	0.25%	0.048%
122	10.425	10.377	10.458	VV	467	17184	0.28%	0.054%
123	10.514	10.458	10.535	VV	498	19916	0.32%	0.063%
124	10.550	10.535	10.586	VV	607	15014	0.24%	0.047%
125	10.622	10.586	10.665	VV	573	21885	0.35%	0.069%
126	10.741	10.665	10.782	VV	703	34062	0.55%	0.107%
127	10.806	10.782	10.858	VV	855	28067	0.45%	0.088%
128	10.887	10.858	10.985	VV	967	46756	0.75%	0.147%
129	11.002	10.985	11.039	VV	536	15602	0.25%	0.049%
130	11.095	11.039	11.337	VV	456353	5296758	85.47%	16.637%
131	11.361	11.337	11.388	VV	896	24391	0.39%	0.077%
132	11.412	11.388	11.525	VV	1013	67154	1.08%	0.211%
133	11.546	11.525	11.620	VV	862	40869	0.66%	0.128%
134	11.645	11.620	11.665	VV	708	15536	0.25%	0.049%
135	11.690	11.665	11.718	VV	713	18627	0.30%	0.059%
136	11.766	11.718	11.796	VV	686	28071	0.45%	0.088%
137	11.813	11.796	11.828	VV	600	10473	0.17%	0.033%
138	11.844	11.828	11.872	VV	654	14605	0.24%	0.046%
139	11.926	11.872	11.967	VV	693	33682	0.54%	0.106%
140	11.992	11.967	12.009	VV	689	14926	0.24%	0.047%
141	12.044	12.009	12.083	VV	752	29204	0.47%	0.092%

					rteres			
142	12.110	12.083	12.148	VV	1071	31062	0.50%	0.098%
143	12.177	12.148	12.222	VV	1067	32708	0.53%	0.103%
144	12.233	12.222	12.260	VV	727	14217	0.23%	0.045%
145	12.354	12.260	12.378	VV	733	41527	0.67%	0.130%
146	12.411	12.378	12.438	VV	814	23374	0.38%	0.073%
147	12.456	12.438	12.475	VV	643	13566	0.22%	0.043%
148	12.541	12.475	12.677	VV	335693	4123806	66.54%	12.953%
149	12.696	12.677	12.891	VV	3934	96858	1.56%	0.304%
150	12.911	12.891	13.008	VV	594	31340	0.51%	0.098%
151	13.030	13.008	13.071	VV	422	13382	0.22%	0.042%
152	13.131	13.071	13.162	VV	583	23033	0.37%	0.072%
153	13.170	13.162	13.201	VV	481	9250	0.15%	0.029%
154	13.265	13.201	13.412	VV	898	49458	0.80%	0.155%
155	13.430	13.412	13.455	VV	306	5230	0.08%	0.016%
156	13.484	13.455	13.544	VV	245	9792	0.16%	0.031%
157	13.624	13.544	13.652	VV	262	12450	0.20%	0.039%
158	13.730	13.652	13.875	VV	1253	64266	1.04%	0.202%
159	13.890	13.875	13.932	VV	317	8158	0.13%	0.026%
160	13.951	13.932	14.022	VV	271	9598	0.15%	0.030%
161	14.039	14.022	14.078	PV	518	5683	0.09%	0.018%
162	14.101	14.078	14.171	VV	293	9490	0.15%	0.030%
163	14.240	14.171	14.324	VV	532	28865	0.47%	0.091%
164	14.363	14.324	14.412	VV	948	23405	0.38%	0.074%
165	14.445	14.412	14.558	VV	1295	33619	0.54%	0.106%
166	14.631	14.558	14.688	VV	332	16608	0.27%	0.052%
167	14.770	14.688	14.896	VV	25562	592809	9.57%	1.862%
168	14.918	14.896	15.022	VV	1481	53927	0.87%	0.169%
169	15.035	15.022	15.069	VV	245	6805	0.11%	0.021%
170	15.084	15.069	15.142	VV	235	8192	0.13%	0.026%
171	15.161	15.142	15.184	VV	186	3763	0.06%	0.012%
172	15.270	15.184	15.353	PV	692	30345	0.49%	0.095%
173	15.410	15.353	15.455	VV	495	20317	0.33%	0.064%
174	15.478	15.455	15.519	VV	462	11182	0.18%	0.035%
175	15.540	15.519	15.562	VV	228	4430	0.07%	0.014%
176	15.594	15.562	15.621	VV	214	6817	0.11%	0.021%
177	15.641	15.621	15.665	VV	193	4131	0.07%	0.013%
178	15.741	15.665	15.758	VV	289	10352	0.17%	0.033%
179	15.799	15.758	15.865	VV	1479	57709	0.93%	0.181%
180	15.882	15.865	15.948	VV	807	26279	0.42%	0.083%
181	15.970	15.948	16.058	VV	480	20824	0.34%	0.065%
182	16.085	16.058	16.124	VV	269	7531	0.12%	0.024%
183	16.142	16.124	16.172	VV	179	2840	0.05%	0.009%
184	16.238	16.172	16.262	VV	347	12943	0.21%	0.041%
185	16.392	16.262	16.465	VV	1632	64969	1.05%	0.204%
186	16.486	16.465	16.532	VV	369	8461	0.14%	0.027%
187	16.553	16.532	16.657	VV	229	12704	0.21%	0.040%
188	16.671	16.657	16.711	VV	188	3776	0.06%	0.012%
189	16.799	16.711	16.862	PV	2257	53283	0.86%	0.167%
190	16.891	16.862	17.000	VV	500	21974	0.35%	0.069%
191	17.044	17.000	17.100	VV	287	10088	0.16%	0.032%
192	17.120	17.100	17.140	VV	229	3264	0.05%	0.010%
193	17.235	17.140	17.298	PV	1511	50020	0.81%	0.157%
194	17.326	17.298	17.387	VV	2277	52372	0.85%	0.164%

					rteres			
195	17.423	17.387	17.484	VV	475	21908	0.35%	0.069%
196	17.600	17.484	17.638	VV	5943	180940	2.92%	0.568%
197	17.654	17.638	17.718	VV	3769	96340	1.55%	0.303%
198	17.741	17.718	17.852	VV	1454	68593	1.11%	0.215%
199	17.872	17.852	17.895	VV	827	18424	0.30%	0.058%
200	17.914	17.895	17.981	VV	1376	42555	0.69%	0.134%
201	18.064	17.981	18.118	VV	2312	89054	1.44%	0.280%
202	18.165	18.118	18.222	VV	2829	86843	1.40%	0.273%
203	18.260	18.222	18.302	VV	846	36277	0.59%	0.114%
204	18.428	18.302	18.577	VV	4570	365757	5.90%	1.149%
205	18.591	18.577	18.608	VV	1519	26015	0.42%	0.082%
206	18.641	18.608	18.685	VV	3633	99724	1.61%	0.313%
207	18.702	18.685	18.752	VV	1575	59693	0.96%	0.187%
208	18.771	18.752	18.798	VV	1611	42169	0.68%	0.132%
209	18.868	18.798	18.914	VV	3614	177589	2.87%	0.558%
210	18.951	18.914	19.048	VV	3031	192694	3.11%	0.605%
211	19.096	19.048	19.122	VV	2791	110186	1.78%	0.346%
212	19.143	19.122	19.178	VV	3102	92563	1.49%	0.291%
213	19.218	19.178	19.295	VV	3760	213161	3.44%	0.670%
214	19.368	19.295	19.392	VV	3691	185880	3.00%	0.584%
215	19.435	19.392	19.478	VV	5718	219269	3.54%	0.689%
216	19.491	19.478	19.523	VV	3564	95244	1.54%	0.299%
217	19.581	19.523	19.622	VV	4732	225043	3.63%	0.707%
218	19.713	19.622	19.769	VV	11157	465649	7.51%	1.463%
219	19.858	19.769	19.898	VV	5019	354902	5.73%	1.115%
220	19.936	19.898	19.972	VV	5924	230253	3.72%	0.723%
221	20.188	19.972	20.238	VV	6347	909047	14.67%	2.855%
222	20.279	20.238	20.310	VV	7603	293791	4.74%	0.923%
223	20.551	20.310	20.602	VV	7747	1272073	20.53%	3.995%
224	20.626	20.602	20.702	VV	8332	447445	7.22%	1.405%
225	20.784	20.702	20.805	VV	7433	444149	7.17%	1.395%
226	20.828	20.805	20.861	VV	7372	244281	3.94%	0.767%
227	20.929	20.861	20.952	VV	7405	396114	6.39%	1.244%
228	21.016	20.952	21.102	VBA	8304	691846	11.16%	2.173%
Sum of corrected areas:						31837743		

Aliphatic EPH 042122.M Mon Apr 25 11:35:14 2022

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-W	SDG No.:	N2487
Lab Sample ID:	N2487-05	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	17.3
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 9:15	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	5.86		1	1.15	2.41	mg/kg	FC059385.D
Aliphatic C9-C28	Aliphatic C9-C28	6.24		1	1.24	4.83	mg/kg	FC059385.D
Total AliphaticEPH	Total AliphaticEPH	12.1			2.39	7.24	mg/kg	
Total EPH	Total EPH	12.1			2.39	7.24	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	04/19/22
Project:	442890_Paterson, NJ	Date Received:	04/20/22
Client Sample ID:	UST-1-W	SDG No.:	N2487
Lab Sample ID:	N2487-05	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	17.3
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059385.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	6.24		1.24	4.83	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	5.86		1.15	2.41	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	30.8		40 - 140	62%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	31.7		40 - 140	63%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-05	Acq On:	23 Apr 2022 9:15
Client Sample ID:	UST-1-W	Operator:	UA/NP
Data file:	FC059385.D	Misc:	
Instrument:	FID_C	ALS Vial:	34
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	326458	2.563	300	ug/ml
Aliphatic C12-C16	6.100	9.471	10690896	77.553	200	ug/ml
Aliphatic C16-C21	9.472	12.813	576235	3.857	300	ug/ml
Aliphatic C21-C28	12.814	16.454	844168	5.473	400	ug/ml
Aliphatic C28-C40	16.455	21.124	8564887	72.871	600	ug/ml
Aliphatic EPH	2.862	21.124	21002644	162.316		ug/ml
ortho-Terphenyl (SURR)	11.095	11.095	5099460	31.73		ug/ml
1-chlorooctadecane (SURR)	12.542	12.542	4018122	30.77		ug/ml
Aliphatic C9-C28	2.862	16.454	12437757	89.446	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059385.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 9:15
 Operator : UA/NP
 Sample : N2487-05
 Misc :
 ALS Vial : 34 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-W

Integration File: sample.E
 Quant Time: Apr 25 01:32:00 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.095	5099460	31.735 ug/ml
Spiked Amount 50.000		Recovery =	63.47%
12) S 1-chlorooctadecane (S...	12.542	4018122	30.771 ug/ml
Spiked Amount 50.000		Recovery =	61.54%

Target Compounds

(f)=RT Delta > 1/2 Window

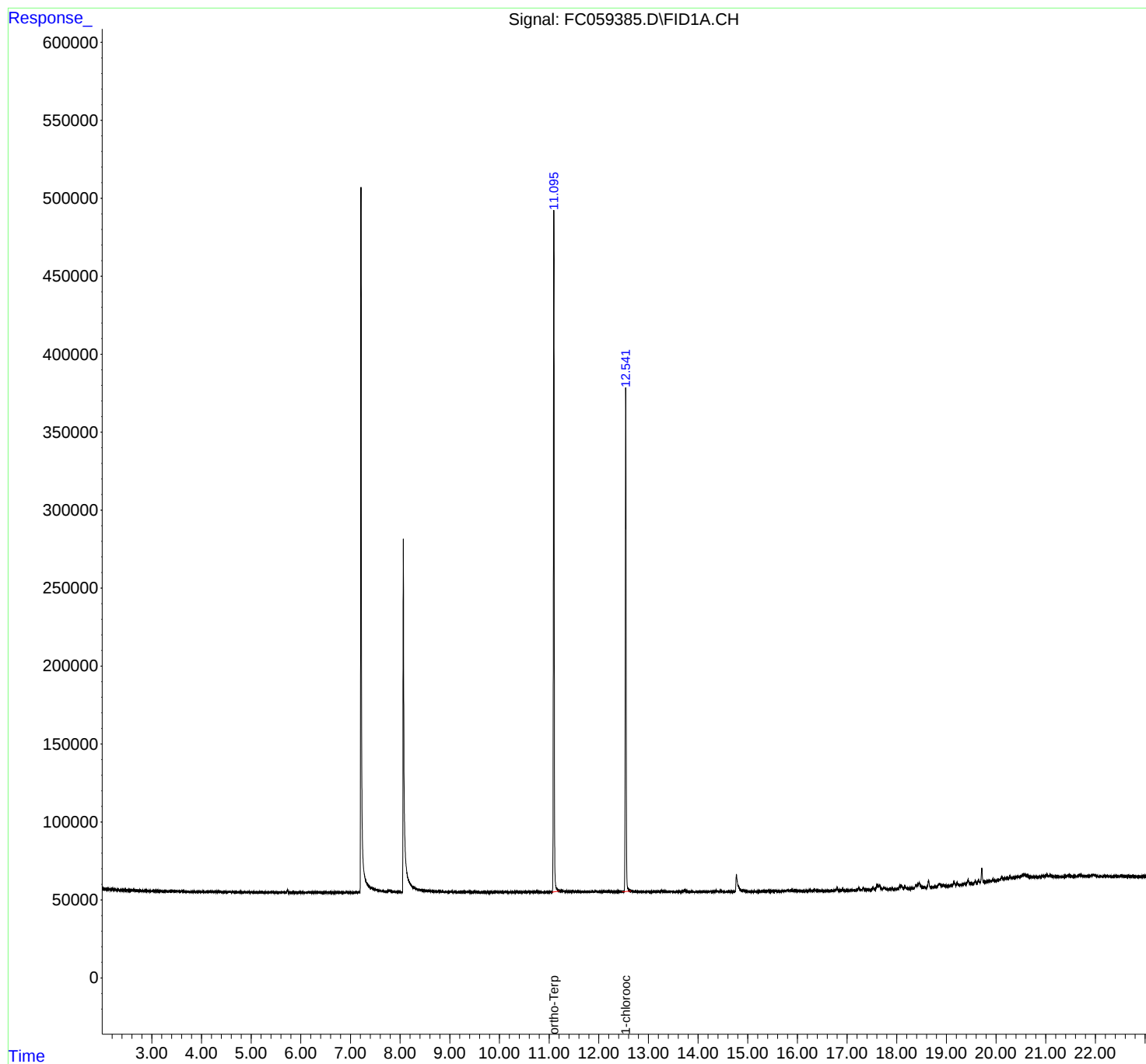
(m)=manual int.

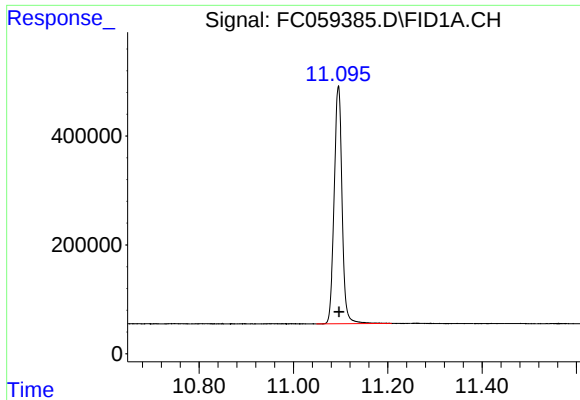
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059385.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 9:15
Operator : UA/NP
Sample : N2487-05
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
UST-1-W

Integration File: sample.E
Quant Time: Apr 25 01:32:00 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

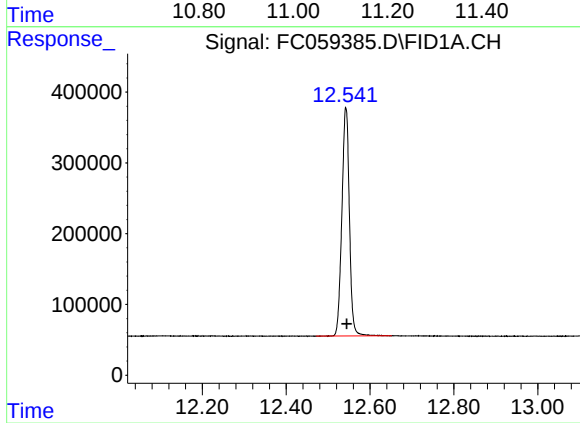




#9 ortho-Terphenyl (SURR)

R.T.: 11.095 min
Delta R.T.: -0.002 min
Response: 5099460
Conc: 31.73 ug/ml

Instrument :
FID_C
ClientSampleId :
UST-1-W



#12 1-chlorooctadecane (SURR)

R.T.: 12.542 min
Delta R.T.: -0.002 min
Response: 4018122
Conc: 30.77 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059385.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 9:15
 Sample : N2487-05
 Misc :
 ALS Vial : 34 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.929	2.905	2.960	BV	158	2048	0.04%	0.007%
2	3.012	2.960	3.042	PV	234	5347	0.09%	0.018%
3	3.052	3.042	3.092	VV	183	3289	0.06%	0.011%
4	3.119	3.092	3.172	VV	321	7102	0.12%	0.023%
5	3.181	3.172	3.199	VV	178	1515	0.03%	0.005%
6	3.209	3.199	3.242	VV	120	1593	0.03%	0.005%
7	3.253	3.242	3.271	VV	99	2110	0.04%	0.007%
8	3.284	3.271	3.304	VV	167	2150	0.04%	0.007%
9	3.321	3.304	3.354	VV	247	3468	0.06%	0.011%
10	3.400	3.354	3.435	PV	233	6162	0.11%	0.020%
11	3.442	3.435	3.468	VV	220	3470	0.06%	0.011%
12	3.488	3.468	3.520	VV	213	5674	0.10%	0.019%
13	3.534	3.520	3.548	VV	332	3979	0.07%	0.013%
14	3.559	3.548	3.582	VV	300	4838	0.08%	0.016%
15	3.607	3.582	3.621	VV	550	8299	0.14%	0.027%
16	3.640	3.621	3.677	VV	410	8767	0.15%	0.029%
17	3.689	3.677	3.706	VV	234	3288	0.06%	0.011%
18	3.740	3.706	3.765	VV	270	6199	0.11%	0.020%
19	3.783	3.765	3.795	PV	202	2114	0.04%	0.007%
20	3.827	3.795	3.883	VV	269	8238	0.14%	0.027%
21	3.904	3.883	3.932	VV	215	3488	0.06%	0.012%
22	3.946	3.932	3.967	VV	265	3635	0.06%	0.012%
23	3.982	3.967	3.993	VV	232	2039	0.03%	0.007%
24	4.005	3.993	4.048	VV	239	4531	0.08%	0.015%
25	4.064	4.048	4.080	VV	114	1964	0.03%	0.006%
26	4.119	4.080	4.132	VV	306	6698	0.11%	0.022%
27	4.134	4.132	4.147	VV	281	2140	0.04%	0.007%
28	4.180	4.147	4.265	VV	454	21223	0.36%	0.070%
29	4.279	4.265	4.309	VV	531	9253	0.16%	0.031%
30	4.337	4.309	4.355	VV	296	6353	0.11%	0.021%
31	4.367	4.355	4.412	VV	369	8675	0.15%	0.029%
32	4.422	4.412	4.460	VV	225	3971	0.07%	0.013%
33	4.489	4.460	4.522	VV	180	2783	0.05%	0.009%
34	4.572	4.522	4.595	VV	263	7190	0.12%	0.024%
35	4.626	4.595	4.659	VV	276	5772	0.10%	0.019%
36	4.669	4.659	4.701	VV	153	2109	0.04%	0.007%

					rteres			
37	4.712	4.701	4.735	PV	165	1380	0.02%	0.005%
38	4.753	4.735	4.765	VV	166	1748	0.03%	0.006%
39	4.789	4.765	4.828	VV	236	6806	0.12%	0.022%
40	4.835	4.828	4.897	VV	199	6566	0.11%	0.022%
41	4.918	4.897	4.933	VV	225	2514	0.04%	0.008%
42	4.967	4.933	5.024	VV	216	5710	0.10%	0.019%
43	5.053	5.024	5.092	VV	255	4870	0.08%	0.016%
44	5.098	5.092	5.111	PV	151	960	0.02%	0.003%
45	5.145	5.111	5.169	VV	182	3537	0.06%	0.012%
46	5.198	5.169	5.207	VV	141	2281	0.04%	0.008%
47	5.233	5.207	5.254	VV	223	4345	0.07%	0.014%
48	5.266	5.254	5.273	VV	153	1165	0.02%	0.004%
49	5.287	5.273	5.305	VV	280	2904	0.05%	0.010%
50	5.317	5.305	5.331	VV	144	1413	0.02%	0.005%
51	5.376	5.331	5.398	PV	289	6302	0.11%	0.021%
52	5.420	5.398	5.511	VV	282	11482	0.20%	0.038%
53	5.521	5.511	5.545	VV	210	2625	0.05%	0.009%
54	5.566	5.545	5.575	VV	227	2986	0.05%	0.010%
55	5.583	5.575	5.626	VV	279	6671	0.11%	0.022%
56	5.661	5.626	5.679	VV	277	6335	0.11%	0.021%
57	5.699	5.679	5.708	VV	303	3949	0.07%	0.013%
58	5.733	5.708	5.772	VV	2045	26277	0.45%	0.087%
59	5.826	5.772	5.835	PV	204	5188	0.09%	0.017%
60	5.854	5.835	5.895	VV	291	8855	0.15%	0.029%
61	5.901	5.895	5.923	VV	200	3050	0.05%	0.010%
62	5.941	5.923	5.964	VV	205	3395	0.06%	0.011%
63	5.973	5.964	5.982	VV	190	1494	0.03%	0.005%
64	6.005	5.982	6.104	VV	290	10176	0.17%	0.034%
65	6.119	6.104	6.132	VV	262	3261	0.06%	0.011%
66	6.174	6.132	6.186	VV	344	7912	0.14%	0.026%
67	6.197	6.186	6.238	VV	296	5906	0.10%	0.019%
68	6.277	6.238	6.306	VV	335	8856	0.15%	0.029%
69	6.330	6.306	6.365	VV	231	6381	0.11%	0.021%
70	6.385	6.365	6.434	VV	290	5889	0.10%	0.019%
71	6.448	6.434	6.462	VV	117	1233	0.02%	0.004%
72	6.476	6.462	6.489	PV	219	1898	0.03%	0.006%
73	6.503	6.489	6.510	VV	207	1790	0.03%	0.006%
74	6.524	6.510	6.536	VV	303	3708	0.06%	0.012%
75	6.559	6.536	6.568	VV	313	4318	0.07%	0.014%
76	6.578	6.568	6.593	VV	287	3616	0.06%	0.012%
77	6.600	6.593	6.633	VV	229	4147	0.07%	0.014%
78	6.649	6.633	6.664	VV	255	2962	0.05%	0.010%
79	6.675	6.664	6.697	VV	213	3245	0.06%	0.011%
80	6.729	6.697	6.739	VV	269	4487	0.08%	0.015%
81	6.754	6.739	6.777	VV	264	4639	0.08%	0.015%
82	6.795	6.777	6.804	VV	206	2179	0.04%	0.007%
83	6.856	6.804	6.880	VV	238	6492	0.11%	0.021%
84	6.923	6.880	6.973	VV	509	15339	0.26%	0.051%
85	6.988	6.973	7.026	VV	214	3759	0.06%	0.012%
86	7.053	7.026	7.064	VV	224	3313	0.06%	0.011%
87	7.094	7.064	7.109	VV	248	4666	0.08%	0.015%
88	7.121	7.109	7.137	VV	212	2500	0.04%	0.008%
89	7.174	7.137	7.186	VV	340	8053	0.14%	0.027%

rteres								
90	7.212	7.186	7.463	VV	449004	5825352	100.00%	19.228%
91	7.473	7.463	7.585	VV	2338	133401	2.29%	0.440%
92	7.599	7.585	7.725	VV	1531	85800	1.47%	0.283%
93	7.753	7.725	7.763	VV	877	19198	0.33%	0.063%
94	7.784	7.763	7.848	VV	1908	52427	0.90%	0.173%
95	7.863	7.848	7.879	VV	637	11036	0.19%	0.036%
96	7.891	7.879	7.908	VV	678	9149	0.16%	0.030%
97	7.920	7.908	7.937	VV	546	8036	0.14%	0.027%
98	7.947	7.937	7.976	VV	556	10559	0.18%	0.035%
99	8.008	7.976	8.036	VV	460	13628	0.23%	0.045%
100	8.065	8.036	8.443	VV	222711	4002599	68.71%	13.211%
101	8.459	8.443	8.578	VV	1586	106871	1.83%	0.353%
102	8.595	8.578	8.639	VV	1263	39199	0.67%	0.129%
103	8.657	8.639	8.696	VV	968	30439	0.52%	0.100%
104	8.712	8.696	8.730	VV	843	15613	0.27%	0.052%
105	8.779	8.730	8.832	VV	854	42931	0.74%	0.142%
106	8.853	8.832	8.894	VV	675	20516	0.35%	0.068%
107	8.910	8.894	8.932	VV	567	10306	0.18%	0.034%
108	8.949	8.932	8.989	VV	617	16263	0.28%	0.054%
109	8.997	8.989	9.003	VV	430	3304	0.06%	0.011%
110	9.019	9.003	9.038	VV	541	10123	0.17%	0.033%
111	9.046	9.038	9.095	VV	504	16092	0.28%	0.053%
112	9.110	9.095	9.138	VV	691	11699	0.20%	0.039%
113	9.162	9.138	9.170	VV	447	7449	0.13%	0.025%
114	9.191	9.170	9.218	VV	539	12047	0.21%	0.040%
115	9.232	9.218	9.239	VV	413	4799	0.08%	0.016%
116	9.247	9.239	9.268	VV	391	6482	0.11%	0.021%
117	9.273	9.268	9.281	VV	431	2828	0.05%	0.009%
118	9.291	9.281	9.317	VV	445	8347	0.14%	0.028%
119	9.332	9.317	9.367	VV	429	10565	0.18%	0.035%
120	9.379	9.367	9.421	VV	392	10250	0.18%	0.034%
121	9.432	9.421	9.447	VV	396	4901	0.08%	0.016%
122	9.458	9.447	9.492	VV	359	8138	0.14%	0.027%
123	9.533	9.492	9.561	VV	380	13383	0.23%	0.044%
124	9.571	9.561	9.611	VV	397	7112	0.12%	0.023%
125	9.639	9.611	9.660	VV	280	5810	0.10%	0.019%
126	9.670	9.660	9.685	VV	306	2485	0.04%	0.008%
127	9.700	9.685	9.715	VV	158	2323	0.04%	0.008%
128	9.742	9.715	9.752	VV	330	4440	0.08%	0.015%
129	9.767	9.752	9.813	VV	384	6912	0.12%	0.023%
130	9.833	9.813	9.847	VV	225	3238	0.06%	0.011%
131	9.904	9.847	9.914	VV	383	10256	0.18%	0.034%
132	9.948	9.914	9.961	VV	427	9534	0.16%	0.031%
133	9.975	9.961	9.989	VV	291	4250	0.07%	0.014%
134	10.018	9.989	10.051	VV	378	11096	0.19%	0.037%
135	10.069	10.051	10.085	VV	316	5159	0.09%	0.017%
136	10.113	10.085	10.211	VV	532	20409	0.35%	0.067%
137	10.222	10.211	10.262	VV	254	5350	0.09%	0.018%
138	10.272	10.262	10.285	VV	198	2069	0.04%	0.007%
139	10.336	10.285	10.361	PV	326	8580	0.15%	0.028%
140	10.378	10.361	10.411	VV	248	4468	0.08%	0.015%
141	10.436	10.411	10.448	VV	358	4432	0.08%	0.015%

