

Cover Page

Order ID : Q1987

Project ID : Hillside

Client : G Environmental

Lab Sample Number

Q1987-01

Client Sample Number

GC1

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: 5/15/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “ Results Qualifiers” are used:

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1987

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: SOHIL JODHANI

Date: 05/15/2025

LAB CHRONICLE

OrderID:	Q1987	OrderDate:	5/8/2025 1:07:00 PM
Client:	G Environmental	Project:	Hillside
Contact:	Gary Landis	Location:	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1987-01	GC1	Solid	EPH_NF	NJEPH	05/07/25	05/13/25	05/13/25	05/08/25



QC SUMMARY

SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: GENV01
Lab Code: CHEM CASE No.: Q1987 SAS No.: Q1987 SDG No.: Q1987
Run Number: FC051325AL

Client SAMPLE NO.	1-chlorooctadecane (SURR)	ortho-Terphenyl (SURR)		TOT OUT
PB167974BL	86	79		0
PB167974BS	86	78		0
PB167974BSD	85	76		0
GC1	96	87		0
GC1MS	72	64		0
GC1MSD	71	64		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:** G Environmental
Lab Code: CHEM **Cas No:** Q1987 **SAS No :** Q1987 **SDG No:** Q1987
Sample No : Q1987-01MS **Datafile:** FC068853.D
Client ID : GC1MS

COMPOUND	SPIKE ADDED mg/kg	SAMPLE CONCENTRATION mg/kg	MS/MSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C28-C40	34.6	4.49	47.3	123		(40-140)
Aliphatic C9-C28	115.4	5.66	127	105		(40-140)

SOLID EPH_NF MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** G Environmental
Lab Code: CHEM **Cas No:** Q1987 **SAS No :** Q1987 **SDG No:** Q1987
Sample No : Q1987-01MSD **Datafile:** FC068854.D
Client ID : GC1MSD

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	34.6	4.49	46.9	122		0.82 (40-140) 50
Aliphatic C9-C28	115.4	5.66	128	106		1 (40-140) 50

SOLID EPH_NF LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** G Environmental
Lab Code: CHEM **Cas No:** Q1987 **SAS No :** Q1987 **SDG No:** Q1987
Sample No : PB167974BS **Datafile:** FC068849.D
Client ID : PB167974BS

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	QC LIMITS
Aliphatic C28-C40	30.0	36.6	122		(40-140)
Aliphatic C9-C28	99.9	110	109		(40-140)

SOLID EPH_NF LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** G Environmental
Lab Code: CHEM **Cas No:** Q1987 **SAS No :** Q1987 **SDG No:** Q1987
Sample No : PB167974BSD **Datafile:** FC068850.D
Client ID : PB167974BSD

COMPOUND	SPIKE ADDED mg/kg	LCS/LCSD CONCENTRATION mg/kg	% REC	Qual	RPD QC LIMITS	QC Limit Of RPD
Aliphatic C28-C40	30.0	36.4	121		0.515 (40-140)	25
Aliphatic C9-C28	100.1	109	108		0.726 (40-140)	25

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB167974BL

Lab Name: CHEMTECH

Contract: GENV01

Lab Code: CHEM Case No.: Q1987

SAS No.: Q1987 SDG NO.: Q1987

Instrument ID: FID_C

Lab Sample ID: PB167974BL

Matrix: (soil/water) Solid

Date Extracted: 5/13/2025 9:35:00 A

Level: (low/med) low

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

EPA SAMPLE NO.	LAB SAMPLE ID
PB167974BS	PB167974BS
PB167974BSD	PB167974BSD
GC1	Q1987-01
GC1MS	Q1987-01MS
GC1MSD	Q1987-01MSD

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	G Environmental	Date Collected:	05/07/25
Project:	Hillside	Date Received:	05/08/25
Client Sample ID:	GC1	SDG No.:	Q1987
Lab Sample ID:	Q1987-01	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86.6
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Prep Method :		Final Vol:	2000
		Test:	EPH_NF

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 16:24	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS							
Aliphatic C28-C40	Aliphatic C28-C40	4.49		1	1.36	2.30	mg/kg FC068851.D
Aliphatic C9-C28	Aliphatic C9-C28	5.66		1	1.05	4.61	mg/kg FC068851.D
Total AliphaticEPH	Total AliphaticEPH	10.1			2.41	6.91	mg/kg
Total EPH	Total EPH	10.1			2.41	6.91	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:	G Environmental	Date Collected:	05/07/25
Project:	Hillside	Date Received:	05/08/25
Client Sample ID:	GC1	SDG No.:	Q1987
Lab Sample ID:	Q1987-01	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86.6
Sample Wt/Vol:	30.06 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068851.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	5.66		1.05	4.61	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	4.49		1.36	2.30	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	48.1		40 - 140	96%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	43.6		40 - 140	87%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1987-01	Acq On:	13 May 2025 16:24
Client Sample ID:	GC1	Operator:	YP/AJ
Data file:	FC068851.D	Misc:	
Instrument:	FID_C	ALS Vial:	14
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	275128	2.775	300	ug/ml
Aliphatic C12-C16	6.642	10.040	493386	5.423	200	ug/ml
Aliphatic C16-C21	10.041	13.406	4626509	53.947	300	ug/ml
Aliphatic C21-C28	13.407	17.068	957760	11.527	400	ug/ml
Aliphatic C28-C40	17.069	22.062	4944933	58.435	600	ug/ml
Aliphatic EPH	3.341	22.062	11297716	132.107		ug/ml
ortho-Terphenyl (SURR)	11.709	11.709	4975977	43.6		ug/ml
1-chlorooctadecane (SURR)	13.142	13.142	3863145	48.15		ug/ml
Aliphatic C9-C28	3.341	17.068	6352783	73.672	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068851.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 16:24
 Operator : YP/AJ
 Sample : Q1987-01
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 GC1

Integration File: autoint1.e
 Quant Time: May 14 03:13:27 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	4975977	43.596 ug/ml
Spiked Amount	50.000	Recovery	= 87.19%
12) S 1-chlorooctadecane (S...	13.142	3863145	48.153 ug/ml
Spiked Amount	50.000	Recovery	= 96.31%

Target Compounds

(f)=RT Delta > 1/2 Window

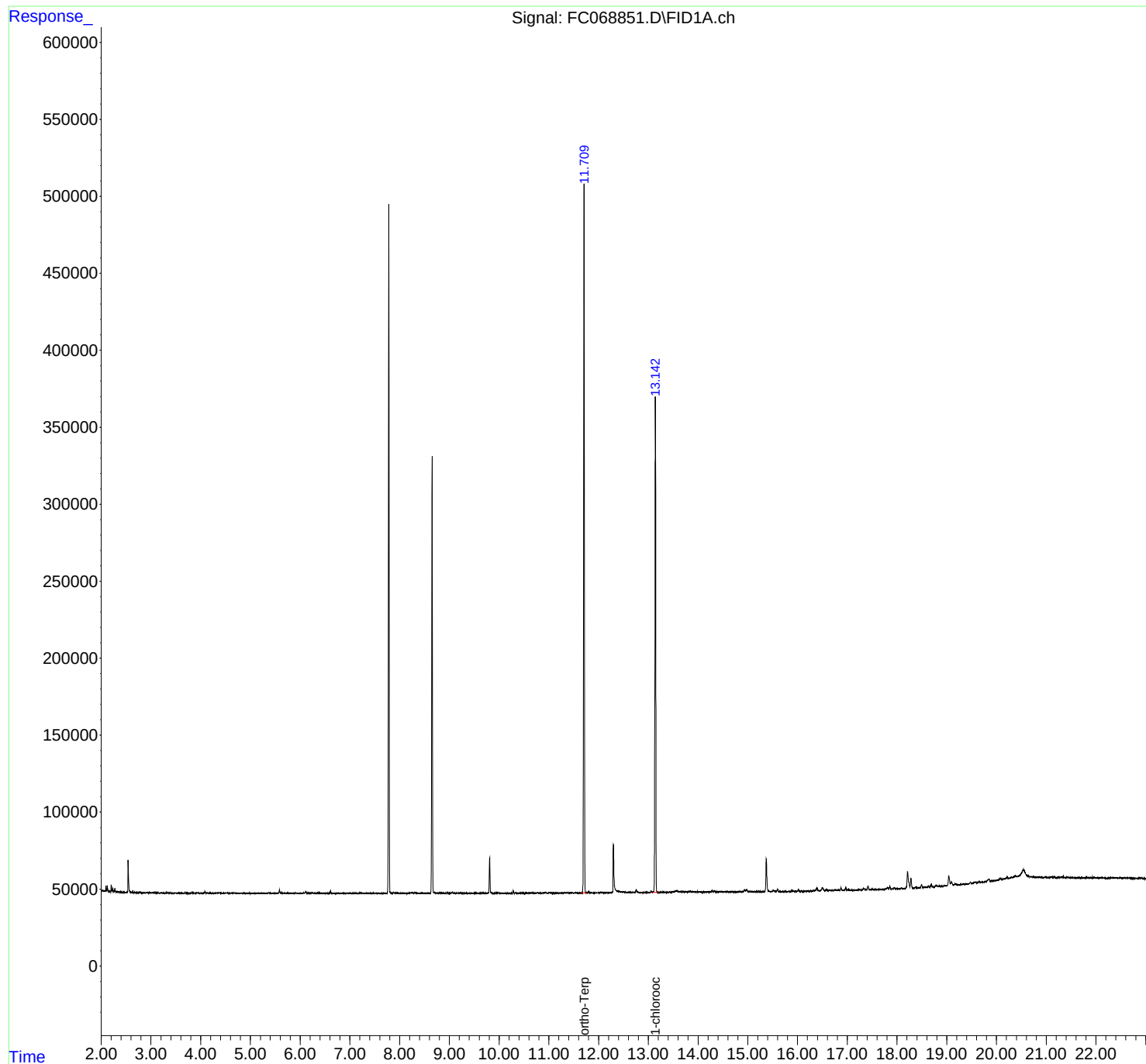
(m)=manual int.

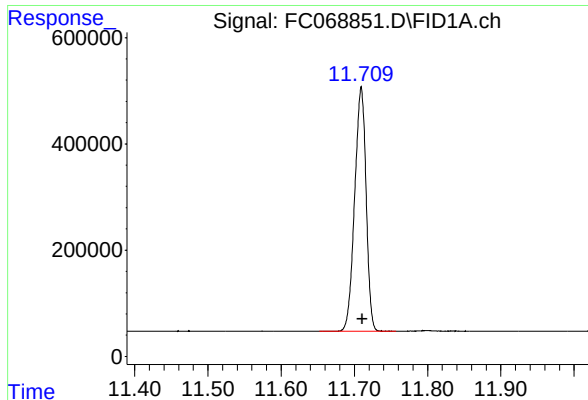
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068851.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 16:24
Operator : YP/AJ
Sample : Q1987-01
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
GC1

Integration File: autoint1.e
Quant Time: May 14 03:13:27 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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

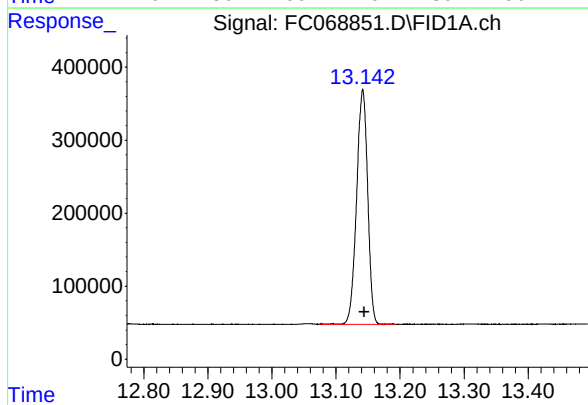




#9 ortho-Terphenyl (SURR)

R.T.: 11.709 min
Delta R.T.: -0.002 min
Response: 4975977
Conc: 43.60 ug/ml

Instrument :
FID_C
ClientSampleId :
GC1



#12 1-chlorooctadecane (SURR)

R.T.: 13.142 min
Delta R.T.: -0.002 min
Response: 3863145
Conc: 48.15 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068851.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 16:24
 Sample : Q1987-01
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.221	3.204	3.241	BV	84	1165	0.02%	0.007%
2	3.244	3.241	3.281	VV	92	1227	0.02%	0.008%
3	3.327	3.281	3.339	PV	177	3792	0.08%	0.023%
4	3.344	3.339	3.418	VV	150	4316	0.09%	0.026%
5	3.435	3.418	3.475	PV	174	2765	0.06%	0.017%
6	3.489	3.475	3.535	PV	100	2248	0.05%	0.014%
7	3.559	3.535	3.604	VV	158	3044	0.06%	0.019%
8	3.625	3.604	3.664	VV	225	3335	0.07%	0.020%
9	3.686	3.664	3.810	VV	326	10854	0.22%	0.066%
10	3.825	3.810	3.881	VV	399	6581	0.13%	0.040%
11	3.891	3.881	3.911	VV	132	1630	0.03%	0.010%
12	3.925	3.911	3.984	VV	297	5935	0.12%	0.036%
13	4.011	3.984	4.068	VV	165	4753	0.10%	0.029%
14	4.088	4.068	4.108	VV	1348	12347	0.25%	0.076%
15	4.122	4.108	4.155	VV	188	3995	0.08%	0.024%
16	4.170	4.155	4.204	PV	128	2682	0.05%	0.016%
17	4.215	4.204	4.256	VV	117	2531	0.05%	0.015%
18	4.281	4.256	4.295	VV	221	2643	0.05%	0.016%
19	4.319	4.295	4.328	VV	198	2869	0.06%	0.018%
20	4.334	4.328	4.348	VV	157	1750	0.04%	0.011%
21	4.374	4.348	4.427	VV	217	6195	0.12%	0.038%
22	4.445	4.427	4.464	VV	139	2068	0.04%	0.013%
23	4.517	4.464	4.545	VV	420	8730	0.18%	0.053%
24	4.555	4.545	4.594	VV	257	4715	0.09%	0.029%
25	4.606	4.594	4.648	VV	182	3824	0.08%	0.023%
26	4.661	4.648	4.708	VV	340	5941	0.12%	0.036%
27	4.723	4.708	4.742	VV	108	1890	0.04%	0.012%
28	4.759	4.742	4.794	VV	107	2159	0.04%	0.013%
29	4.800	4.794	4.814	VV	70	699	0.01%	0.004%
30	4.830	4.814	4.916	VV	117	3801	0.08%	0.023%
31	4.948	4.916	5.004	VV	90	2905	0.06%	0.018%
32	5.015	5.004	5.034	VV	89	929	0.02%	0.006%
33	5.090	5.034	5.125	PV	153	4806	0.10%	0.029%
34	5.151	5.125	5.171	VV	252	3129	0.06%	0.019%
35	5.208	5.171	5.247	VV	152	3524	0.07%	0.022%
36	5.257	5.247	5.270	VV	112	1057	0.02%	0.006%

					rteres			
37	5.289	5.270	5.317	VV	123	2356	0.05%	0.014%
38	5.325	5.317	5.332	VV	121	698	0.01%	0.004%
39	5.375	5.332	5.425	VV	537	9116	0.18%	0.056%
40	5.582	5.425	5.641	VV	2054	33327	0.67%	0.204%
41	5.649	5.641	5.691	VV	212	4207	0.08%	0.026%
42	5.710	5.691	5.778	VV	130	5069	0.10%	0.031%
43	5.792	5.778	5.824	VV	95	2056	0.04%	0.013%
44	5.836	5.824	5.844	VV	123	1184	0.02%	0.007%
45	5.856	5.844	5.884	VV	172	2641	0.05%	0.016%
46	5.903	5.884	5.924	VV	176	2877	0.06%	0.018%
47	5.938	5.924	5.951	VV	145	1232	0.02%	0.008%
48	5.964	5.951	5.973	VV	132	783	0.02%	0.005%
49	5.985	5.973	6.035	VV	81	2920	0.06%	0.018%
50	6.071	6.035	6.087	VV	312	5043	0.10%	0.031%
51	6.113	6.087	6.151	VV	1118	16016	0.32%	0.098%
52	6.182	6.151	6.197	VV	242	4243	0.09%	0.026%
53	6.206	6.197	6.218	VV	227	2236	0.04%	0.014%
54	6.252	6.218	6.303	VV	300	9315	0.19%	0.057%
55	6.329	6.303	6.367	VV	131	4746	0.10%	0.029%
56	6.386	6.367	6.439	VV	523	10120	0.20%	0.062%
57	6.470	6.439	6.514	VV	157	4460	0.09%	0.027%
58	6.542	6.514	6.571	VV	213	4735	0.10%	0.029%
59	6.577	6.571	6.586	VV	106	885	0.02%	0.005%
60	6.610	6.586	6.651	VV	1178	14213	0.29%	0.087%
61	6.663	6.651	6.728	VV	116	3699	0.07%	0.023%
62	6.755	6.728	6.768	PV	136	1772	0.04%	0.011%
63	6.797	6.768	6.812	VV	104	1732	0.03%	0.011%
64	6.824	6.812	6.839	VV	160	1560	0.03%	0.010%
65	6.847	6.839	6.880	VV	109	1886	0.04%	0.012%
66	6.897	6.880	6.915	VV	116	1535	0.03%	0.009%
67	6.935	6.915	6.954	VV	378	3696	0.07%	0.023%
68	6.995	6.954	7.041	VV	186	5710	0.11%	0.035%
69	7.070	7.041	7.104	VV	178	5951	0.12%	0.036%
70	7.168	7.104	7.185	VV	236	6900	0.14%	0.042%
71	7.202	7.185	7.241	VV	320	6934	0.14%	0.042%
72	7.250	7.241	7.264	VV	182	1847	0.04%	0.011%
73	7.268	7.264	7.278	VV	135	763	0.02%	0.005%
74	7.296	7.278	7.324	VV	127	2790	0.06%	0.017%
75	7.333	7.324	7.351	VV	206	1795	0.04%	0.011%
76	7.359	7.351	7.364	VV	92	688	0.01%	0.004%
77	7.372	7.364	7.390	VV	135	1300	0.03%	0.008%
78	7.406	7.390	7.429	VV	184	2595	0.05%	0.016%
79	7.435	7.429	7.444	VV	124	835	0.02%	0.005%
80	7.467	7.444	7.514	VV	298	5321	0.11%	0.033%
81	7.521	7.514	7.564	VV	124	2117	0.04%	0.013%
82	7.583	7.564	7.604	VV	134	2316	0.05%	0.014%
83	7.613	7.604	7.637	VV	124	1388	0.03%	0.009%
84	7.651	7.637	7.668	VV	131	1106	0.02%	0.007%
85	7.693	7.668	7.718	VV	165	2554	0.05%	0.016%
86	7.876	7.845	7.911	VV	517	11269	0.23%	0.069%
87	7.921	7.911	7.942	VV	437	5190	0.10%	0.032%
88	7.950	7.942	7.978	VV	170	2846	0.06%	0.017%
89	7.986	7.978	8.001	VV	127	1277	0.03%	0.008%

					rteres			
90	8.030	8.001	8.084	VV	169	5329	0.11%	0.033%
91	8.118	8.084	8.137	VV	140	2903	0.06%	0.018%
92	8.149	8.137	8.172	VV	152	2226	0.04%	0.014%
93	8.194	8.172	8.207	VV	214	3702	0.07%	0.023%
94	8.233	8.207	8.253	VV	347	7588	0.15%	0.046%
95	8.274	8.253	8.284	VV	296	5012	0.10%	0.031%
96	8.300	8.284	8.321	VV	430	6827	0.14%	0.042%
97	8.335	8.321	8.377	VV	320	5378	0.11%	0.033%
98	8.455	8.377	8.516	VV	272	9788	0.20%	0.060%
99	8.521	8.516	8.551	VV	102	1511	0.03%	0.009%
100	8.567	8.551	8.610	VV	180	3953	0.08%	0.024%
101	8.773	8.758	8.788	VV	199	2962	0.06%	0.018%
102	8.807	8.788	8.891	VV	437	12142	0.24%	0.074%
103	8.897	8.891	8.906	VV	151	1076	0.02%	0.007%
104	8.960	8.906	8.982	VV	287	8524	0.17%	0.052%
105	8.992	8.982	9.008	VV	132	2164	0.04%	0.013%
106	9.056	9.008	9.136	VV	648	18983	0.38%	0.116%
107	9.159	9.136	9.204	VV	311	8803	0.18%	0.054%
108	9.220	9.204	9.283	VV	327	9081	0.18%	0.056%
109	9.294	9.283	9.330	VV	135	2473	0.05%	0.015%
110	9.342	9.330	9.438	VV	114	5158	0.10%	0.032%
111	9.539	9.438	9.641	VV	187	13890	0.28%	0.085%
112	9.665	9.641	9.748	VV	163	6176	0.12%	0.038%
113	9.811	9.748	9.904	VV	23017	248357	4.99%	1.521%
114	9.937	9.904	10.024	VV	351	10008	0.20%	0.061%
115	10.045	10.024	10.096	VV	209	3621	0.07%	0.022%
116	10.114	10.096	10.136	VV	121	1252	0.03%	0.008%
117	10.285	10.136	10.314	PV	1482	22162	0.44%	0.136%
118	10.327	10.314	10.400	VV	214	6853	0.14%	0.042%
119	10.417	10.400	10.451	VV	129	3195	0.06%	0.020%
120	10.468	10.451	10.499	VV	154	2259	0.05%	0.014%
121	10.582	10.499	10.618	VV	220	9288	0.19%	0.057%
122	10.632	10.618	10.651	VV	243	3540	0.07%	0.022%
123	10.677	10.651	10.724	VV	219	6630	0.13%	0.041%
124	10.777	10.724	10.851	VV	343	10541	0.21%	0.065%
125	10.936	10.851	10.984	VV	838	17561	0.35%	0.108%
126	11.009	10.984	11.078	VV	670	13889	0.28%	0.085%
127	11.117	11.078	11.135	VV	126	2772	0.06%	0.017%
128	11.223	11.135	11.284	PV	139	7018	0.14%	0.043%
129	11.312	11.284	11.368	VV	610	11556	0.23%	0.071%
130	11.385	11.368	11.433	VV	394	6550	0.13%	0.040%
131	11.466	11.433	11.504	VV	266	7079	0.14%	0.043%
132	11.543	11.504	11.561	VV	205	3605	0.07%	0.022%
133	11.575	11.561	11.608	VV	191	1996	0.04%	0.012%
134	11.709	11.608	11.758	PV	452708	4980512	100.00%	30.498%
135	11.799	11.758	11.881	VV	1084	23979	0.48%	0.147%
136	11.911	11.881	11.938	VV	126	2375	0.05%	0.015%
137	12.048	11.938	12.076	PV	277	8763	0.18%	0.054%
138	12.144	12.076	12.188	VV	274	7692	0.15%	0.047%
139	12.299	12.188	12.461	VV	29148	438360	8.80%	2.684%
140	12.501	12.461	12.601	VV	605	36006	0.72%	0.220%
141	12.631	12.601	12.671	VV	387	13017	0.26%	0.080%

					rteres			
142	12.691	12.671	12.714	VV	465	7862	0.16%	0.048%
143	12.757	12.714	12.901	VV	2078	45186	0.91%	0.277%
144	12.954	12.901	13.008	VV	131	6227	0.13%	0.038%
145	13.015	13.008	13.034	VV	108	1416	0.03%	0.009%
146	13.057	13.034	13.076	VV	979	11622	0.23%	0.071%
147	13.141	13.076	13.224	VV	320381	3871435	77.73%	23.706%
148	13.257	13.224	13.284	VV	186	3908	0.08%	0.024%
149	13.311	13.284	13.358	VV	266	7294	0.15%	0.045%
150	13.557	13.358	13.622	VV	1101	67772	1.36%	0.415%
151	13.640	13.622	13.689	VV	636	19255	0.39%	0.118%
152	13.711	13.689	13.727	VV	402	8851	0.18%	0.054%
153	13.748	13.727	13.818	VV	438	17555	0.35%	0.107%
154	13.842	13.818	13.871	VV	1041	16763	0.34%	0.103%
155	13.890	13.871	13.934	VV	438	10458	0.21%	0.064%
156	13.980	13.934	14.001	VV	382	7652	0.15%	0.047%
157	14.022	14.001	14.079	VV	366	8301	0.17%	0.051%
158	14.115	14.079	14.228	VV	211	10091	0.20%	0.062%
159	14.282	14.228	14.304	VV	1017	17260	0.35%	0.106%
160	14.329	14.304	14.358	VV	905	15525	0.31%	0.095%
161	14.383	14.358	14.429	VV	288	7591	0.15%	0.046%
162	14.456	14.429	14.501	VV	403	10594	0.21%	0.065%
163	14.563	14.501	14.599	VV	306	12814	0.26%	0.078%
164	14.622	14.599	14.651	VV	261	4853	0.10%	0.030%
165	14.677	14.651	14.794	VV	365	10407	0.21%	0.064%
166	14.838	14.794	14.904	VV	449	11648	0.23%	0.071%
167	14.934	14.904	14.951	VV	1593	23083	0.46%	0.141%
168	14.975	14.951	15.018	VV	1816	35886	0.72%	0.220%
169	15.040	15.018	15.073	VV	471	8224	0.17%	0.050%
170	15.097	15.073	15.121	VV	227	4693	0.09%	0.029%
171	15.187	15.121	15.213	VV	157	6700	0.13%	0.041%
172	15.248	15.213	15.321	VV	192	8265	0.17%	0.051%
173	15.372	15.321	15.491	VV	21176	306210	6.15%	1.875%
174	15.515	15.491	15.558	VV	1006	19952	0.40%	0.122%
175	15.597	15.558	15.680	VV	1635	28891	0.58%	0.177%
176	15.702	15.680	15.724	VV	90	1541	0.03%	0.009%
177	15.770	15.724	15.808	PV	166	4797	0.10%	0.029%
178	15.835	15.808	15.861	VV	162	3090	0.06%	0.019%
179	15.893	15.861	15.987	PV	633	16909	0.34%	0.104%
180	16.016	15.987	16.061	VV	1114	16885	0.34%	0.103%
181	16.072	16.061	16.124	VV	138	2850	0.06%	0.017%
182	16.156	16.124	16.175	PV	150	2335	0.05%	0.014%
183	16.215	16.175	16.262	PV	142	4807	0.10%	0.029%
184	16.388	16.262	16.440	VV	2198	51072	1.03%	0.313%
185	16.495	16.440	16.554	VV	2229	58003	1.16%	0.355%
186	16.582	16.554	16.608	VV	902	13677	0.27%	0.084%
187	16.632	16.608	16.688	VV	430	10341	0.21%	0.063%
188	16.700	16.688	16.717	VV	158	1675	0.03%	0.010%
189	16.750	16.717	16.791	PV	595	11907	0.24%	0.073%
190	16.814	16.791	16.841	VV	422	5677	0.11%	0.035%
191	16.870	16.841	16.921	VV	1596	21748	0.44%	0.133%
192	16.967	16.921	16.991	PBA	1284	20605	0.41%	0.126%
193	17.018	16.991	17.074	BV	536	10547	0.21%	0.065%
194	17.120	17.074	17.150	PV	105	3523	0.07%	0.022%

					rteres			
195	17.179	17.150	17.204	PV	138	2435	0.05%	0.015%
196	17.228	17.204	17.274	VV	497	7030	0.14%	0.043%
197	17.331	17.274	17.384	VV	1081	24881	0.50%	0.152%
198	17.416	17.384	17.464	VV	2536	39016	0.78%	0.239%
199	17.502	17.464	17.537	VV	367	7499	0.15%	0.046%
200	17.562	17.537	17.612	VV	171	4557	0.09%	0.028%
201	17.636	17.612	17.654	PV	90	1783	0.04%	0.011%
202	17.701	17.654	17.745	VV	174	4267	0.09%	0.026%
203	17.810	17.745	17.834	VV	1130	22236	0.45%	0.136%
204	17.854	17.834	17.918	VV	1669	24725	0.50%	0.151%
205	17.945	17.918	17.994	PV	699	11468	0.23%	0.070%
206	18.093	17.994	18.161	VV	459	7921	0.16%	0.049%
207	18.212	18.161	18.256	PV	10808	219260	4.40%	1.343%
208	18.280	18.256	18.343	VV	6496	94255	1.89%	0.577%
209	18.373	18.343	18.428	VV	408	10792	0.22%	0.066%
210	18.493	18.428	18.564	VV	2033	35101	0.70%	0.215%
211	18.633	18.564	18.653	VV	500	11942	0.24%	0.073%
212	18.686	18.653	18.741	VV	1960	39248	0.79%	0.240%
213	18.788	18.741	18.831	VV	1036	27665	0.56%	0.169%
214	18.854	18.831	18.881	VV	553	12842	0.26%	0.079%
215	19.041	18.881	19.071	VV	6793	159848	3.21%	0.979%
216	19.092	19.071	19.141	VV	2437	68595	1.38%	0.420%
217	19.169	19.141	19.214	VV	1417	46319	0.93%	0.284%
218	19.227	19.214	19.246	VV	861	14566	0.29%	0.089%
219	19.282	19.246	19.308	VV	928	28888	0.58%	0.177%
220	19.340	19.308	19.362	VV	1017	28476	0.57%	0.174%
221	19.387	19.362	19.421	VV	995	30750	0.62%	0.188%
222	19.474	19.421	19.501	VV	1969	61042	1.23%	0.374%
223	19.578	19.501	19.611	VV	1843	94348	1.89%	0.578%
224	19.652	19.611	19.682	VV	2076	70220	1.41%	0.430%
225	19.720	19.682	19.744	VV	1748	61242	1.23%	0.375%
226	19.770	19.744	19.788	VV	1830	46213	0.93%	0.283%
227	19.847	19.788	19.898	VV	3615	164769	3.31%	1.009%
228	19.948	19.898	19.971	VV	2209	93206	1.87%	0.571%
229	20.072	19.971	20.112	VV	3428	227200	4.56%	1.391%
230	20.214	20.112	20.248	VV	4163	270559	5.43%	1.657%
231	20.380	20.248	20.414	VV	4683	388406	7.80%	2.378%
232	20.538	20.414	20.881	VV	8546	1233694	24.77%	7.554%
233	20.902	20.881	20.941	VV	2884	98998	1.99%	0.606%
234	20.984	20.941	21.025	VV	2869	134582	2.70%	0.824%
235	21.056	21.025	21.069	VV	2494	64791	1.30%	0.397%
236	21.120	21.069	21.141	VV	2518	107376	2.16%	0.658%
237	21.159	21.141	21.241	VV	2482	138100	2.77%	0.846%
238	21.306	21.241	21.344	VV	2188	133439	2.68%	0.817%
239	21.348	21.344	21.377	VV	2538	40045	0.80%	0.245%
240	21.438	21.377	21.481	VV	2056	114848	2.31%	0.703%
241	21.532	21.481	21.581	VV	1651	94761	1.90%	0.580%
242	21.598	21.581	21.688	VV	1481	87144	1.75%	0.534%
243	21.706	21.688	21.743	VV	1268	40399	0.81%	0.247%
244	21.819	21.743	21.928	VV	1202	117661	2.36%	0.720%
245	21.964	21.928	22.018	VV	897	41912	0.84%	0.257%
246	22.052	22.018	22.094	VV	691	30090	0.60%	0.184%