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142	10.456	10.448	10.472	VV	332	3551	0.06%	0.012%
143	10.524	10.472	10.539	VV	383	11213	0.19%	0.037%
144	10.570	10.539	10.580	VV	340	6698	0.11%	0.022%
145	10.592	10.580	10.608	VV	326	3788	0.07%	0.013%
146	10.637	10.608	10.681	VV	397	13993	0.24%	0.046%
147	10.691	10.681	10.725	VV	420	7357	0.13%	0.024%
148	10.748	10.725	10.759	VV	541	7599	0.13%	0.025%
149	10.764	10.759	10.781	VV	433	3899	0.07%	0.013%
150	10.805	10.781	10.855	VV	441	11529	0.20%	0.038%
151	10.896	10.855	10.905	VV	271	6316	0.11%	0.021%
152	10.913	10.905	10.923	VV	279	2114	0.04%	0.007%
153	10.953	10.923	11.052	VV	323	17736	0.30%	0.059%
154	11.095	11.052	11.218	VV	436785	5153559	88.47%	17.010%
155	11.220	11.218	11.235	VV	1003	8680	0.15%	0.029%
156	11.259	11.235	11.328	VV	1123	46454	0.80%	0.153%
157	11.347	11.328	11.398	VV	702	26506	0.46%	0.087%
158	11.404	11.398	11.412	VV	612	4748	0.08%	0.016%
159	11.422	11.412	11.446	VV	631	12666	0.22%	0.042%
160	11.481	11.446	11.518	VV	683	23799	0.41%	0.079%
161	11.549	11.518	11.561	VV	564	11856	0.20%	0.039%
162	11.572	11.561	11.602	VV	536	10941	0.19%	0.036%
163	11.610	11.602	11.619	VV	421	3730	0.06%	0.012%
164	11.633	11.619	11.667	VV	445	10769	0.18%	0.036%
165	11.681	11.667	11.696	VV	395	6050	0.10%	0.020%
166	11.709	11.696	11.720	VV	471	5365	0.09%	0.018%
167	11.744	11.720	11.798	VV	541	18764	0.32%	0.062%
168	11.831	11.798	11.845	VV	403	9221	0.16%	0.030%
169	11.887	11.845	11.905	VV	378	11726	0.20%	0.039%
170	11.933	11.905	12.017	VV	606	27895	0.48%	0.092%
171	12.035	12.017	12.048	VV	433	6589	0.11%	0.022%
172	12.108	12.048	12.161	VV	678	34731	0.60%	0.115%
173	12.179	12.161	12.195	VV	516	9349	0.16%	0.031%
174	12.224	12.195	12.270	VV	595	18983	0.33%	0.063%
175	12.314	12.270	12.369	VV	489	20184	0.35%	0.067%
176	12.404	12.369	12.471	VV	418	20130	0.35%	0.066%
177	12.542	12.471	12.936	VV	324927	4140331	71.07%	13.666%
178	12.960	12.936	12.976	VV	291	4795	0.08%	0.016%
179	13.108	12.976	13.128	VV	518	22974	0.39%	0.076%
180	13.138	13.128	13.185	VV	403	12005	0.21%	0.040%
181	13.187	13.185	13.212	VV	405	4558	0.08%	0.015%
182	13.263	13.212	13.437	VV	943	44893	0.77%	0.148%
183	13.459	13.437	13.542	VV	258	10245	0.18%	0.034%
184	13.554	13.542	13.662	VV	237	13296	0.23%	0.044%
185	13.733	13.662	13.831	VV	1057	39597	0.68%	0.131%
186	13.864	13.831	13.925	VV	303	11628	0.20%	0.038%
187	13.956	13.925	14.008	PV	255	6667	0.11%	0.022%
188	14.045	14.008	14.157	VV	275	13401	0.23%	0.044%
189	14.241	14.157	14.322	VV	442	22028	0.38%	0.073%
190	14.366	14.322	14.422	VV	741	22888	0.39%	0.076%
191	14.447	14.422	14.562	VV	900	22701	0.39%	0.075%
192	14.613	14.562	14.682	PV	215	7669	0.13%	0.025%
193	14.717	14.682	14.742	PV	229	3546	0.06%	0.012%
194	14.773	14.742	14.895	VV	10750	310277	5.33%	1.024%

					rteres			
195	14.913	14.895	15.031	VV	941	34462	0.59%	0.114%
196	15.056	15.031	15.084	VV	161	2858	0.05%	0.009%
197	15.121	15.084	15.229	PV	177	7459	0.13%	0.025%
198	15.347	15.229	15.365	PV	297	17458	0.30%	0.058%
199	15.407	15.365	15.452	VV	684	17315	0.30%	0.057%
200	15.479	15.452	15.529	VV	312	9003	0.15%	0.030%
201	15.554	15.529	15.602	VV	235	6588	0.11%	0.022%
202	15.617	15.602	15.645	VV	206	3297	0.06%	0.011%
203	15.675	15.645	15.694	VV	218	4707	0.08%	0.016%
204	15.713	15.694	15.745	VV	282	5808	0.10%	0.019%
205	15.806	15.745	15.868	VV	703	35060	0.60%	0.116%
206	15.889	15.868	15.945	VV	917	23615	0.41%	0.078%
207	15.970	15.945	16.061	VV	573	22813	0.39%	0.075%
208	16.107	16.061	16.144	VV	255	8333	0.14%	0.028%
209	16.254	16.144	16.305	VV	603	29050	0.50%	0.096%
210	16.351	16.305	16.436	VV	1144	34134	0.59%	0.113%
211	16.447	16.436	16.503	VV	433	9040	0.16%	0.030%
212	16.533	16.503	16.568	VV	254	6091	0.10%	0.020%
213	16.578	16.568	16.608	VV	118	1126	0.02%	0.004%
214	16.692	16.608	16.718	PV	389	13160	0.23%	0.043%
215	16.800	16.718	16.855	VV	2154	50390	0.87%	0.166%
216	16.909	16.855	16.965	VV	1148	30134	0.52%	0.099%
217	17.039	16.965	17.057	VV	232	9731	0.17%	0.032%
218	17.083	17.057	17.112	VV	288	6507	0.11%	0.021%
219	17.138	17.112	17.156	VV	281	3891	0.07%	0.013%
220	17.235	17.156	17.282	VV	2009	47463	0.81%	0.157%
221	17.327	17.282	17.398	VV	1664	45444	0.78%	0.150%
222	17.449	17.398	17.488	VV	410	19051	0.33%	0.063%
223	17.521	17.488	17.554	VV	1758	37448	0.64%	0.124%
224	17.605	17.554	17.635	VV	3201	97090	1.67%	0.320%
225	17.654	17.635	17.705	VV	3510	80182	1.38%	0.265%
226	17.739	17.705	17.832	VV	1602	64362	1.10%	0.212%
227	17.858	17.832	17.888	VV	649	18102	0.31%	0.060%
228	17.914	17.888	17.978	VV	974	34416	0.59%	0.114%
229	18.065	17.978	18.081	VV	2828	73871	1.27%	0.244%
230	18.096	18.081	18.131	VV	2738	56237	0.97%	0.186%
231	18.163	18.131	18.248	VV	2322	81596	1.40%	0.269%
232	18.266	18.248	18.298	VV	757	20794	0.36%	0.069%
233	18.321	18.298	18.338	VV	870	17572	0.30%	0.058%
234	18.455	18.338	18.581	VV	4255	315602	5.42%	1.042%
235	18.641	18.581	18.698	VV	5901	166656	2.86%	0.550%
236	18.866	18.698	18.905	VV	3521	246037	4.22%	0.812%
237	18.949	18.905	19.055	VV	2528	189635	3.26%	0.626%
238	19.090	19.055	19.108	VV	2517	69511	1.19%	0.229%
239	19.156	19.108	19.188	VV	4357	147600	2.53%	0.487%
240	19.216	19.188	19.292	VV	3955	183789	3.15%	0.607%
241	19.366	19.292	19.395	VV	3212	179471	3.08%	0.592%
242	19.436	19.395	19.532	VV	5876	305615	5.25%	1.009%
243	19.580	19.532	19.612	VV	4791	177912	3.05%	0.587%
244	19.648	19.612	19.682	VV	5567	187444	3.22%	0.619%
245	19.712	19.682	19.792	VV	13058	397786	6.83%	1.313%
246	19.862	19.792	19.898	VV	5036	292217	5.02%	0.965%

					rteres				
247	19.934	19.898	20.005	VV	5913	325382	5.59%	1.074%	
248	20.115	20.005	20.151	VV	6980	503029	8.64%	1.660%	
249	20.194	20.151	20.252	VV	6621	381917	6.56%	1.261%	
250	20.279	20.252	20.308	VV	7519	233249	4.00%	0.770%	
251	20.566	20.308	20.605	VV	8560	1298958	22.30%	4.287%	
252	20.624	20.605	20.743	VV	8207	604650	10.38%	1.996%	
253	20.765	20.743	20.797	VV	6940	220215	3.78%	0.727%	
254	21.016	20.797	21.048	VV	7883	1076259	18.48%	3.552%	
255	21.082	21.048	21.102	VBA	7582	247295	4.25%	0.816%	

Sum of corrected areas: 30296533

Aliphatic EPH 042122.M Mon Apr 25 11:35:46 2022

CALIBRATION SUMMARY

Initial Calibration Report for SequenceID : FC042122AL

AreaCount

Parameter Range	FC059341.D	FC059342.D	FC059343.D	FC059344.D	FC059345.D	
Aliphatic C9-C12	39128828.000	19432659.000	7329400.000	3849131.000	1896656.000	
Aliphatic C12-C16	27725647.000	13753250.000	5254220.000	2809443.000	1412795.000	
Aliphatic C16-C21	43939351.000	21981521.000	8505407.000	4622834.000	2371074.000	
Aliphatic C21-C28	58476432.000	29974250.000	11773834.000	6426121.000	3346924.000	
Aliphatic C28-C40	62252173.000	33482711.000	13699504.000	7617316.000	3935943.000	
Aliphatic EPH	231522431.000	118624391.000	46562365.000	25324845.000	12963392.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aliphatic C9-C12	127377.0506662	2.575				
Aliphatic C12-C16	137853.577	2.845				
Aliphatic C16-C21	149386.165333	4.395				
Aliphatic C21-C28	154246.896	6.036				
Aliphatic C28-C40	117535.7116662	9.624				
Aliphatic EPH	134899.9253326	5.202				

Concentration

Parameter Range	FC059341.D	FC059342.D	FC059343.D	FC059344.D	FC059345.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	FC059341.D	FC059342.D	FC059343.D	FC059344.D	FC059345.D	
Aliphatic C9-C12	130429.426666	129551.060000	122156.666666	128304.366666	126443.733333	
Aliphatic C12-C16	138628.235000	137532.500000	131355.500000	140472.150000	141279.500000	
Aliphatic C16-C21	146464.503333	146543.473333	141756.783333	154094.466666	158071.600000	
Aliphatic C21-C28	146191.080000	149871.250000	147172.925000	160653.025000	167346.200000	
Aliphatic C28-C40	103753.621666	111609.036666	114162.533333	126955.266666	131198.100000	



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

Initial Calibration Report for SequenceID : FC042122AL

Aliphatic EPH	128623.572777	131804.878888	129339.902777	140693.583333	144037.688888	
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284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Continuing Calibration Report for SequenceID : FC042222AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC059373.D

Aliphatic C9-C12	7416761.000	60.000	2.862	6.099	123612.683	127377.051	2.955
Aliphatic C12-C16	5347385.000	40.000	6.100	9.471	133684.625	137853.577	3.024
Aliphatic C16-C21	8570500.000	60.000	9.472	12.813	142841.667	149386.165	4.381
Aliphatic C21-C28	11228095.000	80.000	12.814	16.454	140351.188	154246.896	9.009
Aliphatic C28-C40	11827992.000	120.000	16.455	21.124	98566.600	117535.712	16.139
Aliphatic EPH	44390733.000	360.000	2.862	21.124	123307.592	134899.925	8.593



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	23 Apr 2022 00:25
Client Sample ID:		Operator:	UA/NP
Data file:	FC059373.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	2.862	6.099	7416761.000	60.000	ug/ml
Aliphatic C12-C16	6.100	9.471	5347385.000	40.000	ug/ml
Aliphatic C16-C21	9.472	12.813	8570500.000	60.000	ug/ml
Aliphatic C21-C28	12.814	16.454	11228095.000	80.000	ug/ml
Aliphatic C28-C40	16.455	21.124	11827992.000	120.000	ug/ml
Aliphatic EPH	2.862	21.124	44390733.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059373.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 00:25
 Operator : UA/NP
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
 Quant Time: Apr 23 02:01:25 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.096	3094911	19.260 ug/ml
Spiked Amount 50.000		Recovery =	38.52%
12) S 1-chlorooctadecane (S...	12.542	2483365	19.017 ug/ml
Spiked Amount 50.000		Recovery =	38.03%
Target Compounds			
1) T n-Nonane (C9)	2.962	2422773	19.331 ug/ml
2) T n-Decane (C10)	4.002	2425201	19.412 ug/ml
3) T A~Naphthalene (C11.7)	5.553	2495648	20.345 ug/ml
4) T n-Dodecane (C12)	5.998	2568787	19.480 ug/ml
5) T A~2-methylnaphthalene...	6.601	2498183	19.795 ug/ml
6) T n-Tetradecane (C14)	7.779	2624035	19.399 ug/ml
7) T n-Hexadecane (C16)	9.370	2723350	19.391 ug/ml
8) T n-Octadecane (C18)	10.803	2809035	19.230 ug/ml
10) T n-Eicosane (C20)	12.104	2868600	19.128 ug/ml
11) T n-Heneicosane (C21)	12.713	2892865	19.018 ug/ml
13) T n-Docosane (C22)	13.296	2898620	18.918 ug/ml
14) T n-Tetracosane (C24)	14.393	2877473	18.583 ug/ml
15) T n-Hexacosane (C26)	15.409	2773546	17.996 ug/ml
16) T n-Octacosane (C28)	16.354	2678456	17.302 ug/ml
17) T n-Tricontane (C30)	17.237	2516153	16.566 ug/ml
18) T n-Dotriacontane (C32)	18.066	2267907	16.096 ug/ml
19) T n-Tetratriacontane (C34)	18.846	2015180	15.944 ug/ml
20) T n-Hexatriacontane (C36)	19.584	1785419	16.323 ug/ml
21) T n-Octatriacontane (C38)	20.282	1638828	17.597 ug/mlm
22) T n-Tetracontane (C40)	21.020	1604505	19.209 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059373.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 00:25
Operator : UA/NP
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

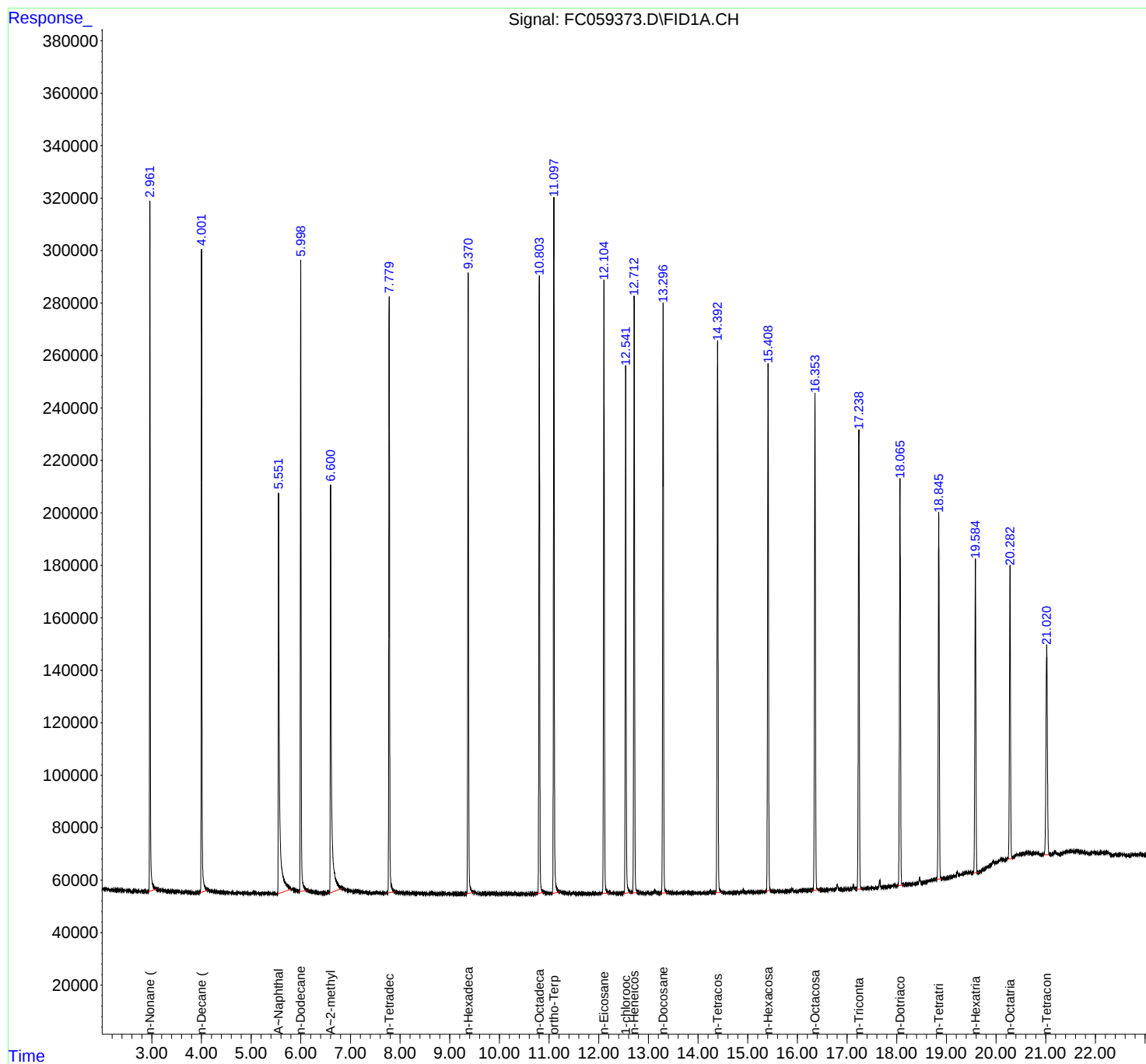
Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 23 02:01:25 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rters

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

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222
Data File : FC059373.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 00:25
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.962	2.935	3.088	BB	262067	2422773	78.28%	4.408%
2	4.002	3.971	4.131	BB	243726	2425201	78.36%	4.413%
3	5.553	5.528	5.808	BB	152843	2495648	80.64%	4.541%
4	5.998	5.965	6.135	BB	239639	2568787	83.00%	4.674%
5	6.601	6.578	6.828	BB	152076	2498183	80.72%	4.546%
6	7.779	7.745	7.901	BB	227591	2624035	84.79%	4.775%
7	9.370	9.311	9.485	BB	237275	2723350	87.99%	4.955%
8	10.803	10.721	10.881	BB	234601	2809035	90.76%	5.111%
9	11.096	11.051	11.215	BB	268415	3094911	100.00%	5.632%
10	12.104	12.068	12.211	BB	232026	2868600	92.69%	5.220%
11	12.542	12.485	12.638	BB	201352	2483365	80.24%	4.519%
12	12.713	12.675	12.795	BB	226473	2892865	93.47%	5.264%
13	13.296	13.258	13.395	BB	223028	2898620	93.66%	5.274%
14	14.393	14.335	14.478	BB	211633	2877473	92.97%	5.236%
15	15.409	15.365	15.450	BBA	200440	2773546	89.62%	5.047%
16	16.354	16.278	16.421	BB	189805	2678456	86.54%	4.874%
17	17.237	17.171	17.301	BB	174867	2516153	81.30%	4.578%
18	18.066	18.021	18.138	BB	154971	2267907	73.28%	4.127%
19	18.846	18.801	18.898	BB	138663	2015180	65.11%	3.667%
20	19.584	19.541	19.650	BBA	119400	1785419	57.69%	3.249%
21	20.282	20.231	20.331	M	111965	1639411	52.97%	2.983%
22	21.020	20.951	21.066	M	79961	1597978	51.63%	2.908%
Sum of corrected areas:						54956895		

Aliphatic EPH 042122.M Mon Apr 25 11:15:58 2022



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Continuing Calibration Report for SequenceID : FC042222AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC059395.D

Aliphatic C9-C12	7720386.000	60.000	2.862	6.099	128673.100	127377.051	-1.017
Aliphatic C12-C16	5634325.000	40.000	6.100	9.471	140858.125	137853.577	-2.180
Aliphatic C16-C21	8826621.000	60.000	9.472	12.813	147110.350	149386.165	1.523
Aliphatic C21-C28	11056145.000	80.000	12.814	16.454	138201.813	154246.896	10.402
Aliphatic C28-C40	11972270.000	120.000	16.455	21.124	99768.917	117535.712	15.116
Aliphatic EPH	45209747.000	360.000	2.862	21.124	125582.631	134899.925	6.907



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	23 Apr 2022 15:31
Client Sample ID:		Operator:	UA/NP
Data file:	FC059395.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	2.862	6.099	7720386.000	60.000	ug/ml
Aliphatic C12-C16	6.100	9.471	5634325.000	40.000	ug/ml
Aliphatic C16-C21	9.472	12.813	8826621.000	60.000	ug/ml
Aliphatic C21-C28	12.814	16.454	11056145.000	80.000	ug/ml
Aliphatic C28-C40	16.455	21.124	11972270.000	120.000	ug/ml
Aliphatic EPH	2.862	21.124	45209747.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059395.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 15:31
 Operator : UA/NP
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
 Quant Time: Apr 25 01:33:37 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.095	3193546	19.874 ug/ml
Spiked Amount 50.000		Recovery =	39.75%
12) S 1-chlorooctadecane (S...	12.541	2546752	19.503 ug/ml
Spiked Amount 50.000		Recovery =	39.01%
Target Compounds			
1) T n-Nonane (C9)	2.960	2506310	19.998 ug/ml
2) T n-Decane (C10)	4.000	2527307	20.229 ug/ml
3) T A~Naphthalene (C11.7)	5.550	2652106	21.620 ug/ml
4) T n-Dodecane (C12)	5.998	2686769	20.375 ug/ml
5) T A~2-methylnaphthalene...	6.598	2700289	21.396 ug/ml
6) T n-Tetradecane (C14)	7.779	2768476	20.467 ug/ml
7) T n-Hexadecane (C16)	9.370	2865849	20.406 ug/ml
8) T n-Octadecane (C18)	10.803	2945955	20.167 ug/ml
10) T n-Eicosane (C20)	12.104	2941099	19.611 ug/ml
11) T n-Heneicosane (C21)	12.713	2939567	19.325 ug/ml
13) T n-Docosane (C22)	13.295	2931486	19.132 ug/ml
14) T n-Tetracosane (C24)	14.393	2854101	18.432 ug/ml
15) T n-Hexacosane (C26)	15.408	2700511	17.522 ug/ml
16) T n-Octacosane (C28)	16.355	2570047	16.602 ug/ml
17) T n-Tricontane (C30)	17.238	2418607	15.924 ug/ml
18) T n-Dotriacontane (C32)	18.068	2199953	15.613 ug/mlm
19) T n-Tetratriacontane (C34)	18.847	1988333	15.732 ug/ml
20) T n-Hexatriacontane (C36)	19.584	1785710	16.326 ug/ml
21) T n-Octatriacontane (C38)	20.281	1762567	18.925 ug/mlm
22) T n-Tetracontane (C40)	21.021	1817100	21.754 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059395.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 15:31
Operator : UA/NP
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

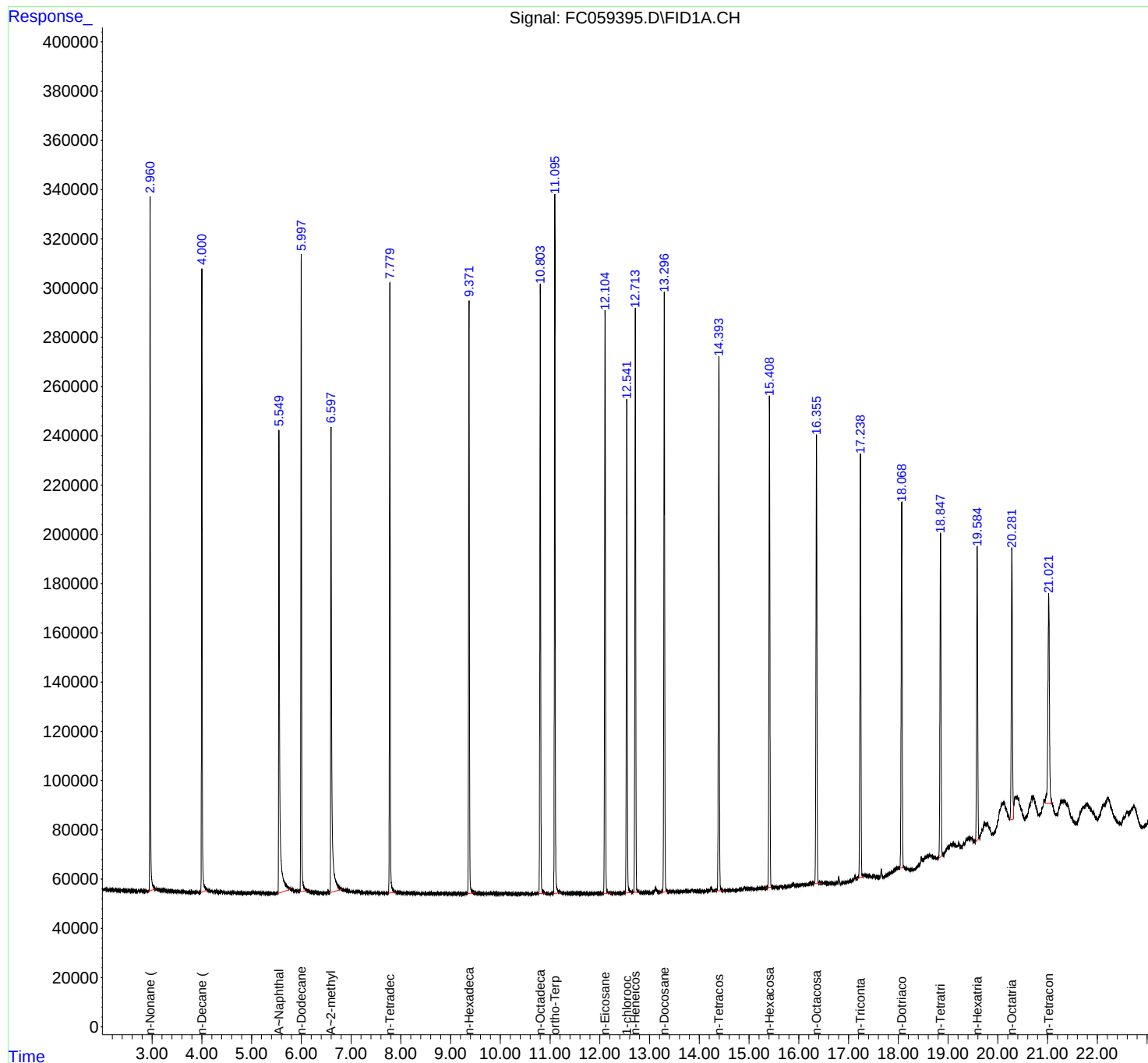
Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 25 01:33:37 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rters

Instrument :
FID_C
LabSampleId :
20 PPM ALIPHATIC HC STD
Area Percent Report
Manual IntegrationsAPPROVED
Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222
Data File : FC059395.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 15:31
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.960	2.918	3.071	BB	278838	2506310	78.48%	4.438%
2	4.000	3.971	4.111	BB	250177	2527307	79.14%	4.475%
3	5.550	5.528	5.778	BB	182122	2652106	83.05%	4.696%
4	5.998	5.961	6.128	BB	258976	2686769	84.13%	4.757%
5	6.598	6.565	6.818	BB	184564	2700289	84.55%	4.781%
6	7.779	7.741	7.895	BB	247448	2768476	86.69%	4.902%
7	9.370	9.328	9.478	BB	243414	2865849	89.74%	5.074%
8	10.803	10.761	10.911	BB	249527	2945955	92.25%	5.216%
9	11.095	11.058	11.208	BB	281047	3193546	100.00%	5.655%
10	12.104	12.061	12.221	BB	237498	2941099	92.10%	5.208%
11	12.541	12.498	12.645	BB	199822	2546752	79.75%	4.509%
12	12.713	12.668	12.801	BB	234074	2939567	92.05%	5.205%
13	13.295	13.191	13.388	BB	242270	2931486	91.79%	5.191%
14	14.393	14.321	14.485	BB	218627	2854101	89.37%	5.054%
15	15.408	15.321	15.450	BBA	197110	2700511	84.56%	4.782%
16	16.355	16.281	16.458	BB	182168	2570047	80.48%	4.551%
17	17.238	17.168	17.305	BB	171934	2418607	75.73%	4.282%
18	18.068	17.828	18.175	BB	150094	2347628	73.51%	4.157%
19	18.847	18.801	18.891	BV	131734	1988333	62.26%	3.521%
20	19.584	19.541	19.629	BV	118902	1785710	55.92%	3.162%
21	20.281	20.238	20.319	M	110445	1777109	55.65%	3.147%
22	21.021	20.948	21.095	M	85260	1829523	57.29%	3.239%
Sum of corrected areas:							56477079	

Aliphatic EPH 042122.M Mon Apr 25 11:21:26 2022

QC SAMPLE DATA

Report of Analysis

Client:	AEI Consultants	Date Collected:	
Project:	442890_Paterson, NJ	Date Received:	
Client Sample ID:	PB144264BL	SDG No.:	N2487
Lab Sample ID:	PB144264BL	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	0
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 2:59	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	0.95	U	1	0.95	2.00	mg/kg	FC059375.D
Aliphatic C9-C28	Aliphatic C9-C28	1.03	U	1	1.03	4.00	mg/kg	FC059375.D
Total AliphaticEPH	Total AliphaticEPH	1.98	U		1.98	6.00	mg/kg	
Total EPH	Total EPH	1.98	U		1.98	6.00	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	
Project:	442890_Paterson, NJ	Date Received:	
Client Sample ID:	PB144264BL	SDG No.:	N2487
Lab Sample ID:	PB144264BL	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	0
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059375.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	1.03	U	1.03	4.00	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	0.95	U	0.95	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	43.7		40 - 140	87%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	43.8		40 - 140	88%	SPK: 50



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Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB144264BL	Acq On:	23 Apr 2022 2:59
Client Sample ID:	PB144264BL	Operator:	UA/NP
Data file:	FC059375.D	Misc:	
Instrument:	FID_C	ALS Vial:	24
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	0	0	300	ug/ml
Aliphatic C12-C16	6.100	9.471	0	0	200	ug/ml
Aliphatic C16-C21	9.472	12.813	0	0	300	ug/ml
Aliphatic C21-C28	12.814	16.454	0	0	400	ug/ml
Aliphatic C28-C40	16.455	21.124	0	0	600	ug/ml
Aliphatic EPH	2.862	21.124	0	0		ug/ml
ortho-Terphenyl (SURR)	11.098	11.098	7040614	43.81		ug/ml
1-chlorooctadecane (SURR)	12.544	12.544	5710984	43.73		ug/ml
Aliphatic C9-C28	2.862	16.454	0	0	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059375.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 2:59
 Operator : UA/NP
 Sample : PB144264BL
 Misc :
 ALS Vial : 24 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB144264BL

Integration File: sample.E
 Quant Time: Apr 23 05:19:56 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.098	7040614	43.815 ug/ml
Spiked Amount 50.000		Recovery =	87.63%
12) S 1-chlorooctadecane (S...	12.544	5710984	43.734 ug/ml
Spiked Amount 50.000		Recovery =	87.47%

Target Compounds

(f)=RT Delta > 1/2 Window

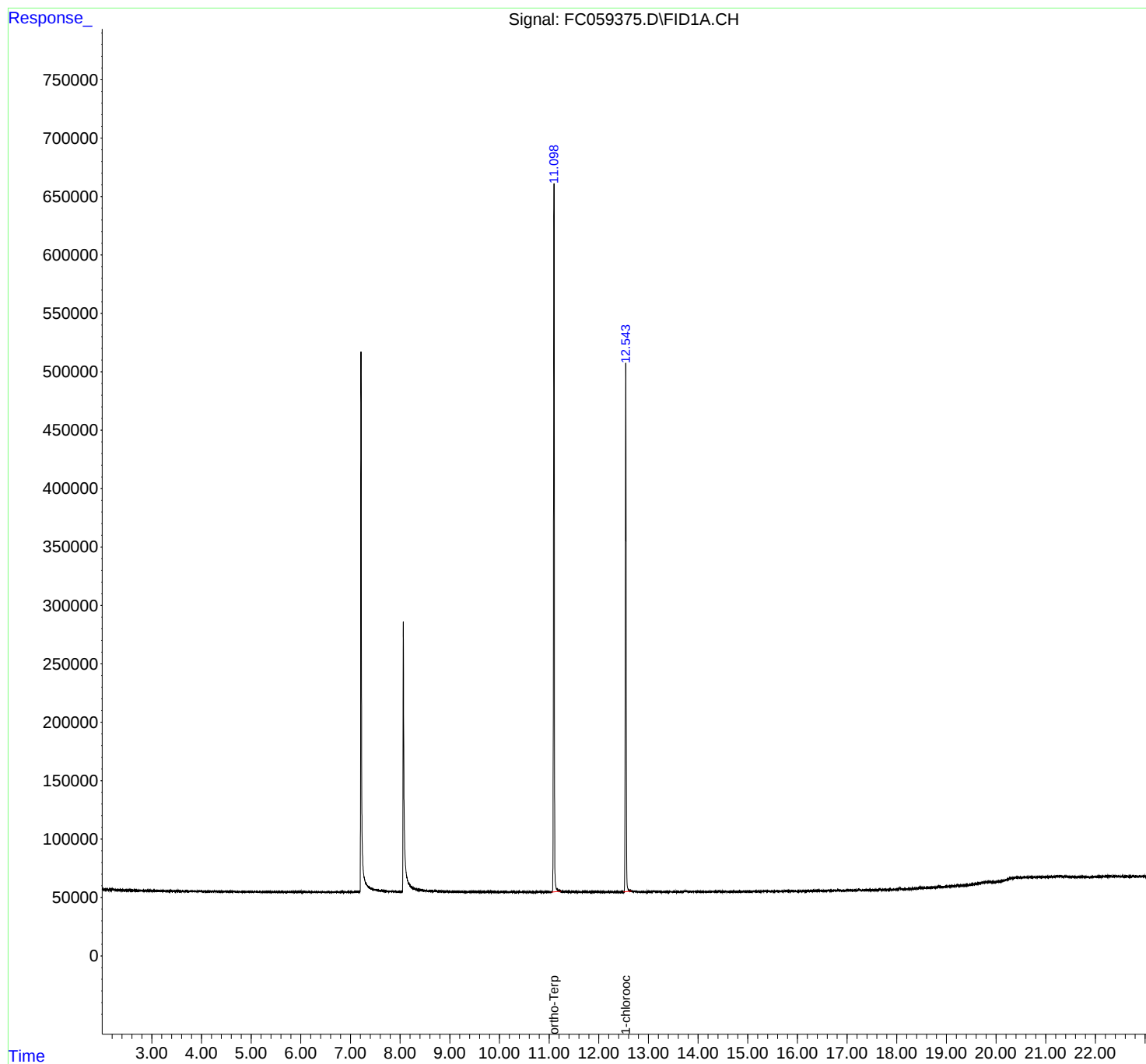
(m)=manual int.

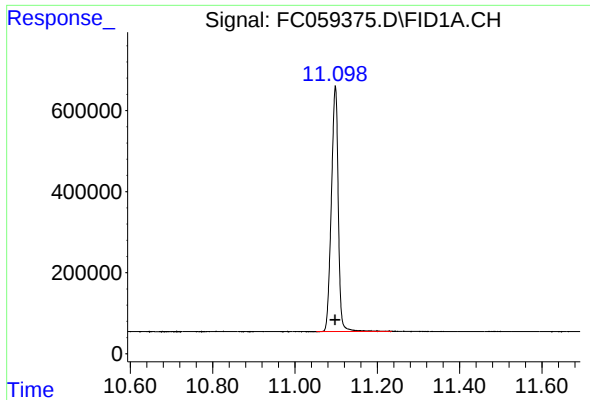
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059375.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 2:59
Operator : UA/NP
Sample : PB144264BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB144264BL

Integration File: sample.E
Quant Time: Apr 23 05:19:56 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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

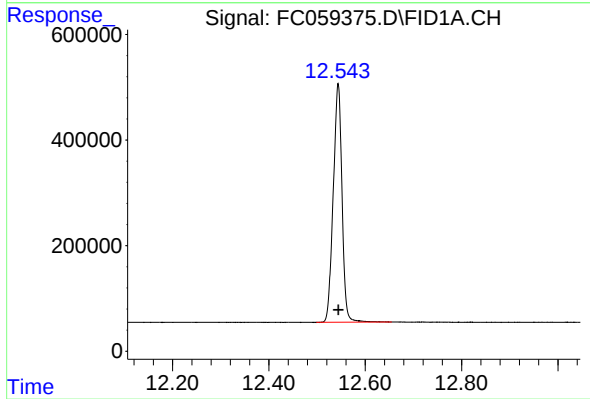




#9 ortho-Terphenyl (SURR)

R.T.: 11.098 min
Delta R.T.: 0.000 min
Response: 7040614
Conc: 43.81 ug/ml

Instrument :
FID_C
ClientSampleId :
PB144264BL



#12 1-chlorooctadecane (SURR)

R.T.: 12.544 min
Delta R.T.: 0.000 min
Response: 5710984
Conc: 43.73 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059375.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 2:59
Sample : PB144264BL
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	11.098	11.052	11.235	BB	607049	7040614	100.00%	55.214%
2	12.544	12.498	12.655	BB	453801	5710984	81.11%	44.786%
Sum of corrected areas:							12751598	

Aliphatic EPH 042122.M Mon Apr 25 11:16:29 2022

Report of Analysis

Client:	AEI Consultants		Date Collected:		
Project:	442890_Paterson, NJ		Date Received:		
Client Sample ID:	PB144264BS		SDG No.:	N2487	
Lab Sample ID:	PB144264BS		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	0	
Sample Wt/Vol:	30.03	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 3:38	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	28.5		1	0.95	2.00	mg/kg	FC059376.D
Aliphatic C9-C28	Aliphatic C9-C28	91.5	E	1	1.03	3.99	mg/kg	FC059376.D
Total AliphaticEPH	Total AliphaticEPH	120			1.98	5.99	mg/kg	
Total EPH	Total EPH	120			1.98	5.99	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	
Project:	442890_Paterson, NJ	Date Received:	
Client Sample ID:	PB144264BS	SDG No.:	N2487
Lab Sample ID:	PB144264BS	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	0
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059376.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	91.5	E	1.03	3.99	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	28.5		0.95	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	50.0		40 - 140	100%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	47.4		40 - 140	95%	SPK: 50



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Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB144264BS	Acq On:	23 Apr 2022 3:38
Client Sample ID:	PB144264BS	Operator:	UA/NP
Data file:	FC059376.D	Misc:	
Instrument:	FID_C	ALS Vial:	25
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	29358568	230.486	300	ug/ml
Aliphatic C12-C16	6.100	9.471	50688293	367.697	200	ug/ml
Aliphatic C16-C21	9.472	12.813	53326035	356.968	300	ug/ml
Aliphatic C21-C28	12.814	16.454	64275360	416.704	400	ug/ml
Aliphatic C28-C40	16.455	21.124	50343825	428.328	600	ug/ml
Aliphatic EPH	2.862	21.124	247992081	1800		ug/ml
ortho-Terphenyl (SURR)	11.099	11.099	7623795	47.44		ug/ml
1-chlorooctadecane (SURR)	12.545	12.545	6531264	50.02		ug/ml
Aliphatic C9-C28	2.862	16.454	197648256	1370	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059376.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 3:38
 Operator : UA/NP
 Sample : PB144264BS
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB144264BS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
 Quant Time: Apr 23 05:20:07 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.099	7623795	47.444 ug/ml
Spiked Amount 50.000		Recovery =	94.89%
12) S 1-chlorooctadecane (S...	12.545	6531264	50.016 ug/ml
Spiked Amount 50.000		Recovery =	100.03%
Target Compounds			
1) T n-Nonane (C9)	2.976	5374289	42.881 ug/ml
2) T n-Decane (C10)	4.010	5474759	43.821 ug/ml
3) T A~Naphthalene (C11.7)	5.551	6273752	51.144 ug/ml
4) T n-Dodecane (C12)	6.000	5823545	44.162 ug/ml
5) T A~2-methylnaphthalene...	6.599	6335052	50.196 ug/ml
6) T n-Tetradecane (C14)	7.783	6196190	45.808 ug/ml
7) T n-Hexadecane (C16)	9.372	6798784	48.409 ug/ml
8) T n-Octadecane (C18)	10.806	7553518	51.709 ug/ml
10) T n-Eicosane (C20)	12.109	7497152	49.991 ug/mlm
11) T n-Heneicosane (C21)	12.717	7686465	50.532 ug/ml
13) T n-Docosane (C22)	13.299	7666593	50.036 ug/ml
14) T n-Tetracosane (C24)	14.396	8931143	57.679 ug/ml
15) T n-Hexacosane (C26)	15.414	7375328	47.855 ug/ml
16) T n-Octacosane (C28)	16.358	7307705	47.206 ug/ml
17) T n-Tricontane (C30)	17.243	6486576	42.706 ug/ml
18) T n-Dotriacontane (C32)	18.069	6170860	43.796 ug/ml
19) T n-Tetratriacontane (C34)	18.849	5370320	42.491 ug/ml
20) T n-Hexatriacontane (C36)	19.585	4960164	45.349 ug/ml
21) T n-Octatriacontane (C38)	20.283	4665681	50.098 ug/mlm
22) T n-Tetracontane (C40)	21.023	4504996	53.934 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059376.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 3:38
Operator : UA/NP
Sample : PB144264BS
Misc :
ALS Vial : 25 Sample Multiplier: 1

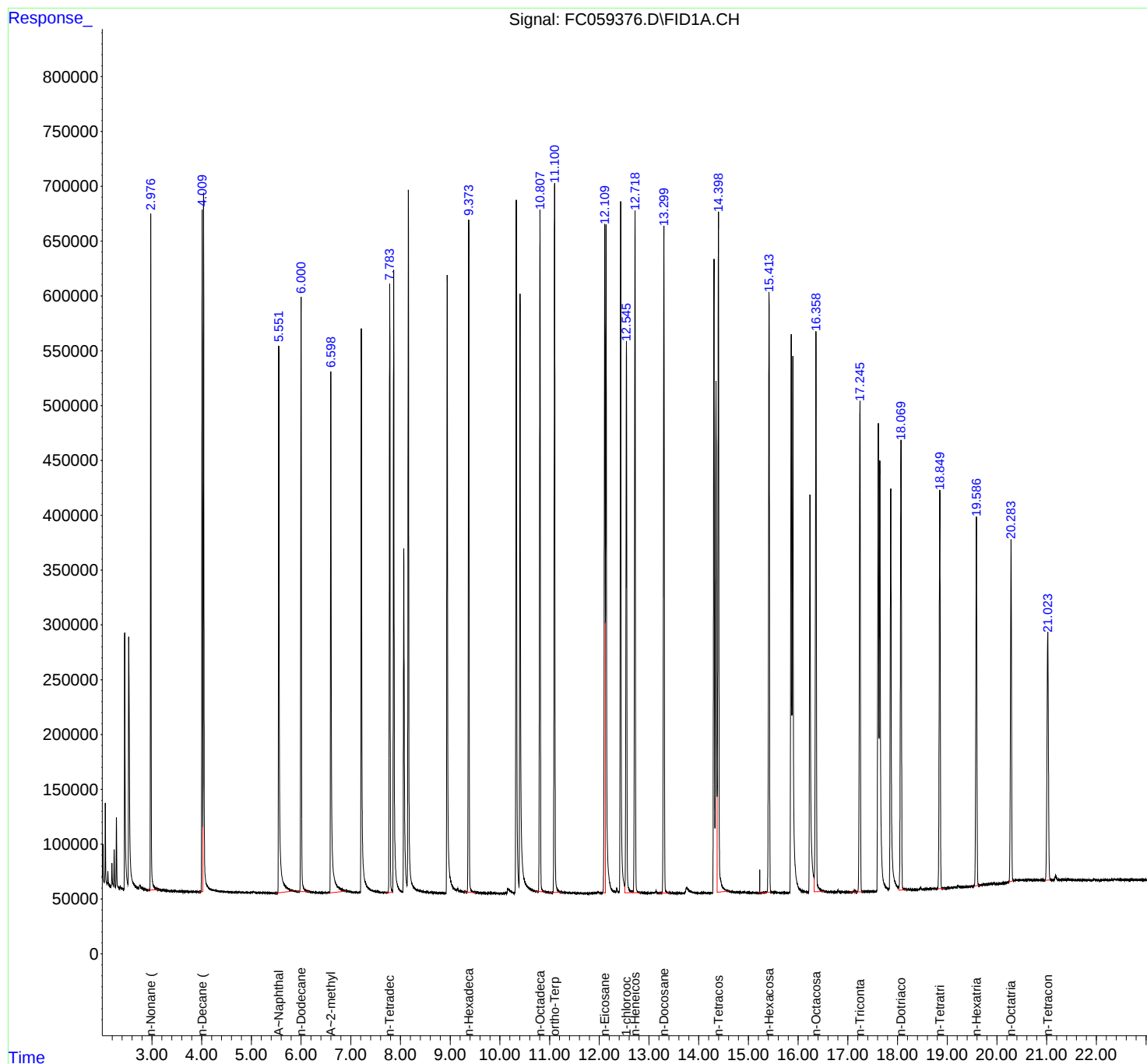
Instrument :
FID_C
ClientSampleId :
PB144264BS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 23 05:20:07 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rteres

Instrument :

FID_C

ClientSampleId :

PB144264BS

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222

Data File : FC059376.D

Signal(s) : FID1A.CH

Acq On : 23 Apr 2022 3:38

Sample : PB144264BS

Misc :

ALS Vial : 25 Sample Multiplier: 1

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.976	2.918	3.128	BB	606749	5374289	60.17%	2.050%
2	4.010	3.945	4.024	BV	618054	5474759	61.30%	2.088%
3	4.039	4.024	4.241	VB	632314	6412223	71.80%	2.446%
4	5.551	5.485	5.848	BB	496323	6273752	70.25%	2.393%
5	6.000	5.918	6.161	BB	545359	5823545	65.20%	2.221%
6	6.599	6.571	6.905	BB	474607	6335052	70.93%	2.417%
7	7.213	7.148	7.458	BV	509276	6275353	70.26%	2.394%
8	7.783	7.698	7.838	BV	563570	6196190	69.38%	2.364%
9	7.863	7.838	8.037	VV	561745	6632382	74.26%	2.530%
10	8.067	8.037	8.131	PV	295104	3971726	44.47%	1.515%
11	8.158	8.131	8.408	VB	641245	7487759	83.84%	2.856%
12	8.939	8.861	9.131	BV	560094	6991047	78.28%	2.667%
13	9.372	9.281	9.518	BB	608228	6798784	76.12%	2.593%
14	10.330	10.295	10.385	PV	637790	7563749	84.69%	2.885%
15	10.407	10.385	10.701	VB	545245	7654289	85.70%	2.920%
16	10.806	10.708	10.925	BB	630150	7553518	84.58%	2.881%
17	11.099	10.991	11.248	BB	632624	7623795	85.36%	2.908%
18	12.109	12.058	12.120	M	608768	7267845	81.38%	2.772%
19	12.136	12.120	12.260	M	607638	7856929	87.97%	2.997%
20	12.429	12.398	12.511	VV	617054	7743240	86.70%	2.954%
21	12.545	12.511	12.675	VV	504761	6531264	73.13%	2.491%
22	12.717	12.675	12.835	VB	627056	7686465	86.06%	2.932%
23	13.299	13.188	13.418	BB	597762	7666593	85.84%	2.925%
24	14.307	14.191	14.327	BV	580393	7091715	79.40%	2.705%
25	14.347	14.327	14.370	VV	467949	6239562	69.86%	2.380%
26	14.396	14.370	14.601	VB	608668	8931143	100.00%	3.407%
27	15.414	15.185	15.450	BBA	548415	7375328	82.58%	2.813%
28	15.860	15.816	15.876	M	509412	6697029	74.99%	2.555%
29	15.893	15.877	16.023	M	489856	7211269	80.74%	2.751%
30	16.237	16.138	16.321	BV	364268	5755016	64.44%	2.195%
31	16.358	16.321	16.531	VB	510627	7307705	81.82%	2.788%
32	17.243	17.041	17.298	BB	443323	6486576	72.63%	2.474%
33	17.612	17.495	17.628	BV	412560	5633077	63.07%	2.149%
34	17.644	17.628	17.821	VV	389708	6444962	72.16%	2.459%
35	17.863	17.821	18.025	VV	363253	6102068	68.32%	2.328%
36	18.069	18.025	18.185	VB	408560	6170860	69.09%	2.354%

					rters			
37	18.849	18.801	18.955	BB	359745	5370320	60.13%	2.049%
38	19.585	19.541	19.650	BBA	336099	4960164	55	
39	20.283	20.235	20.324	M	311891	4665503	52	
40	21.023	20.966	21.078	M	226169	4510295	50	

Sum of corrected areas: 2621

Instrument :
FID_C
ClientSampleId :
PB144264BS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Aliphatic EPH 042122.M Mon Apr 25 11:18:32 2022

Report of Analysis

Client:	AEI Consultants		Date Collected:		
Project:	442890_Paterson, NJ		Date Received:		
Client Sample ID:	PB144264BSD		SDG No.:	N2487	
Lab Sample ID:	PB144264BSD		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	0	
Sample Wt/Vol:	30	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 4:16	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	27.3		1	0.95	2.00	mg/kg	FC059377.D
Aliphatic C9-C28	Aliphatic C9-C28	88.5	E	1	1.03	4.00	mg/kg	FC059377.D
Total AliphaticEPH	Total AliphaticEPH	116			1.98	6.00	mg/kg	
Total EPH	Total EPH	116			1.98	6.00	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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:	AEI Consultants		Date Collected:		
Project:	442890_Paterson, NJ		Date Received:		
Client Sample ID:	PB144264BSD		SDG No.:	N2487	
Lab Sample ID:	PB144264BSD		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	0	
Sample Wt/Vol:	30	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059377.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	88.5	E	1.03	4.00	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	27.3		0.95	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	48.0		40 - 140	96%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	45.5		40 - 140	91%	SPK: 50



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Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB144264BSD	Acq On:	23 Apr 2022 4:16
Client Sample ID:	PB144264BSD	Operator:	UA/NP
Data file:	FC059377.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	2.862	6.099	28214265	221.502	300	ug/ml
Aliphatic C12-C16	6.100	9.471	49566129	359.556	200	ug/ml
Aliphatic C16-C21	9.472	12.813	51466670	344.521	300	ug/ml
Aliphatic C21-C28	12.814	16.454	61669981	399.813	400	ug/ml
Aliphatic C28-C40	16.455	21.124	48090881	409.16	600	ug/ml
Aliphatic EPH	2.862	21.124	239007926	1730		ug/ml
ortho-Terphenyl (SURR)	11.099	11.099	7313154	45.51		ug/ml
1-chlorooctadecane (SURR)	12.544	12.544	6263732	47.97		ug/ml
Aliphatic C9-C28	2.862	16.454	190917045	1330	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059377.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 4:16
 Operator : UA/NP
 Sample : PB144264BSD
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB144264BSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
 Quant Time: Apr 23 05:20:24 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.099	7313154	45.511 ug/ml
Spiked Amount 50.000		Recovery =	91.02%
12) S 1-chlorooctadecane (S...	12.544	6263732	47.967 ug/ml
Spiked Amount 50.000		Recovery =	95.93%
Target Compounds			
1) T n-Nonane (C9)	2.975	5189180	41.404 ug/ml
2) T n-Decane (C10)	4.009	5253163	42.048 ug/ml
3) T A~Naphthalene (C11.7)	5.551	6036460	49.210 ug/ml
4) T n-Dodecane (C12)	6.000	5574416	42.273 ug/ml
5) T A~2-methylnaphthalene...	6.598	6037710	47.840 ug/ml
6) T n-Tetradecane (C14)	7.783	5967014	44.114 ug/ml
7) T n-Hexadecane (C16)	9.372	6524799	46.459 ug/ml
8) T n-Octadecane (C18)	10.807	7285926	49.877 ug/ml
10) T n-Eicosane (C20)	12.109	7370801	49.148 ug/ml
11) T n-Heneicosane (C21)	12.716	7359377	48.382 ug/ml
13) T n-Docosane (C22)	13.299	7340425	47.907 ug/ml
14) T n-Tetracosane (C24)	14.397	8591937	55.488 ug/ml
15) T n-Hexacosane (C26)	15.414	7049789	45.742 ug/ml
16) T n-Octacosane (C28)	16.358	7044516	45.506 ug/ml
17) T n-Tricontane (C30)	17.243	6157945	40.543 ug/ml
18) T n-Dotriacontane (C32)	18.069	5860391	41.592 ug/ml
19) T n-Tetratriacontane (C34)	18.849	5127593	40.570 ug/ml
20) T n-Hexatriacontane (C36)	19.585	4753570	43.460 ug/ml
21) T n-Octatriacontane (C38)	20.281	4467879	47.974 ug/mlm
22) T n-Tetracontane (C40)	21.021	4323287	51.759 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059377.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 4:16
Operator : UA/NP
Sample : PB144264BSD
Misc :
ALS Vial : 26 Sample Multiplier: 1

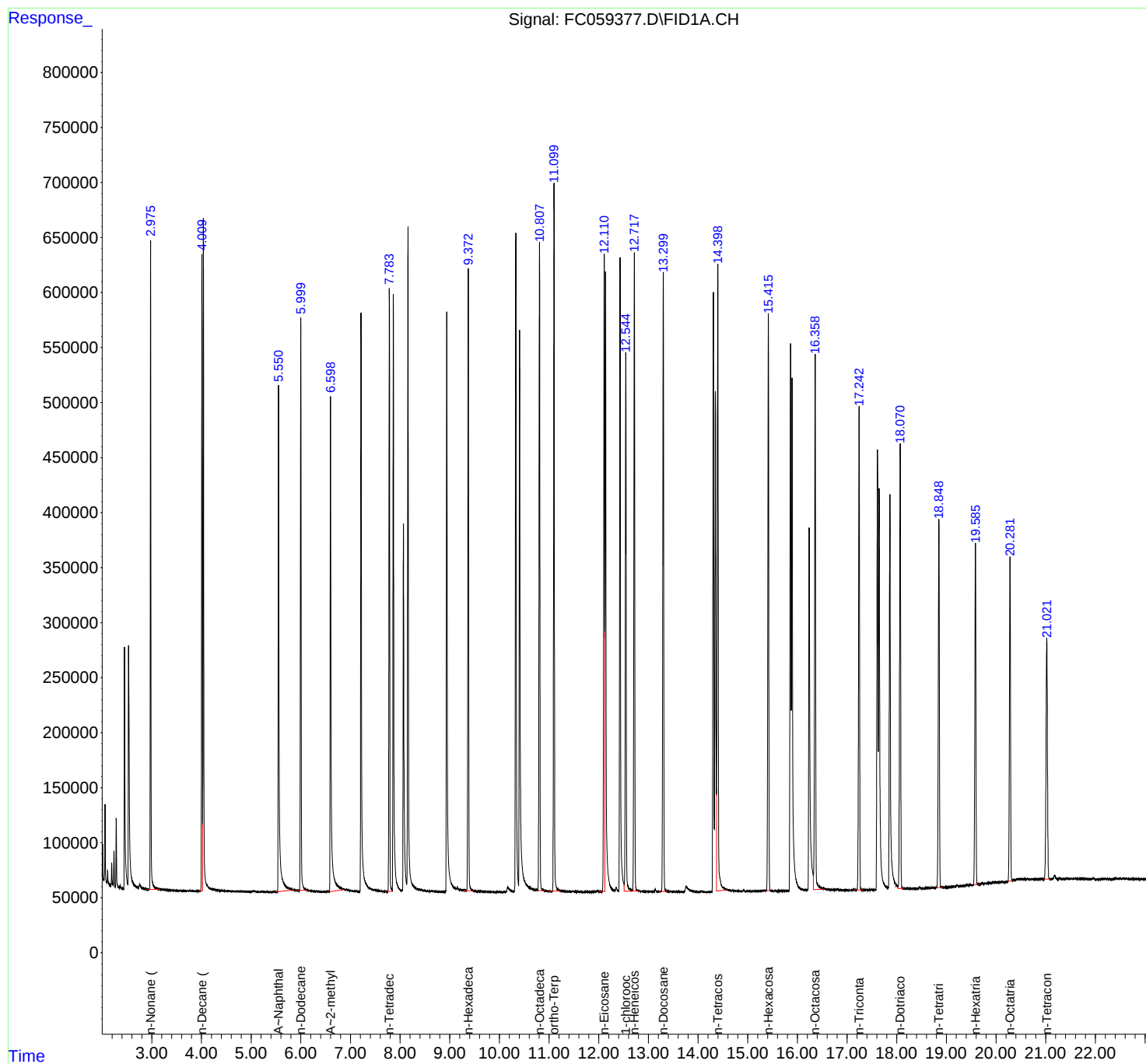
Instrument :
FID_C
ClientSampleId :
PB144264BSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 23 05:20:24 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rteres