Aliphatic EPH 050625.M Wed May 14 03:43:51 2025



CALIBRATION SUMMARY

Initial Calibration Report for SequenceID : FC050625AL

AreaCount

Parameter Range	FC068781.D	FC068782.D	FC068783.D	FC068784.D	FC068785.D	
Aliphatic C9-C12	27880831.000	14168342.000	6134963.000	3195282.000	1492730.000	
Aliphatic C12-C16	16912815.000	8652812.000	3764747.000	1956091.000	919066.000	
Aliphatic C16-C21	23844810.000	12210662.000	5322269.000	2761699.000	1307311.000	
Aliphatic C21-C28	31086803.000	15724596.000	6816713.000	3578057.000	1689101.000	
Aliphatic C28-C40	47720501.000	24011560.000	10345705.000	5495913.000	2571840.000	
Aliphatic EPH	147445760.000	74767972.000	32384397.000	16987042.000	7980048.000	

AVG Response Factor

Parameter Range	AVG RF	% RSD				
Aliphatic C9-C12	99133.1666664	5.629				
Aliphatic C12-C16	90984.404	5.976				
Aliphatic C16-C21	85760.459333	6.077				
Aliphatic C21-C28	83091.075	5.885				
Aliphatic C28-C40	84622.6919998	5.889				
Aliphatic EPH	87597.2298886	5.859				

Concentration

Parameter Range	FC068781.D	FC068782.D	FC068783.D	FC068784.D	FC068785.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	FC068781.D	FC068782.D	FC068783.D	FC068784.D	FC068785.D	
Aliphatic C9-C12	92936.103333	94455.613333	102249.383333	106509.400000	99515.333333	
Aliphatic C12-C16	84564.075000	86528.120000	94118.675000	97804.550000	91906.600000	
Aliphatic C16-C21	79482.700000	81404.413333	88704.483333	92056.633333	87154.066666	

Initial Calibration Report for SequenceID : FC050625AL

Aliphatic C21-C28	77717.007500	78622.980000	85208.912500	89451.425000	84455.050000	
Aliphatic C28-C40	79534.168333	80038.533333	86214.208333	91598.550000	85728.000000	
Aliphatic EPH	81914.311111	83075.524444	89956.658333	94372.455555	88667.200000	

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068781.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 15:33
 Operator : YP/AJ
 Sample : 100 PPM ALIPHATIC HC STD1
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
 Quant Time: May 07 08:36:16 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:32:40 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.719	10663591	90.357 ug/ml
Spiked Amount 50.000		Recovery =	180.71%
12) S 1-chlorooctadecane (S...	13.148	7506812	90.440 ug/ml
Spiked Amount 50.000		Recovery =	180.88%
Target Compounds			
1) T n-Nonane (C9)	3.446	9452990	91.096 ug/ml
2) T n-Decane (C10)	4.522	9350074	91.009 ug/ml
3) T A~Naphthalene (C11.7)	6.120	10375040	91.117 ug/ml
4) T n-Dodecane (C12)	6.547	9077767	90.560 ug/ml
5) T A~2-methylnaphthalene...	7.179	10106516	90.819 ug/ml
6) T n-Tetradecane (C14)	8.345	8598731	90.089 ug/ml
7) T n-Hexadecane (C16)	9.948	8314084	89.600 ug/ml
8) T n-Octadecane (C18)	11.393	8110111	89.374 ug/ml
10) T n-Eicosane (C20)	12.703	7900541	89.681 ug/ml
11) T n-Heneicosane (C21)	13.316	7834158	89.765 ug/ml
13) T n-Docosane (C22)	13.902	7786407	90.161 ug/ml
14) T n-Tetracosane (C24)	15.007	7763690	90.799 ug/ml
15) T n-Hexacosane (C26)	16.028	7766538	91.654 ug/ml
16) T n-Octacosane (C28)	16.979	7770168	92.247 ug/ml
17) T n-Tricontane (C30)	17.869	7942026	92.146 ug/ml
18) T n-Dotriacontane (C32)	18.703	8053843	92.130 ug/ml
19) T n-Tetratriacontane (C34)	19.488	7971732	92.003 ug/ml
20) T n-Hexatriacontane (C36)	20.229	8070568	92.069 ug/ml
21) T n-Octatriacontane (C38)	21.005	7905156	92.304 ug/ml
22) T n-Tetracontane (C40)	21.984	7777176	92.883 ug/ml

(f)=RT Delta > 1/2 Window

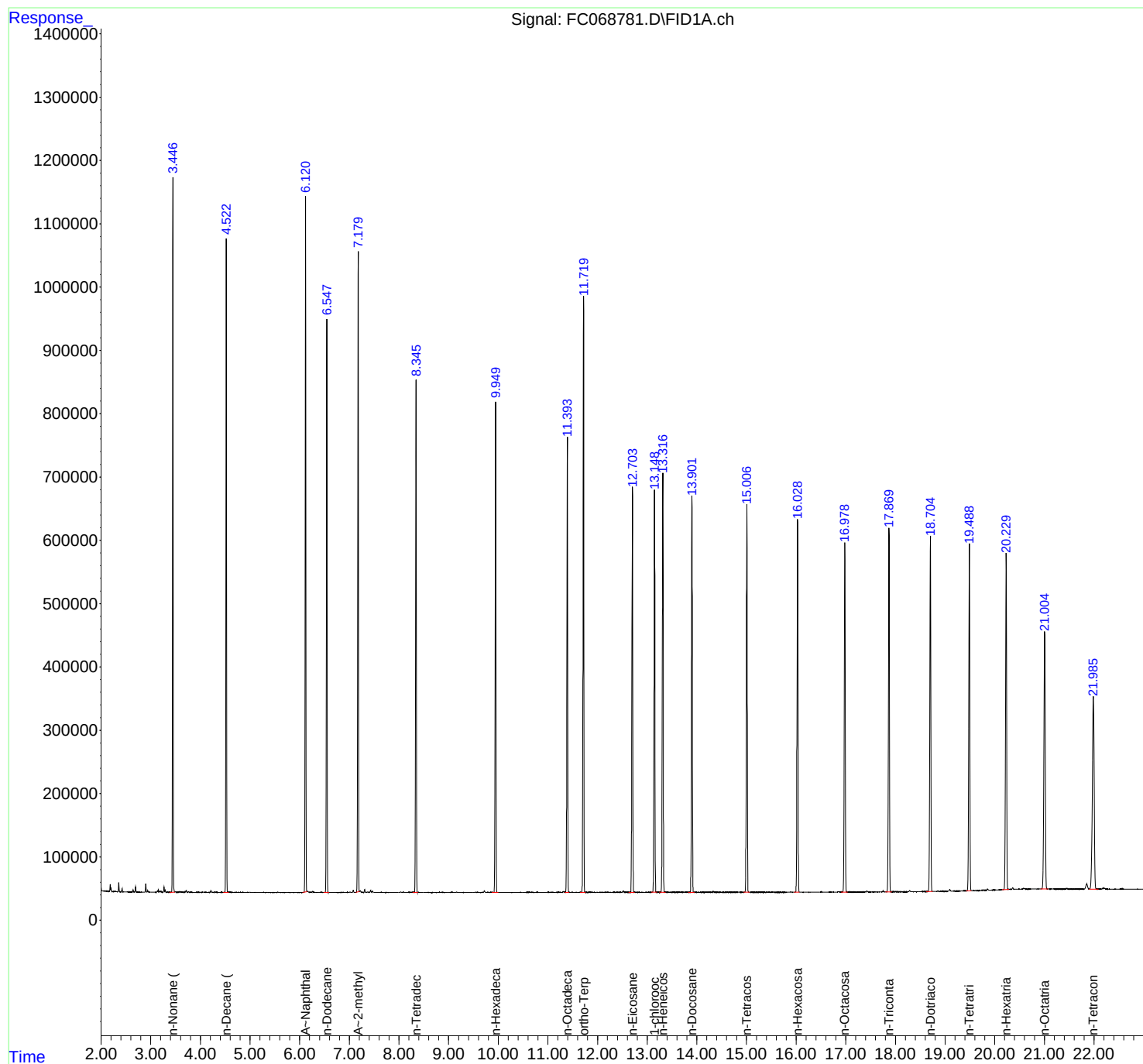
(m)=manual int.

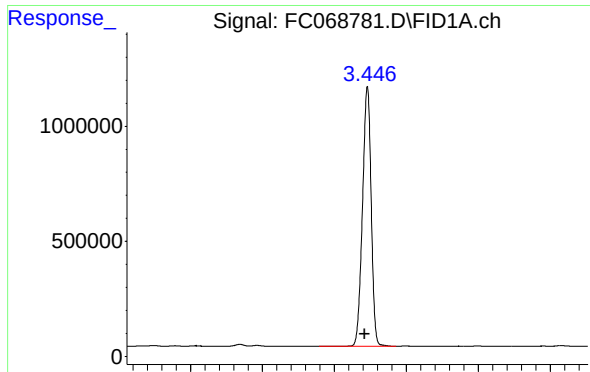
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068781.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 15:33
Operator : YP/AJ
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
Quant Time: May 07 08:36:16 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:32:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

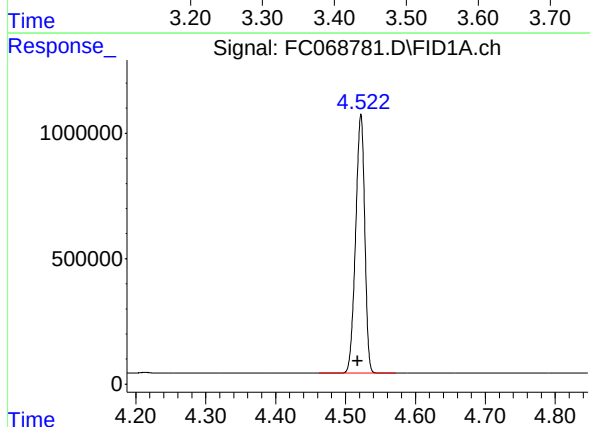




#1 n-Nonane (C9)

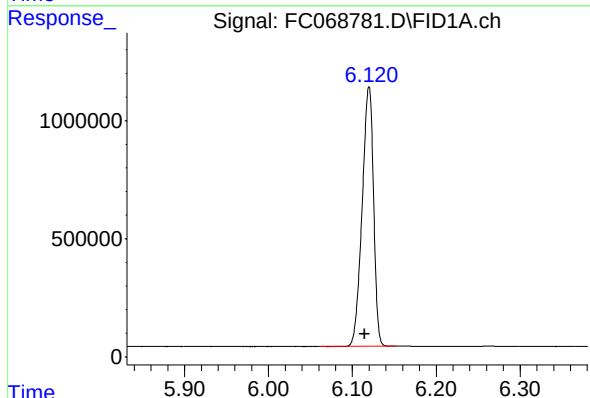
R.T.: 3.446 min
Delta R.T.: 0.004 min
Response: 9452990
Conc: 91.10 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



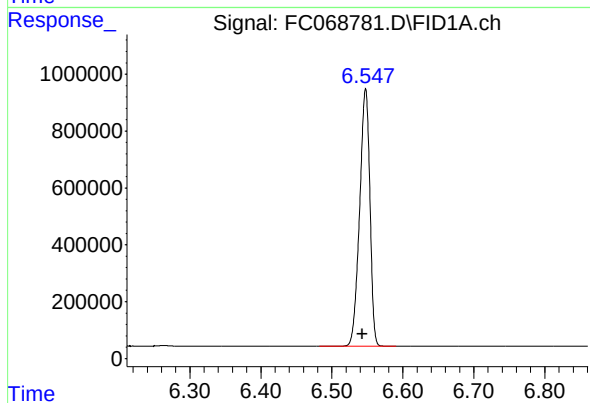
#2 n-Decane (C10)

R.T.: 4.522 min
Delta R.T.: 0.004 min
Response: 9350074
Conc: 91.01 ug/ml



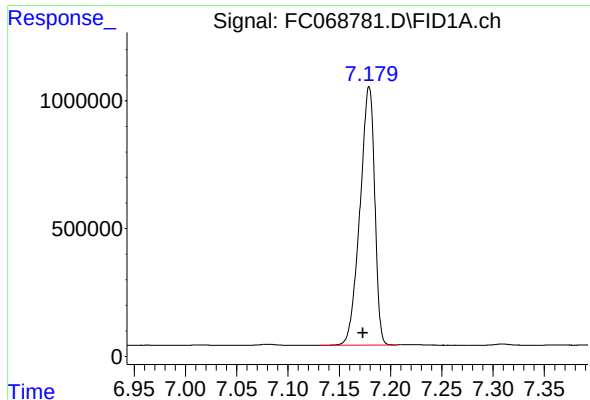
#3 A~Naphthalene (C11.7)

R.T.: 6.120 min
Delta R.T.: 0.005 min
Response: 10375040
Conc: 91.12 ug/ml



#4 n-Dodecane (C12)

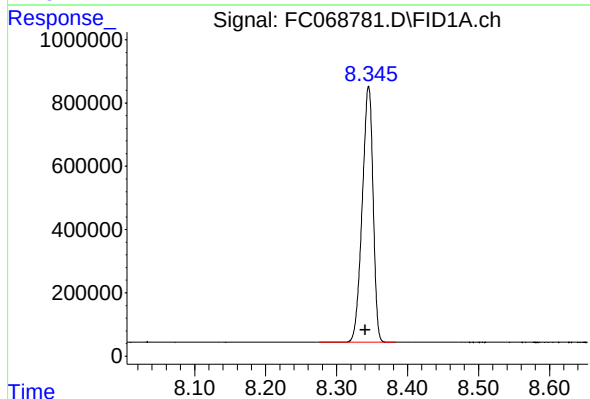
R.T.: 6.547 min
Delta R.T.: 0.004 min
Response: 9077767
Conc: 90.56 ug/ml



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

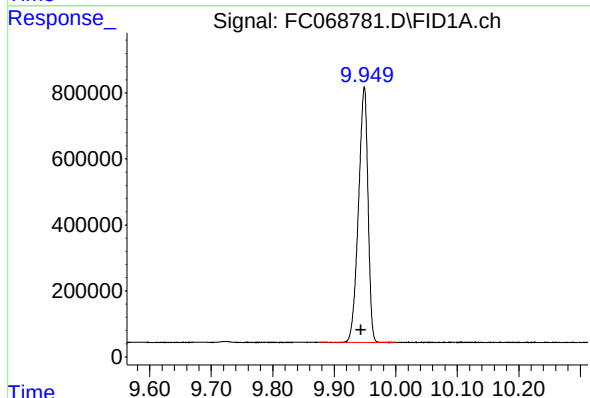
R.T.: 7.179 min
Delta R.T.: 0.006 min
Response: 10106516
Conc: 90.82 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



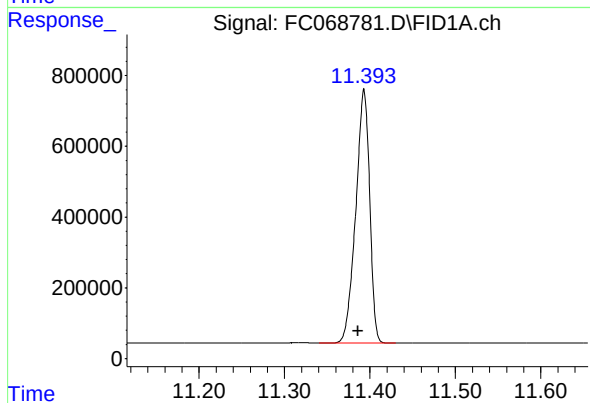
#6 n-Tetradecane (C14)

R.T.: 8.345 min
Delta R.T.: 0.004 min
Response: 8598731
Conc: 90.09 ug/ml



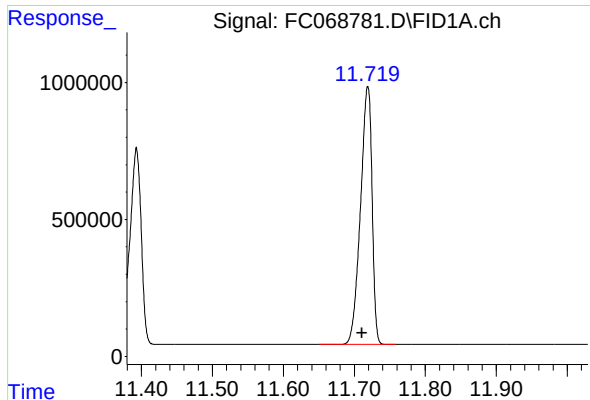
#7 n-Hexadecane (C16)

R.T.: 9.948 min
Delta R.T.: 0.005 min
Response: 8314084
Conc: 89.60 ug/ml



#8 n-Octadecane (C18)

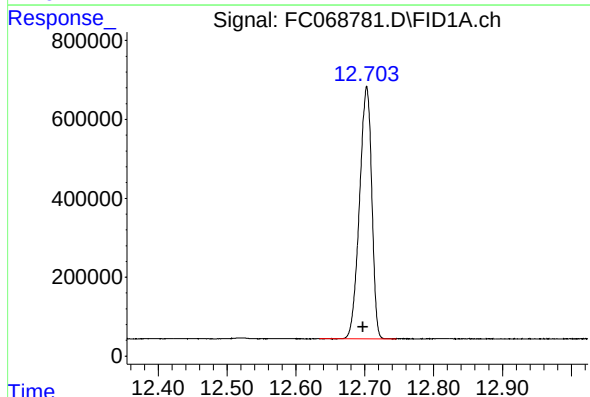
R.T.: 11.393 min
Delta R.T.: 0.007 min
Response: 8110111
Conc: 89.37 ug/ml



#9 ortho-Terphenyl (SURR)

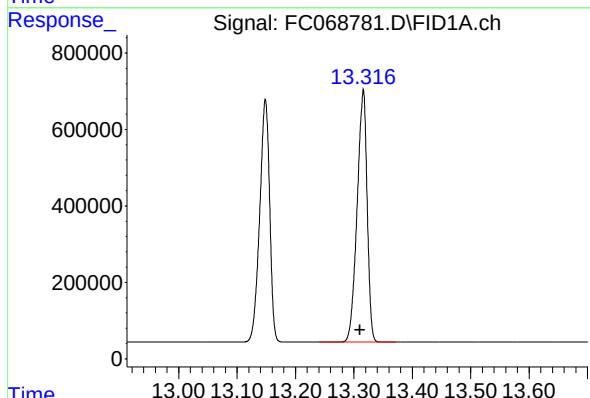
R.T.: 11.719 min
Delta R.T.: 0.008 min
Response: 10663591
Conc: 90.36 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



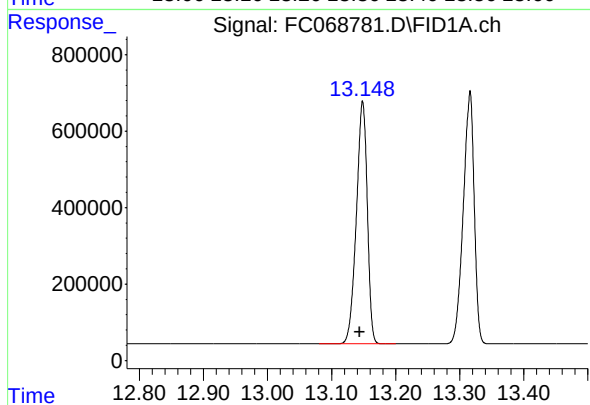
#10 n-Eicosane (C20)

R.T.: 12.703 min
Delta R.T.: 0.005 min
Response: 7900541
Conc: 89.68 ug/ml



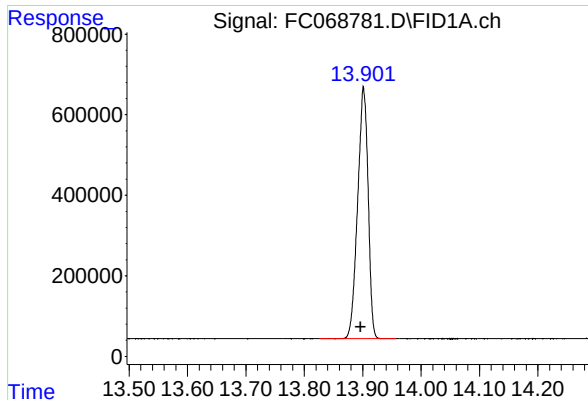
#11 n-Heneicosane (C21)

R.T.: 13.316 min
Delta R.T.: 0.005 min
Response: 7834158
Conc: 89.77 ug/ml



#12 1-chlorooctadecane (SURR)

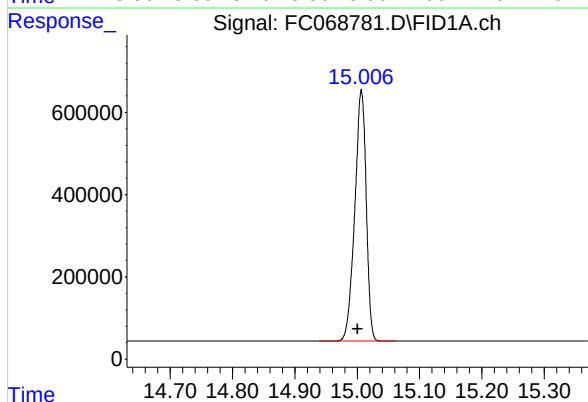
R.T.: 13.148 min
Delta R.T.: 0.004 min
Response: 7506812
Conc: 90.44 ug/ml



#13 n-Docosane (C22)

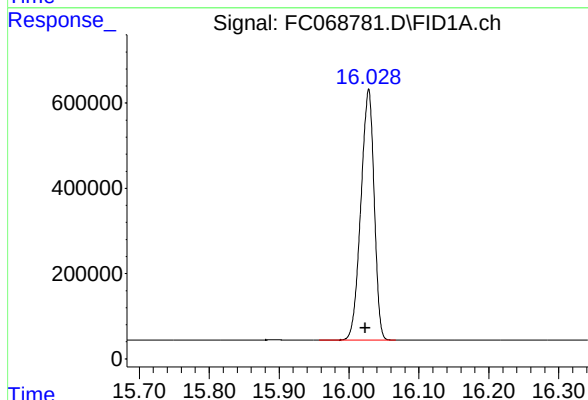
R.T.: 13.902 min
Delta R.T.: 0.005 min
Response: 7786407
Conc: 90.16 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



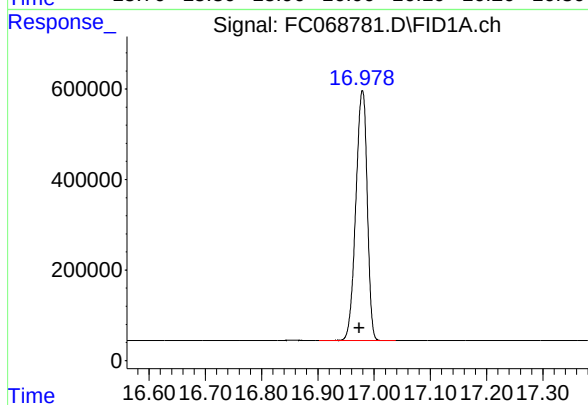
#14 n-Tetracosane (C24)