Instrument :

FID_C

ClientSampleId :

PB144264BSD

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222
 Data File : FC059377.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 4:16
 Sample : PB144264BSD
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.976	2.915	3.158	BB	585061	5189180	60.40%	2.054%
2	4.009	3.948	4.023	BV	572159	5253163	61.14%	2.080%
3	4.038	4.023	4.225	VB	608324	6161046	71.71%	2.439%
4	5.551	5.478	5.858	BB	456883	6036460	70.26%	2.390%
5	6.000	5.928	6.131	BB	522871	5574416	64.88%	2.207%
6	6.598	6.571	6.878	BB	447821	6037710	70.27%	2.390%
7	7.213	7.135	7.515	BB	521730	6566750	76.43%	2.600%
8	7.783	7.701	7.837	BV	547318	5967014	69.45%	2.362%
9	7.863	7.837	8.038	VV	540379	6379994	74.26%	2.526%
10	8.067	8.038	8.130	VV	327152	4124125	48.00%	1.633%
11	8.158	8.130	8.421	VB	602486	7250826	84.39%	2.871%
12	8.939	8.865	9.135	BV	523373	6714911	78.15%	2.658%
13	9.372	9.288	9.488	BB	564592	6524799	75.94%	2.583%
14	10.330	10.281	10.385	BV	604621	7249722	84.38%	2.870%
15	10.406	10.385	10.715	VB	507678	7359514	85.66%	2.914%
16	10.807	10.767	10.925	PB	596834	7285926	84.80%	2.885%
17	11.099	11.001	11.235	BB	641704	7313154	85.12%	2.895%
18	12.109	12.008	12.123	BV	581907	7370801	85.79%	2.918%
19	12.136	12.123	12.325	VV	566330	7443957	86.64%	2.947%
20	12.429	12.398	12.510	VV	567253	7397373	86.10%	2.929%
21	12.544	12.510	12.675	VV	489584	6263732	72.90%	2.480%
22	12.716	12.675	12.808	VB	584912	7359377	85.65%	2.914%
23	13.299	13.218	13.391	BB	562062	7340425	85.43%	2.906%
24	14.308	14.185	14.327	BV	545216	6751610	78.58%	2.673%
25	14.348	14.327	14.370	VV	452214	5958461	69.35%	2.359%
26	14.397	14.370	14.588	VB	572867	8591937	100.00%	3.402%
27	15.414	15.361	15.450	BBA	522368	7049789	82.05%	2.791%
28	15.862	15.768	15.876	BV	492197	6301657	73.34%	2.495%
29	15.892	15.876	16.118	VB	464419	7137193	83.07%	2.826%
30	16.237	16.165	16.320	BV	327624	5494393	63.95%	2.175%
31	16.358	16.320	16.545	VB	485996	7044516	81.99%	2.789%
32	17.243	17.151	17.315	BB	438058	6157945	71.67%	2.438%
33	17.612	17.531	17.628	BV	399629	5347786	62.24%	2.117%
34	17.646	17.628	17.827	VV	361995	6209851	72.28%	2.459%
35	17.862	17.827	18.024	VV	355022	5819748	67.73%	2.304%
36	18.069	18.024	18.141	VB	396005	5860391	68.21%	2.320%

						rters		
37	18.849	18.801	18.911	BB	332266	5127593	59.68%	2.030%
38	19.585	19.541	19.650	BBA	310068	4753570	58	
39	20.281	20.231	20.321	M	295185	4477816	52	
40	21.021	20.958	21.075	M	219344	4336181	50	

Sum of corrected areas: 2525

Instrument :
FID_C
ClientSampleId :
PB144264BSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Aliphatic EPH 042122.M Mon Apr 25 11:19:25 2022

Report of Analysis

Client:	AEI Consultants		Date Collected:		
Project:	442890_Paterson, NJ		Date Received:		
Client Sample ID:	UST-1-NMS		SDG No.:	N2487	
Lab Sample ID:	N2487-02MS		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	15	
Sample Wt/Vol:	30.03	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 6:46	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	37.8		1	1.12	2.35	mg/kg	FC059381.D
Aliphatic C9-C28	Aliphatic C9-C28	105	E	1	1.21	4.71	mg/kg	FC059381.D
Total AliphaticEPH	Total AliphaticEPH	143			2.33	7.06	mg/kg	
Total EPH	Total EPH	143			2.33	7.06	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	
Project:	442890_Paterson, NJ	Date Received:	
Client Sample ID:	UST-1-NMS	SDG No.:	N2487
Lab Sample ID:	N2487-02MS	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	15
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059381.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	105	E	1.21	4.71	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	37.8		1.12	2.35	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	36.3		40 - 140	73%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	35.9		40 - 140	72%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-02MS	Acq On:	23 Apr 2022 6:46
Client Sample ID:	UST-1-NMS	Operator:	UA/NP
Data file:	FC059381.D	Misc:	
Instrument:	FID_C	ALS Vial:	30
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	26079778	204.745	300	ug/ml
Aliphatic C12-C16	6.100	9.471	52058225	377.634	200	ug/ml
Aliphatic C16-C21	9.472	12.813	52133960	348.988	300	ug/ml
Aliphatic C21-C28	12.814	16.454	62590322	405.78	400	ug/ml
Aliphatic C28-C40	16.455	21.124	56691949	482.338	600	ug/ml
Aliphatic EPH	2.862	21.124	249554234	1820		ug/ml
ortho-Terphenyl (SURR)	11.098	11.098	5775074	35.94		ug/ml
1-chlorooctadecane (SURR)	12.542	12.542	4740758	36.3		ug/ml
Aliphatic C9-C28	2.862	16.454	192862285	1340	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059381.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 6:46
 Operator : UA/NP
 Sample : N2487-02MS
 Misc :
 ALS Vial : 30 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 UST-1-NMS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 04/25/2022
 Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
 Quant Time: Apr 23 07:08:55 2022
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
 Quant Title : GC Extractables
 QLast Update : Thu Apr 21 17:30:29 2022
 Response via : Initial Calibration
 Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.098	5775074	35.939 ug/ml
Spiked Amount 50.000		Recovery =	71.88%
12) S 1-chlorooctadecane (S...	12.542	4740758	36.304 ug/ml
Spiked Amount 50.000		Recovery =	72.61%
Target Compounds			
1) T n-Nonane (C9)	2.966	3919864	31.276 ug/ml
2) T n-Decane (C10)	4.004	4552947	36.443 ug/ml
3) T A~Naphthalene (C11.7)	5.550	5330812	43.457 ug/ml
4) T n-Dodecane (C12)	5.999	5513415	41.810 ug/ml
5) T A~2-methylnaphthalene...	6.598	5951938	47.161 ug/ml
6) T n-Tetradecane (C14)	7.783	6123860	45.273 ug/ml
7) T n-Hexadecane (C16)	9.372	6531101	46.503 ug/ml
8) T n-Octadecane (C18)	10.806	7121578	48.752 ug/ml
10) T n-Eicosane (C20)	12.108	7132975	47.562 ug/ml
11) T n-Heneicosane (C21)	12.716	7127782	46.859 ug/ml
13) T n-Docosane (C22)	13.299	7159772	46.728 ug/ml
14) T n-Tetracosane (C24)	14.397	8466954	54.681 ug/ml
15) T n-Hexacosane (C26)	15.415	6936835	45.010 ug/ml
16) T n-Octacosane (C28)	16.357	6923498	44.724 ug/ml
17) T n-Tricontane (C30)	17.243	6123618	40.317 ug/ml
18) T n-Dotriacontane (C32)	18.070	5848770	41.510 ug/ml
19) T n-Tetratriacontane (C34)	18.849	5147293	40.726 ug/ml
20) T n-Hexatriacontane (C36)	19.585	4792061	43.812 ug/ml
21) T n-Octatriacontane (C38)	20.282	4592811	49.315 ug/mlm
22) T n-Tetracontane (C40)	21.024	4488864	53.741 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059381.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 6:46
Operator : UA/NP
Sample : N2487-02MS
Misc :
ALS Vial : 30 Sample Multiplier: 1

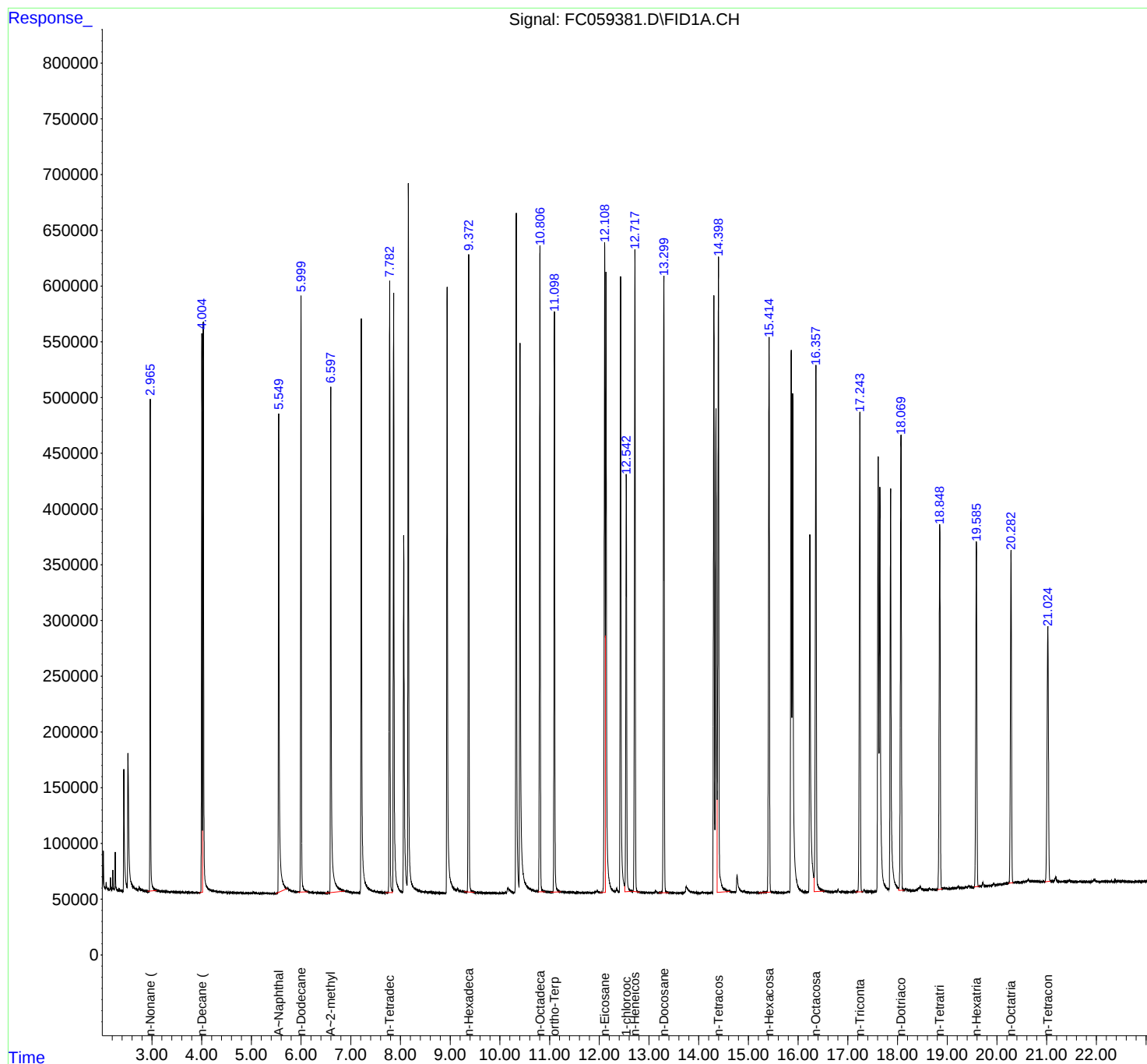
Instrument :
FID_C
ClientSampleId :
UST-1-NMS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 23 07:08:55 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rters

Instrument :

FID_C

ClientSampleId :

UST-1-NMS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222
Data File : FC059381.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 6:46
Sample : N2487-02MS
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.966	2.905	3.178	BV	437650	4016536	46.32%	1.543%
2	3.187	3.178	3.364	VV	522	32000	0.37%	0.012%
3	3.387	3.364	3.398	VV	213	2600	0.03%	0.001%
4	3.408	3.398	3.517	VV	209	10701	0.12%	0.004%
5	3.530	3.517	3.542	PV	168	2015	0.02%	0.001%
6	3.550	3.542	3.585	VV	229	4007	0.05%	0.002%
7	3.608	3.585	3.629	VV	331	4770	0.06%	0.002%
8	3.637	3.629	3.648	VV	112	710	0.01%	0.000%
9	3.684	3.648	3.723	VV	194	3675	0.04%	0.001%
10	3.744	3.723	3.756	VV	223	2307	0.03%	0.001%
11	3.779	3.756	3.825	VV	247	5984	0.07%	0.002%
12	3.831	3.825	3.892	VV	198	5130	0.06%	0.002%
13	3.903	3.892	3.972	PV	196	2874	0.03%	0.001%
14	4.004	3.972	4.018	PV	502382	4564260	52.64%	1.753%
15	4.033	4.018	4.268	VV	510770	5492654	63.34%	2.110%
16	4.275	4.268	4.364	VV	1648	70155	0.81%	0.027%
17	4.374	4.364	4.415	VV	1063	26536	0.31%	0.010%
18	4.421	4.415	4.430	VV	704	6054	0.07%	0.002%
19	4.440	4.430	4.473	VV	690	16148	0.19%	0.006%
20	4.482	4.473	4.510	VV	633	12655	0.15%	0.005%
21	4.518	4.510	4.528	VV	563	5638	0.07%	0.002%
22	4.541	4.528	4.551	VV	618	7632	0.09%	0.003%
23	4.564	4.551	4.584	VV	622	10879	0.13%	0.004%
24	4.595	4.584	4.612	VV	541	8131	0.09%	0.003%
25	4.621	4.612	4.656	VV	468	11184	0.13%	0.004%
26	4.670	4.656	4.704	VV	515	11059	0.13%	0.004%
27	4.714	4.704	4.745	VV	425	7978	0.09%	0.003%
28	4.761	4.745	4.792	VV	412	8922	0.10%	0.003%
29	4.794	4.792	4.820	VV	352	4173	0.05%	0.002%
30	4.833	4.820	4.889	VV	264	9035	0.10%	0.003%
31	4.898	4.889	4.912	VV	236	2782	0.03%	0.001%
32	4.917	4.912	4.936	VV	282	3223	0.04%	0.001%
33	4.978	4.936	5.013	VV	319	10878	0.13%	0.004%
34	5.032	5.013	5.082	VV	821	20130	0.23%	0.008%
35	5.089	5.082	5.118	VV	480	6312	0.07%	0.002%
36	5.134	5.118	5.148	VV	213	2592	0.03%	0.001%

				rters				
37	5.174	5.148	5.232	VV	196	7684	0.09%	0.003%
38	5.237	5.232	5.262	VV	157	3075		
39	5.312	5.262	5.327	VV	324	9521		
40	5.337	5.327	5.362	VV	249	2056		
41	5.370	5.362	5.404	VV	198	1569		
42	5.470	5.404	5.486	PV	243	6374		
43	5.495	5.486	5.512	VV	144	1624	0.02%	0.001%
44	5.550	5.512	5.715	VV	429765	5624298	64.86%	2.160%
45	5.732	5.715	5.889	VV	5240	288870	3.33%	0.111%
46	5.902	5.889	5.965	VV	1596	63089	0.73%	0.024%
47	5.999	5.965	6.133	VV	533365	5659299	65.26%	2.174%
48	6.145	6.133	6.271	VV	1717	87683	1.01%	0.034%
49	6.280	6.271	6.345	VV	743	28764	0.33%	0.011%
50	6.349	6.345	6.362	VV	645	5619	0.06%	0.002%
51	6.384	6.362	6.429	VV	633	20491	0.24%	0.008%
52	6.446	6.429	6.463	VV	465	7073	0.08%	0.003%
53	6.479	6.463	6.493	VV	372	5510	0.06%	0.002%
54	6.541	6.493	6.572	VV	1053	28835	0.33%	0.011%
55	6.598	6.572	6.903	VV	452653	6252472	72.10%	2.402%
56	6.921	6.903	6.998	VV	2448	94756	1.09%	0.036%
57	7.007	6.998	7.108	VV	1135	55058	0.63%	0.021%
58	7.116	7.108	7.138	VV	617	11371	0.13%	0.004%
59	7.145	7.138	7.165	VV	748	10877	0.13%	0.004%
60	7.212	7.165	7.462	VV	516585	6640397	76.58%	2.551%
61	7.478	7.462	7.513	VV	2317	60187	0.69%	0.023%
62	7.534	7.513	7.651	VV	1996	95225	1.10%	0.037%
63	7.661	7.651	7.708	VV	825	24450	0.28%	0.009%
64	7.715	7.708	7.744	VV	840	15033	0.17%	0.006%
65	7.783	7.744	7.838	VV	547616	6173050	71.19%	2.371%
66	7.863	7.838	8.041	VV	534739	6573587	75.81%	2.525%
67	8.066	8.041	8.132	VV	320995	4135972	47.70%	1.589%
68	8.157	8.132	8.570	VV	636654	7707621	88.89%	2.961%
69	8.603	8.570	8.822	VV	1481	102910	1.19%	0.040%
70	8.832	8.822	8.883	VV	312	8043	0.09%	0.003%
71	8.893	8.883	8.904	VV	191	1833	0.02%	0.001%
72	8.938	8.904	9.131	VV	544160	6991297	80.62%	2.686%
73	9.152	9.131	9.178	VV	4097	87253	1.01%	0.034%
74	9.192	9.178	9.290	VV	2384	123375	1.42%	0.047%
75	9.306	9.290	9.338	VV	1482	38141	0.44%	0.015%
76	9.372	9.338	9.549	VV	569858	6671342	76.93%	2.563%
77	9.557	9.549	9.569	VV	829	8723	0.10%	0.003%
78	9.579	9.569	9.654	VV	695	28449	0.33%	0.011%
79	9.671	9.654	9.698	VV	551	11580	0.13%	0.004%
80	9.724	9.698	9.801	VV	547	23363	0.27%	0.009%
81	9.841	9.801	9.855	VV	412	10139	0.12%	0.004%
82	9.864	9.855	9.918	VV	430	10458	0.12%	0.004%
83	9.932	9.918	9.952	VV	312	4880	0.06%	0.002%
84	9.956	9.952	9.982	VV	313	4494	0.05%	0.002%
85	9.996	9.982	10.022	VV	282	5485	0.06%	0.002%
86	10.034	10.022	10.061	VV	256	4210	0.05%	0.002%
87	10.112	10.061	10.130	VV	704	17366	0.20%	0.007%
88	10.160	10.130	10.295	VV	4498	187911	2.17%	0.072%
89	10.329	10.295	10.385	VV	603362	7199551	83.03%	2.766%

Instrument :

FID_C

ClientSampleId :

UST-1-NMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

							Instrument : FID_C	
							ClientSampleId : MUST-1-NMS	
	Area	Area	Area	Area	Area	Area	Area	Area
90	10.405	10.385	10.722	VV	490940	7518045	86.70%	2.888%
Manual IntegrationsAPPROVED								
91	10.746	10.722	10.772	VV	2163	54579	0.00%	0.000%
92	10.806	10.772	10.922	VV	579667	7249814	83.93%	2.796%
93	10.927	10.922	11.006	VV	1493	59094	0.00%	0.000%
94	11.017	11.006	11.062	VV	974	29585	0.00%	0.000%
95	11.098	11.062	11.243	VV	522534	5909596	68.33%	2.276%
96	11.261	11.243	11.298	VV	1451	39399	0.45%	0.015%
97	11.305	11.298	11.319	VV	1013	12003	0.14%	0.005%
98	11.358	11.319	11.395	VV	1073	43262	0.50%	0.017%
99	11.422	11.395	11.444	VV	987	26890	0.31%	0.010%
100	11.471	11.444	11.513	VV	1093	30860	0.36%	0.012%
101	11.523	11.513	11.527	VV	588	4557	0.05%	0.002%
102	11.556	11.527	11.628	VV	758	31229	0.36%	0.012%
103	11.655	11.628	11.668	VV	559	11006	0.13%	0.004%
104	11.685	11.668	11.702	VV	486	8935	0.10%	0.003%
105	11.719	11.702	11.732	VV	558	8747	0.10%	0.003%
106	11.755	11.732	11.790	VV	624	18164	0.21%	0.007%
107	11.809	11.790	11.822	VV	471	8038	0.09%	0.003%
108	11.839	11.822	11.858	VV	523	9324	0.11%	0.004%
109	11.884	11.858	11.902	VV	700	15830	0.18%	0.006%
110	11.954	11.902	12.032	VV	2175	92660	1.07%	0.036%
111	12.041	12.032	12.058	VV	784	10833	0.12%	0.004%
112	12.108	12.058	12.121	VV	584772	7162890	82.60%	2.751%
113	12.135	12.121	12.325	VV	557956	7440207	85.80%	2.858%
114	12.348	12.325	12.393	VV	4119	95228	1.10%	0.037%
115	12.428	12.393	12.512	VV	553540	7332666	84.56%	2.817%
116	12.542	12.512	12.651	VV	375728	4870081	56.16%	1.871%
117	12.662	12.651	12.675	VV	1875	25862	0.30%	0.010%
118	12.716	12.675	12.915	VV	570133	7277644	83.93%	2.796%
119	12.932	12.915	12.997	VV	575	23918	0.28%	0.009%
120	13.016	12.997	13.036	VV	494	9324	0.11%	0.004%
121	13.050	13.036	13.067	VV	321	5484	0.06%	0.002%
122	13.138	13.067	13.192	VV	2165	56474	0.65%	0.022%
123	13.212	13.192	13.229	VV	580	10513	0.12%	0.004%
124	13.299	13.229	13.438	VV	550088	7217925	83.24%	2.773%
125	13.445	13.438	13.522	VV	495	14523	0.17%	0.006%
126	13.529	13.522	13.547	VV	219	2000	0.02%	0.001%
127	13.566	13.547	13.587	VV	189	2654	0.03%	0.001%
128	13.619	13.587	13.661	VV	270	6142	0.07%	0.002%
129	13.750	13.661	13.942	VV	5527	267574	3.09%	0.103%
130	13.953	13.942	14.010	VV	431	10167	0.12%	0.004%
131	14.068	14.010	14.185	VV	625	30361	0.35%	0.012%
132	14.196	14.185	14.215	PV	202	2200	0.03%	0.001%
133	14.251	14.215	14.273	VV	482	9181	0.11%	0.004%
134	14.306	14.273	14.326	VV	531689	6670736	76.93%	2.562%
135	14.347	14.326	14.369	VV	435047	5925167	68.33%	2.276%
136	14.397	14.369	14.673	VV	571480	8671414	100.00%	3.331%
137	14.682	14.673	14.737	VV	1200	37805	0.44%	0.015%
138	14.772	14.737	14.890	VV	15891	427358	4.93%	0.164%
139	14.912	14.890	14.982	VV	1907	57835	0.67%	0.022%
140	14.998	14.982	15.015	VV	735	11271	0.13%	0.004%
141	15.030	15.015	15.055	VV	444	8603	0.10%	0.003%

				rters			
142	15.065	15.055	15.075	VV	375	4161	0.05%
143	15.091	15.075	15.152	VV	419	12804	0.002%
144	15.165	15.152	15.219	VV	256	6328	
145	15.238	15.219	15.257	PV	214	2755	
146	15.283	15.257	15.295	VV	721	10118	
147	15.302	15.295	15.328	VV	789	13364	
148	15.415	15.328	15.524	VV	498535	6996035	80.68%
149	15.553	15.524	15.585	VV	872	15798	2.687%
150	15.594	15.585	15.623	VV	233	2684	0.18%
151	15.646	15.623	15.662	VV	233	3474	0.001%
152	15.679	15.662	15.707	VV	223	3571	0.04%
153	15.723	15.707	15.735	VV	165	1573	0.001%
154	15.747	15.735	15.761	VV	193	1589	0.02%
155	15.792	15.761	15.825	PV	976	24466	0.001%
156	15.860	15.825	15.875	VV	492893	6242478	0.28%
157	15.890	15.875	16.165	VV	447053	7153216	0.006%
158	16.236	16.165	16.322	VV	319502	5502313	71.99%
159	16.357	16.322	16.640	VV	474993	7114966	2.398%
160	16.651	16.640	16.695	VV	673	15800	82.49%
161	16.765	16.695	16.773	VV	557	21491	63.45%
162	16.802	16.773	16.862	VV	2673	52796	2.114%
163	16.889	16.862	16.962	VV	508	16940	82.05%
164	16.970	16.962	16.988	VV	200	1952	2.733%
165	16.996	16.988	17.062	VV	180	4965	0.18%
166	17.128	17.062	17.169	PV	793	21431	0.008%
167	17.243	17.169	17.305	VV	428344	6146919	0.25%
168	17.325	17.305	17.390	VV	1970	39075	0.61%
169	17.412	17.390	17.425	VV	372	6170	0.020%
170	17.446	17.425	17.500	VV	485	14810	0.20%
171	17.512	17.500	17.533	VV	402	6232	0.007%
172	17.611	17.533	17.627	VV	392987	5391794	0.07%
173	17.645	17.627	17.822	VV	360231	6252028	0.002%
174	17.861	17.822	18.023	VV	363573	5817646	70.89%
175	18.070	18.023	18.136	VV	403957	5934902	2.361%
176	18.165	18.136	18.212	VV	2674	81813	0.45%
177	18.226	18.212	18.285	VV	1221	46680	0.07%
178	18.294	18.285	18.348	VV	1005	34467	0.17%
179	18.458	18.348	18.544	VV	4166	249598	0.015%
180	18.567	18.544	18.598	VV	1587	47410	67.09%
181	18.642	18.598	18.687	VV	2573	92961	2.235%
182	18.727	18.687	18.768	VV	1680	74383	68.44%
183	18.849	18.768	18.904	VV	328283	5289752	0.94%
184	18.954	18.904	19.024	VV	2687	169230	0.54%
185	19.036	19.024	19.067	VV	2183	55311	0.40%
186	19.095	19.067	19.118	VV	2484	72634	0.013%
187	19.148	19.118	19.172	VV	2917	85326	2.88%
188	19.219	19.172	19.278	VV	4280	193745	0.096%
189	19.283	19.278	19.298	VV	2769	32339	0.55%
190	19.371	19.298	19.398	VV	3499	181616	0.018%
191	19.436	19.398	19.464	VV	4524	150907	0.84%
192	19.482	19.464	19.528	VV	3695	135091	0.028%
193	19.585	19.528	19.630	VV	312256	5020228	0.98%
194	19.648	19.630	19.668	VV	4189	91931	2.23%

Instrument :

FID_C

ClientSampleId :

UST-1-NMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

195	19.716	19.668	19.768	VV	7512	303368	3.50%	0.117%
196	19.777	19.768	19.803	VV	4251	88258		
197	19.862	19.803	19.892	VV	4633	233964		
198	19.935	19.892	19.965	VV	6443	232929		
199	20.078	19.965	20.100	VV	5739	437165		
200	20.215	20.100	20.225	VV	6580	458951		
201	20.283	20.225	20.353	VV	304680	5119923	59.04%	1.967%
202	20.366	20.353	20.378	VV	7201	105472	1.22%	0.041%
203	20.403	20.378	20.455	VV	7378	328161	3.78%	0.126%
204	20.566	20.455	20.580	VV	7995	555918	6.41%	0.214%
205	20.628	20.580	20.674	VV	9480	477682	5.51%	0.183%
206	20.691	20.674	20.778	VV	8147	501028	5.78%	0.192%
207	20.808	20.778	20.852	VV	7944	344807	3.98%	0.132%
208	20.920	20.852	20.957	VV	7715	481749	5.56%	0.185%
209	21.024	20.957	21.085	VV	236414	5082386	58.61%	1.952%
210	21.091	21.085	21.102	VBA	8167	89815	1.04%	0.034%

Sum of corrected areas: 260333910

Aliphatic EPH 042122.M Mon Apr 25 11:33:57 2022

Instrument :

FID_C

ClientSampleId :

UST-1-NMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

Report of Analysis

Client:	AEI Consultants		Date Collected:		
Project:	442890_Paterson, NJ		Date Received:		
Client Sample ID:	UST-1-NMSD		SDG No.:	N2487	
Lab Sample ID:	N2487-02MSD		Matrix:	Solid	
Analytical Method:	NJEPH		% Moisture:	15	
Sample Wt/Vol:	30.05	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	

Prep Date :	Date Analyzed :	Prep Batch ID
04/21/22 09:36	04/23/22 7:24	PB144264

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	Datafile
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	39.3		1	1.12	2.35	mg/kg	FC059382.D
Aliphatic C9-C28	Aliphatic C9-C28	110	E	1	1.21	4.69	mg/kg	FC059382.D
Total AliphaticEPH	Total AliphaticEPH	149			2.33	7.04	mg/kg	
Total EPH	Total EPH	149			2.33	7.04	mg/kg	

* As samples are not fractionated, all aliphatic and aromatic carbon compounds in the C9-C40 carbon range are calculated against the aliphatic calibration curve, and reported as Aliphatic EPH. Therefore, the aliphatic C9-C40 concentration for the sample is reported as the Total EPH.

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



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

Report of Analysis

Client:	AEI Consultants	Date Collected:	
Project:	442890_Paterson, NJ	Date Received:	
Client Sample ID:	UST-1-NMSD	SDG No.:	N2487
Lab Sample ID:	N2487-02MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Moisture:	15
Sample Wt/Vol:	30.05	Units:	g
Soil Aliquot Vol:		Final Vol:	2000 uL
		Test:	EPH_NF

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC059382.D	1	04/21/22	04/23/22	PB144264

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	110	E	1.21	4.69	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	39.3		1.12	2.35	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	38.9		40 - 140	78%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	38.0		40 - 140	76%	SPK: 50



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	N2487-02MSD	Acq On:	23 Apr 2022 7:24
Client Sample ID:	UST-1-NMSD	Operator:	UA/NP
Data file:	FC059382.D	Misc:	
Instrument:	FID_C	ALS Vial:	31
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	2.862	6.099	27597527	216.66	300	ug/ml
Aliphatic C12-C16	6.100	9.471	53797039	390.248	200	ug/ml
Aliphatic C16-C21	9.472	12.813	54974064	368	300	ug/ml
Aliphatic C21-C28	12.814	16.454	66006313	427.926	400	ug/ml
Aliphatic C28-C40	16.455	21.124	58952765	501.573	600	ug/ml
Aliphatic EPH	2.862	21.124	261327708	1900		ug/ml
ortho-Terphenyl (SURR)	11.098	11.098	6109433	38.02		ug/ml
1-chlorooctadecane (SURR)	12.542	12.542	5077122	38.88		ug/ml
Aliphatic C9-C28	2.862	16.454	202374943	1400	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
 Data File : FC059382.D
 Signal(s) : FID1A.CH
 Acq On : 23 Apr 2022 7:24
 Operator : UA/NP
 Sample : N2487-02MSD
 Misc :
 ALS Vial : 31 Sample Multiplier: 1

Instrument :

FID_C

ClientSampleId :

UST-1-NMSD

Manual Integrations

APPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E

Quant Time: Apr 25 01:31:27 2022

Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M

Quant Title : GC Extractables

QLast Update : Thu Apr 21 17:30:29 2022

Response via : Initial Calibration

Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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)	11.098	6109433	38.020 ug/ml
Spiked Amount 50.000		Recovery =	76.04%
12) S 1-chlorooctadecane (S...	12.542	5077122	38.880 ug/ml
Spiked Amount 50.000		Recovery =	77.76%
Target Compounds			
1) T n-Nonane (C9)	2.966	4154348	33.147 ug/ml
2) T n-Decane (C10)	4.005	4835381	38.704 ug/ml
3) T A~Naphthalene (C11.7)	5.550	5672736	46.245 ug/ml
4) T n-Dodecane (C12)	6.000	5855877	44.407 ug/ml
5) T A~2-methylnaphthalene...	6.598	6379710	50.550 ug/ml
6) T n-Tetradecane (C14)	7.784	6480789	47.912 ug/ml
7) T n-Hexadecane (C16)	9.373	6920450	49.276 ug/ml
8) T n-Octadecane (C18)	10.806	7529138	51.542 ug/ml
10) T n-Eicosane (C20)	12.108	7556545	50.387 ug/ml
11) T n-Heneicosane (C21)	12.717	7558091	49.688 ug/ml
13) T n-Docosane (C22)	13.300	7567987	49.392 ug/ml
14) T n-Tetracosane (C24)	14.397	8822175	56.975 ug/ml
15) T n-Hexacosane (C26)	15.414	7313410	47.453 ug/ml
16) T n-Octacosane (C28)	16.357	7304583	47.186 ug/ml
17) T n-Tricontane (C30)	17.242	6446388	42.442 ug/ml
18) T n-Dotriacontane (C32)	18.069	6125910	43.477 ug/ml
19) T n-Tetratriacontane (C34)	18.849	5385313	42.610 ug/ml
20) T n-Hexatriacontane (C36)	19.586	5017808	45.876 ug/ml
21) T n-Octatriacontane (C38)	20.282	4801839	51.560 ug/mlm
22) T n-Tetracontane (C40)	21.025	4718580	56.491 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC042222AL\
Data File : FC059382.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 7:24
Operator : UA/NP
Sample : N2487-02MSD
Misc :
ALS Vial : 31 Sample Multiplier: 1

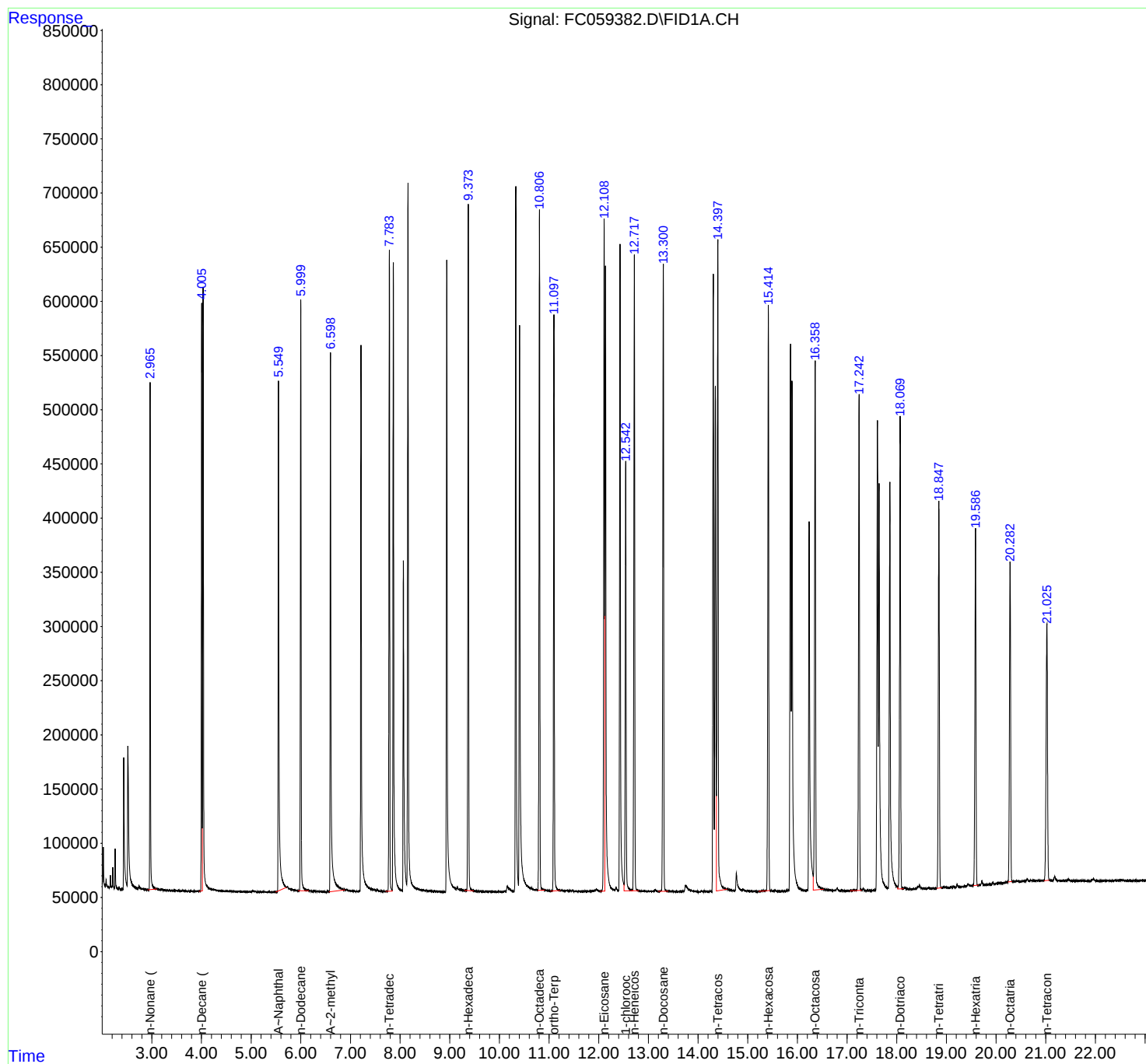
Instrument :
FID_C
ClientSampleId :
UST-1-NMSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Integration File: sample.E
Quant Time: Apr 25 01:31:27 2022
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.M
Quant Title : GC Extractables
QLast Update : Thu Apr 21 17:30:29 2022
Response via : Initial Calibration
Integrator: ChemStation 6890 Scale Mode: Large solvent peaks clipped

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



rters

Instrument :

FID_C

ClientSampleId :

UST-1-NMSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC04222
Data File : FC059382.D
Signal(s) : FID1A.CH
Acq On : 23 Apr 2022 7:24
Sample : N2487-02MSD
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 042122.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	2.966	2.905	3.121	BV	464957	4229049	46.28%	1.551%
2	3.134	3.121	3.149	VV	933	12568	0.14%	0.005%
3	3.157	3.149	3.197	VV	737	16962	0.19%	0.006%
4	3.208	3.197	3.253	VV	541	14538	0.16%	0.005%
5	3.262	3.253	3.383	VV	313	14252	0.16%	0.005%
6	3.400	3.383	3.512	VV	269	10948	0.12%	0.004%
7	3.532	3.512	3.593	VV	309	8203	0.09%	0.003%
8	3.609	3.593	3.632	VV	333	4017	0.04%	0.001%
9	3.646	3.632	3.672	VV	213	3131	0.03%	0.001%
10	3.679	3.672	3.718	VV	181	3114	0.03%	0.001%
11	3.737	3.718	3.768	PV	197	3094	0.03%	0.001%
12	3.797	3.768	3.887	VV	237	11887	0.13%	0.004%
13	3.909	3.887	3.936	VV	329	5350	0.06%	0.002%
14	3.950	3.936	3.969	PV	145	2223	0.02%	0.001%
15	4.005	3.969	4.019	VV	540793	4848333	53.06%	1.778%
16	4.033	4.019	4.335	VV	554540	5844138	63.96%	2.143%
17	4.340	4.335	4.359	VV	1079	15154	0.17%	0.006%
18	4.374	4.359	4.392	VV	1016	18881	0.21%	0.007%
19	4.403	4.392	4.471	VV	870	31982	0.35%	0.012%
20	4.492	4.471	4.510	VV	735	13720	0.15%	0.005%
21	4.520	4.510	4.551	VV	608	13089	0.14%	0.005%
22	4.566	4.551	4.634	VV	630	22804	0.25%	0.008%
23	4.655	4.634	4.702	VV	462	15291	0.17%	0.006%
24	4.710	4.702	4.724	VV	375	3834	0.04%	0.001%
25	4.770	4.724	4.847	VV	476	20221	0.22%	0.007%
26	4.864	4.847	4.888	VV	247	5124	0.06%	0.002%
27	4.896	4.888	4.918	VV	245	2907	0.03%	0.001%
28	4.925	4.918	4.950	VV	163	2086	0.02%	0.001%
29	4.967	4.950	4.984	VV	233	3505	0.04%	0.001%
30	5.001	4.984	5.012	VV	257	3548	0.04%	0.001%
31	5.035	5.012	5.138	VV	939	32062	0.35%	0.012%
32	5.145	5.138	5.152	VV	158	1272	0.01%	0.000%
33	5.159	5.152	5.178	VV	155	2429	0.03%	0.001%
34	5.191	5.178	5.268	VV	302	9945	0.11%	0.004%
35	5.274	5.268	5.305	VV	184	2571	0.03%	0.001%
36	5.309	5.305	5.343	VV	156	1727	0.02%	0.001%

					retention				
37	5.358	5.343	5.396	VV	198	4241	0.05%	0.002%	
38	5.410	5.396	5.425	VV	132	1380			
39	5.441	5.425	5.470	PV	126	2236			
40	5.481	5.470	5.490	VV	153	911			
41	5.513	5.490	5.523	VV	181	1923			
42	5.550	5.523	5.718	VV	462020	5989539	65.60%	2.198%	
43	5.733	5.718	5.862	VV	5298	261165	2.86%	0.096%	
44	5.871	5.862	5.895	VV	1872	34209	0.37%	0.013%	
45	5.901	5.895	5.955	VV	1650	53560	0.59%	0.020%	
46	6.000	5.955	6.132	VV	542559	5994404	65.60%	2.198%	
47	6.143	6.132	6.213	VV	1774	62989	0.69%	0.023%	
48	6.230	6.213	6.265	VV	862	22905	0.25%	0.008%	
49	6.274	6.265	6.285	VV	607	6802	0.07%	0.002%	
50	6.318	6.285	6.335	VV	658	16758	0.18%	0.006%	
51	6.349	6.335	6.359	VV	496	6692	0.07%	0.002%	
52	6.369	6.359	6.382	VV	483	5989	0.07%	0.002%	
53	6.393	6.382	6.403	VV	474	5278	0.06%	0.002%	
54	6.411	6.403	6.473	VV	499	14818	0.16%	0.005%	
55	6.480	6.473	6.510	VV	344	5961	0.07%	0.002%	
56	6.540	6.510	6.570	VV	1112	23520	0.26%	0.009%	
57	6.598	6.570	6.904	VV	495752	6632605	72.58%	2.432%	
58	6.921	6.904	7.074	VV	2528	139000	1.52%	0.051%	
59	7.086	7.074	7.125	VV	929	22913	0.25%	0.008%	
60	7.132	7.125	7.162	VV	797	15902	0.17%	0.006%	
61	7.213	7.162	7.463	VV	501851	6306432	69.01%	2.312%	
62	7.479	7.463	7.517	VV	2282	63496	0.69%	0.023%	
63	7.535	7.517	7.588	VV	1957	60403	0.66%	0.022%	
64	7.601	7.588	7.622	VV	1079	18527	0.20%	0.007%	
65	7.628	7.622	7.643	VV	794	9508	0.10%	0.003%	
66	7.672	7.643	7.741	VV	853	42033	0.46%	0.015%	
67	7.784	7.741	7.838	VV	593386	6529015	71.45%	2.394%	
68	7.863	7.838	8.045	VV	583883	6945112	76.00%	2.546%	
69	8.066	8.045	8.130	VV	304172	3909615	42.78%	1.433%	
70	8.158	8.130	8.561	VV	656644	8109528	88.75%	2.973%	
71	8.603	8.579	8.698	VV	1321	63018	0.69%	0.023%	
72	8.708	8.698	8.767	VV	639	18539	0.20%	0.007%	
73	8.779	8.767	8.864	VV	367	18175	0.20%	0.007%	
74	8.872	8.864	8.905	VV	286	4447	0.05%	0.002%	
75	8.939	8.905	9.130	VV	575850	7401047	80.99%	2.714%	
76	9.152	9.130	9.209	VV	4274	134065	1.47%	0.049%	
77	9.218	9.209	9.286	VV	2248	84755	0.93%	0.031%	
78	9.304	9.286	9.337	VV	1624	42870	0.47%	0.016%	
79	9.373	9.337	9.520	VV	627205	7054322	77.20%	2.586%	
80	9.528	9.520	9.538	VV	828	8671	0.09%	0.003%	
81	9.547	9.538	9.615	VV	785	29725	0.33%	0.011%	
82	9.626	9.615	9.652	VV	480	9610	0.11%	0.004%	
83	9.676	9.652	9.698	VV	578	11902	0.13%	0.004%	
84	9.718	9.698	9.755	VV	544	12739	0.14%	0.005%	
85	9.802	9.755	9.848	VV	442	19312	0.21%	0.007%	
86	9.854	9.848	9.933	VV	321	9697	0.11%	0.004%	
87	9.985	9.933	10.022	VV	335	9610	0.11%	0.004%	
88	10.035	10.022	10.048	VV	281	2052	0.02%	0.001%	
89	10.061	10.048	10.070	PV	170	1750	0.02%	0.001%	

Instrument :

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ClientSampleId :

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Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

90	10.108	10.070	10.135	VV	700	16759	0.18%	0.006%
91	10.159	10.135	10.285	VV	4736	195711		
92	10.329	10.285	10.381	VV	647286	7604377	83.24%	2.779%
93	10.406	10.381	10.728	VV	524197	7960181	87.06%	2.810%
94	10.743	10.728	10.767	VV	2207	45282	0.05%	0.002%
95	10.806	10.767	11.052	VV	627513	7758280	84.24%	2.779%
96	11.098	11.052	11.252	VV	534777	6247165	68.37%	2.290%
97	11.266	11.252	11.335	VV	1609	56877	0.62%	0.021%
98	11.357	11.335	11.398	VV	1244	38789	0.42%	0.014%
99	11.417	11.398	11.448	VV	1119	28956	0.32%	0.011%
100	11.477	11.448	11.517	VV	1122	32191	0.35%	0.012%
101	11.543	11.517	11.625	VV	744	32387	0.35%	0.012%
102	11.662	11.625	11.695	VV	533	18611	0.20%	0.007%
103	11.742	11.695	11.762	VV	660	21765	0.24%	0.008%
104	11.767	11.762	11.791	VV	629	9380	0.10%	0.003%
105	11.811	11.791	11.832	VV	580	12888	0.14%	0.005%
106	11.842	11.832	11.858	VV	585	8980	0.10%	0.003%
107	11.879	11.858	11.898	VV	834	16086	0.18%	0.006%
108	11.954	11.898	12.023	VV	2363	95841	1.05%	0.035%
109	12.042	12.023	12.058	VV	758	13444	0.15%	0.005%
110	12.108	12.058	12.121	VV	620376	7579250	82.94%	2.779%
111	12.135	12.121	12.325	VV	576401	7833937	85.73%	2.872%
112	12.347	12.325	12.394	VV	4127	96888	1.06%	0.036%
113	12.428	12.394	12.508	VV	596984	7718081	84.46%	2.830%
114	12.542	12.508	12.673	VV	394965	5168284	56.56%	1.895%
115	12.717	12.673	12.856	VV	586859	7664055	83.87%	2.810%
116	12.872	12.856	12.968	VV	765	37273	0.41%	0.014%
117	12.980	12.968	12.991	VV	435	5631	0.06%	0.002%
118	13.000	12.991	13.036	VV	470	10706	0.12%	0.004%
119	13.045	13.036	13.072	VV	340	7707	0.08%	0.003%
120	13.137	13.072	13.207	VV	2233	61906	0.68%	0.023%
121	13.300	13.207	13.455	VV	575045	7631235	83.51%	2.798%
122	13.464	13.455	13.475	VV	388	3820	0.04%	0.001%
123	13.491	13.475	13.589	VV	315	10696	0.12%	0.004%
124	13.622	13.589	13.675	VV	249	8462	0.09%	0.003%
125	13.699	13.675	13.708	VV	718	9049	0.10%	0.003%
126	13.747	13.708	13.935	VV	6124	274652	3.01%	0.101%
127	13.947	13.935	14.015	VV	362	8774	0.10%	0.003%
128	14.026	14.015	14.033	VV	151	978	0.01%	0.000%
129	14.056	14.033	14.075	VV	601	9575	0.10%	0.004%
130	14.080	14.075	14.123	VV	500	9658	0.11%	0.004%
131	14.136	14.123	14.168	VV	290	6153	0.07%	0.002%
132	14.170	14.168	14.208	VV	243	2877	0.03%	0.001%
133	14.246	14.208	14.278	PV	583	11684	0.13%	0.004%
134	14.306	14.278	14.326	VV	565895	7039000	77.03%	2.581%
135	14.347	14.326	14.369	VV	468455	6249673	68.39%	2.291%
136	14.397	14.369	14.738	VV	598681	9137847	100.00%	3.350%
137	14.771	14.738	14.885	VV	17334	446663	4.89%	0.164%
138	14.910	14.885	14.978	VV	2050	64977	0.71%	0.024%
139	14.995	14.978	15.066	VV	845	27003	0.30%	0.010%
140	15.089	15.066	15.140	VV	396	11996	0.13%	0.004%
141	15.164	15.140	15.195	VV	263	4584	0.05%	0.002%

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Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

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142	15.216	15.195	15.233	PV	299	3690	0.04%	0.001%
143	15.320	15.233	15.347	VV	1001	40711	0.04%	0.001%
144	15.414	15.347	15.512	VV	540154	7366049	80.04%	2.746%
145	15.518	15.512	15.528	VV	292	2980	0.04%	0.001%
146	15.553	15.528	15.585	VV	1035	19834	0.04%	0.001%
147	15.598	15.585	15.647	VV	289	6582	0.04%	0.001%
148	15.670	15.647	15.680	VV	201	3139	0.03%	0.001%
149	15.698	15.680	15.708	VV	303	4379	0.05%	0.002%
150	15.721	15.708	15.745	VV	370	5614	0.06%	0.002%
151	15.752	15.745	15.760	VV	288	2031	0.02%	0.001%
152	15.793	15.760	15.828	VV	1154	31416	0.34%	0.012%
153	15.860	15.828	15.875	VV	508672	6560394	71.79%	2.405%
154	15.892	15.875	16.126	VV	470079	7489860	81.97%	2.746%
155	16.135	16.126	16.173	VV	808	19044	0.21%	0.007%
156	16.236	16.173	16.318	VV	338813	5769695	63.14%	2.115%
157	16.357	16.318	16.708	VV	489681	7588316	83.04%	2.782%
158	16.729	16.708	16.737	VV	695	8711	0.10%	0.003%
159	16.752	16.737	16.768	VV	716	12043	0.13%	0.004%
160	16.801	16.768	16.858	VV	2991	60643	0.66%	0.022%
161	16.884	16.858	16.918	VV	375	9548	0.10%	0.004%
162	16.928	16.918	16.956	VV	237	3899	0.04%	0.001%
163	16.982	16.956	17.028	VV	228	4836	0.05%	0.002%
164	17.043	17.028	17.059	PV	239	2346	0.03%	0.001%
165	17.130	17.059	17.168	VV	953	30710	0.34%	0.011%
166	17.242	17.168	17.294	VV	453694	6452690	70.62%	2.366%
167	17.325	17.294	17.385	VV	1975	38781	0.42%	0.014%
168	17.416	17.385	17.432	VV	322	5515	0.06%	0.002%
169	17.440	17.432	17.482	VV	323	6440	0.07%	0.002%
170	17.523	17.482	17.529	VV	301	6036	0.07%	0.002%
171	17.535	17.529	17.544	VV	285	2579	0.03%	0.001%
172	17.612	17.544	17.627	VV	431928	5630932	61.62%	2.065%
173	17.645	17.627	17.827	VV	376808	6546076	71.64%	2.400%
174	17.862	17.827	18.022	VV	376658	6063966	66.36%	2.223%
175	18.069	18.022	18.140	VV	435404	6225459	68.13%	2.283%
176	18.167	18.140	18.205	VV	2835	75989	0.83%	0.028%
177	18.223	18.205	18.281	VV	1398	52748	0.58%	0.019%
178	18.319	18.281	18.339	VV	1090	34801	0.38%	0.013%
179	18.460	18.339	18.576	VV	4489	296031	3.24%	0.109%
180	18.582	18.576	18.602	VV	1512	21632	0.24%	0.008%
181	18.643	18.602	18.676	VV	2367	76490	0.84%	0.028%
182	18.725	18.676	18.767	VV	1562	79008	0.86%	0.029%
183	18.849	18.767	18.915	VV	357523	5543814	60.67%	2.033%
184	18.949	18.915	19.052	VV	2714	183779	2.01%	0.067%
185	19.093	19.052	19.120	VV	2620	94222	1.03%	0.035%
186	19.146	19.120	19.175	VV	2830	83314	0.91%	0.031%
187	19.218	19.175	19.293	VV	4477	210970	2.31%	0.077%
188	19.368	19.293	19.390	VV	3390	171656	1.88%	0.063%
189	19.437	19.390	19.512	VV	4941	284095	3.11%	0.104%
190	19.586	19.512	19.632	VV	332215	5290333	57.89%	1.940%
191	19.642	19.632	19.677	VV	4255	113516	1.24%	0.042%
192	19.716	19.677	19.781	VV	7900	321661	3.52%	0.118%
193	19.808	19.781	19.818	VV	4377	95058	1.04%	0.035%
194	19.861	19.818	19.893	VV	4754	204285	2.24%	0.075%

Instrument :

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ClientSampleId :

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Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022

Supervised By :mohammad ahmed 04/25/2022

195	19.936	19.893	19.975	VV	6478	257624	2.82%	0.094%
196	20.061	19.975	20.105	VV	5763	425843		
197	20.283	20.105	20.329	VV	302007	5672064	62	
198	20.337	20.329	20.377	VV	7241	207703	2	
199	20.407	20.377	20.494	VV	7434	505364	5	
200	20.556	20.494	20.592	VV	7513	424708	4	
201	20.628	20.592	20.662	VV	9138	342582	3.75%	0.126%
202	20.699	20.662	20.735	VV	7925	344904	3.77%	0.126%
203	20.745	20.735	20.755	VV	7815	90803	0.99%	0.033%
204	20.766	20.755	20.798	VV	7875	201692	2.21%	0.074%
205	20.839	20.798	20.853	VV	7819	254019	2.78%	0.093%
206	20.869	20.853	20.877	VV	7761	110943	1.21%	0.041%
207	20.905	20.877	20.943	VV	7890	305408	3.34%	0.112%
208	21.024	20.943	21.102	VBA	244578	5464496	59.80%	2.004%
Sum of corrected areas:					272743154			

Instrument :
FID_C
ClientSampleId :
UST-1-NMSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 04/25/2022
Supervised By :mohammad ahmed 04/25/2022

Aliphatic EPH 042122.M Mon Apr 25 11:34:19 2022



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

Manual Integration Report

Sequence:	FC042122AL	Instrument	FID_c
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
20 PPM ALIPHATIC HC	FC059348.D	n-Tetracontane (C40)	yogesh	4/22/2022 8:24:17 AM	mohammad	4/22/2022 10:46:15	Peak Integrated by Software incorrectly



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Manual Integration Report

Sequence:

FC042222AL

Instrument

FID_c

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
20 PPM ALIPHATIC HC	FC059351.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:12:36 AM	mohammad	4/25/2022 5:02:32	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059351.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:12:36 AM	mohammad	4/25/2022 5:02:32	Peak Integrated by Software incorrectly
PB144240BS	FC059353.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:12:38 AM	mohammad	4/25/2022 5:02:36	Peak Integrated by Software incorrectly
PB144240BS	FC059353.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:12:38 AM	mohammad	4/25/2022 5:02:36	Peak Integrated by Software incorrectly
PB144240BSD	FC059354.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:12:39 AM	mohammad	4/25/2022 5:02:38	Peak Integrated by Software incorrectly
PB144240BSD	FC059354.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:12:39 AM	mohammad	4/25/2022 5:02:38	Peak Integrated by Software incorrectly
N2349-03	FC059356.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:08 AM	mohammad	4/25/2022 5:02:41	Peak Integrated by Software incorrectly
N2349-09	FC059359.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:10 AM	mohammad	4/25/2022 5:02:43	Peak Integrated by Software incorrectly
N2349-11	FC059360.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:12 AM	mohammad	4/25/2022 5:02:46	Peak Integrated by Software incorrectly
N2349-13	FC059361.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:15 AM	mohammad	4/25/2022 5:02:48	Peak Integrated by Software incorrectly
N2349-15	FC059362.D	1-chlorooctadecane (Surr)	yogesh	5/2/2022 8:27:32 AM	mohammad	5/3/2022 11:30:43	Peak Integrated by Software incorrectly
N2349-17	FC059363.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:19 AM	mohammad	4/25/2022 5:02:54	Peak Integrated by Software incorrectly
N2428-01MS	FC059366.D	n-Dotriacontane (C32)	yogesh	4/25/2022 8:13:22 AM	mohammad	4/25/2022 5:02:59	Peak Integrated by Software incorrectly