R.T.: 15.007 min
Delta R.T.: 0.006 min
Response: 7763690
Conc: 90.80 ug/ml



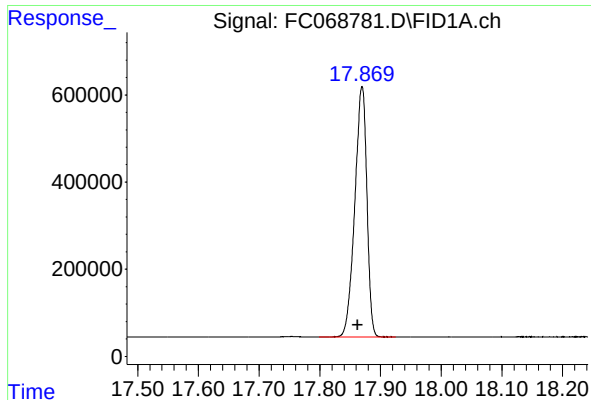
#15 n-Hexacosane (C26)

R.T.: 16.028 min
Delta R.T.: 0.005 min
Response: 7766538
Conc: 91.65 ug/ml



#16 n-Octacosane (C28)

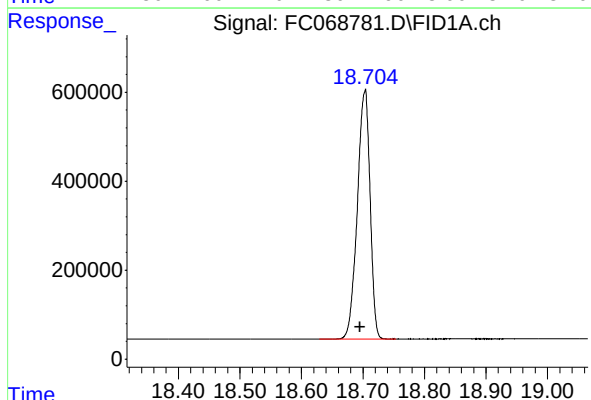
R.T.: 16.979 min
Delta R.T.: 0.005 min
Response: 7770168
Conc: 92.25 ug/ml



#17 n-Tricontane (C30)

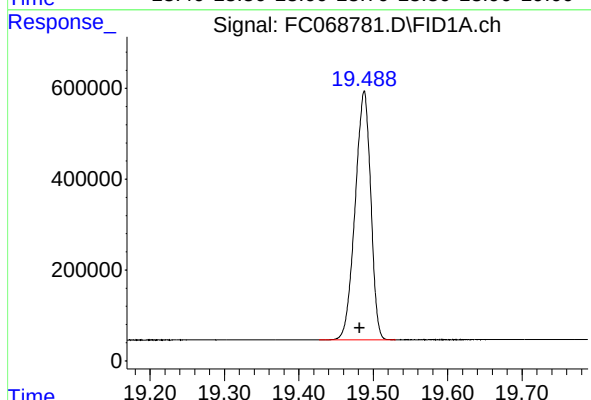
R.T.: 17.869 min
Delta R.T.: 0.007 min
Response: 7942026
Conc: 92.15 ug/ml

Instrument :
FID_C
ClientSampleId :
100 PPM ALIPHATIC HC STD1



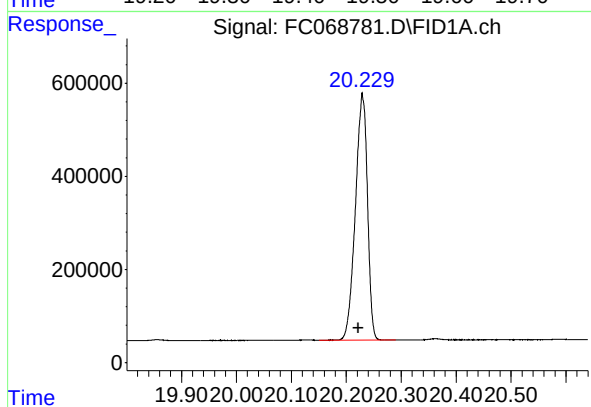
#18 n-Dotriacontane (C32)

R.T.: 18.703 min
Delta R.T.: 0.007 min
Response: 8053843
Conc: 92.13 ug/ml



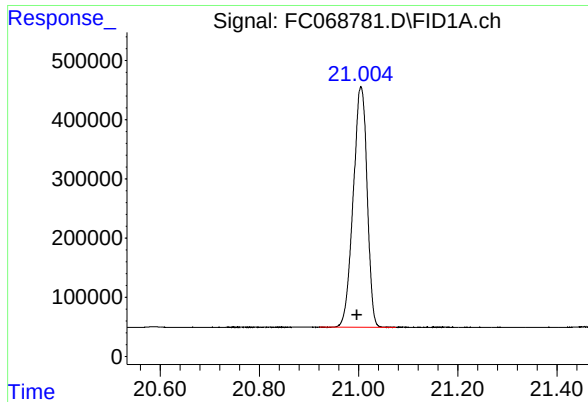
#19 n-Tetatriacontane (C34)

R.T.: 19.488 min
Delta R.T.: 0.006 min
Response: 7971732
Conc: 92.00 ug/ml



#20 n-Hexatriacontane (C36)

R.T.: 20.229 min
Delta R.T.: 0.007 min
Response: 8070568
Conc: 92.07 ug/ml



#21 n-Octatriacontane (C38)

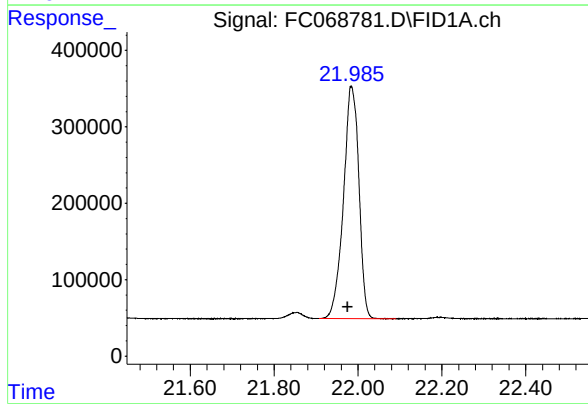
R.T.: 21.005 min
Delta R.T.: 0.008 min
Response: 7905156
Conc: 92.30 ug/ml

Instrument :

FID_C

ClientSampleId :

100 PPM ALIPHATIC HC STD1



#22 n-Tetracontane (C40)

R.T.: 21.984 min
Delta R.T.: 0.009 min
Response: 7777176
Conc: 92.88 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068781.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 15:33
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.446	3.379	3.486	BV	1129688	9452990	88.65%	5.080%
2	4.522	4.462	4.572	BB	1035042	9350074	87.68%	5.024%
3	6.120	6.060	6.152	BV	1096833	10375040	97.29%	5.575%
4	6.547	6.482	6.590	BB	904836	9077767	85.13%	4.878%
5	7.179	7.130	7.205	BV	1013537	10106516	94.78%	5.431%
6	8.345	8.275	8.384	BB	810803	8598731	80.64%	4.621%
7	9.948	9.875	10.000	BB	775582	8314084	77.97%	4.468%
8	11.393	11.340	11.430	BB	717485	8110111	76.05%	4.358%
9	11.719	11.650	11.759	BB	944228	10663591	100.00%	5.730%
10	12.703	12.634	12.745	BB	638688	7900541	74.09%	4.245%
11	13.148	13.080	13.200	BB	635291	7506812	70.40%	4.034%
12	13.316	13.240	13.372	BB	656730	7834158	73.47%	4.210%
13	13.902	13.825	13.957	BB	619594	7786407	73.02%	4.184%
14	15.007	14.939	15.062	BB	610530	7763690	72.81%	4.172%
15	16.028	15.957	16.067	BB	591954	7766538	72.83%	4.173%
16	16.979	16.902	17.039	BB	553331	7770168	72.87%	4.175%
17	17.869	17.799	17.925	BB	573859	7942026	74.48%	4.268%
18	18.703	18.629	18.754	BB	555957	8053843	75.53%	4.328%
19	19.488	19.427	19.530	BB	547546	7971732	74.76%	4.284%
20	20.229	20.150	20.290	BB	529354	8070568	75.68%	4.337%
21	21.005	20.920	21.075	BB	406107	7905156	74.13%	4.248%
22	21.984	21.907	22.090	VB	302688	7777176	72.93%	4.179%
Sum of corrected areas:						186097717		

Aliphatic EPH 050625.M Wed May 07 09:07:08 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068782.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 16:11
 Operator : YP/AJ
 Sample : 50 PPM ALIPHATIC HC STD2
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
 Quant Time: May 07 08:36:38 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:32:40 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.714	5441207	46.106 ug/ml
Spiked Amount 50.000		Recovery =	92.21%
12) S 1-chlorooctadecane (S...	13.145	3828109	46.120 ug/ml
Spiked Amount 50.000		Recovery =	92.24%
Target Compounds			
1) T n-Nonane (C9)	3.444	4793918	46.198 ug/ml
2) T n-Decane (C10)	4.519	4749857	46.233 ug/ml
3) T A~Naphthalene (C11.7)	6.116	5278650	46.359 ug/ml
4) T n-Dodecane (C12)	6.545	4624567	46.135 ug/ml
5) T A~2-methylnaphthalene...	7.175	5122386	46.031 ug/ml
6) T n-Tetradecane (C14)	8.342	4394825	46.045 ug/ml
7) T n-Hexadecane (C16)	9.945	4257987	45.888 ug/ml
8) T n-Octadecane (C18)	11.389	4159655	45.839 ug/ml
10) T n-Eicosane (C20)	12.698	4047839	45.948 ug/ml
11) T n-Heneicosane (C21)	13.312	4003168	45.869 ug/ml
13) T n-Docosane (C22)	13.898	3969368	45.962 ug/ml
14) T n-Tetracosane (C24)	15.002	3939821	46.077 ug/ml
15) T n-Hexacosane (C26)	16.024	3918274	46.240 ug/ml
16) T n-Octacosane (C28)	16.976	3897133	46.267 ug/ml
17) T n-Tricontane (C30)	17.865	3988283	46.273 ug/ml
18) T n-Dotriacontane (C32)	18.698	4044691	46.268 ug/ml
19) T n-Tetratriacontane (C34)	19.483	4012023	46.303 ug/ml
20) T n-Hexatriacontane (C36)	20.224	4065667	46.381 ug/ml
21) T n-Octatriacontane (C38)	21.000	3986154	46.544 ug/ml
22) T n-Tetracontane (C40)	21.980	3914742	46.754 ug/ml

(f)=RT Delta > 1/2 Window

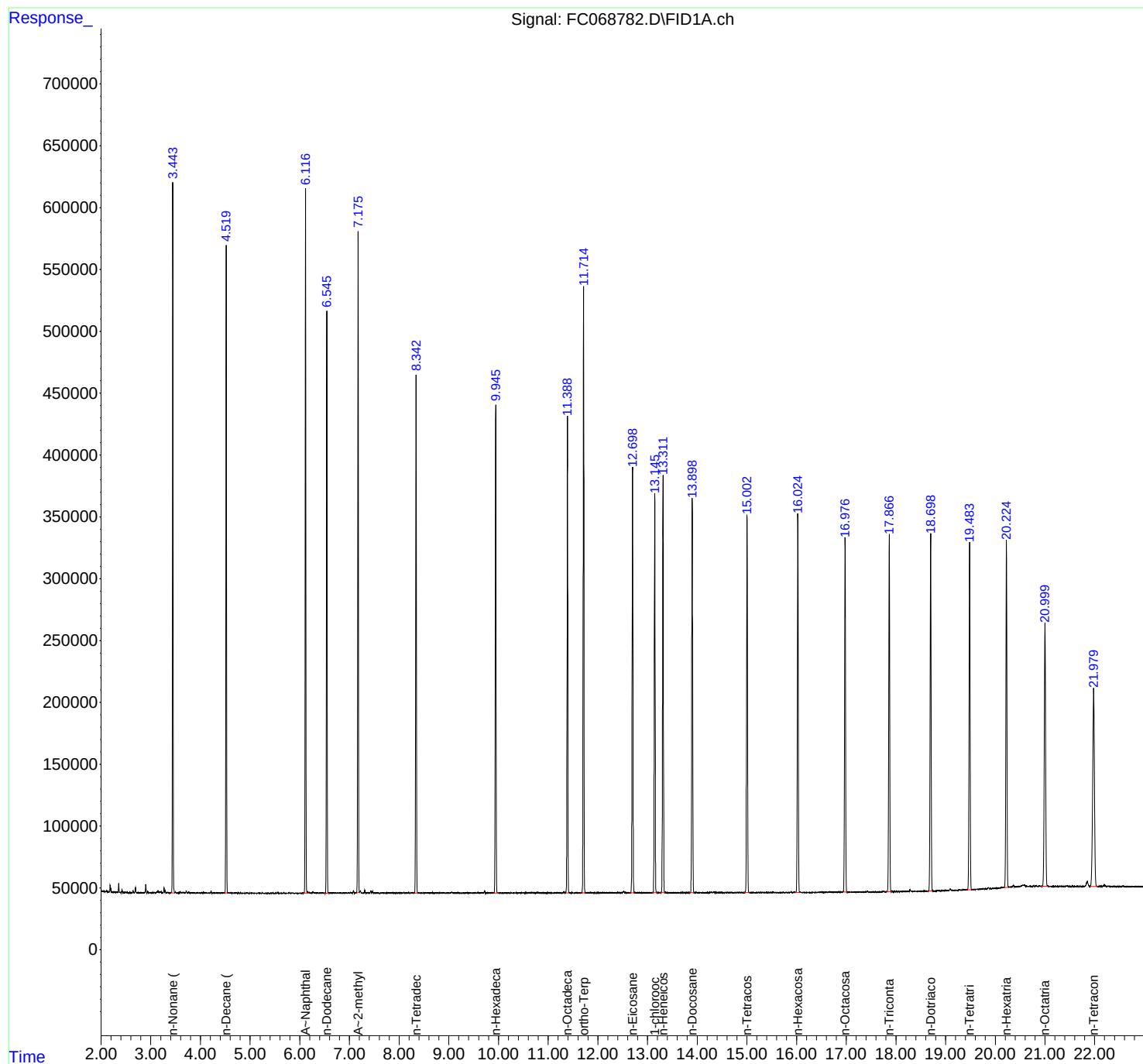
(m)=manual int.

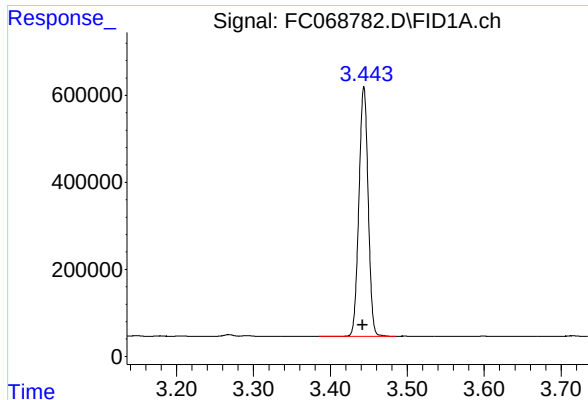
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068782.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 16:11
Operator : YP/AJ
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 12 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
Quant Time: May 07 08:36:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:32:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

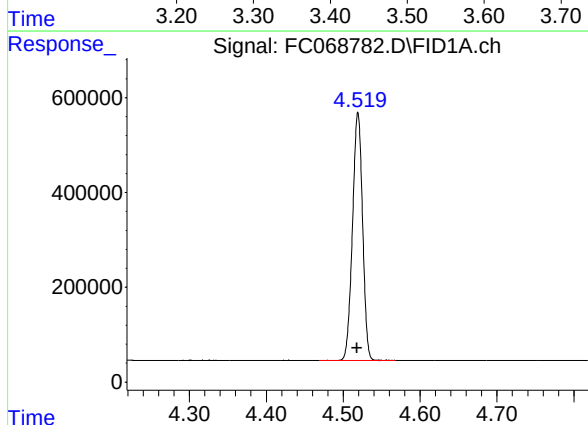




#1 n-Nonane (C9)

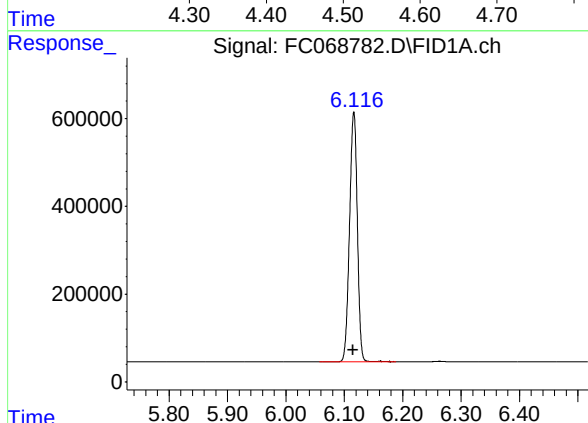
R.T.: 3.444 min
Delta R.T.: 0.002 min
Response: 4793918
Conc: 46.20 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



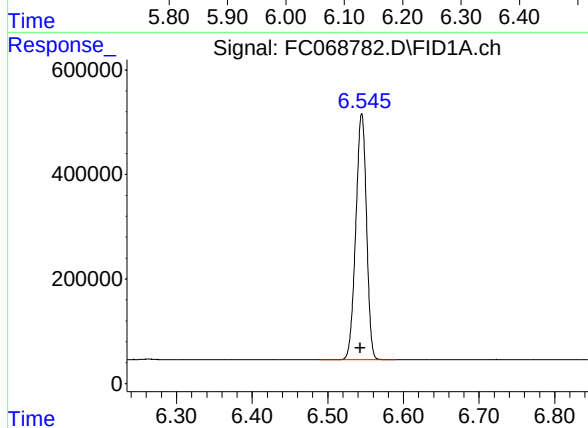
#2 n-Decane (C10)

R.T.: 4.519 min
Delta R.T.: 0.001 min
Response: 4749857
Conc: 46.23 ug/ml



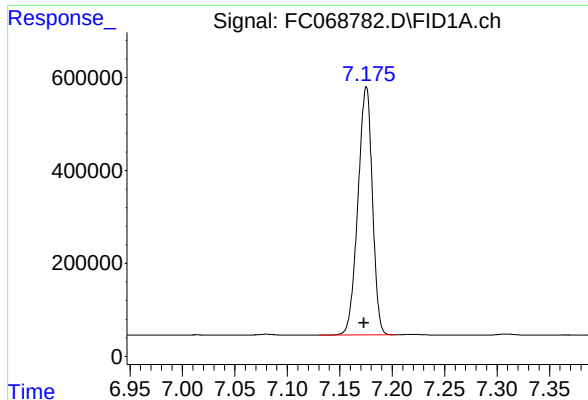
#3 A~Naphthalene (C11.7)

R.T.: 6.116 min
Delta R.T.: 0.002 min
Response: 5278650
Conc: 46.36 ug/ml



#4 n-Dodecane (C12)

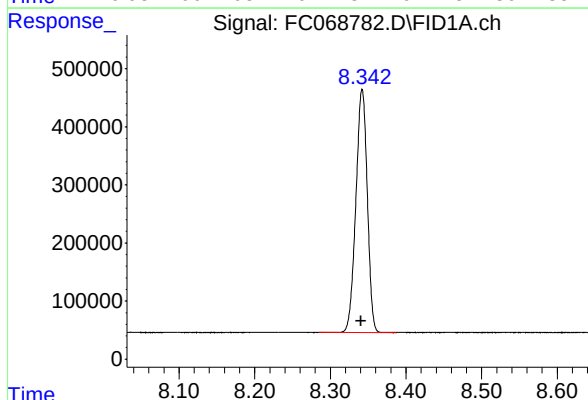
R.T.: 6.545 min
Delta R.T.: 0.002 min
Response: 4624567
Conc: 46.13 ug/ml



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

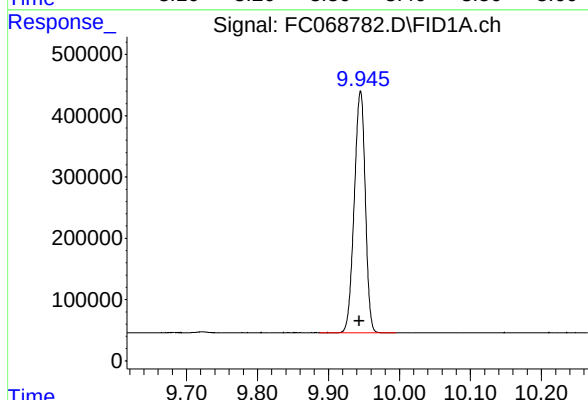
R.T.: 7.175 min
Delta R.T.: 0.002 min
Response: 5122386
Conc: 46.03 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



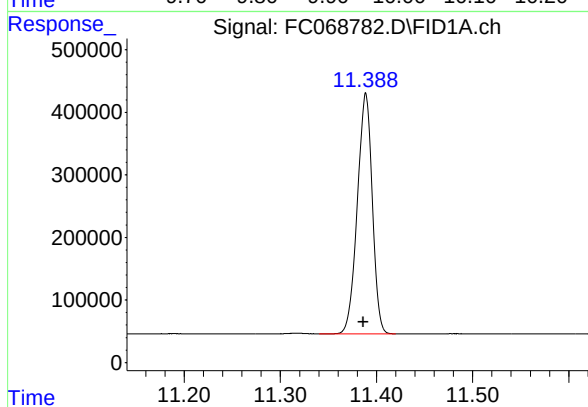
#6 n-Tetradecane (C14)

R.T.: 8.342 min
Delta R.T.: 0.001 min
Response: 4394825
Conc: 46.04 ug/ml



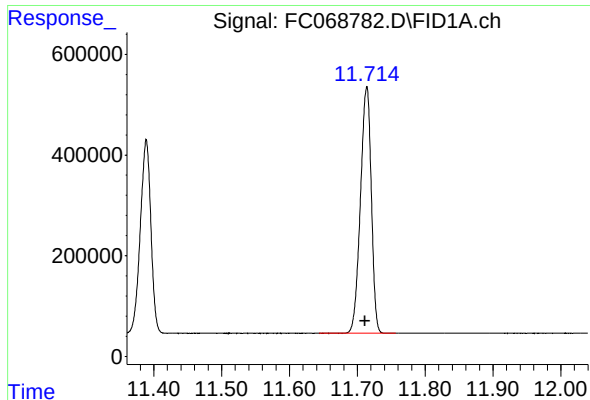
#7 n-Hexadecane (C16)

R.T.: 9.945 min
Delta R.T.: 0.001 min
Response: 4257987
Conc: 45.89 ug/ml



#8 n-Octadecane (C18)

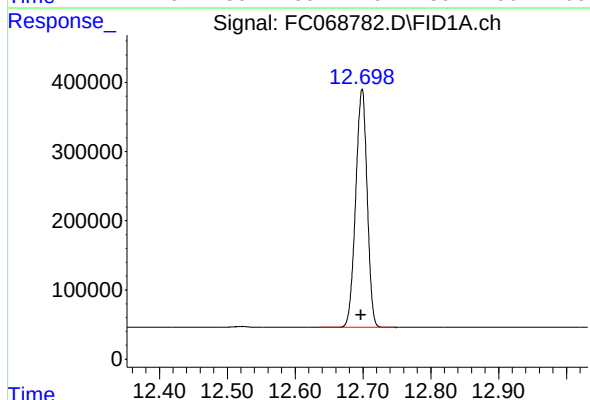
R.T.: 11.389 min
Delta R.T.: 0.003 min
Response: 4159655
Conc: 45.84 ug/ml



#9 ortho-Terphenyl (SURR)

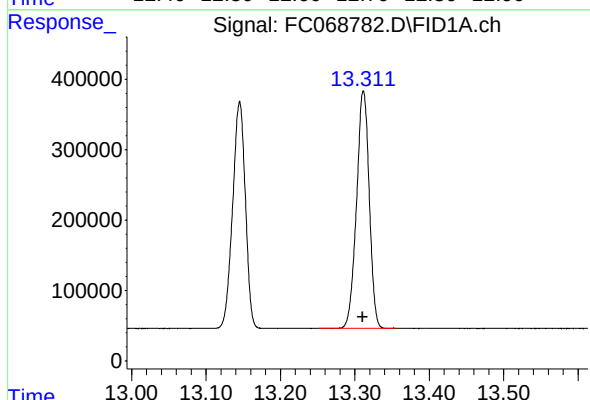
R.T.: 11.714 min
Delta R.T.: 0.003 min
Response: 5441207
Conc: 46.11 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



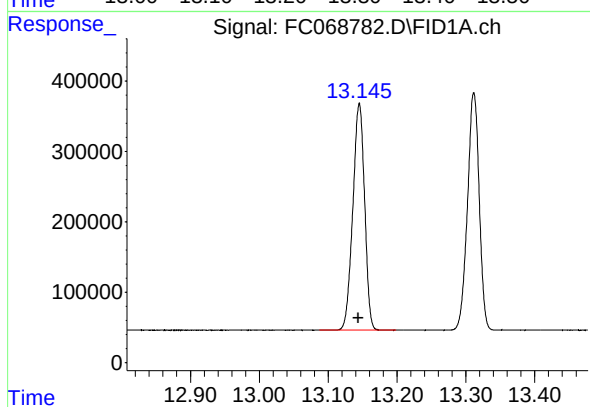
#10 n-Eicosane (C20)

R.T.: 12.698 min
Delta R.T.: 0.001 min
Response: 4047839
Conc: 45.95 ug/ml



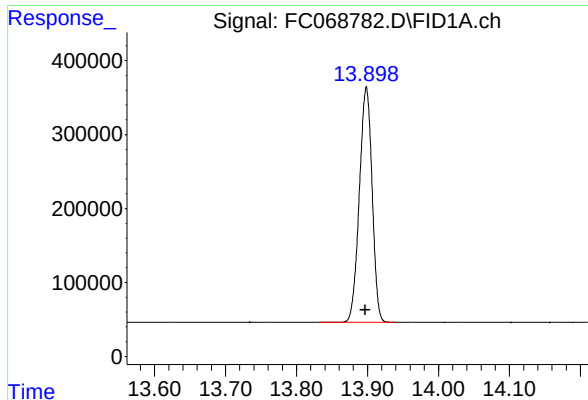
#11 n-Heneicosane (C21)

R.T.: 13.312 min
Delta R.T.: 0.001 min
Response: 4003168
Conc: 45.87 ug/ml



#12 1-chlorooctadecane (SURR)

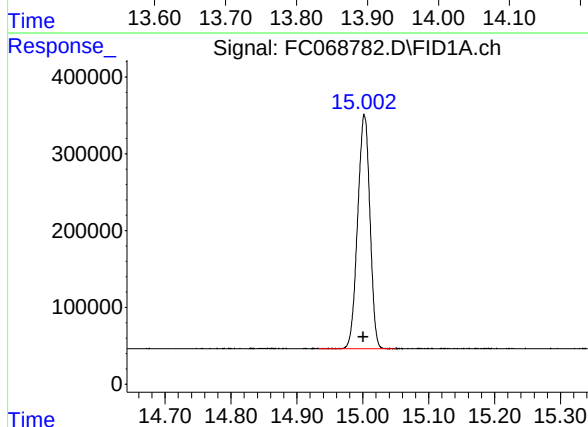
R.T.: 13.145 min
Delta R.T.: 0.001 min
Response: 3828109
Conc: 46.12 ug/ml



#13 n-Docosane (C22)

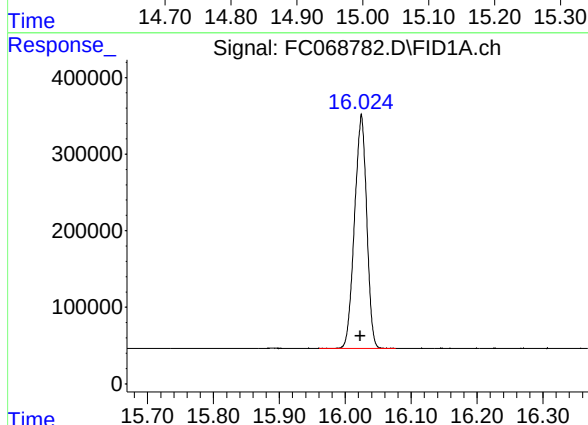
R.T.: 13.898 min
Delta R.T.: 0.002 min
Response: 3969368
Conc: 45.96 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



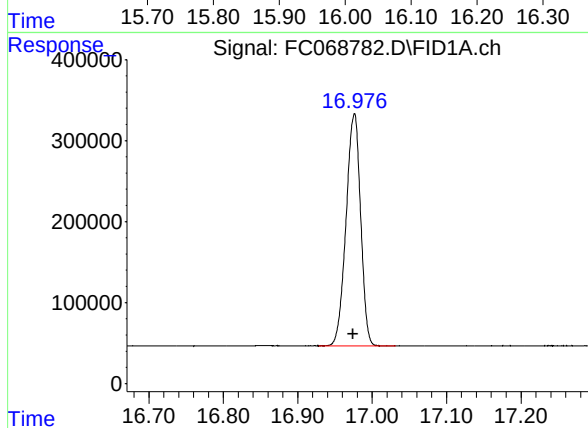
#14 n-Tetracosane (C24)

R.T.: 15.002 min
Delta R.T.: 0.002 min
Response: 3939821
Conc: 46.08 ug/ml



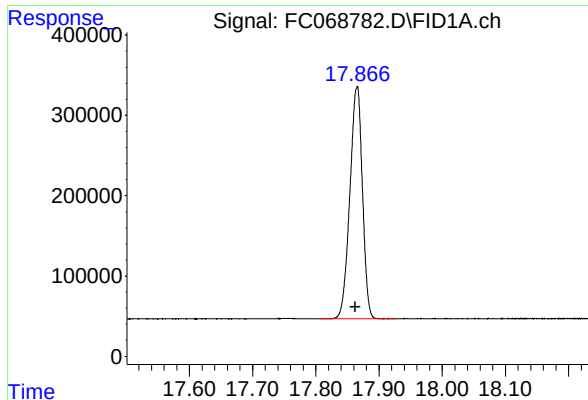
#15 n-Hexacosane (C26)

R.T.: 16.024 min
Delta R.T.: 0.001 min
Response: 3918274
Conc: 46.24 ug/ml



#16 n-Octacosane (C28)

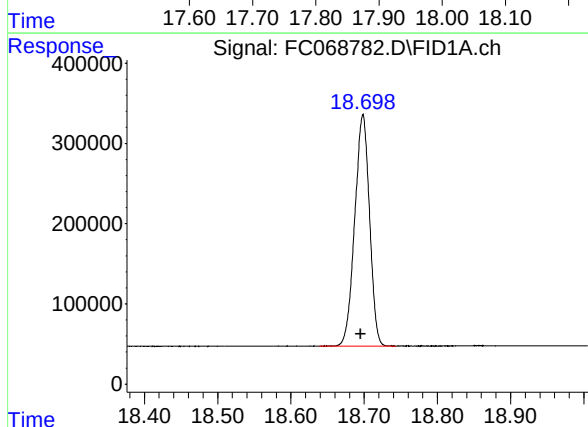
R.T.: 16.976 min
Delta R.T.: 0.002 min
Response: 3897133
Conc: 46.27 ug/ml



#17 n-Tricontane (C30)

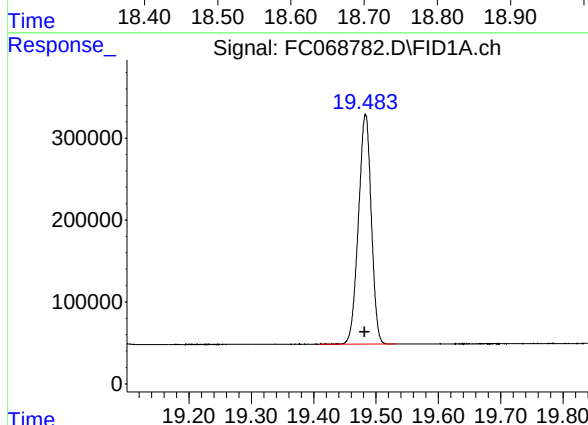
R.T.: 17.865 min
Delta R.T.: 0.003 min
Response: 3988283
Conc: 46.27 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



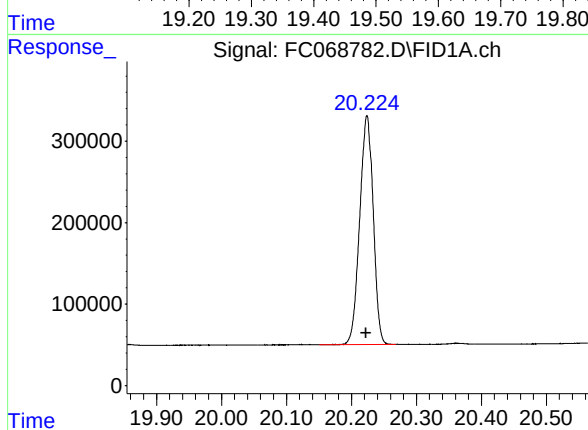
#18 n-Dotriacontane (C32)

R.T.: 18.698 min
Delta R.T.: 0.003 min
Response: 4044691
Conc: 46.27 ug/ml



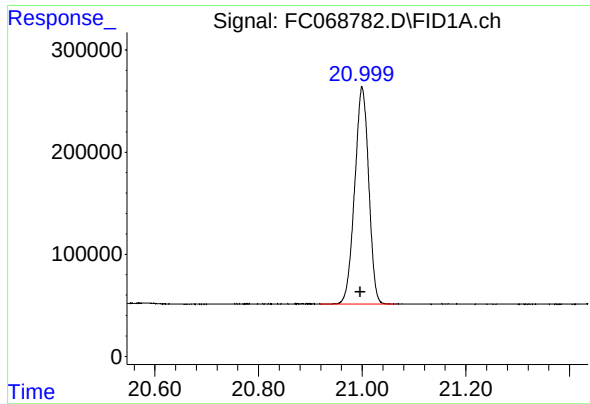
#19 n-Tetatriacontane (C34)

R.T.: 19.483 min
Delta R.T.: 0.001 min
Response: 4012023
Conc: 46.30 ug/ml



#20 n-Hexatriacontane (C36)

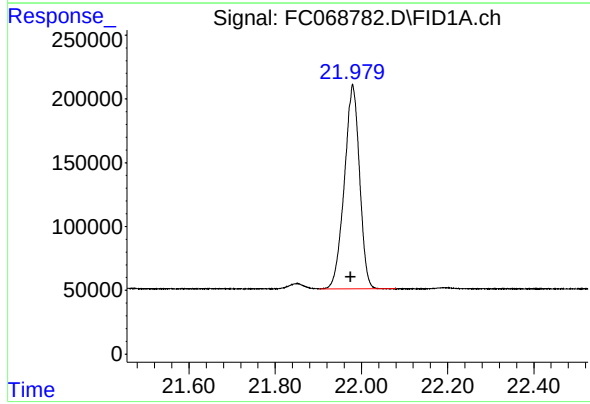
R.T.: 20.224 min
Delta R.T.: 0.001 min
Response: 4065667
Conc: 46.38 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 21.000 min
Delta R.T.: 0.003 min
Response: 3986154
Conc: 46.54 ug/ml

Instrument :
FID_C
ClientSampleId :
50 PPM ALIPHATIC HC STD2



#22 n-Tetracontane (C40)

R.T.: 21.980 min
Delta R.T.: 0.005 min
Response: 3914742
Conc: 46.75 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068782.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 16:11
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.444	3.385	3.485	BV	574667	4793918	88.10%	5.076%
2	4.519	4.469	4.569	BB	523128	4749857	87.29%	5.030%
3	6.116	6.057	6.189	BB	572205	5278650	97.01%	5.590%
4	6.545	6.489	6.590	BB	471329	4624567	84.99%	4.897%
5	7.175	7.130	7.204	BV	535416	5122386	94.14%	5.424%
6	8.342	8.285	8.387	BB	418679	4394825	80.77%	4.654%
7	9.945	9.887	9.995	BB	395436	4257987	78.25%	4.509%
8	11.389	11.340	11.420	BB	385218	4159655	76.45%	4.405%
9	11.714	11.644	11.757	BB	488432	5441207	100.00%	5.762%
10	12.699	12.635	12.749	BB	345120	4047839	74.39%	4.286%
11	13.145	13.087	13.199	BB	322558	3828109	70.35%	4.054%
12	13.312	13.252	13.355	BB	337391	4003168	73.57%	4.239%
13	13.898	13.832	13.940	BB	318990	3969368	72.95%	4.203%
14	15.002	14.934	15.050	BB	305123	3939821	72.41%	4.172%
15	16.024	15.960	16.077	BB	306028	3918274	72.01%	4.149%
16	16.976	16.929	17.032	BB	285617	3897133	71.62%	4.127%
17	17.865	17.805	17.927	BB	288468	3988283	73.30%	4.223%
18	18.698	18.639	18.744	BB	289046	4044691	74.33%	4.283%
19	19.483	19.409	19.532	BB	280526	4012023	73.73%	4.248%
20	20.224	20.150	20.269	BB	281259	4065667	74.72%	4.305%
21	21.000	20.917	21.065	BB	212347	3986154	73.26%	4.221%
22	21.980	21.902	22.080	PB	159997	3914742	71.95%	4.145%
Sum of corrected areas:							94438323	

Aliphatic EPH 050625.M Wed May 07 09:07:49 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068783.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 16:48
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD3
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
 Quant Time: May 07 08:37:02 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:32:40 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.711	2360314	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
12) S 1-chlorooctadecane (S...	13.144	1660070	20.000 ug/ml
Spiked Amount 50.000		Recovery =	40.00%
Target Compounds			
1) T n-Nonane (C9)	3.442	2075388	20.000 ug/ml
2) T n-Decane (C10)	4.518	2054768	20.000 ug/ml
3) T A~Naphthalene (C11.7)	6.115	2277305	20.000 ug/ml
4) T n-Dodecane (C12)	6.543	2004807	20.000 ug/ml
5) T A~2-methylnaphthalene...	7.173	2225640	20.000 ug/ml
6) T n-Tetradecane (C14)	8.341	1908934	20.000 ug/ml
7) T n-Hexadecane (C16)	9.944	1855813	20.000 ug/ml
8) T n-Octadecane (C18)	11.386	1814880	20.000 ug/ml
10) T n-Eicosane (C20)	12.697	1761914	20.000 ug/ml
11) T n-Heneicosane (C21)	13.310	1745475	20.000 ug/ml
13) T n-Docosane (C22)	13.897	1727226	20.000 ug/ml
14) T n-Tetracosane (C24)	15.001	1710088	20.000 ug/ml
15) T n-Hexacosane (C26)	16.023	1694760	20.000 ug/ml
16) T n-Octacosane (C28)	16.974	1684639	20.000 ug/ml
17) T n-Tricontane (C30)	17.862	1723787	20.000 ug/ml
18) T n-Dotriacontane (C32)	18.695	1748360	20.000 ug/ml
19) T n-Tetratriacontane (C34)	19.482	1732928	20.000 ug/ml
20) T n-Hexatriacontane (C36)	20.222	1753150	20.000 ug/ml
21) T n-Octatriacontane (C38)	20.996	1712858	20.000 ug/ml
22) T n-Tetracontane (C40)	21.975	1674622	20.000 ug/ml

(f)=RT Delta > 1/2 Window

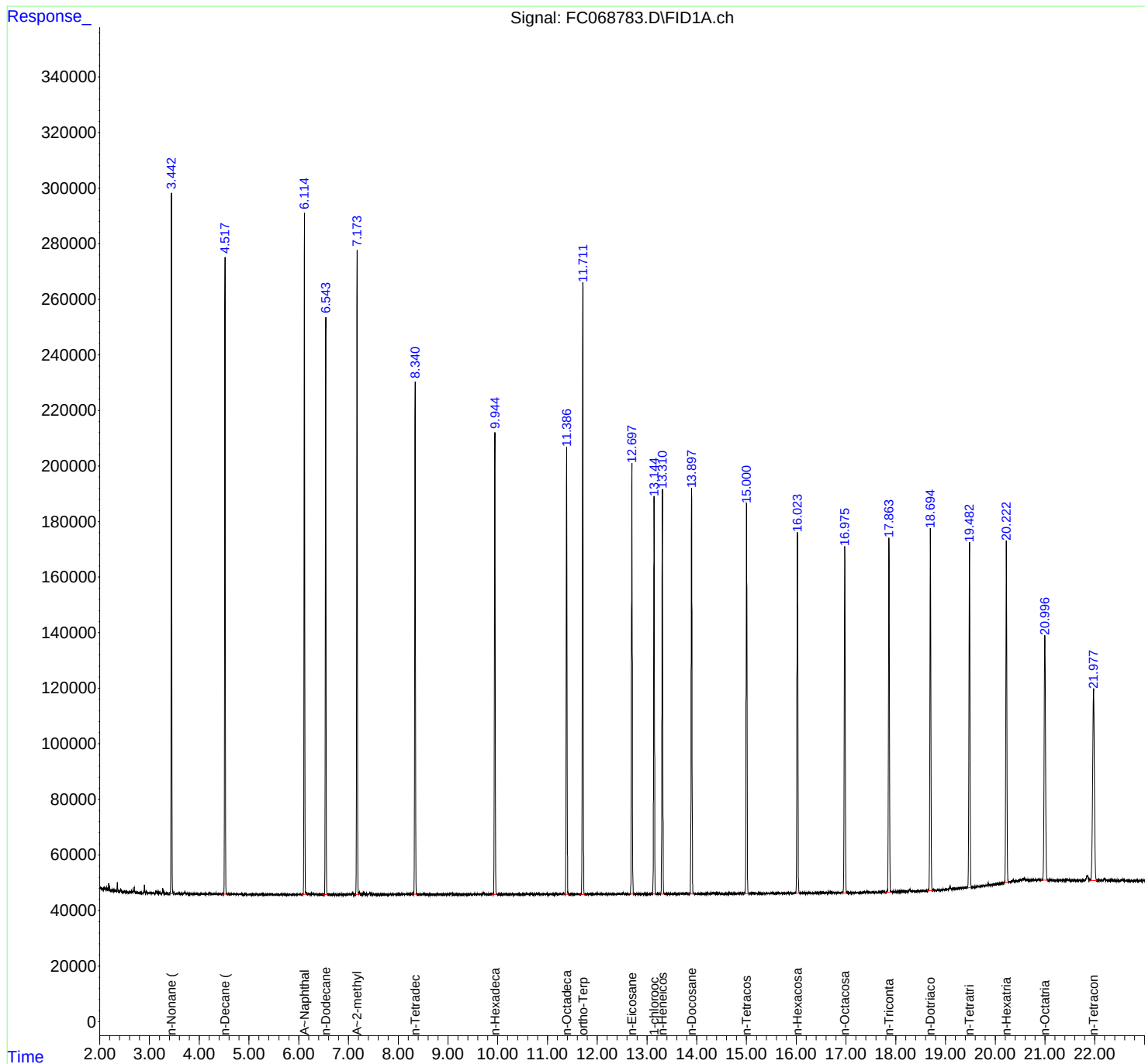
(m)=manual int.

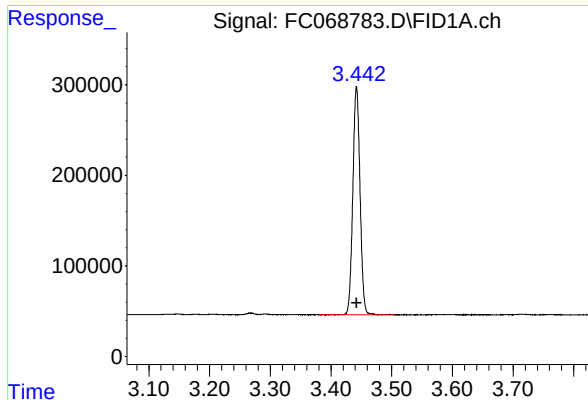
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068783.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 16:48
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
Quant Time: May 07 08:37:02 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:32:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

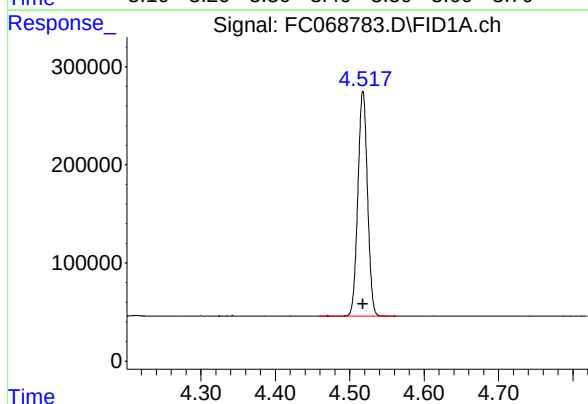




#1 n-Nonane (C9)

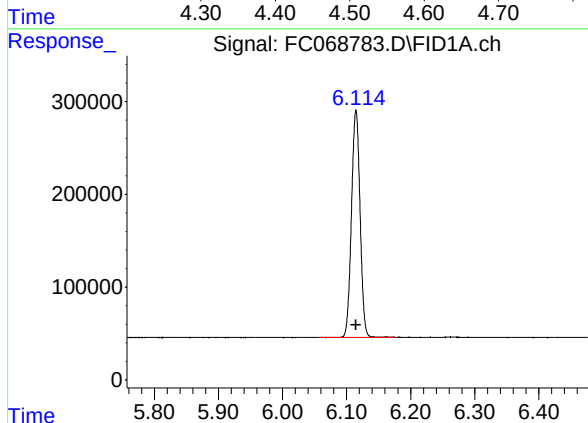
R.T.: 3.442 min
Delta R.T.: 0.000 min
Response: 2075388
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



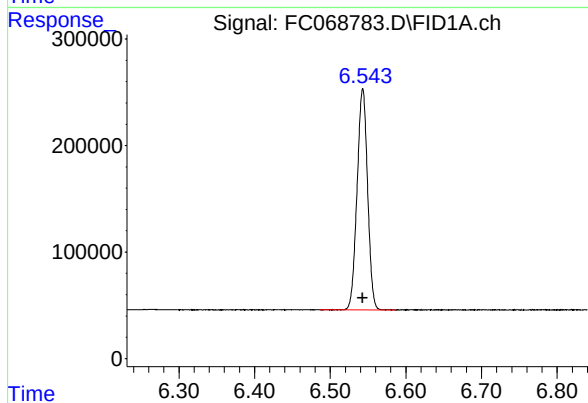
#2 n-Decane (C10)

R.T.: 4.518 min
Delta R.T.: 0.000 min
Response: 2054768
Conc: 20.00 ug/ml



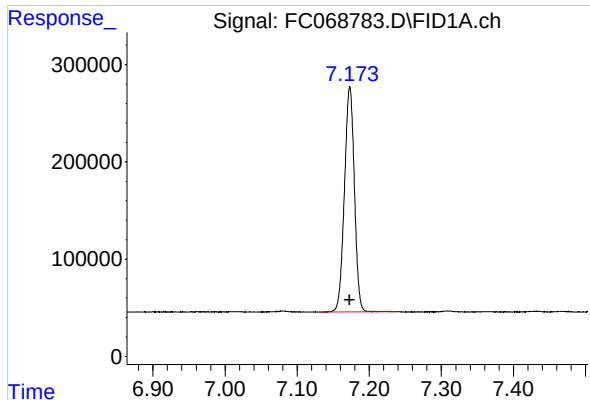
#3 A~Naphthalene (C11.7)

R.T.: 6.115 min
Delta R.T.: 0.000 min
Response: 2277305
Conc: 20.00 ug/ml



#4 n-Dodecane (C12)

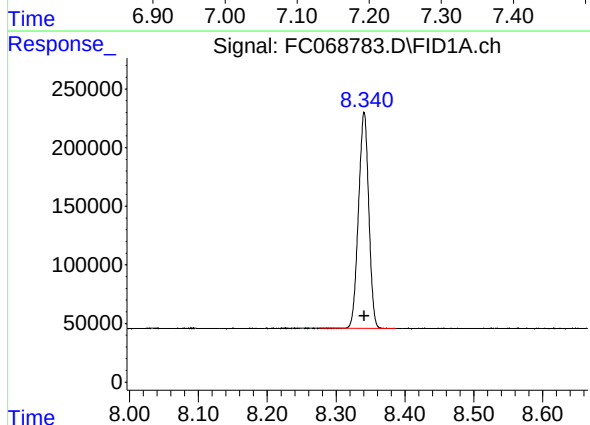
R.T.: 6.543 min
Delta R.T.: 0.000 min
Response: 2004807
Conc: 20.00 ug/ml



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

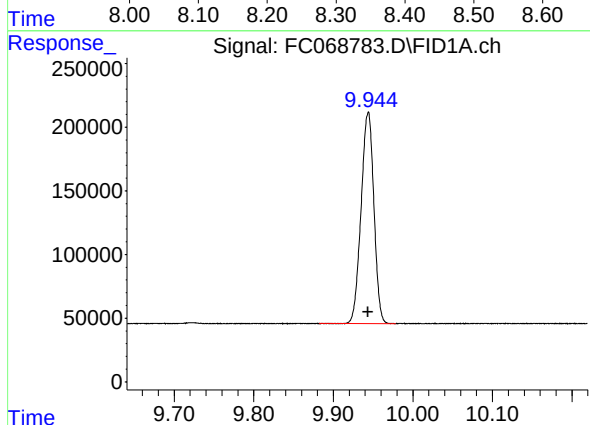
R.T.: 7.173 min
Delta R.T.: 0.000 min
Response: 2225640
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



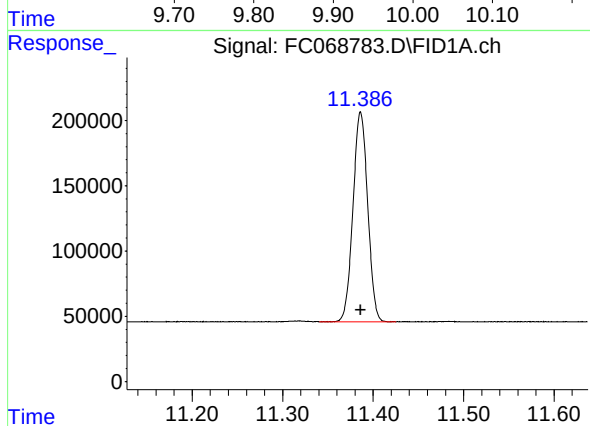
#6 n-Tetradecane (C14)

R.T.: 8.341 min
Delta R.T.: 0.000 min
Response: 1908934
Conc: 20.00 ug/ml



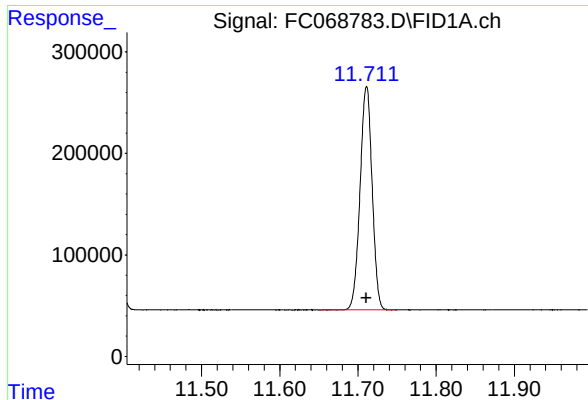
#7 n-Hexadecane (C16)

R.T.: 9.944 min
Delta R.T.: 0.000 min
Response: 1855813
Conc: 20.00 ug/ml



#8 n-Octadecane (C18)

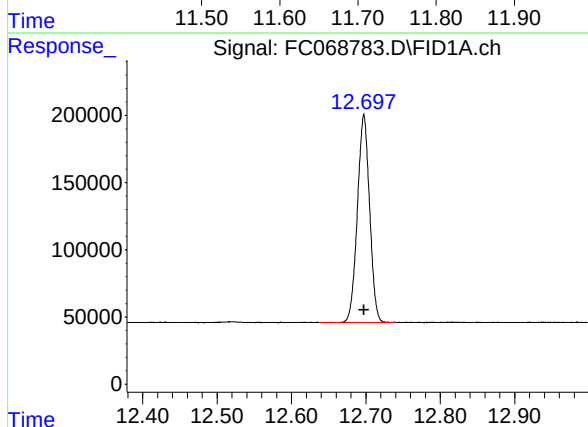
R.T.: 11.386 min
Delta R.T.: 0.000 min
Response: 1814880
Conc: 20.00 ug/ml



#9 ortho-Terphenyl (SURR)

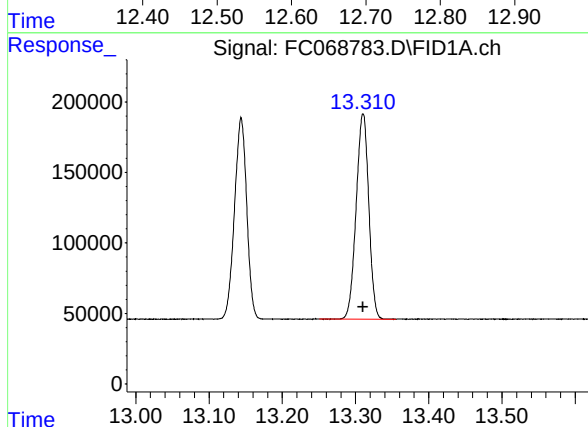
R.T.: 11.711 min
Delta R.T.: 0.000 min
Response: 2360314
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



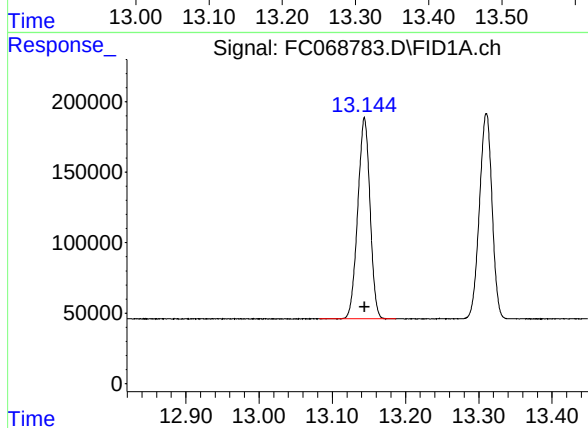
#10 n-Eicosane (C20)

R.T.: 12.697 min
Delta R.T.: 0.000 min
Response: 1761914
Conc: 20.00 ug/ml



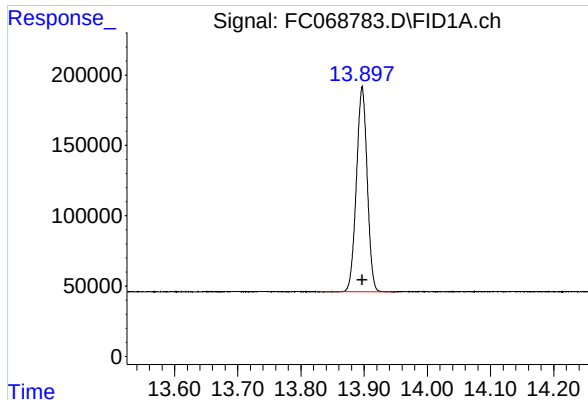
#11 n-Heneicosane (C21)