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Manual Integration Report

Sequence:

FC042222AL

Instrument

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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
N2428-01MS	FC059366.D	n-Octacosane (C28)	yogesh	4/25/2022 8:13:22 AM	mohammad	4/25/2022 5:02:59	Peak Integrated by Software incorrectly
N2428-01MS	FC059366.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:22 AM	mohammad	4/25/2022 5:02:59	Peak Integrated by Software incorrectly
N2428-01MS	FC059366.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:22 AM	mohammad	4/25/2022 5:02:59	Peak Integrated by Software incorrectly
N2428-01MS	FC059366.D	n-Tricontane (C30)	yogesh	4/25/2022 8:13:22 AM	mohammad	4/25/2022 5:02:59	Peak Integrated by Software incorrectly
N2428-01MSD	FC059367.D	n-Octacosane (C28)	yogesh	4/25/2022 8:13:24 AM	mohammad	4/25/2022 5:03:02	Peak Integrated by Software incorrectly
N2428-01MSD	FC059367.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:24 AM	mohammad	4/25/2022 5:03:02	Peak Integrated by Software incorrectly
N2428-05	FC059371.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:25 AM	mohammad	4/25/2022 5:03:04	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059373.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:27 AM	mohammad	4/25/2022 5:03:07	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059373.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:27 AM	mohammad	4/25/2022 5:03:07	Peak Integrated by Software incorrectly
N2428-06	FC059374.D	1-chlorooctadecane (Surr)	yogesh	4/25/2022 8:13:29 AM	mohammad	4/25/2022 5:03:09	Peak Integrated by Software incorrectly
PB144264BS	FC059376.D	n-Eicosane (C20)	yogesh	4/25/2022 8:13:30 AM	mohammad	4/25/2022 5:03:12	Peak Integrated by Software incorrectly
PB144264BS	FC059376.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:30 AM	mohammad	4/25/2022 5:03:12	Peak Integrated by Software incorrectly
PB144264BS	FC059376.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:30 AM	mohammad	4/25/2022 5:03:12	Peak Integrated by Software incorrectly



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Manual Integration Report

Sequence:

FC042222AL

Instrument

FID_c

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
PB144264BSD	FC059377.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:32 AM	mohammad	4/25/2022 5:03:15	Peak Integrated by Software incorrectly
PB144264BSD	FC059377.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:32 AM	mohammad	4/25/2022 5:03:15	Peak Integrated by Software incorrectly
N2487-02MS	FC059381.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:34 AM	mohammad	4/25/2022 5:03:17	Peak Integrated by Software incorrectly
N2487-02MS	FC059381.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:34 AM	mohammad	4/25/2022 5:03:17	Peak Integrated by Software incorrectly
N2487-02MSD	FC059382.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:36 AM	mohammad	4/25/2022 5:03:21	Peak Integrated by Software incorrectly
N2487-02MSD	FC059382.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:36 AM	mohammad	4/25/2022 5:03:21	Peak Integrated by Software incorrectly
N2493-01	FC059386.D	1-chlorooctadecane (SURR)	yogesh	4/25/2022 8:13:49 AM	mohammad	4/25/2022 5:03:25	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059395.D	n-Dotriacontane (C32)	yogesh	4/25/2022 8:13:53 AM	mohammad	4/25/2022 5:03:28	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059395.D	n-Octatriacontane (C38)	yogesh	4/25/2022 8:13:53 AM	mohammad	4/25/2022 5:03:28	Peak Integrated by Software incorrectly
20 PPM ALIPHATIC HC	FC059395.D	n-Tetracontane (C40)	yogesh	4/25/2022 8:13:53 AM	mohammad	4/25/2022 5:03:28	Peak Integrated by Software incorrectly



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

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042122AL

Review By	yogesh	Review On	4/22/2022 8:24:43 AM
Supervise By	mohammad	Supervise On	4/22/2022 10:46:19 AM
SubDirectory	FC042122AL	HP Acquire Method	HP Processing Method FC042122AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP19590,PP19593,PP19594,PP19595,PP19596		
CCC	PP19594		
Internal Standard/PEM	PP19598,PP19599		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	Sampled	Data File Name	Date-Time	Operator	Status
1	MECL2	FC059339.D	21 Apr 2022 13:10	UA/NP	Ok
2	I.BLK	FC059340.D	21 Apr 2022 13:50	UA/NP	Ok
3	100 PPM ALIPHATIC HC STD1	FC059341.D	21 Apr 2022 14:27	UA/NP	Ok
4	50 PPM ALIPHATIC HC STD2	FC059342.D	21 Apr 2022 15:06	UA/NP	Ok
5	20 PPM ALIPHATIC HC STD3	FC059343.D	21 Apr 2022 15:45	UA/NP	Ok
6	10 PPM ALIPHATIC HC STD4	FC059344.D	21 Apr 2022 16:23	UA/NP	Ok
7	5 PPM ALIPHATIC HC STD5	FC059345.D	21 Apr 2022 17:02	UA/NP	Ok
8	20 PPM ALIPHATIC HC STD ICV	FC059346.D	21 Apr 2022 17:40	UA/NP	Ok
9	I.BLK	FC059347.D	21 Apr 2022 18:57	UA/NP	Ok
10	20 PPM ALIPHATIC HC STD	FC059348.D	21 Apr 2022 20:15	UA/NP	Ok,M

M : Manual Integration



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Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042222AL

Review By	yogesh	Review On	4/25/2022 8:14:02 AM
Supervise By	mohammad	Supervise On	5/3/2022 11:30:49 AM
SubDirectory	FC042222AL	HP Acquire Method	HP Processing Method FC042122AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP19590,PP19593,PP19594,PP19595,PP19596		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP19594 PP19598,PP19599		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC059349.D	22 Apr 2022 8:25	UA/NP	Ok
2	I.BLK	FC059350.D	22 Apr 2022 9:01	UA/NP	Ok
3	20 PPM ALIPHATIC HC STD	FC059351.D	22 Apr 2022 9:39	UA/NP	Ok,M
4	PB144240BL	FC059352.D	22 Apr 2022 10:51	UA/NP	Ok
5	PB144240BS	FC059353.D	22 Apr 2022 11:29	UA/NP	Ok,M
6	PB144240BSD	FC059354.D	22 Apr 2022 12:07	UA/NP	Ok,M
7	N2349-01	FC059355.D	22 Apr 2022 12:46	UA/NP	Dilution
8	N2349-03	FC059356.D	22 Apr 2022 13:25	UA/NP	Dilution
9	N2349-05	FC059357.D	22 Apr 2022 14:04	UA/NP	Dilution
10	N2349-07	FC059358.D	22 Apr 2022 14:43	UA/NP	Dilution
11	N2349-09	FC059359.D	22 Apr 2022 15:22	UA/NP	Ok,M
12	N2349-11	FC059360.D	22 Apr 2022 16:01	UA/NP	Dilution
13	N2349-13	FC059361.D	22 Apr 2022 16:39	UA/NP	Dilution
14	N2349-15	FC059362.D	22 Apr 2022 17:18	UA/NP	Dilution
15	N2349-17	FC059363.D	22 Apr 2022 17:58	UA/NP	Dilution
16	N2428-01	FC059364.D	22 Apr 2022 18:37	UA/NP	Ok
17	N2428-01D	FC059365.D	22 Apr 2022 19:16	UA/NP	Ok
18	N2428-01MS	FC059366.D	22 Apr 2022 19:55	UA/NP	Ok,M
19	N2428-01MSD	FC059367.D	22 Apr 2022 20:34	UA/NP	Ok,M
20	N2428-02	FC059368.D	22 Apr 2022 21:12	UA/NP	Ok
21	N2428-03	FC059369.D	22 Apr 2022 21:50	UA/NP	Ok
22	N2428-04	FC059370.D	22 Apr 2022 22:30	UA/NP	Ok
23	N2428-05	FC059371.D	22 Apr 2022 23:08	UA/NP	Dilution

Daily Analysis Runlog For Sequence/QC Batch ID # FC042222AL

Review By	yogesh	Review On	4/25/2022 8:14:02 AM		
Supervise By	mohammad	Supervise On	5/3/2022 11:30:49 AM		
SubDirectory	FC042222AL	HP Acquire Method		HP Processing Method	FC042122AL
STD. NAME	STD REF.#				
Tune/Reschk Initial Calibration Stds	PP19590,PP19593,PP19594,PP19595,PP19596				
CCC Internal Standard/PEM	PP19594				
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP19598,PP19599				
24	I.BLK	FC059372.D	22 Apr 2022 23:47	UA/NP	Ok
25	20 PPM ALIPHATIC HC STD	FC059373.D	23 Apr 2022 00:25	UA/NP	Ok,M
26	N2428-06	FC059374.D	23 Apr 2022 2:21	UA/NP	Dilution
27	PB144264BL	FC059375.D	23 Apr 2022 2:59	UA/NP	Ok
28	PB144264BS	FC059376.D	23 Apr 2022 3:38	UA/NP	Ok,M
29	PB144264BSD	FC059377.D	23 Apr 2022 4:16	UA/NP	Ok,M
30	N2487-01	FC059378.D	23 Apr 2022 4:54	UA/NP	Ok
31	N2487-02	FC059379.D	23 Apr 2022 5:32	UA/NP	Ok
32	N2487-02D	FC059380.D	23 Apr 2022 6:09	UA/NP	Ok
33	N2487-02MS	FC059381.D	23 Apr 2022 6:46	UA/NP	Ok,M
34	N2487-02MSD	FC059382.D	23 Apr 2022 7:24	UA/NP	Ok,M
35	N2487-03	FC059383.D	23 Apr 2022 8:01	UA/NP	Ok
36	N2487-04	FC059384.D	23 Apr 2022 8:38	UA/NP	Ok
37	N2487-05	FC059385.D	23 Apr 2022 9:15	UA/NP	Ok
38	N2493-01	FC059386.D	23 Apr 2022 9:52	UA/NP	Ok,M
39	N2493-03	FC059387.D	23 Apr 2022 10:29	UA/NP	Not Ok
40	N2494-01	FC059388.D	23 Apr 2022 11:07	UA/NP	Ok
41	N2494-03	FC059389.D	23 Apr 2022 11:44	UA/NP	Ok
42	N2494-04	FC059390.D	23 Apr 2022 12:22	UA/NP	Ok
43	N2494-06	FC059391.D	23 Apr 2022 13:00	UA/NP	Ok
44	N2507-01	FC059392.D	23 Apr 2022 13:38	UA/NP	ReRun
45	N2507-02	FC059393.D	23 Apr 2022 14:16	UA/NP	Dilution
46	I.BLK	FC059394.D	23 Apr 2022 14:54	UA/NP	Ok
47	20 PPM ALIPHATIC HC STD	FC059395.D	23 Apr 2022 15:31	UA/NP	Ok,M

M : Manual Integration



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Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042122AL

Review By	yogesh	Review On	4/22/2022 8:24:43 AM				
Supervise By	mohammad	Supervise On	4/22/2022 10:46:19 AM				
SubDirectory	FC042122AL	HP Acquire Method	HP Processing Method			FC042122AL	
STD. NAME		STD REF.#					
Tune/Reschk Initial Calibration Stds		PP19590,PP19593,PP19594,PP19595,PP19596					
CCC		PP19594					
Internal Standard/PEM		PP19598,PP19599					
ICV/I.BLK							
Surrogate Standard							
MS/MSD Standard							
LCS Standard							

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC059339.D	21 Apr 2022 13:10		UA/NP	Ok
2	I.BLK	I.BLK	FC059340.D	21 Apr 2022 13:50		UA/NP	Ok
3	100 PPM ALIPHATIC HC	100 PPM ALIPHATIC HC	FC059341.D	21 Apr 2022 14:27		UA/NP	Ok
4	50 PPM ALIPHATIC HC	50 PPM ALIPHATIC HC	FC059342.D	21 Apr 2022 15:06		UA/NP	Ok
5	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059343.D	21 Apr 2022 15:45		UA/NP	Ok
6	10 PPM ALIPHATIC HC	10 PPM ALIPHATIC HC	FC059344.D	21 Apr 2022 16:23		UA/NP	Ok
7	5 PPM ALIPHATIC HC	5 PPM ALIPHATIC HC	FC059345.D	21 Apr 2022 17:02		UA/NP	Ok
8	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059346.D	21 Apr 2022 17:40		UA/NP	Ok
9	I.BLK	I.BLK	FC059347.D	21 Apr 2022 18:57		UA/NP	Ok
10	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059348.D	21 Apr 2022 20:15		UA/NP	Ok,M

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042222AL

Review By	yogesh	Review On	4/25/2022 8:14:02 AM				
Supervise By	mohammad	Supervise On	5/3/2022 11:30:49 AM				
SubDirectory	FC042222AL	HP Acquire Method	HP Processing Method		FC042122AL		
STD. NAME		STD REF.#					
Tune/Reschk Initial Calibration Stds		PP19590,PP19593,PP19594,PP19595,PP19596					
CCC		PP19594					
Internal Standard/PEM		PP19598,PP19599					
ICV/I.BLK							
Surrogate Standard							
MS/MSD Standard							
LCS Standard							

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC059349.D	22 Apr 2022 8:25		UA/NP	Ok
2	I.BLK	I.BLK	FC059350.D	22 Apr 2022 9:01		UA/NP	Ok
3	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059351.D	22 Apr 2022 9:39		UA/NP	Ok,M
4	PB144240BL	PB144240BL	FC059352.D	22 Apr 2022 10:51		UA/NP	Ok
5	PB144240BS	PB144240BS	FC059353.D	22 Apr 2022 11:29		UA/NP	Ok,M
6	PB144240BSD	PB144240BSD	FC059354.D	22 Apr 2022 12:07		UA/NP	Ok,M
7	N2349-01	DEL-1	FC059355.D	22 Apr 2022 12:46	need 10x dilution	UA/NP	Dilution
8	N2349-03	DEL-2	FC059356.D	22 Apr 2022 13:25	need 10x & 100xdilution	UA/NP	Dilution
9	N2349-05	DEL-3	FC059357.D	22 Apr 2022 14:04	need 5x&50x dilution	UA/NP	Dilution
10	N2349-07	DEL-4	FC059358.D	22 Apr 2022 14:43	need 20x dilution	UA/NP	Dilution
11	N2349-09	DEL-5	FC059359.D	22 Apr 2022 15:22		UA/NP	Ok,M
12	N2349-11	DEL-6	FC059360.D	22 Apr 2022 16:01	need 2x dilution	UA/NP	Dilution
13	N2349-13	DEL-7	FC059361.D	22 Apr 2022 16:39	need 10x&100x dilution	UA/NP	Dilution
14	N2349-15	DEL-8	FC059362.D	22 Apr 2022 17:18	need 10x&200x dilution	UA/NP	Dilution
15	N2349-17	DEL-8D	FC059363.D	22 Apr 2022 17:58	need 10x&100x dilution	UA/NP	Dilution
16	N2428-01	S-1	FC059364.D	22 Apr 2022 18:37		UA/NP	Ok
17	N2428-01D	N2428-01D	FC059365.D	22 Apr 2022 19:16		UA/NP	Ok
18	N2428-01MS	S-1MS	FC059366.D	22 Apr 2022 19:55	FC059364.D	UA/NP	Ok,M
19	N2428-01MSD	S-1MSD	FC059367.D	22 Apr 2022 20:34	FC059364.D!FC059366.D	UA/NP	Ok,M

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042222AL

Review By	yogesh	Review On	4/25/2022 8:14:02 AM					
Supervise By	mohammad	Supervise On	5/3/2022 11:30:49 AM					
SubDirectory	FC042222AL	HP Acquire Method	HP Processing Method		FC042122AL			
STD. NAME		STD REF.#						
Tune/Reschk Initial Calibration Stds		PP19590,PP19593,PP19594,PP19595,PP19596						
CCC Internal Standard/PEM		PP19594						
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard		PP19598,PP19599						
20	N2428-02	S-2	FC059368.D	22 Apr 2022 21:12		UA/NP	Ok	
21	N2428-03	S-3	FC059369.D	22 Apr 2022 21:50		UA/NP	Ok	
22	N2428-04	S-4	FC059370.D	22 Apr 2022 22:30		UA/NP	Ok	
23	N2428-05	S-5	FC059371.D	22 Apr 2022 23:08	surrogate fail (need 10x&50x dilution)	UA/NP	Dilution	
24	I.BLK	I.BLK	FC059372.D	22 Apr 2022 23:47		UA/NP	Ok	
25	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059373.D	23 Apr 2022 00:25		UA/NP	Ok,M	
26	N2428-06	S-6	FC059374.D	23 Apr 2022 2:21	need 50x dilution	UA/NP	Dilution	
27	PB144264BL	PB144264BL	FC059375.D	23 Apr 2022 2:59		UA/NP	Ok	
28	PB144264BS	PB144264BS	FC059376.D	23 Apr 2022 3:38		UA/NP	Ok,M	
29	PB144264BSD	PB144264BSD	FC059377.D	23 Apr 2022 4:16		UA/NP	Ok,M	
30	N2487-01	UST-1-PB	FC059378.D	23 Apr 2022 4:54		UA/NP	Ok	
31	N2487-02	UST-1-N	FC059379.D	23 Apr 2022 5:32		UA/NP	Ok	
32	N2487-02D	N2487-02D	FC059380.D	23 Apr 2022 6:09		UA/NP	Ok	
33	N2487-02MS	UST-1-NMS	FC059381.D	23 Apr 2022 6:46	FC059379.D	UA/NP	Ok,M	
34	N2487-02MSD	UST-1-NMSD	FC059382.D	23 Apr 2022 7:24	FC059379.D!FC059381.D	UA/NP	Ok,M	
35	N2487-03	UST-1-E	FC059383.D	23 Apr 2022 8:01		UA/NP	Ok	
36	N2487-04	UST-1-S	FC059384.D	23 Apr 2022 8:38		UA/NP	Ok	
37	N2487-05	UST-1-W	FC059385.D	23 Apr 2022 9:15		UA/NP	Ok	
38	N2493-01	72-11944	FC059386.D	23 Apr 2022 9:52		UA/NP	Ok,M	
39	N2493-03	Field Sampling Hourly R	FC059387.D	23 Apr 2022 10:29	not used	UA/NP	Not Ok	



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Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC042222AL

Review By	yogesh	Review On	4/25/2022 8:14:02 AM					
Supervise By	mohammad	Supervise On	5/3/2022 11:30:49 AM					
SubDirectory	FC042222AL	HP Acquire Method	HP Processing Method		FC042122AL			
STD. NAME		STD REF.#						
Tune/Reschk Initial Calibration Stds		PP19590,PP19593,PP19594,PP19595,PP19596						
CCC		PP19594						
Internal Standard/PEM		PP19598,PP19599						
ICV/I.BLK								
Surrogate Standard								
MS/MSD Standard								
LCS Standard								
40	N2494-01	MH-1S	FC059388.D	23 Apr 2022 11:07		UA/NP	Ok	
41	N2494-03	MH-1S-EPH	FC059389.D	23 Apr 2022 11:44		UA/NP	Ok	
42	N2494-04	MH-1D	FC059390.D	23 Apr 2022 12:22		UA/NP	Ok	
43	N2494-06	MH-1D-EPH	FC059391.D	23 Apr 2022 13:00		UA/NP	Ok	
44	N2507-01	PL-01-042022	FC059392.D	23 Apr 2022 13:38	surrogate fail	UA/NP	ReRun	
45	N2507-02	PL-01-042022-EPH-2	FC059393.D	23 Apr 2022 14:16	surrogate fail;Need 2X	UA/NP	Dilution	
46	I.BLK	I.BLK	FC059394.D	23 Apr 2022 14:54		UA/NP	Ok	
47	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC059395.D	23 Apr 2022 15:31		UA/NP	Ok,M	

M : Manual Integration



PERCENT SOLID

Supervisor: apatel
Analyst: JIGNESH
Date: 4/21/2022

OVENTEMP IN Celsius(°C): 107
Time IN: 16:50
In Date: 04/20/2022
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:17
Out Date: 04/21/2022
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB119764

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
N2480-01	WC-16-1A-1-GR	1	1.15	8.40	9.55	8.62	88.9	
N2480-03	WC-16-1A-1	2	1.17	8.54	9.71	8.51	85.9	
N2480-05	WC-16-1A-2-GR	3	1.16	8.54	9.7	8.14	81.7	
N2480-07	WC-16-1A-2	4	1.16	8.81	9.97	8.52	83.5	
N2480-09	WC-16-1A-3-GR	5	1.11	8.50	9.61	7.82	78.9	
N2480-11	WC-16-1A-3	6	1.19	8.49	9.68	8.04	80.7	
N2480-13	WC-16-1A-4-GR	7	1.15	8.70	9.85	8.33	82.5	
N2480-15	WC-16-1A-4	8	1.15	8.66	9.81	8.21	81.5	
N2487-01	UST-1-PB	20	1.15	8.76	9.91	8.04	78.7	
N2487-02	UST-1-N	21	1.15	8.79	9.94	8.62	85.0	
N2487-03	UST-1-E	22	1.17	8.68	9.85	8.05	79.3	
N2487-04	UST-1-S	23	1.19	8.78	9.97	8.5	83.3	
N2487-05	UST-1-W	24	1.17	8.69	9.86	8.36	82.7	
N2489-01	20220369-WEST-CREEK-TUBE-A-1-COMPOSITE	9	1.18	8.54	9.72	4.25	35.9	SLUDGE SAMPLE
N2489-02	20220370-WEST-CREEK-TUBE-A-5-COMPOSITE	10	1.15	8.80	9.95	4.32	36.0	SLUDGE SAMPLE
N2489-03	20220371-WEST-CREEK-TUBE-B-8-COMPOSITE	11	1.15	8.81	9.96	4.05	32.9	SLUDGE SAMPLE
N2489-04	20220372-WEST-CREEK-TUBE-B-14-COMPOSITE	12	1.16	8.74	9.9	4.12	33.9	SLUDGE SAMPLE
N2489-05	20220373-WEST-CREEK-TUBE-B-22-COMPOSITE	13	1.15	8.83	9.98	4.18	34.3	SLUDGE SAMPLE
N2489-06	20220374-WEST-CREEK-TUBE-A-22-COMPOSITE	14	1.14	8.79	9.93	4.69	40.4	SLUDGE SAMPLE
N2491-01	RBR-200046-333	15	1.15	8.83	9.98	8.82	86.9	
N2493-01	72-11944	16	1.15	8.80	9.95	9.05	89.8	
N2493-02	72-11944-EPH-2	17	1.15	8.80	9.95	9.05	89.8	
N2494-01	MH-1S	25	1.14	8.70	9.84	8.87	88.9	
N2494-03	MH-1S-EPH	26	1.14	8.70	9.84	8.87	88.9	
N2494-04	MH-1D	27	1.16	8.59	9.75	9.28	94.5	



PERCENT SOLID

Supervisor: apatel
Analyst: JIGNESH
Date: 4/21/2022

OVENTEMP IN Celsius(°C): 107
Time IN: 16:50
In Date: 04/20/2022
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN-1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:17
Out Date: 04/21/2022
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: %SOLIDS-OVEN

QC:LB119764

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
N2494-06	MH-1D-EPH	28	1.16	8.59	9.75	9.28	94.5	
N2507-01	PL-01-042022	18	1.11	8.68	9.79	9.1	92.1	
N2507-02	PL-01-042022-EPH-2	19	1.11	8.68	9.79	9.1	92.1	
N2508-01	40576-SOL	29	1.15	8.82	9.97	5.59	50.3	
N2510-01	AUD-1596	30	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2510-02	AUD-1597	31	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2510-03	AUD-1598	32	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2510-04	AUD-1599	33	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2510-05	AUD-1600	34	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2510-06	AUD-1602	35	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
N2511-01	1526	36	1.14	8.50	9.64	8.21	83.2	
N2511-02	1527	37	1.15	8.40	9.55	9.35	97.6	
N2511-03	1528	38	1.19	8.56	9.75	7.43	72.9	
N2511-04	1529	39	1.16	8.81	9.97	9.71	97.0	
N2511-05	1526-29	40	1.13	8.67	9.8	8.61	86.3	
N2511-05D	1526-29DUP	41	1.15	8.67	9.82	8.63	86.3	

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

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-042022 WorkList ID : 158823 Department : Wet-Chemistry Date : 04-20-2022 08:16:00

Due Date	Matrix	Sample	Test	Raw Sample			Preservative	Customer	Customer Sample			Collect Date	Method
				Storage	Location								
04/22/2022	Solid	N2480-01	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-1-GR		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-03	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-1		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-05	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-2-GR		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-07	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-2		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-09	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-3-GR		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-11	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-3		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-13	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-4-GR		04/19/2022	Chemtech -SO
04/22/2022	Solid	N2480-15	Percent Solids		P11		Cool 4 deg C	ROUX02	P11	WC-16-1A-4		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2487-01	Percent Solids		N11		Cool 4 deg C	AEIC01	N11	UST-1-PB		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2487-02	Percent Solids		N11		Cool 4 deg C	AEIC01	N11	UST-1-N		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2487-03	Percent Solids		N11		Cool 4 deg C	AEIC01	N11	UST-1-E		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2487-04	Percent Solids		N11		Cool 4 deg C	AEIC01	N11	UST-1-S		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2487-05	Percent Solids		N11		Cool 4 deg C	AEIC01	N11	UST-1-W		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2489-01	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220369-WEST-CREEK-TUBE-A-1-COMPOSITE		04/18/2022	Chemtech -SO
04/27/2022	Solid	N2489-02	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220370-WEST-CREEK-TUBE-A-5-COMPOSITE		04/18/2022	Chemtech -SO
04/27/2022	Solid	N2489-03	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220371-WEST-CREEK-TUBE-B-8-COMPOSITE		04/18/2022	Chemtech -SO
04/27/2022	Solid	N2489-04	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220372-WEST-CREEK-TUBE-B-14-COMPOSITE		04/18/2022	Chemtech -SO
04/27/2022	Solid	N2489-05	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220373-WEST-CREEK-TUBE-B-22-COMPOSITE		04/18/2022	Chemtech -SO
04/27/2022	Solid	N2489-06	Percent Solids		P11		Cool 4 deg C	AQUA04	P11	20220374-WEST-CREEK-TUBE-A-22-COMPOSITE		04/18/2022	Chemtech -SO
04/25/2022	Solid	N2491-01	Percent Solids		P11		Cool 4 deg C	PSEG03	P11	RBR-200046-333		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2493-01	Percent Solids		P11		Cool 4 deg C	PSEG03	P11	72-11944		04/20/2022	Chemtech -SO

Date/Time 04/20/22 15:45 Date/Time 04/20/22 17:10
 Raw Sample Received by: JP(WC) Raw Sample Received by: KS(WC)
 Raw Sample Relinquished by: KS(WC) Raw Sample Relinquished by: JP(WC)

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-042022

WorkList ID : 158823

Department : Wet-Chemistry

Date : 04-20-2022 08:16:00

Due Date	Matrix	Sample	Test	Raw Sample			Preservative	Customer	Raw Sample Storage Location	Customer Sample		Collect Date	Method
04/25/2022	Solid	N2493-02	Percent Solids				Cool 4 deg C	PSEG03	P11	72-11944-EPH-2		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2494-01	Percent Solids				Cool 4 deg C	PSEG03	P11	MH-1S		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2494-03	Percent Solids				Cool 4 deg C	PSEG03	P11	MH-1S-EPH		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2494-04	Percent Solids				Cool 4 deg C	PSEG03	P11	MH-1D		04/19/2022	Chemtech -SO
04/27/2022	Solid	N2494-06	Percent Solids				Cool 4 deg C	PSEG03	P11	MH-1D-EPH		04/19/2022	Chemtech -SO
04/25/2022	Solid	N2507-01	Percent Solids				Cool 4 deg C	PSEG05	P11	PL-01-042022		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2507-02	Percent Solids				Cool 4 deg C	PSEG05	P11	PL-01-042022-EPH-2		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2508-01	Percent Solids				Cool 4 deg C	PSEG03	P11	40576-SOL		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-01	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1596		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-02	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1597		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-03	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1598		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-04	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1599		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-05	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1600		04/20/2022	Chemtech -SO
04/25/2022	Solid	N2510-06	Percent Solids				Cool 4 deg C	PSEG03	P11	AUD-1602		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2511-01	Percent Solids				Cool 4 deg C	PSEG03	P11	1526		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2511-02	Percent Solids				Cool 4 deg C	PSEG03	P11	1527		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2511-03	Percent Solids				Cool 4 deg C	PSEG03	P11	1528		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2511-04	Percent Solids				Cool 4 deg C	PSEG03	P11	1529		04/20/2022	Chemtech -SO
04/27/2022	Solid	N2511-05	Percent Solids				Cool 4 deg C	PSEG03	P11	1526-29		04/20/2022	Chemtech -SO

Date/Time

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time

Raw Sample Received by:

Raw Sample Relinquished by:

SOP ID: MNJDEP-EPH-7

Clean Up SOP #: N/A

Matrix: Solid

Weigh By: HM

Balance check: RJ

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date: 04/21/2022

Extraction Start Time: 09:36

Extraction End Date: 04/21/2022

Extraction End Time: 14:20

Concentration By: RS

Supervisor By: rajesh

Extraction Method: ☐ Separatory Funne

☐ Continous Liquid/Liquid

☐ Sonication

☐ Waste Dilution

☒ Soxhlet

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	100 PPM	PP19898
Surrogate	1.0ML	100 PPM	PP19853
Fractionation Surrogate	1.0ML	100 PPM	PP19918
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2239
Baked Na2SO4	N/A	EP2236
Sand	N/A	E2865
Hexane	N/A	E3314
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
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

KD Bath ID: N/A

KD Bath Temperature: N/A

Envap ID: NE VAP-02

Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/21/22 14:25	RP (Ext. Lab)	MR Rest/PcB Lab
	Preparation Group	Analysis Group

Analytical Method: MNJDEP-EPH-7

Concentration Date: 04/21/2022

Sample ID	Client Sample ID	Test	g/mL	PH	Surr/Spike By:		Final Vol.(mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB144264BL	PB144264BL	EPH_NF	30.01	N/A	ritesh	Haroon	2			U1-1
PB144264BS	PB144264BS	EPH_NF	30.03	N/A	ritesh	Haroon	2			2
PB144264BSD	PB144264BSD	EPH_NF	30.00	N/A	ritesh	Haroon	2			3
N2487-01	UST-1-PB	EPH_NF	30.04	N/A	ritesh	Haroon	2			4
N2487-02	UST-1-N	EPH_NF	30.09	N/A	ritesh	Haroon	2			5
N2487-02DUP	UST-1-NDUP	EPH_NF	30.08	N/A	ritesh	Haroon	2			6
N2487-02MS	UST-1-NMS	EPH_NF	30.03	N/A	ritesh	Haroon	2			U2-1
N2487-02MSD	UST-1-NMSD	EPH_NF	30.05	N/A	ritesh	Haroon	2			2
N2487-03	UST-1-E	EPH_NF	30.10	N/A	ritesh	Haroon	2			3
N2487-04	UST-1-S	EPH_NF	30.06	N/A	ritesh	Haroon	2			4
N2487-05	UST-1-W	EPH_NF	30.07	N/A	ritesh	Haroon	2			5
N2493-01	72-11944	EPH_NF	30.02	N/A	ritesh	Haroon	2	E		6
N2493-02	72-11944-EPH-2	EPH_NF	30.04	N/A	ritesh	Haroon	2			U3-1
N2494-01	MH-1S	EPH_NF	30.09	N/A	ritesh	Haroon	2	E		2
N2494-03	MH-1S-EPH	EPH_NF	30.05	N/A	ritesh	Haroon	2			3
N2494-04	MH-1D	EPH_NF	30.02	N/A	ritesh	Haroon	2	E		4
N2494-06	MH-1D-EPH	EPH_NF	30.05	N/A	ritesh	Haroon	2			5
N2507-01	PL-01-042022	EPH_NF	30.07	N/A	ritesh	Haroon	2	E		6
N2507-02	PL-01-042022-EPH-2	EPH_NF	30.04	N/A	ritesh	Haroon	2			U5-1

* Extracts relinquished on the same date as received.

BP
4/21



Prep Standard - Chemical Standard Summary

Order ID : N2487

Test : EPH_NF

Prepbatch ID : PB144264,

Sequence ID/Qc Batch ID: FC042222AL,

Standard ID :

EP2236,EP2239,PP19590,PP19593,PP19594,PP19595,PP19596,PP19598,PP19599,PP19853,PP19898,PP19918,

Chemical ID :

E2865,E3237,E3243,E3290,E3292,E3294,E3296,E3314,P10270,P10271,P10976,P10977,P10982,P 11000,P11001,P11112,
P11113,P11321,P11322,P11323,P11328,P11329,P11330,P11331,P11344,P11345,P11346,P11398,P11399,P11400,P11401,P
11402,P11403,P11404,P11405,P11406,P11407,P11436,P11437,P11438,P11439,P11440,P11441,P11442,P11443,P11444,P1
1445,P11449,P11450,

CHEMTECH

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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>
3923	Baked Sodium Sulfate	EP2236	04/01/2022	10/01/2022	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 04/01/2022

FROM 4000.00000gram of E3296 = Final Quantity: 4000.000 gram

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3868	METHELENE CHLORIDE+ACETONE	EP2239	04/06/2022	09/29/2022	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 04/06/2022

FROM 8000.00000ml of E3292 + 8000.00000ml of E3294 = Final Quantity: 1600.000 ml

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<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)	PP19590	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani 02/18/2022
<u>FROM</u>	0.50000ml of P10976 + 0.50000ml of P11000 + 1.25000ml of P10270 + 1.25000ml of P10271 + 46.50000ml of E3243 = Final Quantity: 50.000 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>
783	50 PPM Aliphatic HC STD	PP19593	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani 02/18/2022
<u>FROM</u>	0.50000ml of E3243 + 0.50000ml of PP19590 = Final Quantity: 1.000 ml							

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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>
784	20 PPM Aliphatic HC STD	PP19594	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani
02/18/2022								

FROM 0.80000ml of E3243 + 0.20000ml of PP19590 = 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>
785	10 PPM Aliphatic HC STD	PP19595	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani
02/18/2022								

FROM 0.90000ml of E3243 + 0.10000ml of PP19590 = Final Quantity: 1.000 ml

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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>
786	5 PPM Aliphatic HC STD	PP19596	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani
02/18/2022								

FROM 0.90000ml of E3243 + 0.10000ml of PP19593 = 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>
2900	100 PPM Aliphatic HC STD (Absolute)	PP19598	02/15/2022	08/14/2022	Yogesh Patel	None	None	Ankita Jodhani
02/18/2022								

FROM 0.25000ml of P10977 + 0.25000ml of P11001 + 1.25000ml of P11112 + 1.25000ml of P11113 + 22.00000ml of E3243 = Final Quantity: 25.000 ml

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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)	PP19599	02/15/2022	08/15/2022	Yogesh Patel	None	None	Ankita Jodhani
02/18/2022								

FROM

<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	PP19853	03/29/2022	09/28/2022	Yogesh Patel	None	None	Sohil Jodhani
03/31/2022								

FROM

1.25000ml of P10982 + 1.25000ml of P11328 + 1.25000ml of P11329 + 1.25000ml of P11330 + 1.25000ml of P11331 +
1.25000ml of P11344 + 1.25000ml of P11345 + 1.25000ml of P11346 + 490.00000ml of E3290 = Final Quantity: 200.000 ml

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<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1330	100 PPM NJEPH Spike Solution	PP19898	04/08/2022	10/08/2022	Abdul Mirza	None	None	Yogesh Patel 04/25/2022
<u>FROM</u>	5.00000ml of P11398 + 5.00000ml of P11399 + 5.00000ml of P11400 + 5.00000ml of P11401 + 5.00000ml of P11402 + 5.00000ml of P11403 + 5.00000ml of P11404 + 5.00000ml of P11405 + 5.00000ml of P11406 + 5.00000ml of P11407 + 5.00000ml of P11436 + 5.00000ml of P11437 + 5.00000ml of P11438 + 5.00000ml of P11439 + 5.00000ml of P11440 + 5.00000ml of P11441 + 5.00000ml of P11442 + 5.00000ml of P11443 + 5.00000ml of P11444 + 5.00000ml of P11445 = Final Quantity: 100.000 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>
1331	100 PPM NJEPH Fractionating Surrogate	PP19918	04/09/2022	06/09/2022	Abdul Mirza	None	None	Yogesh Patel 04/25/2022
<u>FROM</u>	1.00000ml of P11321 + 1.00000ml of P11322 + 1.00000ml of P11323 + 1.00000ml of P11449 + 1.00000ml of P11450 + 195.00000ml of E3237 = Final Quantity: 200.000 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	10/29/2022	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 #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	21K1662002	10/30/2022	01/25/2022 / Rajesh	01/19/2022 / Rajesh	E3237

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)	0000286118	08/14/2022	02/14/2022 / Rajesh	02/02/2022 / Rajesh	E3243

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)	0000285502	09/28/2022	03/28/2022 / Rajesh	03/23/2022 / Rajesh	E3290

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)	22B242008	09/29/2022	03/29/2022 / Rajesh	03/29/2022 / Rajesh	E3292

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)	0000285137	10/01/2022	04/01/2022 / Rajesh	03/30/2022 / Rajesh	E3294

CHEMICAL RECEIPT LOG BOOK

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	125102	10/01/2022	04/01/2022 / Rajesh	03/28/2022 / Rajesh	E3296

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)	22B0762004	10/22/2022	04/22/2022 / Rajesh	04/14/2022 / Rajesh	E3314

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30540 / Custom NJEPH Aliphatics Calibration Standard	A0163892	08/15/2022	02/15/2022 / yogesh	01/26/2021 / dhaval	P10270

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30540 / Custom NJEPH Aliphatics Calibration Standard	A0163892	08/15/2022	02/15/2022 / yogesh	01/26/2021 / dhaval	P10271

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0171297	08/15/2022	02/15/2022 / yogesh	08/06/2021 / Abdul	P10976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0171297	08/15/2022	02/15/2022 / yogesh	08/06/2021 / Abdul	P10977

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	A0171297	09/29/2022	03/29/2022 / yogesh	08/06/2021 / Abdul	P10982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0173046	08/15/2022	02/15/2022 / yogesh	08/06/2021 / Abdul	P11000

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0173046	08/15/2022	02/15/2022 / yogesh	08/06/2021 / Abdul	P11001

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	092821	08/15/2022	02/15/2022 / yogesh	09/30/2021 / Abdul	P11112

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	092821	08/15/2022	02/15/2022 / yogesh	09/30/2021 / Abdul	P11113

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0175042	06/09/2022	04/09/2022 / Abdul	01/06/2022 / yogesh	P11321

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0175042	10/09/2022	04/09/2022 / Abdul	01/06/2022 / yogesh	P11322

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0175042	10/09/2022	04/09/2022 / Abdul	01/06/2022 / yogesh	P11323

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0177896	09/29/2022	03/29/2022 / yogesh	01/06/2022 / yogesh	P11328

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0177896	09/29/2022	03/29/2022 / yogesh	01/06/2022 / yogesh	P11329

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0177896	09/29/2022	03/29/2022 / yogesh	01/06/2022 / yogesh	P11330

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0177896	09/29/2022	03/29/2022 / yogesh	01/06/2022 / yogesh	P11331

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	A0177029	09/29/2022	03/29/2022 / yogesh	01/06/2022 / Abdul	P11344

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0177029	09/29/2022	03/29/2022 / yogesh	01/06/2022 / Abdul	P11345

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0177029	09/29/2022	03/29/2022 / yogesh	01/06/2022 / Abdul	P11346

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11398

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11399

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11400

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	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11401

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11402

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11403

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11404

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11405

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0180740	02/28/2029	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11406

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	A0180740	10/08/2022	04/08/2022 / Abdul	02/09/2022 / Yogesh	P11407

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11436

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11437

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11438

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11439

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11440

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	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11441

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11442

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11443

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11444

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0177559	10/08/2022	04/08/2022 / Abdul	11/16/2021 / Yogesh	P11445

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0179976	11/30/2027	04/09/2022 / Abdul	02/10/2022 / Yogesh	P11449



CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0179976	11/30/2027	04/09/2022 / Abdul	02/10/2022 / Yogesh	P11450



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30540 **Lot No.:** A0163892

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 : September 30, 2027 **Storage:** 25°C nominal

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

DD
01/26/21
P10270
TO - (5)
P10274

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	n-Nonane (C9) CAS # 111-84-2 (Lot SHBK7143) Purity 99%	2,003.5 µg/mL	+/- 11.7577 µg/mL Gravimetric +/- 49.7420 µg/mL Unstressed +/- 59.6365 µg/mL Stressed
2	n-Decane (C10) CAS # 124-18-5 (Lot SHBL4313) Purity 99%	2,008.5 µg/mL	+/- 11.7870 µg/mL Gravimetric +/- 49.8662 µg/mL Unstressed +/- 59.7853 µg/mL Stressed
3	Naphthalene CAS # 91-20-3 (Lot MKBZ8680V) Purity 99%	2,000.5 µg/mL	+/- 11.7401 µg/mL Gravimetric +/- 49.6676 µg/mL Unstressed +/- 59.5472 µg/mL Stressed
4	n-Dodecane (C12) CAS # 112-40-3 (Lot SHBK0925) Purity 99%	2,002.5 µg/mL	+/- 11.7518 µg/mL Gravimetric +/- 49.7172 µg/mL Unstressed +/- 59.6068 µg/mL Stressed
5	2-Methylnaphthalene CAS # 91-57-6 (Lot STBG8884) Purity 96%	2,008.8 µg/mL	+/- 11.7888 µg/mL Gravimetric +/- 49.8736 µg/mL Unstressed +/- 59.7943 µg/mL Stressed
6	n-Tetradecane (C14) CAS # 629-59-4 (Lot STBJ0716) Purity 99%	2,010.0 µg/mL	+/- 11.7958 µg/mL Gravimetric +/- 49.9034 µg/mL Unstressed +/- 59.8300 µg/mL Stressed
7	n-Hexadecane (C16) CAS # 544-76-3 (Lot SHBJ7508) Purity 99%	2,009.0 µg/mL	+/- 11.7899 µg/mL Gravimetric +/- 49.8786 µg/mL Unstressed +/- 59.8002 µg/mL Stressed

8	n-Octadecane (C18) CAS # 593-45-3 Purity 99%	(Lot RI6FI)	2,000.5 µg/mL	+/- +/- +/-	11.7401 49.6676 59.5472	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	(Lot MKCF7888)	2,009.5 µg/mL	+/- +/- +/-	11.7929 49.8910 59.8151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Heneicosane (C21) CAS # 629-94-7 Purity 99%	(Lot MKBZ8320V)	2,005.5 µg/mL	+/- +/- +/-	11.7694 49.7917 59.6961	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCH2086)	2,011.5 µg/mL	+/- +/- +/-	11.8046 49.9407 59.8746	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCJ8741)	2,010.5 µg/mL	+/- +/- +/-	11.7987 49.9158 59.8449	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCG6079)	2,005.5 µg/mL	+/- +/- +/-	11.7694 49.7917 59.6961	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCB6836)	2,008.5 µg/mL	+/- +/- +/-	11.7870 49.8662 59.7853	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Triacontane (C30) CAS # 638-68-6 Purity 98%	(Lot MKCJ4572)	2,001.7 µg/mL	+/- +/- +/-	11.7468 49.6961 59.5815	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	2,001.0 µg/mL	+/- +/- +/-	11.7430 49.6800 59.5621	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	2,005.0 µg/mL	+/- +/- +/-	11.7665 49.7793 59.6812	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot MKCK2834)	2,006.5 µg/mL	+/- +/- +/-	11.7753 49.8165 59.7258	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 99%	(Lot 0000050904)	2,013.5 µg/mL	+/- +/- +/-	11.8163 49.9903 59.9342	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot 4LJYN)	2,000.2 µg/mL	+/- +/- +/-	11.7382 49.6596 59.5377	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: Hexane/Carbon disulfide (80:20) CAS # 110-54-3/75-15-0 Purity 99%							

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

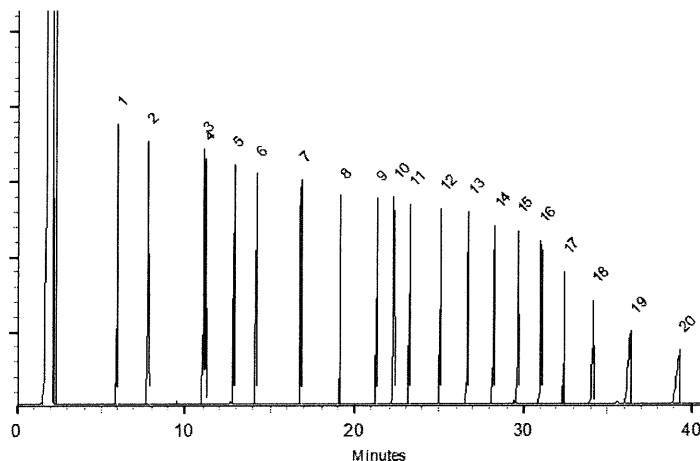
Carrier Gas:
hydrogen-constant pressure 10 psi.

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

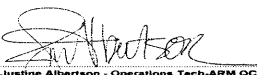


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Clara Windle - Operations Technician I

Date Mixed: 25-Aug-2020

Balance: B442140311


Justine Albertson - Operations Tech-ARM QC

Date Passed: 28-Aug-2020

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.

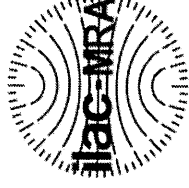


110 Benner Circle
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Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31480 Lot No.: A0175042

Description: MA Fractionation Surrogate Spike Mix

Container Size: 2 mL Pkg Amt: > 1 mL

Expiration Date: July 31, 2027 Storage: 10°C or colder

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

P1311

J.P
↓
01/07/22

P1323

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Fluorobiphenyl CAS # 321-60-8 Purity 99%	4,018.0 µg/mL (Lot 00019169)	+/- 23.5263 µg/mL Gravimetric +/- 180.9945 µg/mL Unstressed +/- 200.8313 µg/mL Stressed
2	2-Bromonaphthalene CAS # 580-13-2 Purity 99%	4,040.0 µg/mL (Lot STBC5362V)	+/- 23.6551 µg/mL Gravimetric +/- 181.9855 µg/mL Unstressed +/- 201.9310 µg/mL Stressed

Solvent:

Hexane
CAS # 110-54-3
Purity 99%

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:

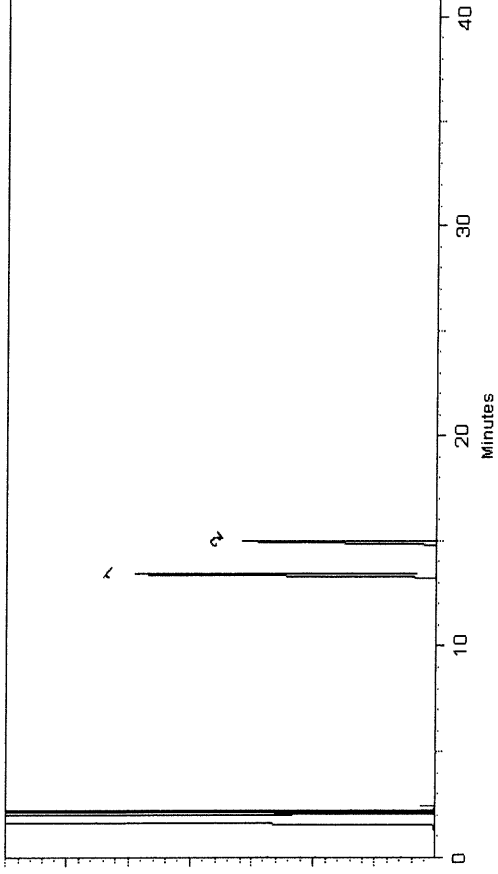
250°C

Det. Temp:

330°C

Det. Type:

FID

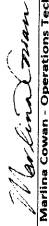


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.



Russ Bookhamer - Operations Technician I

Date Mixed: 03-Aug-2021 Balance: 1128360905



Marlene Cowan - Operations Tech I

Date Passed: 05-Aug-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.



CERTIFIED REFERENCE MATERIAL

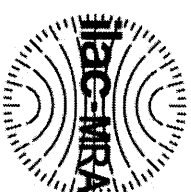
110 Benner Circle
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 30543

Lot No.: A0177559

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, 2027

Storage: 10° C or colder

Handling:

Sonication required. Mix is photosensitive.

Ship: Ambient

P11426
↓
P11428
y.p
02/16/22

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 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
2	Naphthalene CAS # 91-20-3 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
3	2-Methylnaphthalene CAS # 91-57-6 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
4	Acenaphthylene CAS # 208-96-8 Purity 98%	201.1 µg/mL	+/- 1.1944 +/- 9.0608 +/- 10.0534	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
5	Acenaphthene CAS # 83-32-9 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
6	Fluorene CAS # 86-73-7 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed
7	Phenanthrene CAS # 85-01-8 Purity 99%	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL Gravimetric Unstressed Stressed

8	Anthracene CAS # 120-12-7 Purity 99%	(Lot MKCN0922)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Fluoranthene CAS # 206-44-0 Purity 99%	(Lot MKCF7378)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Pyrene CAS # 129-00-0 Purity 99%	(Lot BCCG2258)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Benz(a)anthracene CAS # 56-55-3 Purity 96%	(Lot RP210125)	201.6 µg/mL	+/- 1.1974 +/- 9.0835 +/- 10.0786	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	Chrysene CAS # 218-01-9 Purity 99%	(Lot STB11016)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	Benzo(b)fluoranthene CAS # 205-99-2 Purity 99%	(Lot 012012B)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	Benzo(k)fluoranthene CAS # 207-08-9 Purity 99%	(Lot 012019K)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	Benzo(a)pyrene CAS # 50-32-8 Purity 99%	(Lot Z8BKF)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	Indeno(1,2,3-cd)pyrene CAS # 193-39-5 Purity 99%	(Lot 8-URV-2-1)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Dibenz(a,h)anthracene CAS # 53-70-3 Purity 99%	(Lot ER032211-01)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	Benzo(g,h,i)perylene CAS # 191-24-2 Purity 99%	(Lot 8GFYJ)	201.2 µg/mL	+/- 1.1951 +/- 9.0655 +/- 10.0586	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

Solvent: Acetone/Toluene (50:50)
CAS # 67-64-1/108-88-3
Purity 99%

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

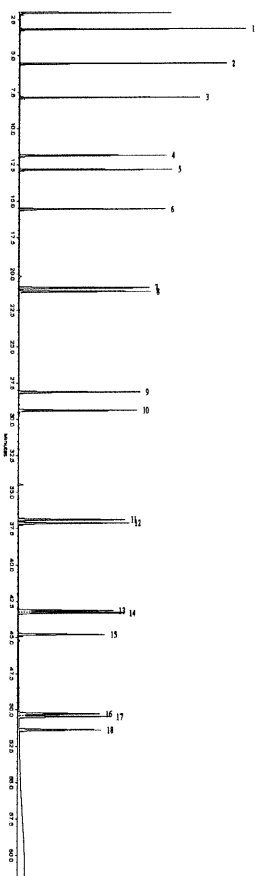
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.


Katelyn MacGinnl - Operations Tech I

Date Mixed: 18-Oct-2021 **Balance:** 1128353505


John Lidgett - AD Chemist

Date Passed: 21-Oct-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.

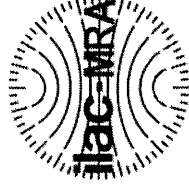


CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31097 Lot No.: A0177896
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 : May 31, 2025 Storage: 10°C or colder
Handling: Sonicate prior to use. Ship: Ambient

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P.P.
P11343
01/07/22

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	Gravimetric
1	o-Terphenyl CAS # 84-15-1 Purity 99%	10,000.6 µg/mL (Lot MKCH4487)	+/- 58.1413 +/- 450.4326 +/- 499.8107	µg/mL µg/mL µg/mL Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:

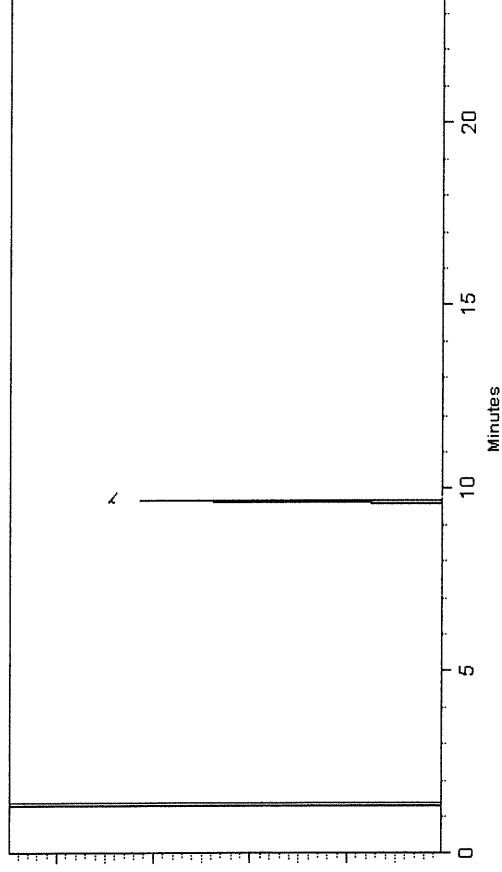
250°C

Det. Temp:

330°C

Det. Type:

FID



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


Morgan Craighead - Mix Technician

Date Mixed: 27-Oct-2021 **Balance:** B442140311


Alexis Shelow - Operations Tech I

Date Passed: 29-Oct-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.

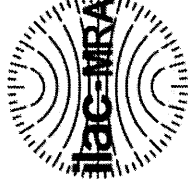


110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 31480 Lot No.: A0179976
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: November 30, 2027 Storage: 10°C or colder
Handling: Sonication required. Mix is Ship: Ambient
photosensitive.

P111h9
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y.p
02/10/24
P111h58

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Fluorobiphenyl CAS # 321-60-8 Purity 99%	(Lot 19169) 4,026.3 µg/mL +/- 23.5751 µg/mL +/- 181.3699 µg/mL +/- 201.2479 µg/mL	Gravimetric Unstressed Stressed
2	2-Bromonaphthalene CAS # 580-13-2 Purity 99%	(Lot STBC5362V) 4,023.0 µg/mL +/- 23.5555 µg/mL +/- 181.2198 µg/mL +/- 201.0812 µg/mL	Gravimetric Unstressed Stressed
Solvent:	Hexane CAS # 110-54-3 Purity 99%		

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:

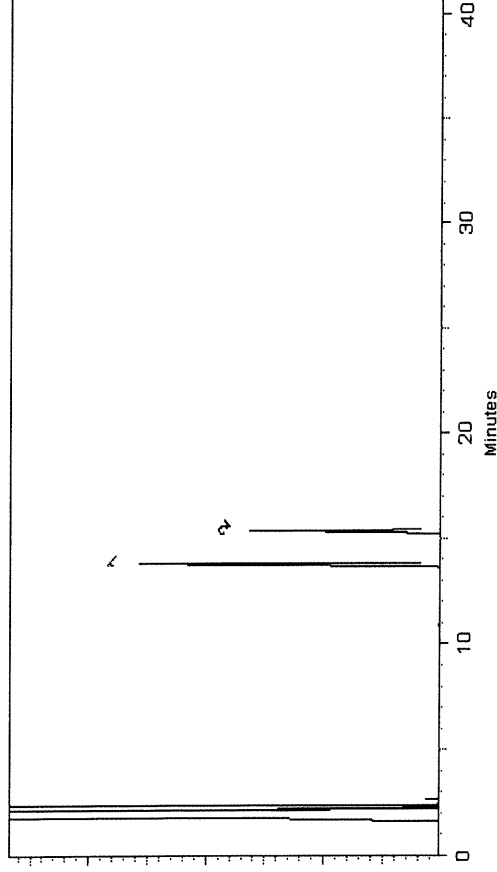
250°C

Det. Temp:

330°C

Det. Type:

FID



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.