R.T.: 13.310 min
Delta R.T.: 0.000 min
Response: 1745475
Conc: 20.00 ug/ml



#12 1-chlorooctadecane (SURR)

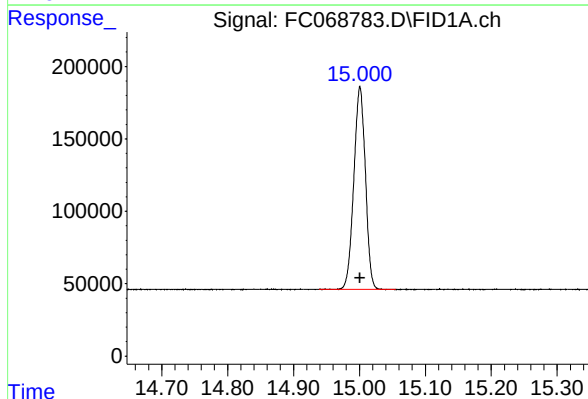
R.T.: 13.144 min
Delta R.T.: 0.000 min
Response: 1660070
Conc: 20.00 ug/ml



#13 n-Docosane (C22)

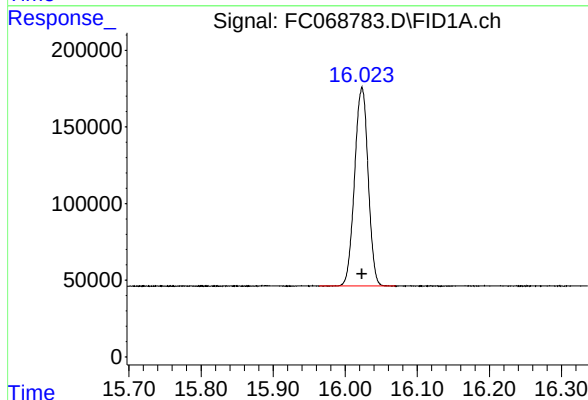
R.T.: 13.897 min
Delta R.T.: 0.000 min
Response: 1727226
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



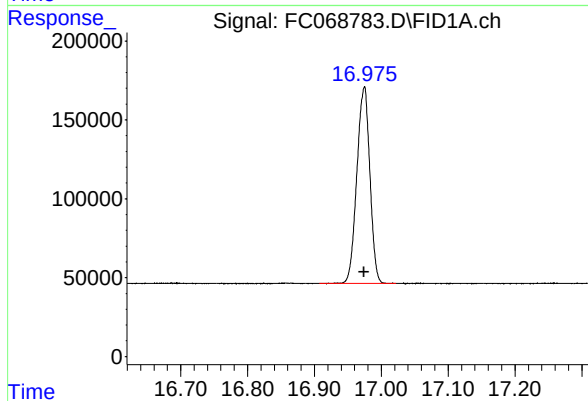
#14 n-Tetracosane (C24)

R.T.: 15.001 min
Delta R.T.: 0.000 min
Response: 1710088
Conc: 20.00 ug/ml



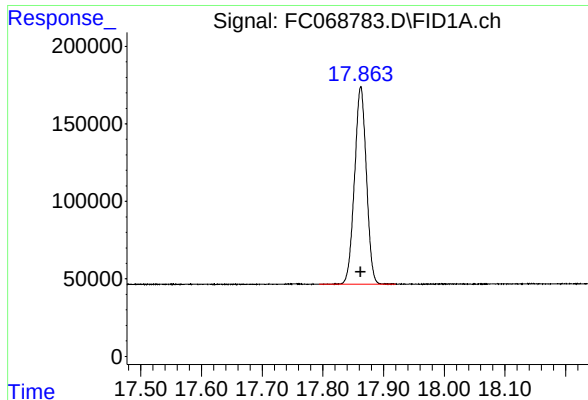
#15 n-Hexacosane (C26)

R.T.: 16.023 min
Delta R.T.: 0.000 min
Response: 1694760
Conc: 20.00 ug/ml



#16 n-Octacosane (C28)

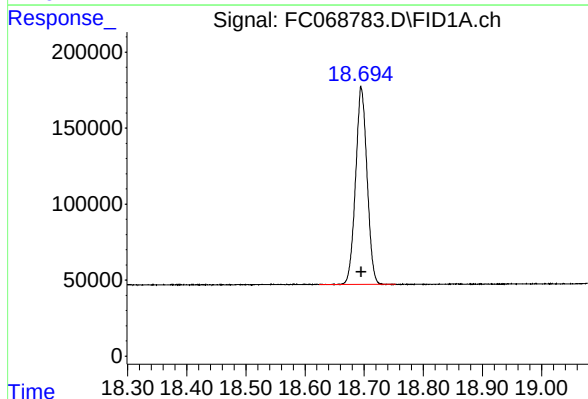
R.T.: 16.974 min
Delta R.T.: 0.000 min
Response: 1684639
Conc: 20.00 ug/ml



#17 n-Tricontane (C30)

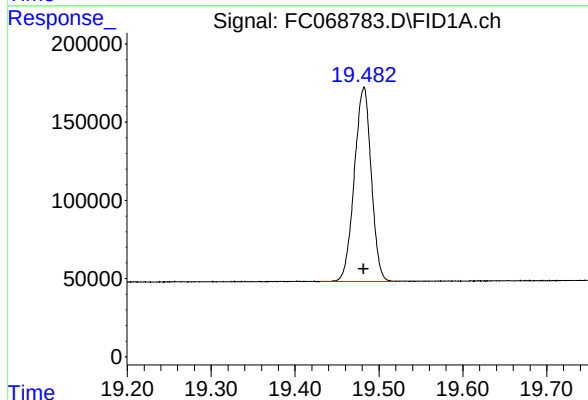
R.T.: 17.862 min
Delta R.T.: 0.000 min
Response: 1723787
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



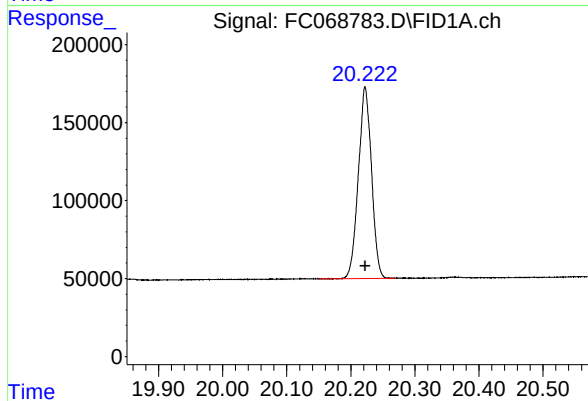
#18 n-Dotriacontane (C32)

R.T.: 18.695 min
Delta R.T.: 0.000 min
Response: 1748360
Conc: 20.00 ug/ml



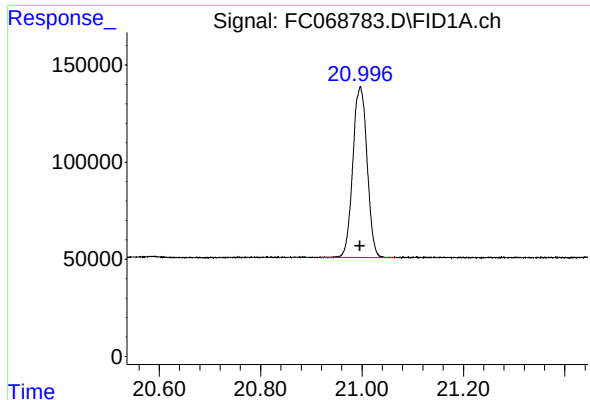
#19 n-Tetatriacontane (C34)

R.T.: 19.482 min
Delta R.T.: 0.000 min
Response: 1732928
Conc: 20.00 ug/ml



#20 n-Hexatriacontane (C36)

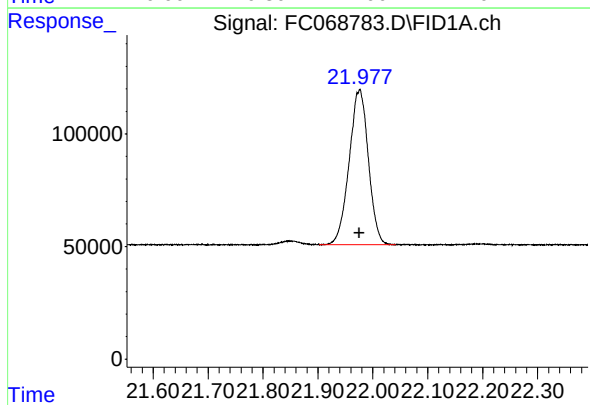
R.T.: 20.222 min
Delta R.T.: 0.000 min
Response: 1753150
Conc: 20.00 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.996 min
Delta R.T.: 0.000 min
Response: 1712858
Conc: 20.00 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD3



#22 n-Tetracontane (C40)

R.T.: 21.975 min
Delta R.T.: 0.000 min
Response: 1674622
Conc: 20.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068783.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 16:48
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.442	3.380	3.507	BB	251852	2075388	87.93%	5.073%
2	4.518	4.459	4.562	BB	229508	2054768	87.05%	5.023%
3	6.115	6.057	6.177	BB	245252	2277305	96.48%	5.567%
4	6.543	6.485	6.587	BB	208645	2004807	84.94%	4.901%
5	7.173	7.130	7.237	BB	232123	2225640	94.29%	5.441%
6	8.341	8.275	8.387	BB	184616	1908934	80.88%	4.666%
7	9.944	9.882	9.979	BB	165547	1855813	78.63%	4.537%
8	11.386	11.340	11.425	BB	160482	1814880	76.89%	4.437%
9	11.711	11.650	11.749	BB	220270	2360314	100.00%	5.770%
10	12.697	12.637	12.740	BB	154757	1761914	74.65%	4.307%
11	13.144	13.082	13.187	BB	142866	1660070	70.33%	4.058%
12	13.310	13.250	13.355	BB	145962	1745475	73.95%	4.267%
13	13.897	13.829	13.950	BB	145860	1727226	73.18%	4.222%
14	15.001	14.939	15.055	BB	140132	1710088	72.45%	4.180%
15	16.023	15.964	16.070	BB	129921	1694760	71.80%	4.143%
16	16.974	16.907	17.022	BB	124139	1684639	71.37%	4.118%
17	17.862	17.794	17.920	BB	127255	1723787	73.03%	4.214%
18	18.695	18.624	18.754	BB	129041	1748360	74.07%	4.274%
19	19.482	19.429	19.520	BB	124106	1732928	73.42%	4.236%
20	20.222	20.150	20.270	BB	122758	1753150	74.28%	4.286%
21	20.996	20.915	21.067	BB	88216	1712858	72.57%	4.187%
22	21.975	21.902	22.042	BB	68753	1674622	70.95%	4.094%
Sum of corrected areas:							40907725	

Aliphatic EPH 050625.M Wed May 07 09:08:12 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068784.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 17:26
 Operator : YP/AJ
 Sample : 10 PPM ALIPHATIC HC STD4
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
 Quant Time: May 07 08:37:27 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:32:40 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	1229812	10.421 ug/ml
Spiked Amount 50.000		Recovery =	20.84%
12) S 1-chlorooctadecane (S...	13.143	860839	10.371 ug/ml
Spiked Amount 50.000		Recovery =	20.74%
Target Compounds			
1) T n-Nonane (C9)	3.442	1080668	10.414 ug/ml
2) T n-Decane (C10)	4.517	1070751	10.422 ug/ml
3) T A~Naphthalene (C11.7)	6.115	1184915	10.406 ug/ml
4) T n-Dodecane (C12)	6.542	1043863	10.414 ug/ml
5) T A~2-methylnaphthalene...	7.172	1152025	10.352 ug/ml
6) T n-Tetradecane (C14)	8.340	994145	10.416 ug/ml
7) T n-Hexadecane (C16)	9.942	961946	10.367 ug/ml
8) T n-Octadecane (C18)	11.385	941672	10.377 ug/ml
10) T n-Eicosane (C20)	12.697	914473	10.380 ug/ml
11) T n-Heneicosane (C21)	13.309	905554	10.376 ug/ml
13) T n-Docosane (C22)	13.895	899148	10.411 ug/ml
14) T n-Tetracosane (C24)	15.000	894756	10.464 ug/ml
15) T n-Hexacosane (C26)	16.022	892257	10.530 ug/ml
16) T n-Octacosane (C28)	16.973	891896	10.589 ug/ml
17) T n-Tricontane (C30)	17.862	915267	10.619 ug/ml
18) T n-Dotriacontane (C32)	18.696	933373	10.677 ug/ml
19) T n-Tetratriacontane (C34)	19.481	923565	10.659 ug/ml
20) T n-Hexatriacontane (C36)	20.221	931989	10.632 ug/ml
21) T n-Octatriacontane (C38)	20.996	908621	10.609 ug/ml
22) T n-Tetracontane (C40)	21.971	883098	10.547 ug/ml

(f)=RT Delta > 1/2 Window

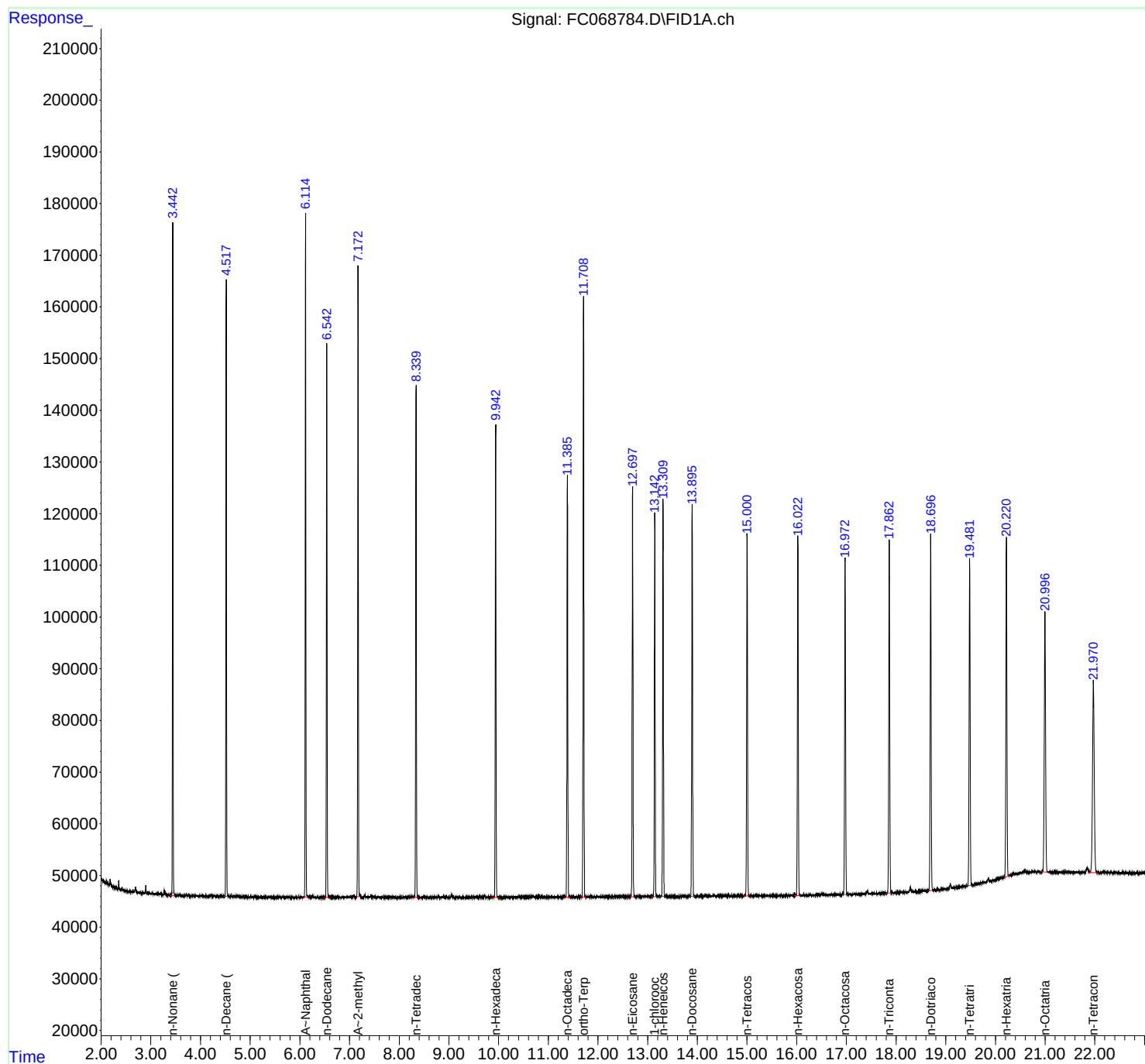
(m)=manual int.

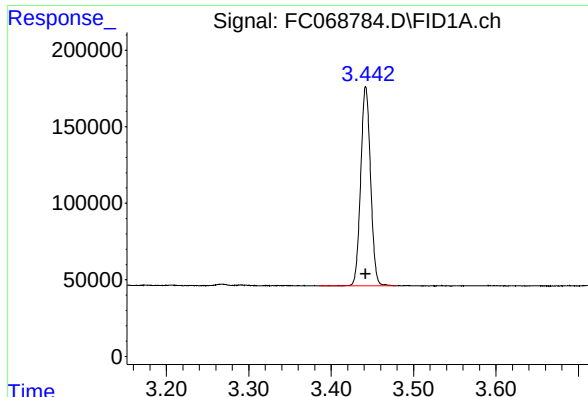
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068784.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 17:26
Operator : YP/AJ
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
Quant Time: May 07 08:37:27 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:32:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

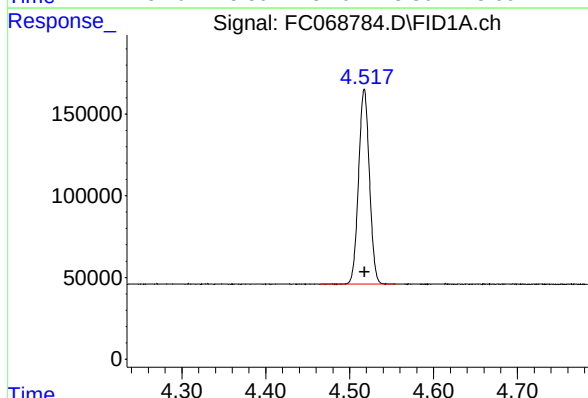




#1 n-Nonane (C9)

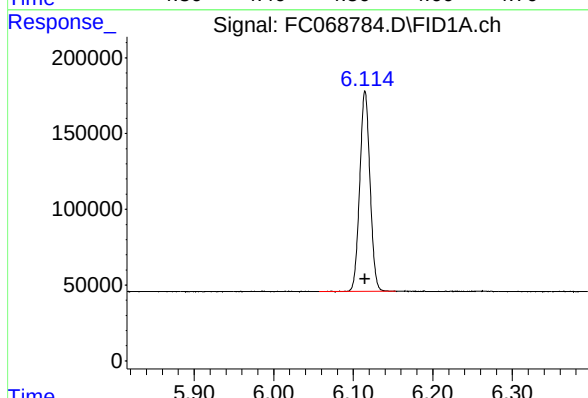
R.T.: 3.442 min
Delta R.T.: 0.000 min
Response: 1080668
Conc: 10.41 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



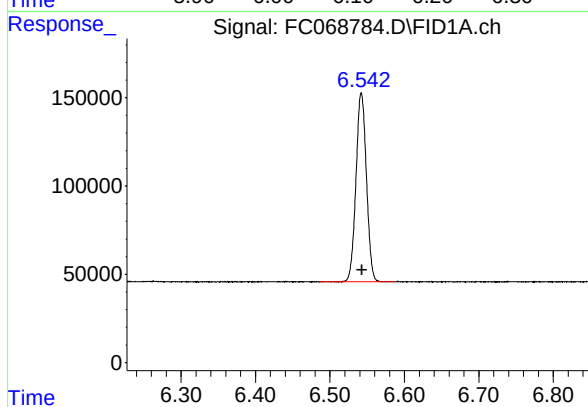
#2 n-Decane (C10)

R.T.: 4.517 min
Delta R.T.: 0.000 min
Response: 1070751
Conc: 10.42 ug/ml



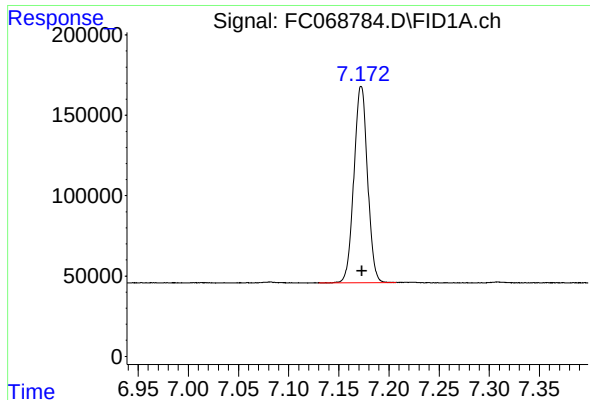
#3 A~Naphthalene (C11.7)

R.T.: 6.115 min
Delta R.T.: 0.000 min
Response: 1184915
Conc: 10.41 ug/ml



#4 n-Dodecane (C12)

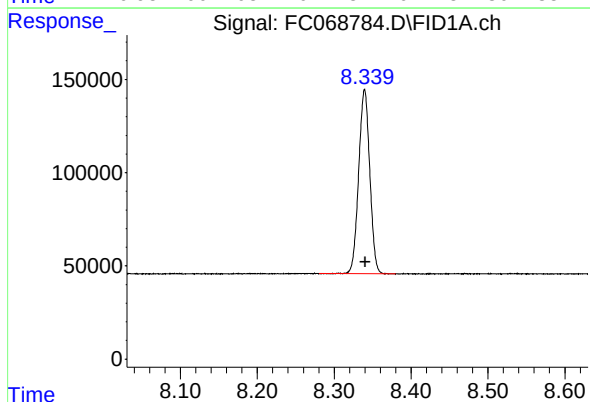
R.T.: 6.542 min
Delta R.T.: 0.000 min
Response: 1043863
Conc: 10.41 ug/ml



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

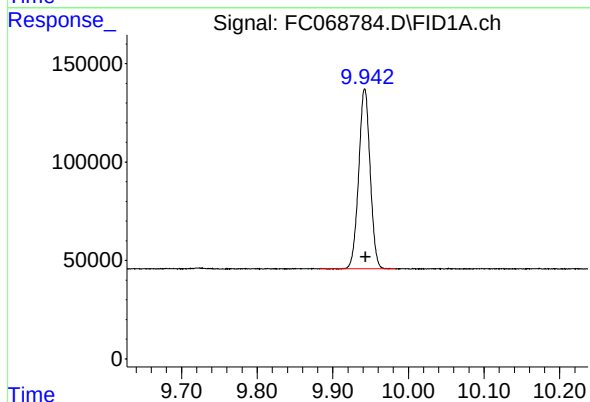
R.T.: 7.172 min
Delta R.T.: 0.000 min
Response: 1152025
Conc: 10.35 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



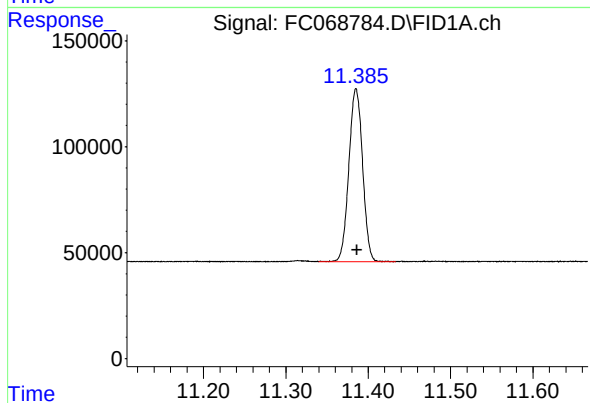
#6 n-Tetradecane (C14)

R.T.: 8.340 min
Delta R.T.: -0.001 min
Response: 994145
Conc: 10.42 ug/ml



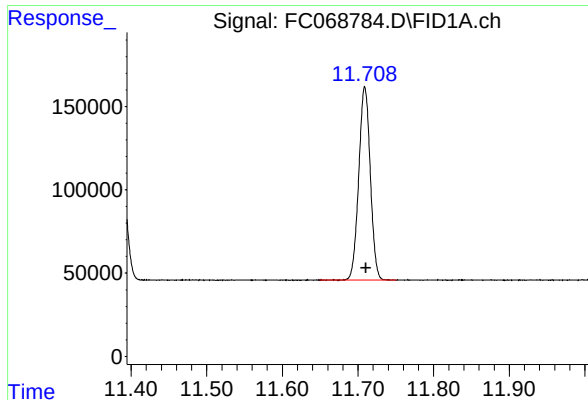
#7 n-Hexadecane (C16)

R.T.: 9.942 min
Delta R.T.: -0.001 min
Response: 961946
Conc: 10.37 ug/ml



#8 n-Octadecane (C18)

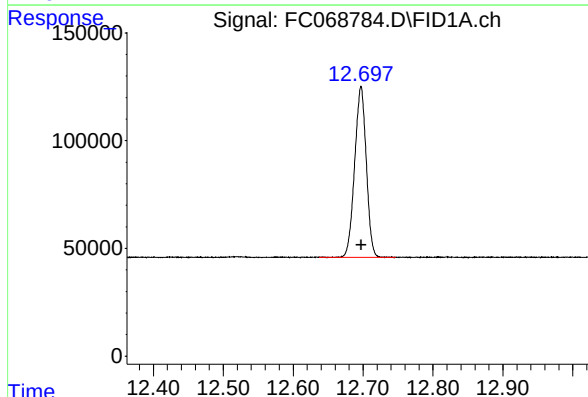
R.T.: 11.385 min
Delta R.T.: 0.000 min
Response: 941672
Conc: 10.38 ug/ml



#9 ortho-Terphenyl (SURR)

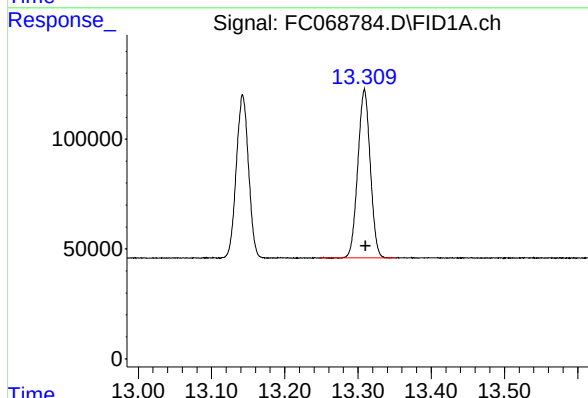
R.T.: 11.709 min
Delta R.T.: -0.002 min
Response: 1229812
Conc: 10.42 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



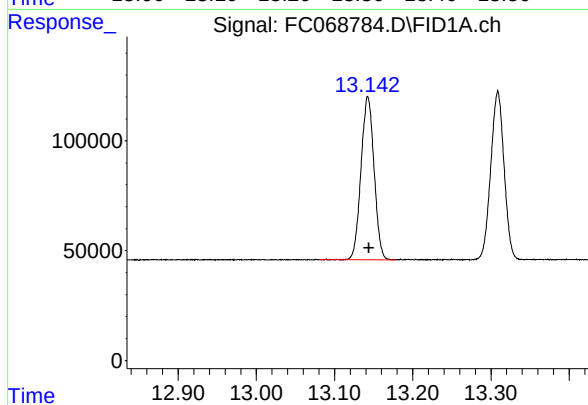
#10 n-Eicosane (C20)

R.T.: 12.697 min
Delta R.T.: 0.000 min
Response: 914473
Conc: 10.38 ug/ml



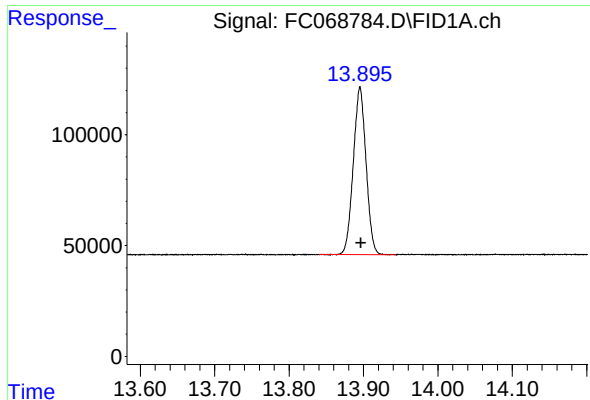
#11 n-Heneicosane (C21)

R.T.: 13.309 min
Delta R.T.: -0.002 min
Response: 905554
Conc: 10.38 ug/ml



#12 1-chlorooctadecane (SURR)

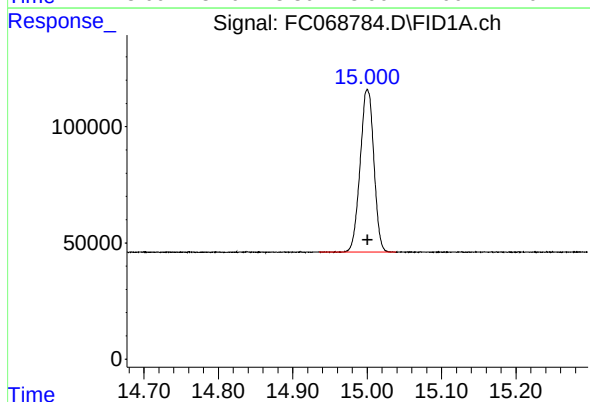
R.T.: 13.143 min
Delta R.T.: -0.001 min
Response: 860839
Conc: 10.37 ug/ml



#13 n-Docosane (C22)

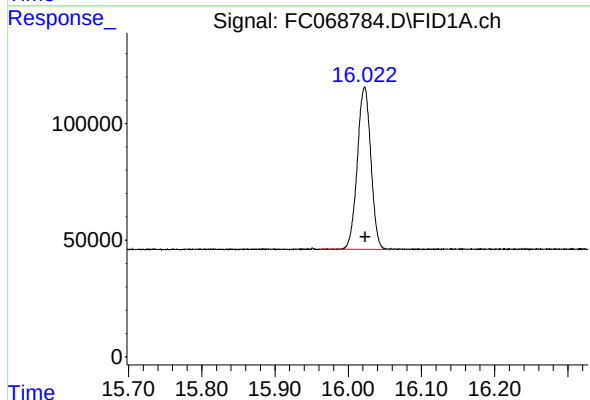
R.T.: 13.895 min
Delta R.T.: -0.001 min
Response: 899148
Conc: 10.41 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



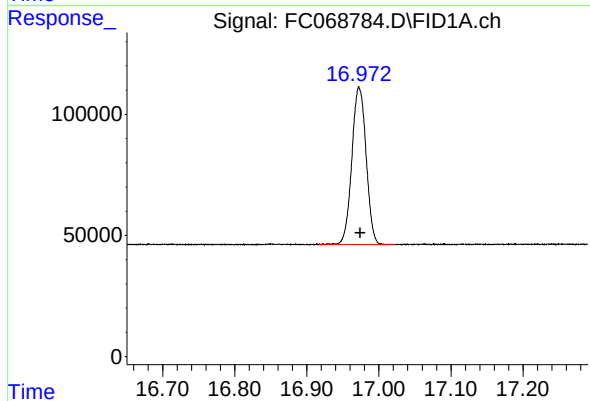
#14 n-Tetracosane (C24)

R.T.: 15.000 min
Delta R.T.: 0.000 min
Response: 894756
Conc: 10.46 ug/ml



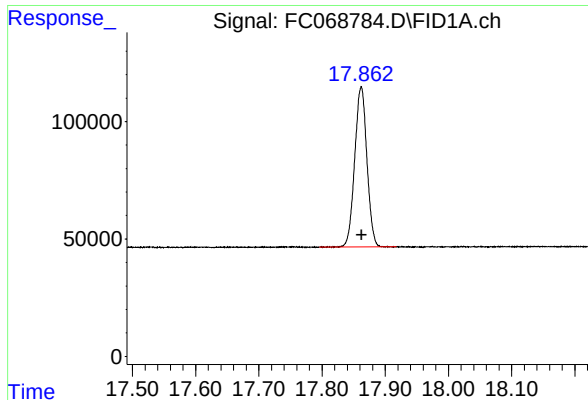
#15 n-Hexacosane (C26)

R.T.: 16.022 min
Delta R.T.: -0.001 min
Response: 892257
Conc: 10.53 ug/ml



#16 n-Octacosane (C28)

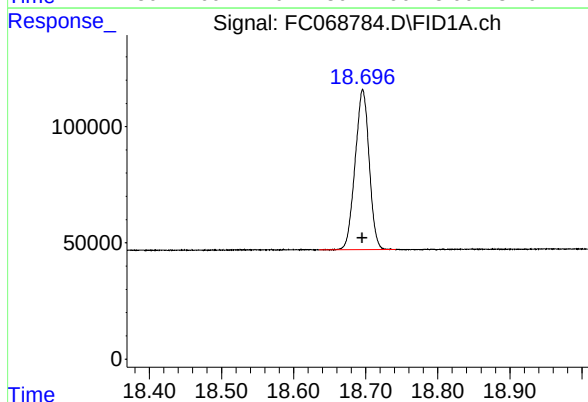
R.T.: 16.973 min
Delta R.T.: -0.001 min
Response: 891896
Conc: 10.59 ug/ml



#17 n-Tricontane (C30)

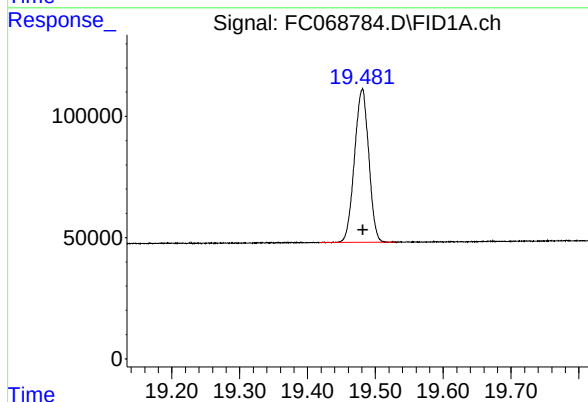
R.T.: 17.862 min
Delta R.T.: 0.000 min
Response: 915267
Conc: 10.62 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



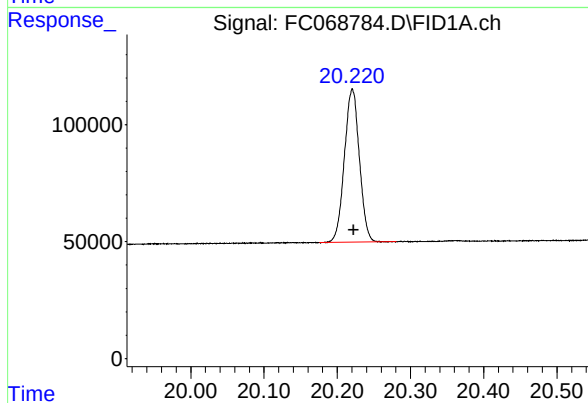
#18 n-Dotriacontane (C32)

R.T.: 18.696 min
Delta R.T.: 0.000 min
Response: 933373
Conc: 10.68 ug/ml



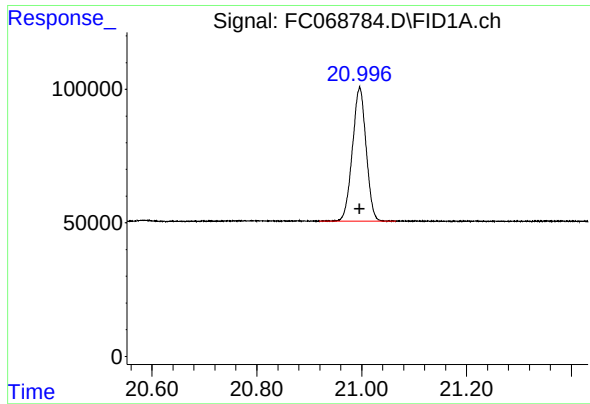
#19 n-Tetatriacontane (C34)

R.T.: 19.481 min
Delta R.T.: -0.001 min
Response: 923565
Conc: 10.66 ug/ml



#20 n-Hexatriacontane (C36)

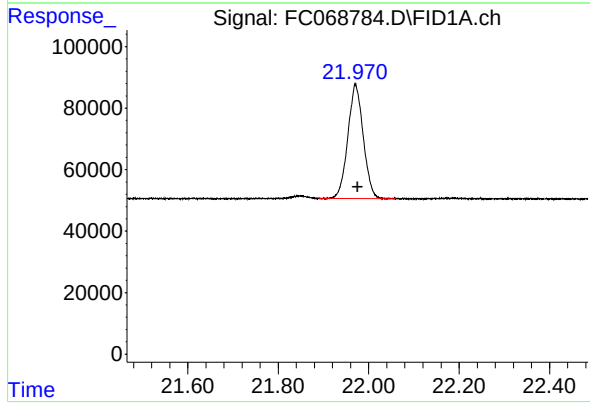
R.T.: 20.221 min
Delta R.T.: -0.002 min
Response: 931989
Conc: 10.63 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.996 min
Delta R.T.: 0.000 min
Response: 908621
Conc: 10.61 ug/ml

Instrument :
FID_C
ClientSampleId :
10 PPM ALIPHATIC HC STD4



#22 n-Tetracontane (C40)

R.T.: 21.971 min
Delta R.T.: -0.004 min
Response: 883098
Conc: 10.55 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068784.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 17:26
 Sample : 10 PPM ALIPHATIC HC STD4
 Misc :
 ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.442	3.385	3.479	BB	130084	1080668	87.87%	5.046%
2	4.517	4.464	4.555	BB	119114	1070751	87.07%	5.000%
3	6.115	6.057	6.154	BB	132196	1184915	96.35%	5.533%
4	6.542	6.485	6.589	BB	106875	1043863	84.88%	4.875%
5	7.172	7.130	7.207	BB	122451	1152025	93.67%	5.380%
6	8.340	8.280	8.380	BB	99151	994145	80.84%	4.642%
7	9.942	9.882	9.984	BB	91549	961946	78.22%	4.492%
8	11.385	11.340	11.434	BB	81573	941672	76.57%	4.397%
9	11.709	11.649	11.750	BB	116052	1229812	100.00%	5.743%
10	12.697	12.637	12.747	BB	79424	914473	74.36%	4.270%
11	13.143	13.080	13.179	BB	74502	860839	70.00%	4.020%
12	13.309	13.247	13.352	BB	76619	905554	73.63%	4.229%
13	13.895	13.840	13.944	BB	75690	899148	73.11%	4.199%
14	15.000	14.935	15.039	BB	69939	894756	72.76%	4.178%
15	16.022	15.960	16.065	BB	69455	892257	72.55%	4.167%
16	16.973	16.917	17.024	BB	64973	891896	72.52%	4.165%
17	17.862	17.795	17.917	BB	68311	915267	74.42%	4.274%
18	18.696	18.635	18.742	BB	68859	933373	75.90%	4.359%
19	19.481	19.417	19.530	BB	63016	923565	75.10%	4.313%
20	20.221	20.175	20.280	BB	65563	931989	75.78%	4.352%
21	20.996	20.919	21.065	BB	50318	908621	73.88%	4.243%
22	21.971	21.890	22.060	BB	37156	883098	71.81%	4.124%
Sum of corrected areas:						21414632		

Aliphatic EPH 050625.M Wed May 07 09:08:31 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068785.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 18:03
 Operator : YP/AJ
 Sample : 5 PPM ALIPHATIC HC STD5
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
 Quant Time: May 07 08:37:53 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:32:40 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	571192	4.840 ug/ml
Spiked Amount 50.000		Recovery =	9.68%
12) S 1-chlorooctadecane (S...	13.142	402064	4.844 ug/ml
Spiked Amount 50.000		Recovery =	9.69%
Target Compounds			
1) T n-Nonane (C9)	3.442	503286	4.850 ug/ml
2) T n-Decane (C10)	4.517	499484	4.862 ug/ml
3) T A~Naphthalene (C11.7)	6.115	548144	4.814 ug/ml
4) T n-Dodecane (C12)	6.542	489960	4.888 ug/ml
5) T A~2-methylnaphthalene...	7.172	533329	4.793 ug/ml
6) T n-Tetradecane (C14)	8.339	466893	4.892 ug/ml
7) T n-Hexadecane (C16)	9.942	452173	4.873 ug/ml
8) T n-Octadecane (C18)	11.386	446925	4.925 ug/ml
10) T n-Eicosane (C20)	12.697	432929	4.914 ug/ml
11) T n-Heneicosane (C21)	13.309	427457	4.898 ug/ml
13) T n-Docosane (C22)	13.896	423815	4.907 ug/ml
14) T n-Tetracosane (C24)	15.000	423107	4.948 ug/ml
15) T n-Hexacosane (C26)	16.022	421364	4.973 ug/ml
16) T n-Octacosane (C28)	16.971	420815	4.996 ug/ml
17) T n-Tricontane (C30)	17.861	430802	4.998 ug/ml
18) T n-Dotriacontane (C32)	18.695	442453	5.061 ug/ml
19) T n-Tetratriacontane (C34)	19.479	435198	5.023 ug/ml
20) T n-Hexatriacontane (C36)	20.220	434336	4.955 ug/ml
21) T n-Octatriacontane (C38)	20.995	420695	4.912 ug/ml
22) T n-Tetracontane (C40)	21.970	408356	4.877 ug/ml

(f)=RT Delta > 1/2 Window

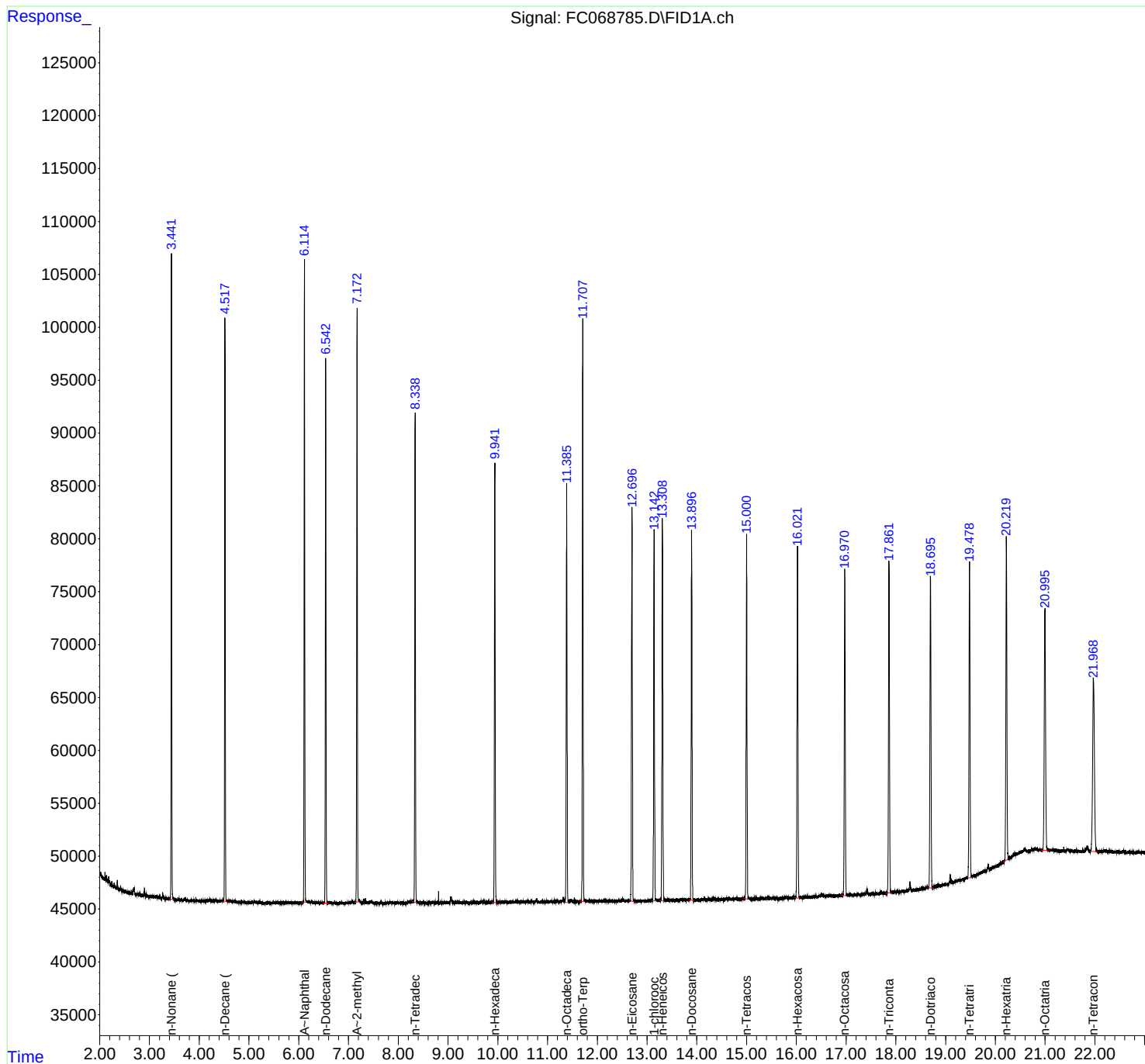
(m)=manual int.

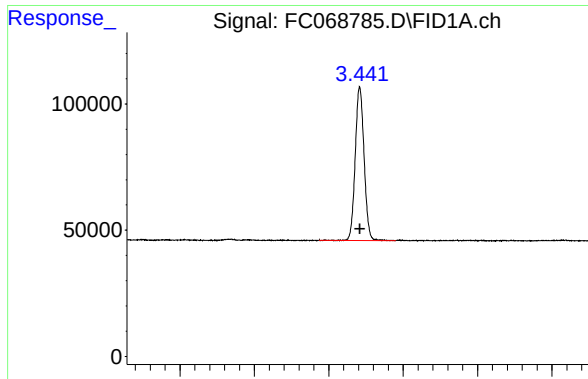
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068785.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 18:03
Operator : YP/AJ
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
Quant Time: May 07 08:37:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:32:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

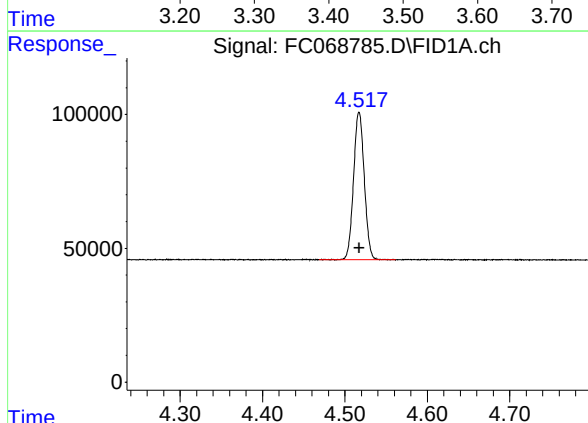




#1 n-Nonane (C9)

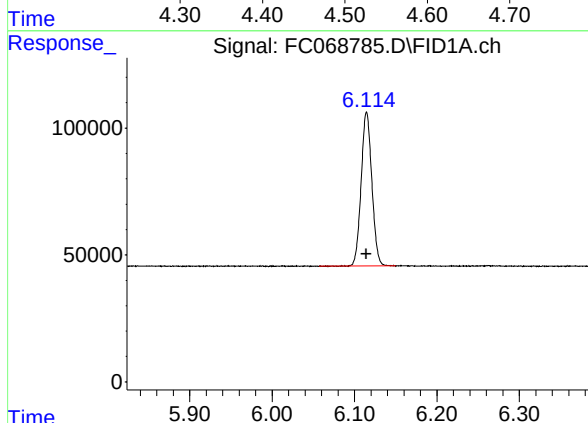
R.T.: 3.442 min
Delta R.T.: 0.000 min
Response: 503286
Conc: 4.85 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



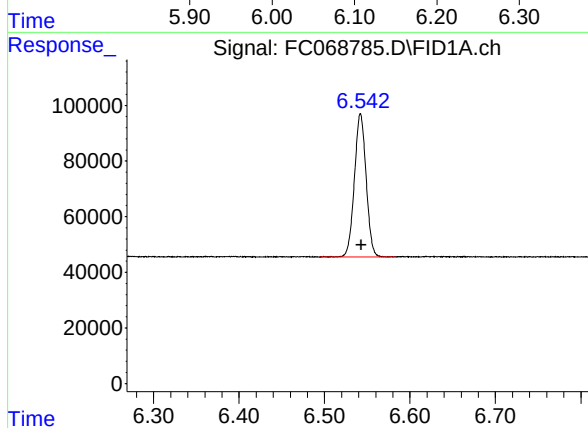
#2 n-Decane (C10)

R.T.: 4.517 min
Delta R.T.: 0.000 min
Response: 499484
Conc: 4.86 ug/ml



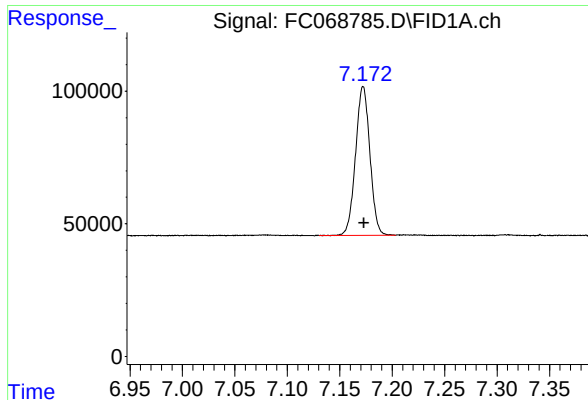
#3 A~Naphthalene (C11.7)

R.T.: 6.115 min
Delta R.T.: 0.000 min
Response: 548144
Conc: 4.81 ug/ml



#4 n-Dodecane (C12)

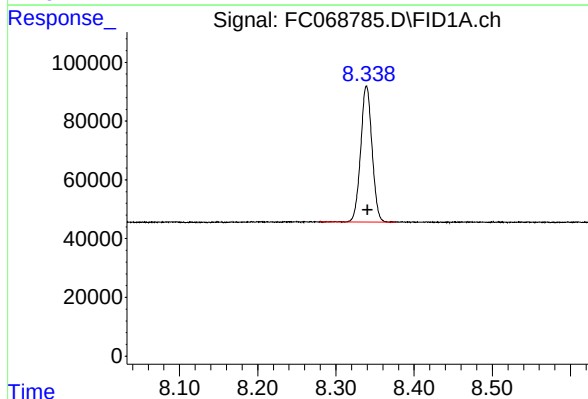
R.T.: 6.542 min
Delta R.T.: 0.000 min
Response: 489960
Conc: 4.89 ug/ml



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

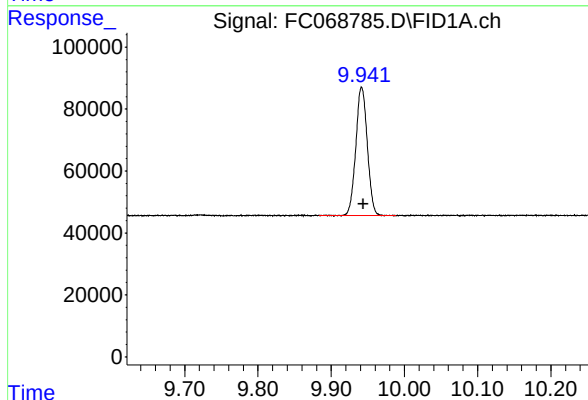
R.T.: 7.172 min
Delta R.T.: 0.000 min
Response: 533329
Conc: 4.79 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



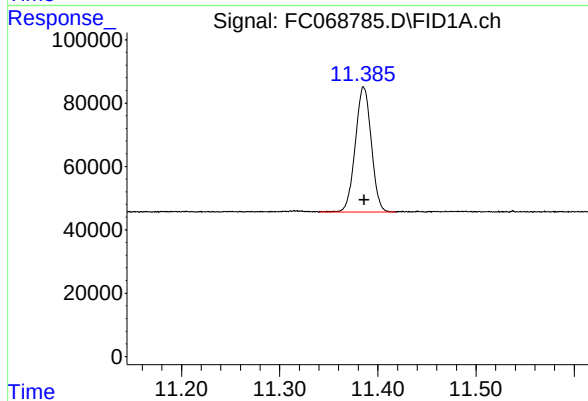
#6 n-Tetradecane (C14)

R.T.: 8.339 min
Delta R.T.: -0.001 min
Response: 466893
Conc: 4.89 ug/ml



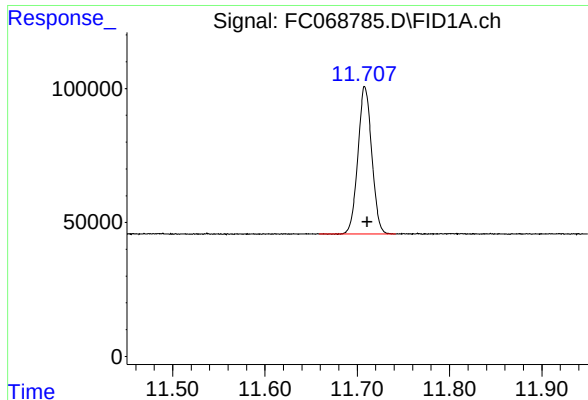
#7 n-Hexadecane (C16)

R.T.: 9.942 min
Delta R.T.: -0.002 min
Response: 452173
Conc: 4.87 ug/ml



#8 n-Octadecane (C18)

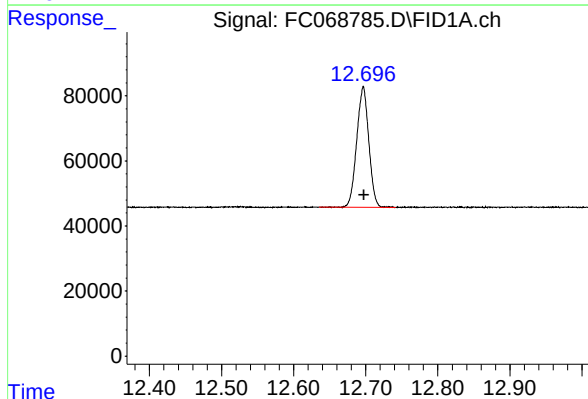
R.T.: 11.386 min
Delta R.T.: 0.000 min
Response: 446925
Conc: 4.93 ug/ml



#9 ortho-Terphenyl (SURR)