Damian Mains

Damian Mains - Operations Tech I

Date Mixed: 26-Dec-2021

Balance: B345965662

Clara Windle

Clara Windle - Operations Technician I

Date Passed: 29-Dec-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:

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

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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:

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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

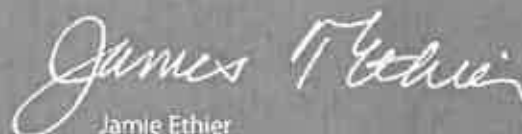
Certificate of Analysis

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

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent



Material No.: 9262-03
Batch No.: 21K1662002
Manufactured Date: 2021-10-19
Expiration Date: 2023-01-18
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 Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	3
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	< 1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	< 0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

E 3237

James T. Erhler
Jamie Erhler
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

Hexanes (95% n-hexane)
ULTRA RESI-ANALYZED
For Organic Residue Analysis



Material No.: 9262-03
Batch No.: 0000286118
Manufactured Date: 2021/06/05
Expiration Date: 2022/09/04
Revision No: 1

Certificate of Analysis

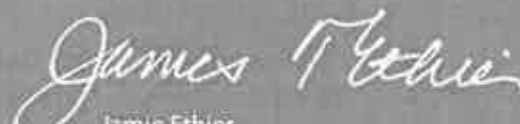
Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	< 1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	< 1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	99.7
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.1
Substances Darkened by H ₂ SO ₄	Passes Test	PT
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 2/2/22

E 3243


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

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

 **avantors™**



Material No.: 9254-03
Batch No.: 0000285502
Manufactured Date: 2021/02/03
Expiration Date: 2024/02/03
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
Titration Acid (μeq/g)	<= 0.3	0.2
Titration Base (μeq/g)	<= 0.6	< 0.1
Water (H ₂ O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 3/23/22

E 3290


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

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



Material No.: 9266-A4
Batch No.: 22B2462008
Manufactured Date: 2022-02-03
Expiration Date: 2023-05-05
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 Heptachlor Epoxide) 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	$\leq 1.0 \text{ ppm}$	0.1 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	$\leq 10 \text{ ppm}$	5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

E 3292

James Ethier
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

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™



Material No.: 9254-03
Batch No.: 0000285137
Manufactured Date: 2021/05/12
Expiration Date: 2024/05/11
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.7
Color (APHA)	<= 10	10
Residue after Evaporation	<= 1.0000 ppm	0.4000
Substances Reducing Permanganate	Passes Test	PT
Titration Acid (μeq/g)	<= 0.3	0.1
Titration Base (μeq/g)	<= 0.6	< 0.1
Water (H ₂ O)	<= 0.5 %	0.3
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	2

For Laboratory, Research or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 3/30/22

E3294

James Ethier
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.**

allan

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MÉXICO
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:	JUL/22/2021
LOT NUMBER :	125102		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.8 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.0
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%	0.002 %
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%	0.33 %
Retained on US Standard No. 60 sieve	Min. 94%	97.40 %
Through US Standard No. 60 sieve	Max. 5%	2.04 %
Through US Standard No. 100 sieve	Max. 10%	0.23 %

COMMENTS

E3296

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent



Material No.: 9262-03
Batch No.: 22B0762004
Manufactured Date: 2021-11-24
Expiration Date: 2023-02-23
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 Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	< 1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	< 0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

For Laboratory, Research, or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 4/14/22

E 3314


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



CERTIFIED WEIGHT REPORT

Part Number: **95899**

Lot Number: **092821**

Description: **NJ EPH Aliphatic n-Hydrocarbons - Revised**

20 components

Expiration Date: **092831**

Recommended Storage: **Ambient (20 °C)**

Nominal Concentration ($\mu\text{g/mL}$): **1000**

NIST Test ID#: **6UTB**

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

CAUTION: Sonicate Before Use

Solvent(s):
Cyclohexane

Lot#
28930

Formulated By: <i>Benson Chan</i>	DATE: 092821
Reviewed By: <i>Pedro L. Rentas</i>	DATE: 092821

5E-05 Balance Uncertainty
0.005 Flask Uncertainty

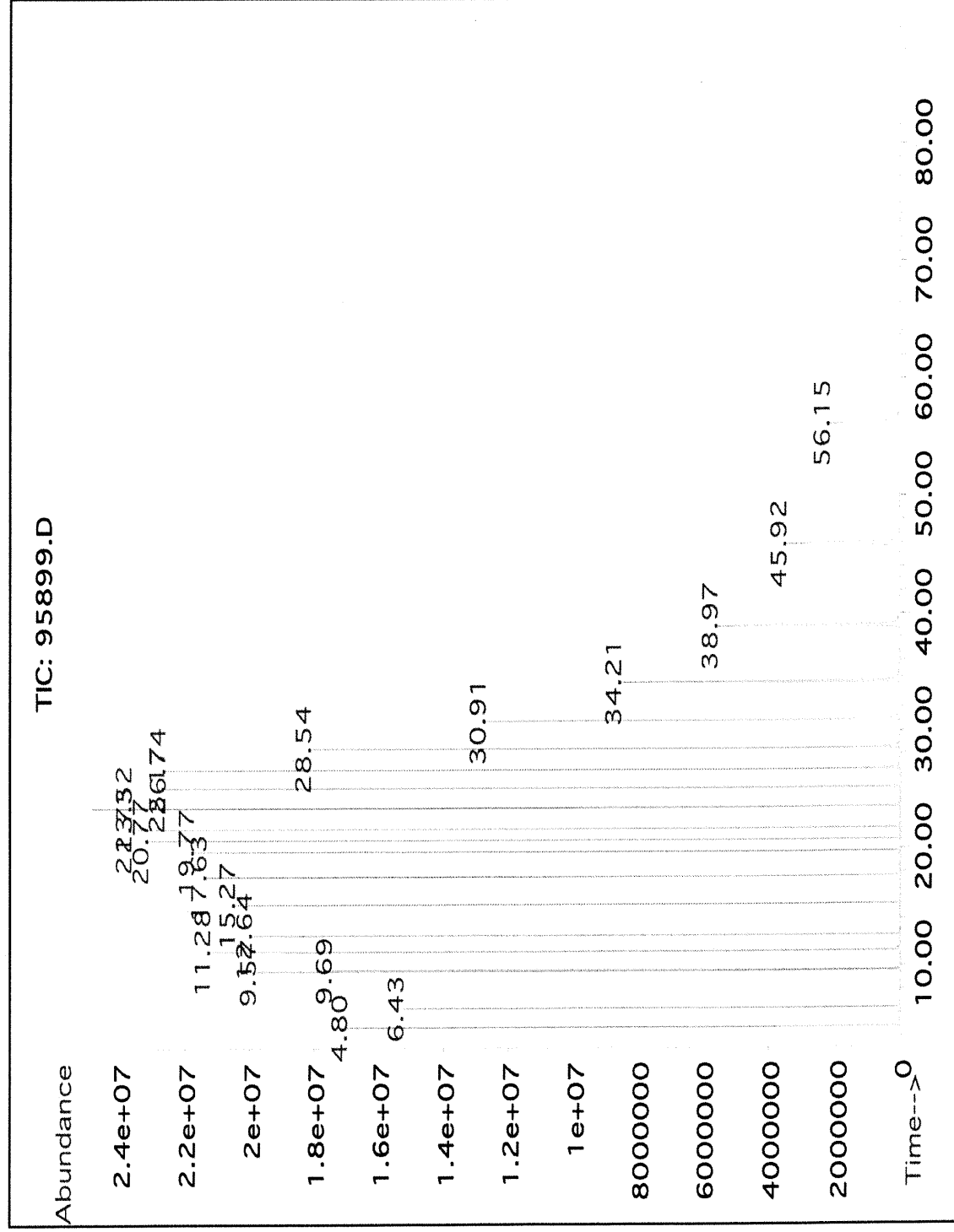
Compound	Part Number	(RM#)	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc. ($\mu\text{g/mL}$)	Nominal Conc. ($\mu\text{g/mL}$)	Purity (%)	Purity Uncertainty	Uncertainty Pipette	Target Weight(g)	Actual Weight(g)	Actual Conc. ($\mu\text{g/mL}$)	Expanded Uncertainty (+/-) ($\mu\text{g/mL}$)	SDS Information (Solvent Safety Info. On Attached pg.)		
															CAS#	OSHA PEL (TWA)	LD50
1. 2-Methylnaphthalene	(0214)	MKB53783V	NA	NA	NA	NA	1000	97	0.2	NA	0.02577	0.02581	1001.6	5.7	91-57-6	N/A	or-rat 1630mg/kg
2. Naphthalene	(0222)	MKB328680V	NA	NA	NA	NA	1000	100	0.2	NA	0.02500	0.02506	1002.6	5.7	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
3. n-Nonane	95708	081621	1.00	25.00	1000.8	1000	1000	NA	NA	0.013	NA	NA	1000.9	4.2	111-84-2	200 ppm (1050mg/m3/8H)	lvn-mus 218mg/kg
4. n-Decane	95708	081621	1.00	25.00	1000.9	1000	1000	NA	NA	0.013	NA	NA	1001.1	4.2	124-18-5	N/A	N/A
5. n-Dodecane	95708	081621	1.00	25.00	1001.2	1000	1000	NA	NA	0.013	NA	NA	1001.3	4.2	112-40-3	N/A	lvn-mus 3494mg/kg
6. n-Tetradecane	95708	081621	1.00	25.00	1002.0	1000	1000	NA	NA	0.013	NA	NA	1002.2	4.2	629-59-4	N/A	N/A
7. n-Hexadecane	95708	081621	1.00	25.00	1001.9	1000	1000	NA	NA	0.013	NA	NA	1002.0	4.2	544-76-3	N/A	N/A
8. n-Octadecane	95708	081621	1.00	25.00	1011.8	1000	1000	NA	NA	0.013	NA	NA	1012.0	4.2	593-45-3	N/A	N/A
9. n-Eicosane	95708	081621	1.00	25.00	1000.5	1000	1000	NA	NA	0.013	NA	NA	1000.7	4.2	112-95-8	N/A	N/A
10. n-Henicosane	95708	081621	1.00	25.00	1001.2	1000	1000	NA	NA	0.013	NA	NA	1001.4	4.2	629-94-7	N/A	N/A
11. n-Docosane	95708	081621	1.00	25.00	1001.6	1000	1000	NA	NA	0.013	NA	NA	1001.7	4.2	629-97-0	N/A	N/A
12. n-Tetracosane	95708	081621	1.00	25.00	1001.3	1000	1000	NA	NA	0.013	NA	NA	1001.4	4.2	646-31-1	N/A	N/A
13. n-Hexacosane	95708	081621	1.00	25.00	1000.4	1000	1000	NA	NA	0.013	NA	NA	1000.5	4.2	630-01-3	N/A	N/A
14. n-Octacosane	95708	081621	1.00	25.00	1001.7	1000	1000	NA	NA	0.013	NA	NA	1001.9	4.2	630-02-4	N/A	N/A
15. n-Triacontane	95708	081621	1.00	25.00	1000.7	1000	1000	NA	NA	0.013	NA	NA	1001.2	4.2	638-68-6	N/A	N/A
16. n-Dotriacontane	95708	081621	1.00	25.00	1001.0	1000	1000	NA	NA	0.013	NA	NA	1000.9	4.3	544-85-4	N/A	lvn-mus 100mg/kg
17. n-Tetraatriacontane	95708	081621	1.00	25.00	1000.8	1000	1000	NA	NA	0.013	NA	NA	1000.9	4.2	14167-59-0	N/A	N/A
18. n-Hexatriacontane	95708	081621	1.00	25.00	1000.9	1000	1000	NA	NA	0.013	NA	NA	1001.1	4.2	630-06-8	N/A	N/A
19. n-Octatriacontane	95708	081621	1.00	25.00	1000.8	1000	1000	NA	NA	0.013	NA	NA	1000.9	4.3	7194-95-6	N/A	N/A
20. n-Tetraoctacontane	95708	081621	1.00	25.00	1000.5	1000	1000	NA	NA	0.013	NA	NA	1000.6	4.3	4181-95-7	N/A	N/A

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
 * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
 * Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
 * All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
 * Uncertainty Reference: Taylor, B.N. and Kuyal, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

P11112
P11116
AR 10/10/2021



Method GC8HOT.M: Column: SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 320°C (20 min.), Rate = 30°C/min., Injector B= 250°C, Detector B = 300°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by Melissa Stonier.



Peak No.	Name	MSD RT (min.)
1	n-Nonane	4.80
2	n-Decane	6.43
3	Naphthalene	9.69
4	n-Dodecane	11.28
5	2-Methylnaphthalene	15.27
6	n-Tetradecane	17.93
7	n-Hexadecane	19.77
8	n-Octadecane	20.77
9	n-Eicosane	21.73
10	n-Heneicosane	23.52
11	n-Docosane	25.18
12	n-Tetracosane	26.74
13	n-Hexacosane	28.54
14	n-Octacosane	30.91
15	n-Triacontane	34.21
16	n-Dotriacontane	38.97
17	n-Tetracontane	45.92
18	n-Hexatriacontane	56.15
19	n-Octatriacontane	
20	n-Tetracontane	



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31098 Lot No.: A0171297

Description : 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride,
1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : May 31, 2028 Storage: 10°C or colder

Ship: Ambient

P10963
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P10982
AR
08/09/2021

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1-Chlorooctadecane CAS # 3386-33-2 Purity 99% (Lot 10951900)	10,002.3 µg/mL	+/- 58.1539 µg/mL Gravimetric +/- 560.8162 µg/mL Unstressed +/- 573.9386 µg/mL Stressed

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

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

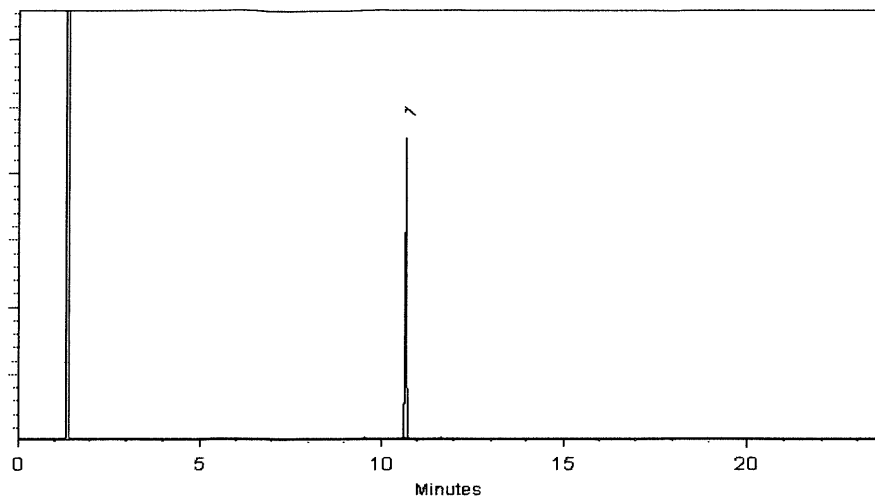
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Sam Moodler
Sam Moodler - Operations Tech I

Date Mixed: 13-Apr-2021

Balance: B442140311

Marline Cowan
Marline Cowan - Operations Tech I

Date Passed: 15-Apr-2021

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

P10963
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P10982

AR
08/09/2021



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31097 **Lot No.:** A0173046

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 : January 31, 2025 **Storage:** 10°C or colder

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

P10983
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P11002
AR
08/09/2021

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	o-Terphenyl CAS # 84-15-1 (Lot MKCH4487) Purity 99%	10,063.0 µg/mL	+/- 58.9211 µg/mL Gravimetric +/- 453.2972 µg/mL Unstressed +/- 502.9780 µg/mL Stressed

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

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

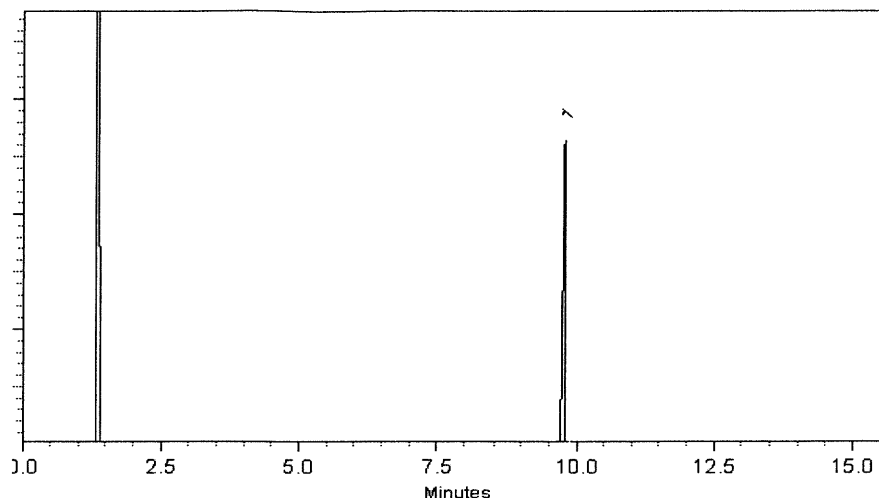
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Aurelia B. Confer

Aurelia Confer - Operations Tech I

Date Mixed: 04-Jun-2021

Balance: B345965662

Alexis Shelow

Alexis Shelow - Operations Tech I

Date Passed: 09-Jun-2021

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

P10983
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P11002

AR
08/09/2021



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110 Benner Circle
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Tel: (800)356-1688
Fax: (814)353-1309

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31098 **Lot No.:** A0177029

Description : 1-Chlorooctadecane Standard
1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride,
1mL/ampul

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

Expiration Date : October 31, 2028 **Storage:** 10°C or colder

Ship: Ambient

P11344 / 20
↓
P11363
AR
01/11/2022

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	1-Chlorooctadecane CAS # 3386-33-2 (Lot 12343600) Purity 99%	10,009.0 µg/mL	+/- 58.1932 µg/mL Gravimetric +/- 561.1947 µg/mL Unstressed +/- 574.3259 µg/mL Stressed

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

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

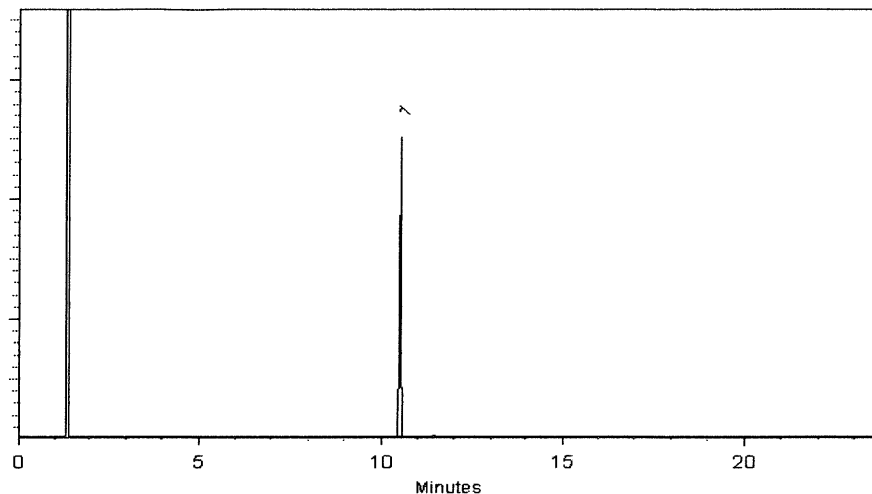
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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

Cathleen Soltis
Cathleen Soltis - Mix Technician

Date Mixed: 30-Sep-2021

Balance: B345965662

Marlene Cowan
Marlene Cowan - Operations Tech I

Date Passed: 04-Oct-2021

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

P 11344 / (20)
↓
P 11363
—
AR
01/11/2022



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 30542 **Lot No.:** A0180740

Description: NJEPH Aliphatics Matrix Spike Mix

Container Size: 5 mL **Pkg Amt:** > 5 mL

Expiration Date: February 28, 2029 **Storage:** 10°C or colder

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

P1139h

J

Y.P

P11425

02/10/22

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 SHBK7143) 202.0 µg/mL	+/- 1.4323 µg/mL +/- 5.0792 µg/mL +/- 6.0663 µg/mL Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	(Lot SHBM1113) 202.0 µg/mL	+/- 1.4323 µg/mL +/- 5.0792 µg/mL +/- 6.0663 µg/mL Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	(Lot SHBK0925) 201.0 µg/mL	+/- 1.4253 µg/mL +/- 5.0541 µg/mL +/- 6.0362 µg/mL Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	(Lot STBK2282) 202.0 µg/mL	+/- 1.4323 µg/mL +/- 5.0792 µg/mL +/- 6.0663 µg/mL Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	(Lot SHBM4146) 201.9 µg/mL	+/- 1.4315 µg/mL +/- 5.0762 µg/mL +/- 6.0627 µg/mL Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	(Lot VZKOJ) 200.8 µg/mL	+/- 1.4238 µg/mL +/- 5.0488 µg/mL +/- 6.0299 µg/mL Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	(Lot MKCF7888) 202.0 µg/mL	+/- 1.4323 µg/mL +/- 5.0792 µg/mL +/- 6.0663 µg/mL Gravimetric Unstressed Stressed

8	n-Heneicosane (C21) CAS # 629-94-7 Purity 99%	(Lot MKCL3226)	201.5 µg/mL	+/- 1.4288 +/- 5.0666 +/- 6.0513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	202.0 µg/mL	+/- 1.4323 +/- 5.0792 +/- 6.0663	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCJ8741)	202.0 µg/mL	+/- 1.4323 +/- 5.0792 +/- 6.0663	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	201.5 µg/mL	+/- 1.4288 +/- 5.0666 +/- 6.0513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	201.0 µg/mL	+/- 1.4253 +/- 5.0541 +/- 6.0362	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Triacontane (C30) CAS # 638-68-6 Purity 99%	(Lot MKCN9321)	201.0 µg/mL	+/- 1.4253 +/- 5.0541 +/- 6.0362	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	201.5 µg/mL	+/- 1.4288 +/- 5.0666 +/- 6.0513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Tetatriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	201.0 µg/mL	+/- 1.4253 +/- 5.0541 +/- 6.0362	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot MKCK2834)	201.5 µg/mL	+/- 1.4288 +/- 5.0666 +/- 6.0513	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	201.8 µg/mL	+/- 1.4306 +/- 5.0732 +/- 6.0591	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	201.9 µg/mL	+/- 1.4315 +/- 5.0762 +/- 6.0627	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
Solvent: n-Pentane						
CAS # 109-66-0						
Purity 99%						

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:

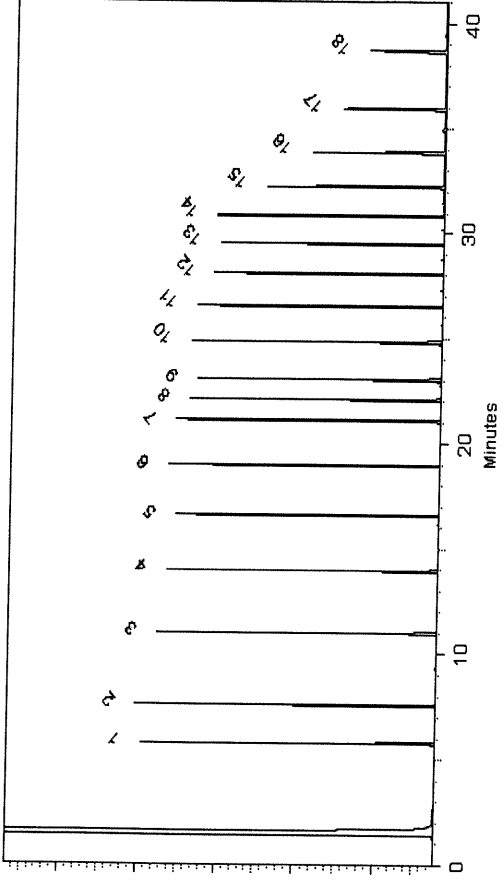
250°C

Det. Temp:

330°C

Det. Type:

FID



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.

Brittany Federinko - Operations Tech I

Date Mixed: 18-Jan-2022

Balance: 1128360905

Clara Windle - Operations Technician I

Date Passed: 21-Jan-2022

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FW 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.

SHIPPING DOCUMENTS

CHAIN OF CUSTODY RECORD

227

www.chemtech.net

2034433

CLIENT INFORMATION		CLIENT PROJECT INFORMATION		CLIENT BILLING INFORMATION	
COMPANY: AET		PROJECT NAME: Paterson NJ		BILL TO: 301258	
ADDRESS: 20 Gibson Place Suite 310		PROJECT NO.: 44880		ADDRESS:	
CITY: Freehold		LOCATION: 112 Madison Ave		STATE: ZIP:	
ATTENTION: Joe Maggiali/Anthony Caracci		PROJECT MANAGER: Joe Maggiali/Anthony Caracci		ATTENTION:	
PHONE: 609-644-3957		e-mail: jmaggiali@aciconsultants.com / acaracci@aciconsultants.com		PHONE:	
FAX:		PHONE: 609-644-3957		FAX:	
DATA TURNAROUND INFORMATION		DATA DELIVERABLE INFORMATION		ANALYSIS	
FAX (RUSH) STD + AT		Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)			
HARD COPY (DATA PACKAGE):		Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP			
EDD: 10		Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B			
*TO BE APPROVED BY CHEMTECH		+ Raw Data ☐ Other			
STANDARD HARD COPY TURNAROUND TIME IS 10 BUSINESS DAYS		EDD FORMAT NYSRP ADD			
PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
1. Ust-1-PB		4/19		1200	
2. Ust-1-N		4/19		1205	
3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
7.					
8.					
9.					
10.					
PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
1. Ust-1-PB		4/19		1200	
2. Ust-1-N		4/19		1205	
3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
7.					
8.					
9.					
10.					
PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
1. Ust-1-PB		4/19		1200	
2. Ust-1-N		4/19		1205	
3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
7.					
8.					
9.					
10.					
PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
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3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
7.					
8.					
9.					
10.					
PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
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3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
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6.					
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PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
CHEMTECH SAMPLE ID		DATE		TIME	
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2. Ust-1-N		4/19		1205	
3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
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PROJECT IDENTIFICATION		SAMPLE TYPE		SAMPLE COLLECTION	
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2. Ust-1-N		4/19		1205	
3. Ust-1-E		4/19		1210	
4. Ust-1-S		4/19		1215	
5. Ust-1-W		4/19		1220	
6.					
7.					
8.					
9.					
10.					
PROJECT IDENTIFICATION		SAMPLE TYPE			

From: Anthony Cauterucci <acauterucci@aeiconsultants.com>
Sent: Thursday, April 28, 2022 9:50 AM
To: Mason Luster; Joseph Maggiulli
Cc: YAZMEEN@chemtech.net
Subject: Re: n2487 - Paterson - SVOC

Yazmeen,

No need for contingency analysis on these samples. Thank you.

Anthony Cauterucci, CHMM

Site Mitigation Department Manager - NY/NJ

AEI Consultants

20 Gibson Place, Suite 310

Freehold, NJ 07728

p. 732.275.4719

f. 732.414.2721

www.aeiconsultants.com



From: Mason Luster <mluster@aeiconsultants.com>
Sent: Thursday, April 28, 2022 9:34 AM
To: Joseph Maggiulli <jmaggiulli@aeiconsultants.com>; Anthony Cauterucci <acauterucci@aeiconsultants.com>
Cc: YAZMEEN@chemtech.net <YAZMEEN@chemtech.net>
Subject: FW: n2487 - Paterson - SVOC

Joe and Anthony,

See below email from Chemtech on contingent samples from Paterson

Mason Luster, GIT

Project Geologist, Site Mitigation East

AEI Consultants

20 Gibson Place Suite 310

Freehold, NJ 07728

e. mluster@aeiconsultants.com

p. 732-414-2720 (x1425)

c. 814-289-9301

f. 732-414-2721

www.aeiconsultants.com

From: Yazmeen Gomez <Yazmeen@chemtech.net>

Sent: Thursday, April 28, 2022 9:16 AM

To: Mason Luster <mluster@aeiconsultants.com>

Subject: n2487 - Paterson - SVOC

Good morning Mason,

Please let me know if you would like to activate SVOC for any of these samples.

Best Regards,

Yazmeen Gomez

CHEMTECH

284 Sheffield St. | Mountainside, NJ 07092

Direct: (908) 728-3147

yazmeen@chemtech.net | www.chemtech.net



Your Opinion Matters! Please Give Us Your [Feedback](#)



284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2020021
Maryland	296
New Hampshire	255421
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-21-14