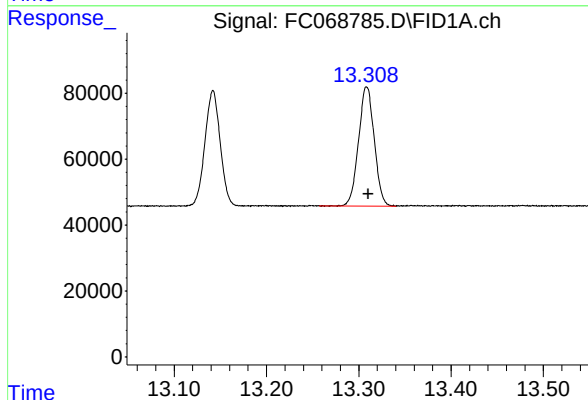
R.T.: 11.709 min
Delta R.T.: -0.002 min
Response: 571192
Conc: 4.84 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



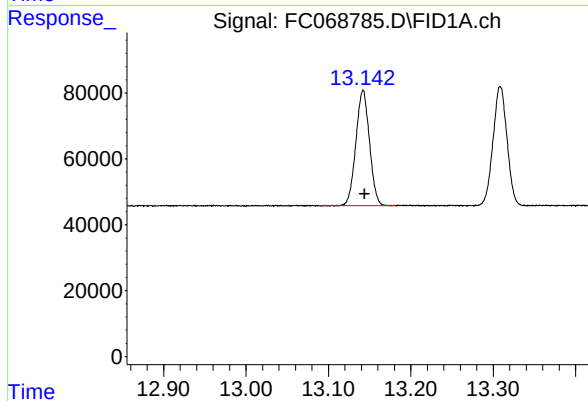
#10 n-Eicosane (C20)

R.T.: 12.697 min
Delta R.T.: 0.000 min
Response: 432929
Conc: 4.91 ug/ml



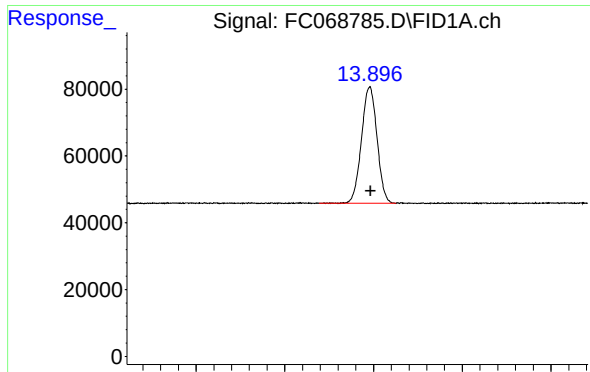
#11 n-Heneicosane (C21)

R.T.: 13.309 min
Delta R.T.: -0.002 min
Response: 427457
Conc: 4.90 ug/ml



#12 1-chlorooctadecane (SURR)

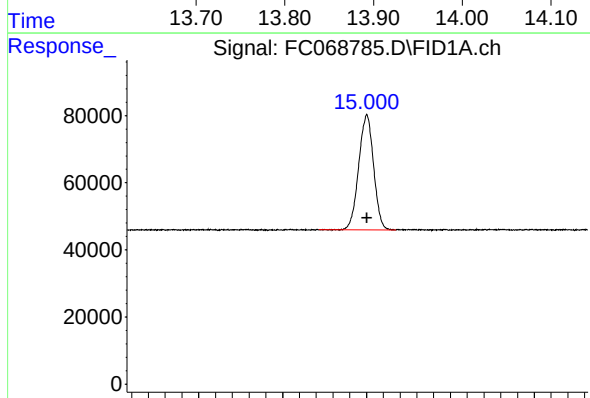
R.T.: 13.142 min
Delta R.T.: -0.002 min
Response: 402064
Conc: 4.84 ug/ml



#13 n-Docosane (C22)

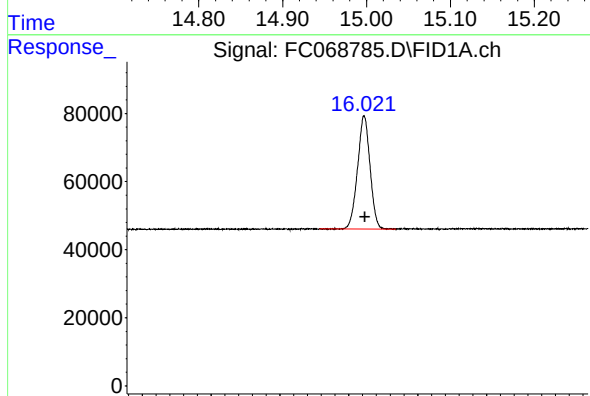
R.T.: 13.896 min
Delta R.T.: -0.001 min
Response: 423815
Conc: 4.91 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



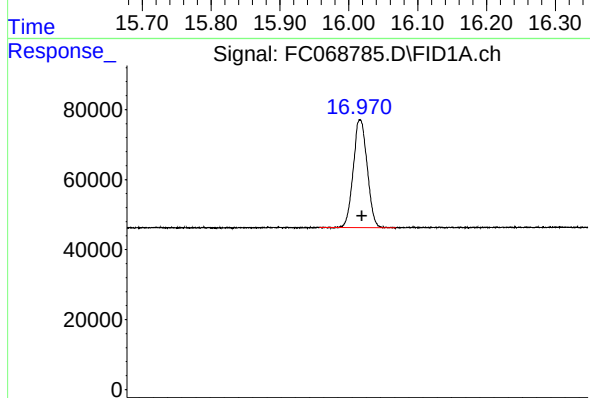
#14 n-Tetracosane (C24)

R.T.: 15.000 min
Delta R.T.: 0.000 min
Response: 423107
Conc: 4.95 ug/ml



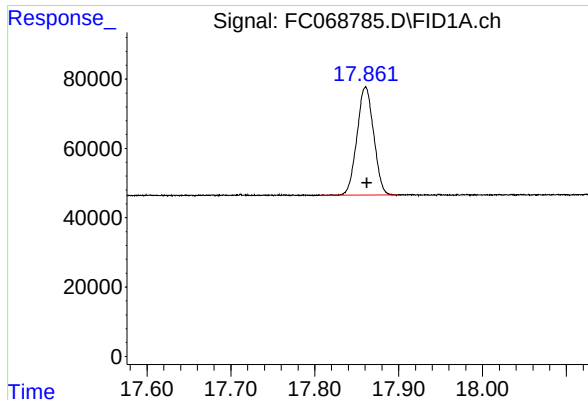
#15 n-Hexacosane (C26)

R.T.: 16.022 min
Delta R.T.: 0.000 min
Response: 421364
Conc: 4.97 ug/ml



#16 n-Octacosane (C28)

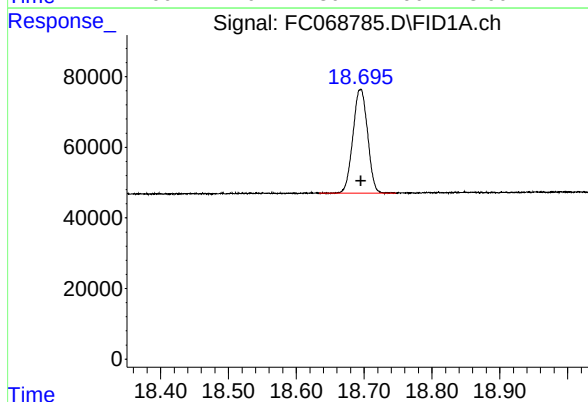
R.T.: 16.971 min
Delta R.T.: -0.003 min
Response: 420815
Conc: 5.00 ug/ml



#17 n-Tricontane (C30)

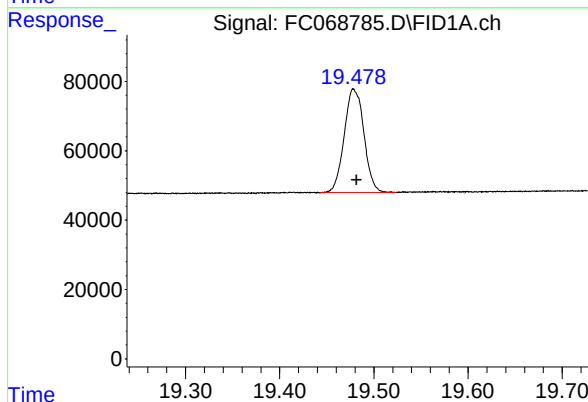
R.T.: 17.861 min
Delta R.T.: -0.002 min
Response: 430802
Conc: 5.00 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



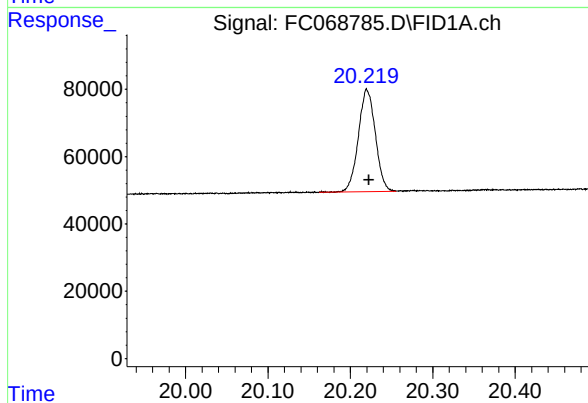
#18 n-Dotriacontane (C32)

R.T.: 18.695 min
Delta R.T.: 0.000 min
Response: 442453
Conc: 5.06 ug/ml



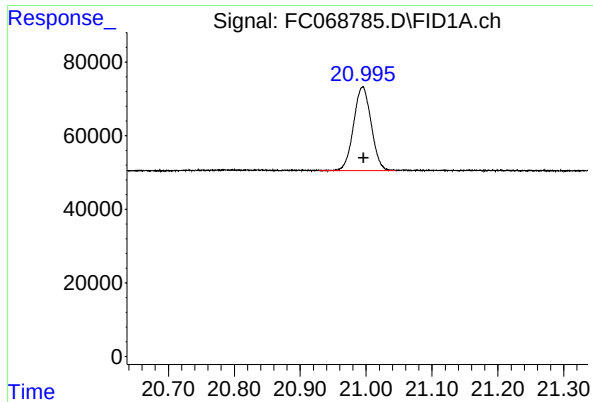
#19 n-Tetratriacontane (C34)

R.T.: 19.479 min
Delta R.T.: -0.003 min
Response: 435198
Conc: 5.02 ug/ml



#20 n-Hexatriacontane (C36)

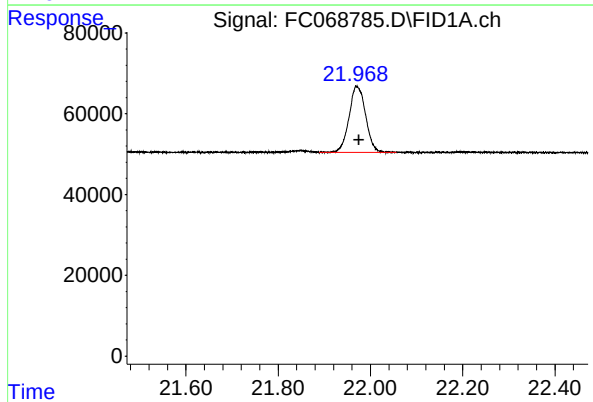
R.T.: 20.220 min
Delta R.T.: -0.002 min
Response: 434336
Conc: 4.95 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.995 min
Delta R.T.: -0.002 min
Response: 420695
Conc: 4.91 ug/ml

Instrument :
FID_C
ClientSampleId :
5 PPM ALIPHATIC HC STD5



#22 n-Tetracontane (C40)

R.T.: 21.970 min
Delta R.T.: -0.005 min
Response: 408356
Conc: 4.88 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068785.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 18:03
 Sample : 5 PPM ALIPHATIC HC STD5
 Misc :
 ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.442	3.387	3.490	BB	60717	503286	88.11%	5.015%
2	4.517	4.469	4.562	BB	55182	499484	87.45%	4.978%
3	6.115	6.057	6.150	BB	60631	548144	95.96%	5.462%
4	6.542	6.494	6.584	BB	51463	489960	85.78%	4.883%
5	7.172	7.130	7.204	BB	56115	533329	93.37%	5.315%
6	8.339	8.279	8.377	BB	46269	466893	81.74%	4.653%
7	9.942	9.884	9.989	BB	41401	452173	79.16%	4.506%
8	11.386	11.340	11.419	BB	39573	446925	78.24%	4.454%
9	11.709	11.659	11.742	BB	54817	571192	100.00%	5.692%
10	12.697	12.635	12.742	BB	37319	432929	75.79%	4.314%
11	13.142	13.089	13.182	BB	35081	402064	70.39%	4.007%
12	13.309	13.257	13.340	BB	36149	427457	74.84%	4.260%
13	13.896	13.839	13.925	BB	34710	423815	74.20%	4.223%
14	15.000	14.944	15.035	BB	34361	423107	74.07%	4.216%
15	16.022	15.957	16.069	BB	33287	421364	73.77%	4.199%
16	16.971	16.914	17.022	BB	30809	420815	73.67%	4.194%
17	17.861	17.805	17.897	BB	31137	430802	75.42%	4.293%
18	18.695	18.634	18.747	BB	29408	442453	77.46%	4.409%
19	19.479	19.442	19.524	BB	29774	435198	76.19%	4.337%
20	20.220	20.162	20.255	BB	30175	434336	76.04%	4.328%
21	20.995	20.929	21.045	BB	22752	420695	73.65%	4.192%
22	21.970	21.889	22.055	BB	16263	408356	71.49%	4.069%
Sum of corrected areas:							10034777	

Aliphatic EPH 050625.M Wed May 07 09:09:03 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
 Data File : FC068786.D
 Signal(s) : FID1A.ch
 Acq On : 06 May 2025 18:40
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD ICV
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
 Quant Time: May 07 08:53:57 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.711	2355158	20.634 ug/ml
Spiked Amount 50.000		Recovery =	41.27%
12) S 1-chlorooctadecane (S...	13.143	1650109	20.568 ug/ml
Spiked Amount 50.000		Recovery =	41.14%
Target Compounds			
1) T n-Nonane (C9)	3.442	2081542	20.695 ug/ml
2) T n-Decane (C10)	4.518	2058071	20.655 ug/ml
3) T A~Naphthalene (C11.7)	6.115	2278649	20.666 ug/ml
4) T n-Dodecane (C12)	6.543	2004473	20.627 ug/ml
5) T A~2-methylnaphthalene...	7.173	2210420	20.594 ug/ml
6) T n-Tetradecane (C14)	8.340	1902473	20.584 ug/ml
7) T n-Hexadecane (C16)	9.943	1844094	20.594 ug/ml
8) T n-Octadecane (C18)	11.387	1800440	20.525 ug/ml
10) T n-Eicosane (C20)	12.697	1749876	20.534 ug/ml
11) T n-Heneicosane (C21)	13.310	1732609	20.542 ug/ml
13) T n-Docosane (C22)	13.896	1718343	20.540 ug/ml
14) T n-Tetracosane (C24)	15.001	1707173	20.517 ug/ml
15) T n-Hexacosane (C26)	16.022	1697577	20.489 ug/ml
16) T n-Octacosane (C28)	16.973	1687805	20.422 ug/ml
17) T n-Tricontane (C30)	17.863	1728320	20.426 ug/ml
18) T n-Dotriacontane (C32)	18.696	1757564	20.405 ug/ml
19) T n-Tetratriacontane (C34)	19.482	1737972	20.399 ug/ml
20) T n-Hexatriacontane (C36)	20.223	1753728	20.404 ug/ml
21) T n-Octatriacontane (C38)	20.997	1714449	20.438 ug/ml
22) T n-Tetracontane (C40)	21.974	1669453	20.370 ug/ml

(f)=RT Delta > 1/2 Window

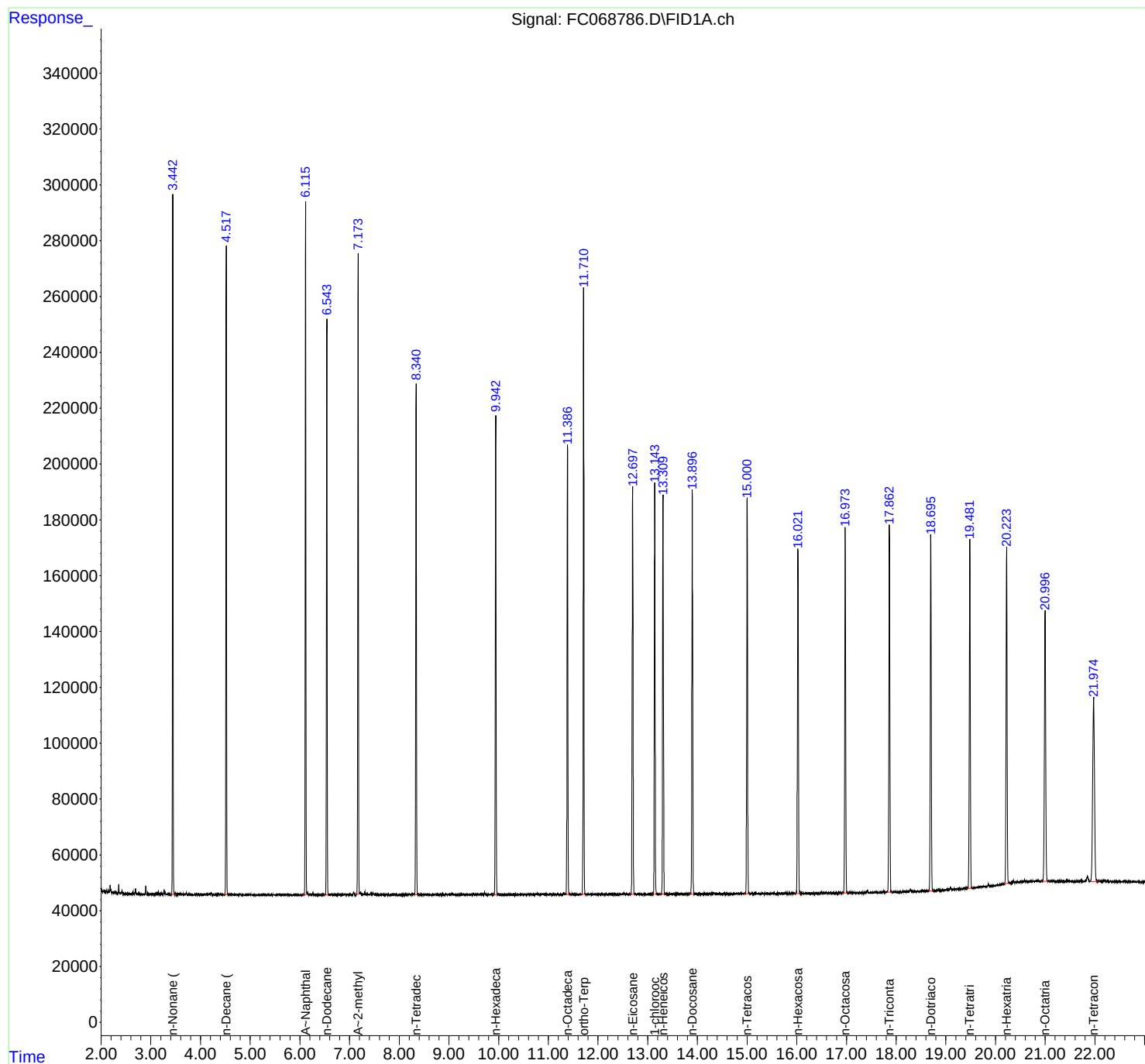
(m)=manual int.

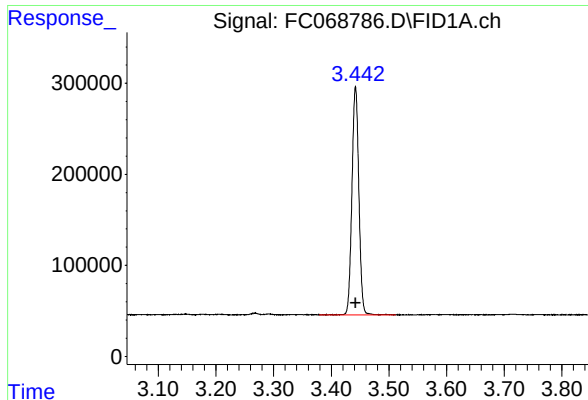
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068786.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 18:40
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
Quant Time: May 07 08:53:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#1 n-Nonane (C9)

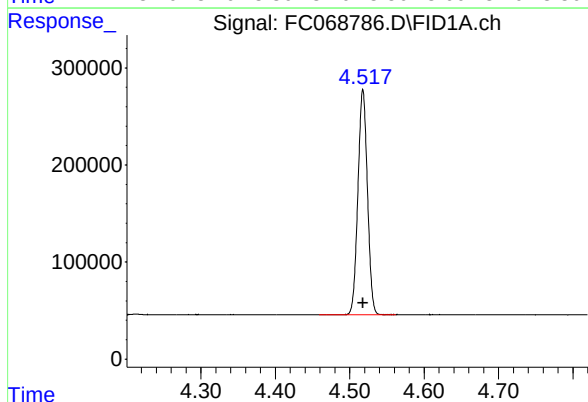
R.T.: 3.442 min
Delta R.T.: 0.000 min
Response: 2081542
Conc: 20.70 ug/ml

Instrument :

FID_C

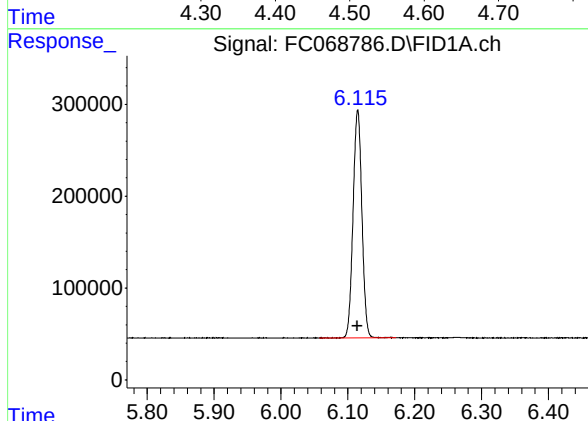
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



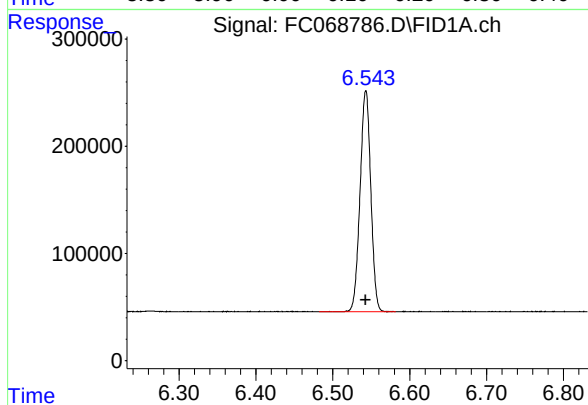
#2 n-Decane (C10)

R.T.: 4.518 min
Delta R.T.: 0.000 min
Response: 2058071
Conc: 20.65 ug/ml



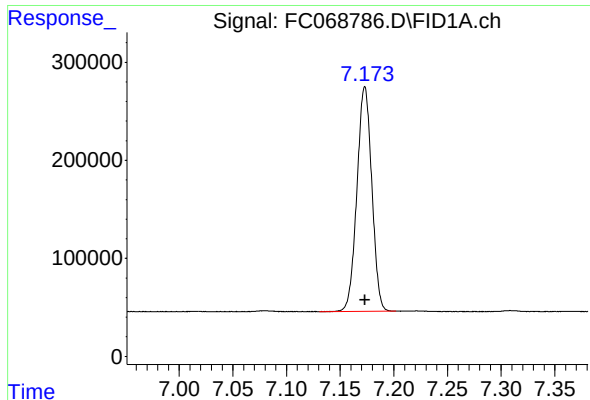
#3 A~Naphthalene (C11.7)

R.T.: 6.115 min
Delta R.T.: 0.000 min
Response: 2278649
Conc: 20.67 ug/ml



#4 n-Dodecane (C12)

R.T.: 6.543 min
Delta R.T.: 0.000 min
Response: 2004473
Conc: 20.63 ug/ml



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

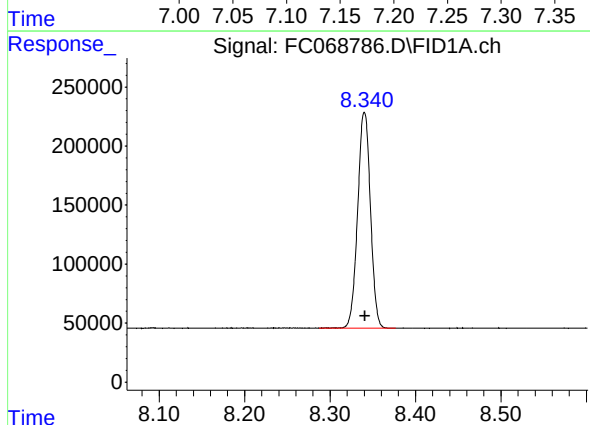
R.T.: 7.173 min
Delta R.T.: 0.000 min
Response: 2210420
Conc: 20.59 ug/ml

Instrument :

FID_C

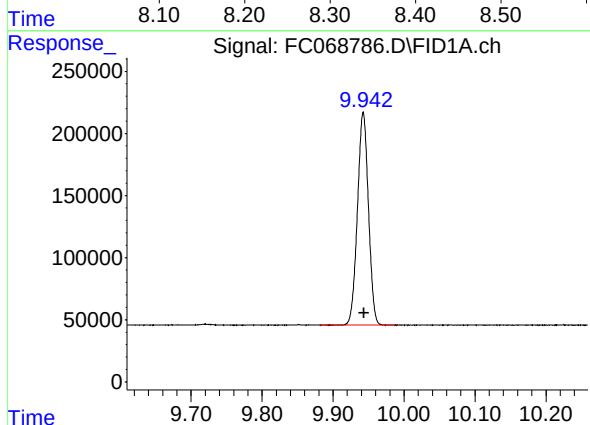
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



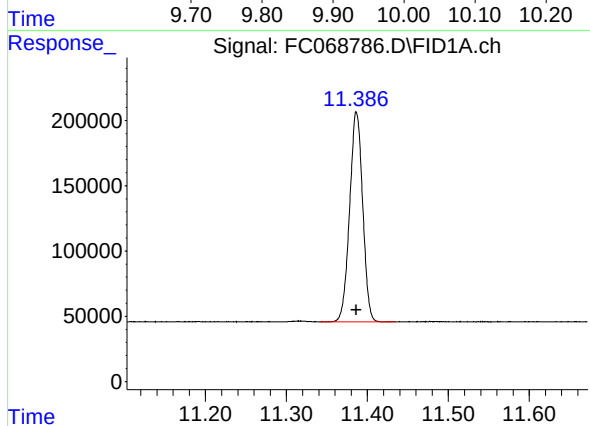
#6 n-Tetradecane (C14)

R.T.: 8.340 min
Delta R.T.: 0.000 min
Response: 1902473
Conc: 20.58 ug/ml



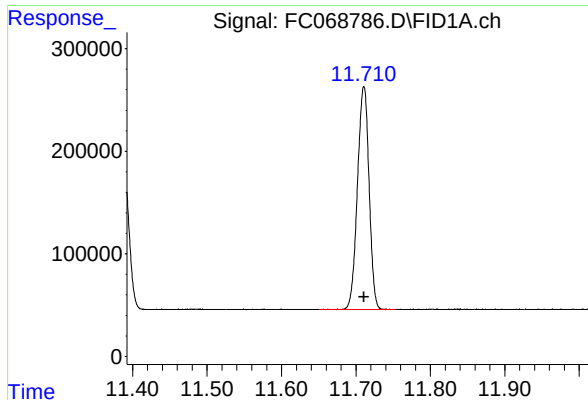
#7 n-Hexadecane (C16)

R.T.: 9.943 min
Delta R.T.: -0.001 min
Response: 1844094
Conc: 20.59 ug/ml



#8 n-Octadecane (C18)

R.T.: 11.387 min
Delta R.T.: 0.000 min
Response: 1800440
Conc: 20.53 ug/ml



#9 ortho-Terphenyl (SURR)

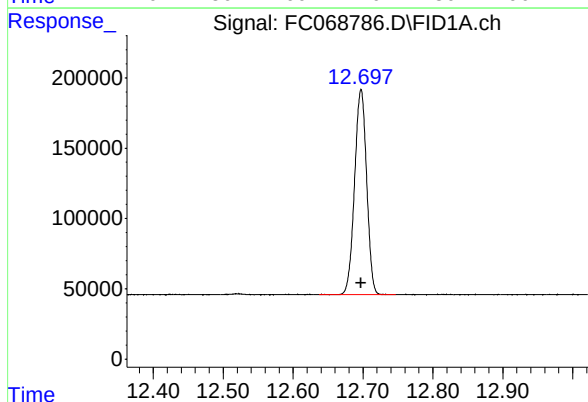
R.T.: 11.711 min
Delta R.T.: 0.000 min
Response: 2355158
Conc: 20.63 ug/ml

Instrument :

FID_C

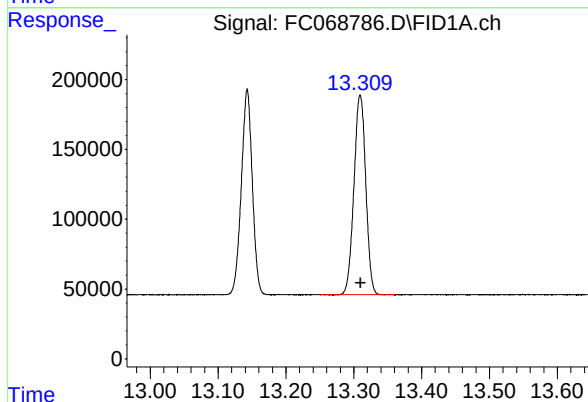
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



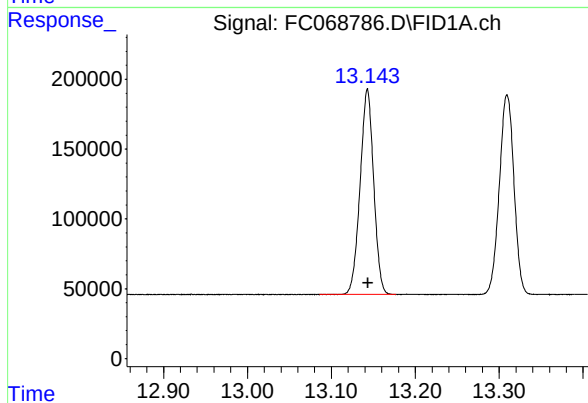
#10 n-Eicosane (C20)

R.T.: 12.697 min
Delta R.T.: 0.000 min
Response: 1749876
Conc: 20.53 ug/ml



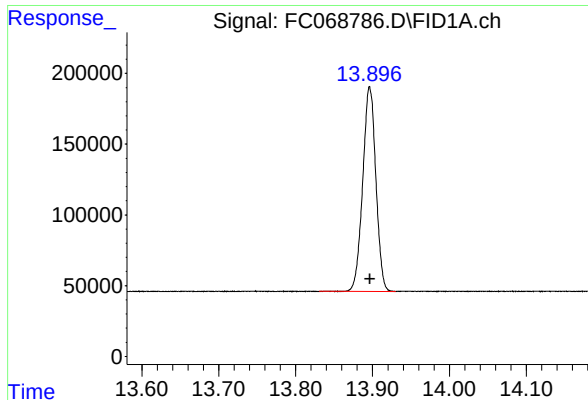
#11 n-Heneicosane (C21)

R.T.: 13.310 min
Delta R.T.: 0.000 min
Response: 1732609
Conc: 20.54 ug/ml



#12 1-chlorooctadecane (SURR)

R.T.: 13.143 min
Delta R.T.: 0.000 min
Response: 1650109
Conc: 20.57 ug/ml



#13 n-Docosane (C22)

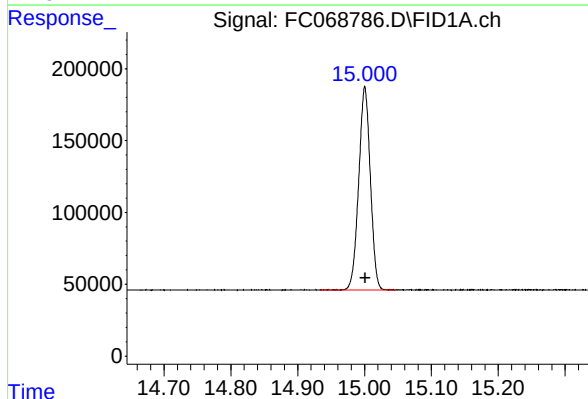
R.T.: 13.896 min
Delta R.T.: 0.000 min
Response: 1718343
Conc: 20.54 ug/ml

Instrument :

FID_C

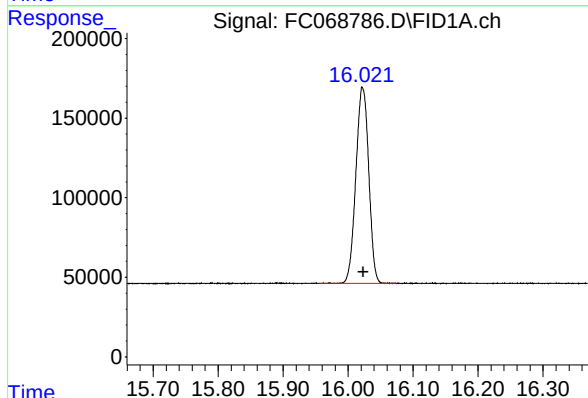
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



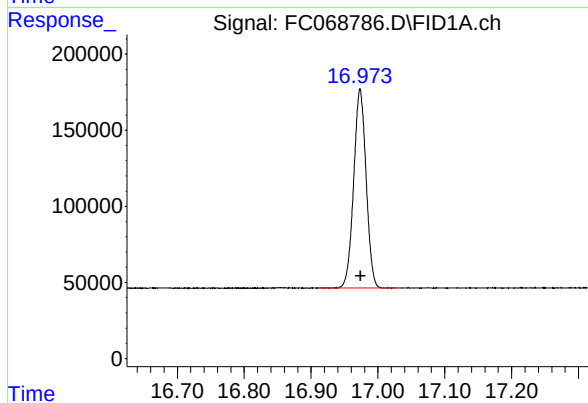
#14 n-Tetracosane (C24)

R.T.: 15.001 min
Delta R.T.: 0.000 min
Response: 1707173
Conc: 20.52 ug/ml



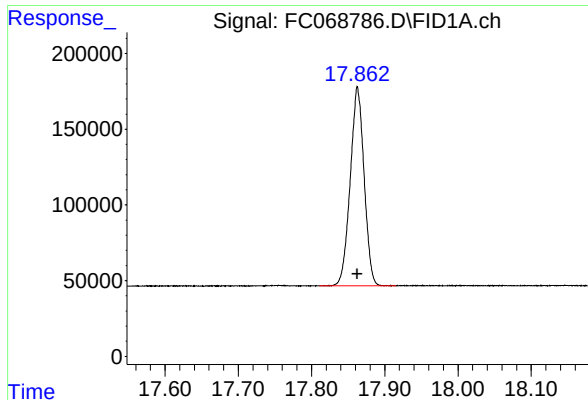
#15 n-Hexacosane (C26)

R.T.: 16.022 min
Delta R.T.: 0.000 min
Response: 1697577
Conc: 20.49 ug/ml



#16 n-Octacosane (C28)

R.T.: 16.973 min
Delta R.T.: 0.000 min
Response: 1687805
Conc: 20.42 ug/ml



#17 n-Tricontane (C30)

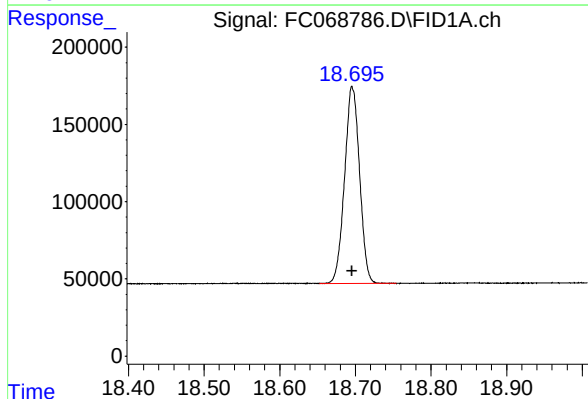
R.T.: 17.863 min
Delta R.T.: 0.000 min
Response: 1728320
Conc: 20.43 ug/ml

Instrument :

FID_C

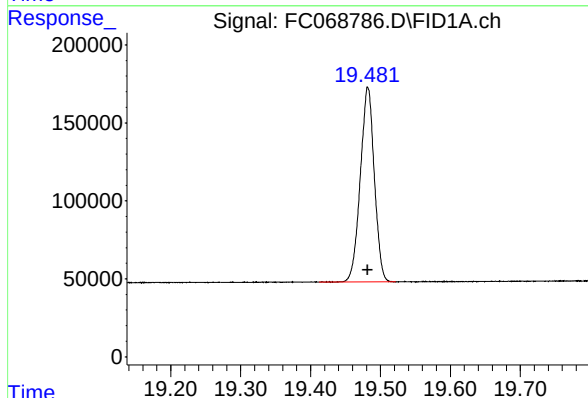
ClientSampleId :

20 PPM ALIPHATIC HC STD ICV



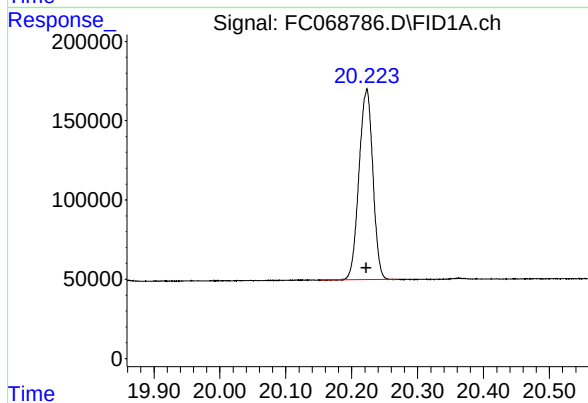
#18 n-Dotriacontane (C32)

R.T.: 18.696 min
Delta R.T.: 0.000 min
Response: 1757564
Conc: 20.40 ug/ml



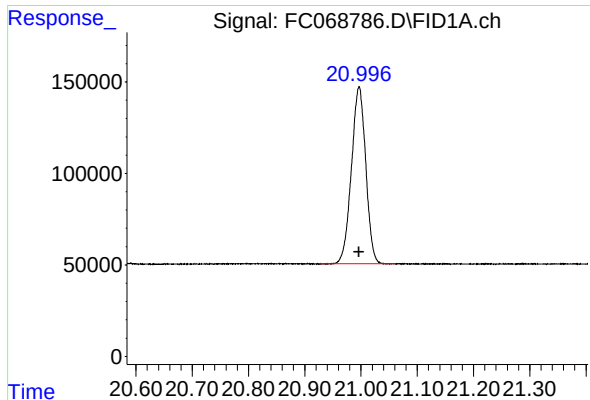
#19 n-Tetratriacontane (C34)

R.T.: 19.482 min
Delta R.T.: 0.000 min
Response: 1737972
Conc: 20.40 ug/ml



#20 n-Hexatriacontane (C36)

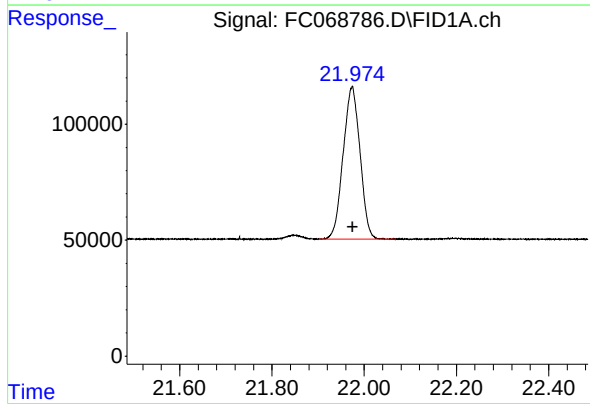
R.T.: 20.223 min
Delta R.T.: 0.000 min
Response: 1753728
Conc: 20.40 ug/ml



#21 n-Octatriacontane (C38)

R.T.: 20.997 min
Delta R.T.: 0.000 min
Response: 1714449
Conc: 20.44 ug/ml

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD ICV



#22 n-Tetracontane (C40)

R.T.: 21.974 min
Delta R.T.: -0.002 min
Response: 1669453
Conc: 20.37 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC050625AL\
Data File : FC068786.D
Signal(s) : FID1A.ch
Acq On : 06 May 2025 18:40
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.442	3.379	3.512	BB	250694	2081542	88.38%	5.097%
2	4.518	4.459	4.562	BB	231932	2058071	87.39%	5.039%
3	6.115	6.057	6.172	BB	249029	2278649	96.75%	5.579%
4	6.543	6.482	6.582	BB	207468	2004473	85.11%	4.908%
5	7.173	7.130	7.202	BB	229639	2210420	93.85%	5.412%
6	8.340	8.287	8.377	BB	182930	1902473	80.78%	4.658%
7	9.943	9.880	9.989	BB	171273	1844094	78.30%	4.515%
8	11.387	11.340	11.435	BB	159991	1800440	76.45%	4.408%
9	11.711	11.650	11.754	BB	217837	2355158	100.00%	5.767%
10	12.697	12.637	12.747	BB	146326	1749876	74.30%	4.285%
11	13.143	13.085	13.177	BB	147670	1650109	70.06%	4.040%
12	13.310	13.249	13.362	BB	142942	1732609	73.57%	4.242%
13	13.896	13.830	13.930	BB	143765	1718343	72.96%	4.207%
14	15.001	14.932	15.047	BB	141597	1707173	72.49%	4.180%
15	16.022	15.955	16.074	BB	123224	1697577	72.08%	4.157%
16	16.973	16.912	17.027	BB	130891	1687805	71.66%	4.133%
17	17.863	17.810	17.915	BB	129951	1728320	73.38%	4.232%
18	18.696	18.652	18.754	BB	127231	1757564	74.63%	4.304%
19	19.482	19.412	19.522	BB	124751	1737972	73.79%	4.256%
20	20.223	20.150	20.267	BB	119167	1753728	74.46%	4.294%
21	20.997	20.925	21.062	BB	96959	1714449	72.80%	4.198%
22	21.974	21.902	22.069	BB	65711	1669453	70.88%	4.088%
Sum of corrected areas:							40840301	

Aliphatic EPH 050625.M Wed May 07 09:09:22 2025

Continuing Calibration Report for SequenceID : FC051325AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC068843.D

Aliphatic C9-C12	5252050.000	60.000	3.341	6.641	87534.167	99133.167	11.700
Aliphatic C12-C16	3350220.000	40.000	6.642	10.040	83755.500	90984.404	7.945
Aliphatic C16-C21	4822387.000	60.000	10.041	13.406	80373.117	85760.459	6.282
Aliphatic C21-C28	6476553.000	80.000	13.407	17.068	80956.913	83091.075	2.568
Aliphatic C28-C40	11056418.000	120.000	17.069	22.062	92136.817	84622.692	-8.880
Aliphatic EPH	30957628.000	360.000	3.341	22.062	85993.411	87597.230	1.831

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	13 May 2025 10:16
Client Sample ID:		Operator:	YP/AJ
Data file:	FC068843.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.341	6.641	5252050.000	60.000	ug/ml
Aliphatic C12-C16	6.642	10.040	3350220.000	40.000	ug/ml
Aliphatic C16-C21	10.041	13.406	4822387.000	60.000	ug/ml
Aliphatic C21-C28	13.407	17.068	6476553.000	80.000	ug/ml
Aliphatic C28-C40	17.069	22.062	11056418.000	120.000	ug/ml
Aliphatic EPH	3.341	22.062	30957628.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068843.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 10:16
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
 Quant Time: May 13 11:45:20 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.707	2040636	17.879 ug/ml
Spiked Amount 50.000		Recovery =	35.76%
12) S 1-chlorooctadecane (S...	13.140	1494821	18.633 ug/ml
Spiked Amount 50.000		Recovery =	37.27%
Target Compounds			
1) T n-Nonane (C9)	3.441	1736368	17.263 ug/ml
2) T n-Decane (C10)	4.516	1771889	17.783 ug/ml
3) T A~Naphthalene (C11.7)	6.112	1909154	17.315 ug/ml
4) T n-Dodecane (C12)	6.541	1743793	17.944 ug/ml
5) T A~2-methylnaphthalene...	7.170	1869680	17.419 ug/ml
6) T n-Tetradecane (C14)	8.338	1689171	18.276 ug/ml
7) T n-Hexadecane (C16)	9.940	1661049	18.550 ug/ml
8) T n-Octadecane (C18)	11.383	1637096	18.663 ug/ml
10) T n-Eicosane (C20)	12.693	1600507	18.781 ug/ml
11) T n-Heneicosane (C21)	13.306	1584784	18.789 ug/ml
13) T n-Docosane (C22)	13.892	1585271	18.949 ug/ml
14) T n-Tetracosane (C24)	14.996	1594383	19.162 ug/ml
15) T n-Hexacosane (C26)	16.018	1599293	19.303 ug/ml
16) T n-Octacosane (C28)	16.968	1697606	20.541 ug/ml
17) T n-Tricontane (C30)	17.857	1923078	22.728 ug/ml
18) T n-Dotriacontane (C32)	18.691	2013827	23.380 ug/ml
19) T n-Tetratriacontane (C34)	19.474	1893522	22.224 ug/ml
20) T n-Hexatriacontane (C36)	20.215	1804054	20.990 ug/ml
21) T n-Octatriacontane (C38)	20.988	1728081	20.601 ug/ml
22) T n-Tetracontane (C40)	21.962	1693856	20.668 ug/ml

(f)=RT Delta > 1/2 Window

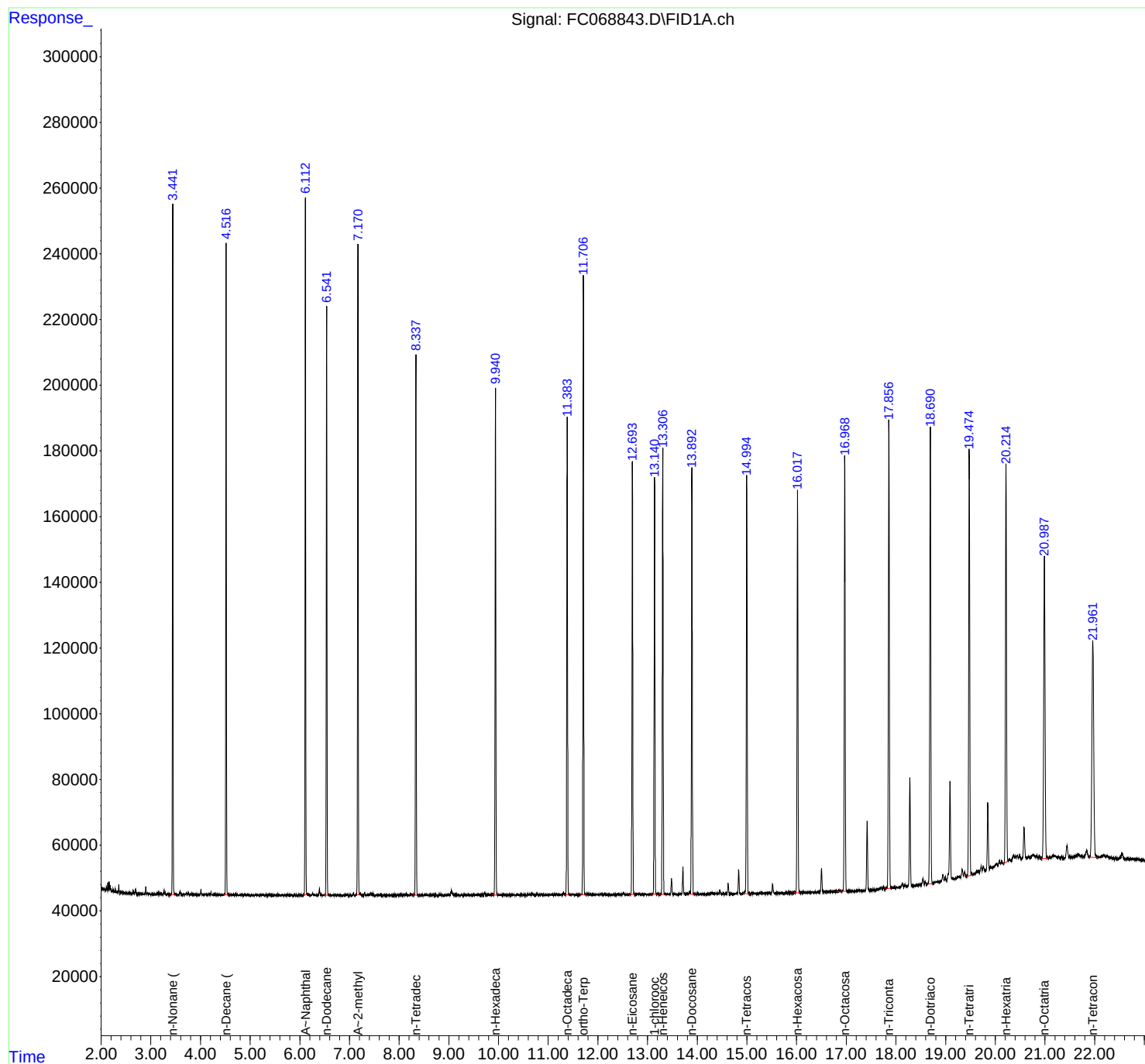
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068843.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 10:16
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
Quant Time: May 13 11:45:20 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068843.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 10:16
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 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.441	3.390	3.482	BB	210327	1736368	85.09%	4.537%
2	4.516	4.459	4.562	BB	198606	1771889	86.83%	4.630%
3	6.112	6.064	6.142	BB	212504	1909154	93.56%	4.988%
4	6.541	6.480	6.580	BB	179372	1743793	85.45%	4.556%
5	7.170	7.130	7.209	BB	197820	1869680	91.62%	4.885%
6	8.338	8.274	8.380	BB	164346	1689171	82.78%	4.414%
7	9.940	9.877	9.979	BB	154307	1661049	81.40%	4.340%
8	11.383	11.340	11.424	BB	145114	1637096	80.22%	4.278%
9	11.707	11.647	11.754	BB	188326	2040636	100.00%	5.332%
10	12.693	12.635	12.742	BB	131683	1600507	78.43%	4.182%
11	13.140	13.077	13.187	BB	126863	1494821	73.25%	3.906%
12	13.306	13.244	13.344	BB	135222	1584784	77.66%	4.141%
13	13.892	13.859	13.940	VB	129351	1585271	77.69%	4.142%
14	14.996	14.919	15.049	BB	126794	1594383	78.13%	4.166%
15	16.018	15.949	16.069	BB	122245	1599293	78.37%	4.179%
16	16.968	16.812	17.007	BB	132785	1697606	83.19%	4.436%
17	17.857	17.804	17.895	BB	141892	1923078	94.24%	5.025%
18	18.691	18.619	18.742	BB	138286	2013827	98.69%	5.262%
19	19.474	19.415	19.547	BB	129452	1893522	92.79%	4.948%
20	20.215	20.150	20.257	BV	120022	1804054	88.41%	4.714%
21	20.988	20.919	21.065	BB	91837	1728081	84.68%	4.515%
22	21.962	21.892	22.057	BB	65809	1693856	83.01%	4.426%
Sum of corrected areas:							38271919	

Aliphatic EPH 050625.M Tue May 13 11:47:44 2025

Continuing Calibration Report for SequenceID : FC051325AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC068847.D

Aliphatic C9-C12	5076115.000	60.000	3.341	6.641	84601.917	99133.167	14.658
Aliphatic C12-C16	3342210.000	40.000	6.642	10.040	83555.250	90984.404	8.165
Aliphatic C16-C21	4878394.000	60.000	10.041	13.406	81306.567	85760.459	5.193
Aliphatic C21-C28	6494834.000	80.000	13.407	17.068	81185.425	83091.075	2.293
Aliphatic C28-C40	11119253.000	120.000	17.069	22.062	92660.442	84622.692	-9.498
Aliphatic EPH	30910806.000	360.000	3.341	22.062	85863.350	87597.230	1.979

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	13 May 2025 13:26
Client Sample ID:		Operator:	YP/AJ
Data file:	FC068847.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.341	6.641	5076115.000	60.000	ug/ml
Aliphatic C12-C16	6.642	10.040	3342210.000	40.000	ug/ml
Aliphatic C16-C21	10.041	13.406	4878394.000	60.000	ug/ml
Aliphatic C21-C28	13.407	17.068	6494834.000	80.000	ug/ml
Aliphatic C28-C40	17.069	22.062	11119253.000	120.000	ug/ml
Aliphatic EPH	3.341	22.062	30910806.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068847.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 13:26
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 05/14/2025
 Supervised By :mohammad ahmed 05/15/2025

Integration File: autoint1.e
 Quant Time: May 14 03:12:40 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.707	2041576	17.887 ug/ml
Spiked Amount 50.000		Recovery =	35.77%
12) S 1-chlorooctadecane (S...	13.140	1510379	18.827 ug/ml
Spiked Amount 50.000		Recovery =	37.65%
Target Compounds			
1) T n-Nonane (C9)	3.441	1664991	16.554 ug/ml
2) T n-Decane (C10)	4.516	1708898	17.150 ug/ml
3) T A~Naphthalene (C11.7)	6.113	1860581	16.874 ug/ml
4) T n-Dodecane (C12)	6.541	1702226	17.517 ug/ml
5) T A~2-methylnaphthalene...	7.171	1832129	17.070 ug/ml
6) T n-Tetradecane (C14)	8.337	1671463	18.085 ug/ml
7) T n-Hexadecane (C16)	9.940	1670747	18.658 ug/ml
8) T n-Octadecane (C18)	11.383	1655681	18.875 ug/ml
10) T n-Eicosane (C20)	12.694	1619601	19.005 ug/ml
11) T n-Heneicosane (C21)	13.306	1603112	19.007 ug/ml
13) T n-Docosane (C22)	13.892	1599262	19.117 ug/ml
14) T n-Tetracosane (C24)	14.996	1601636	19.249 ug/ml
15) T n-Hexacosane (C26)	16.019	1601013	19.323 ug/ml
16) T n-Octacosane (C28)	16.970	1692923	20.484 ug/ml
17) T n-Tricontane (C30)	17.858	1922922	22.726 ug/ml
18) T n-Dotriacontane (C32)	18.691	2015489	23.399 ug/mlm
19) T n-Tetratriacontane (C34)	19.476	1910773	22.427 ug/ml
20) T n-Hexatriacontane (C36)	20.216	1807445	21.029 ug/ml
21) T n-Octatriacontane (C38)	20.987	1739556	20.738 ug/ml
22) T n-Tetracontane (C40)	21.964	1723068	21.024 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068847.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:26
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

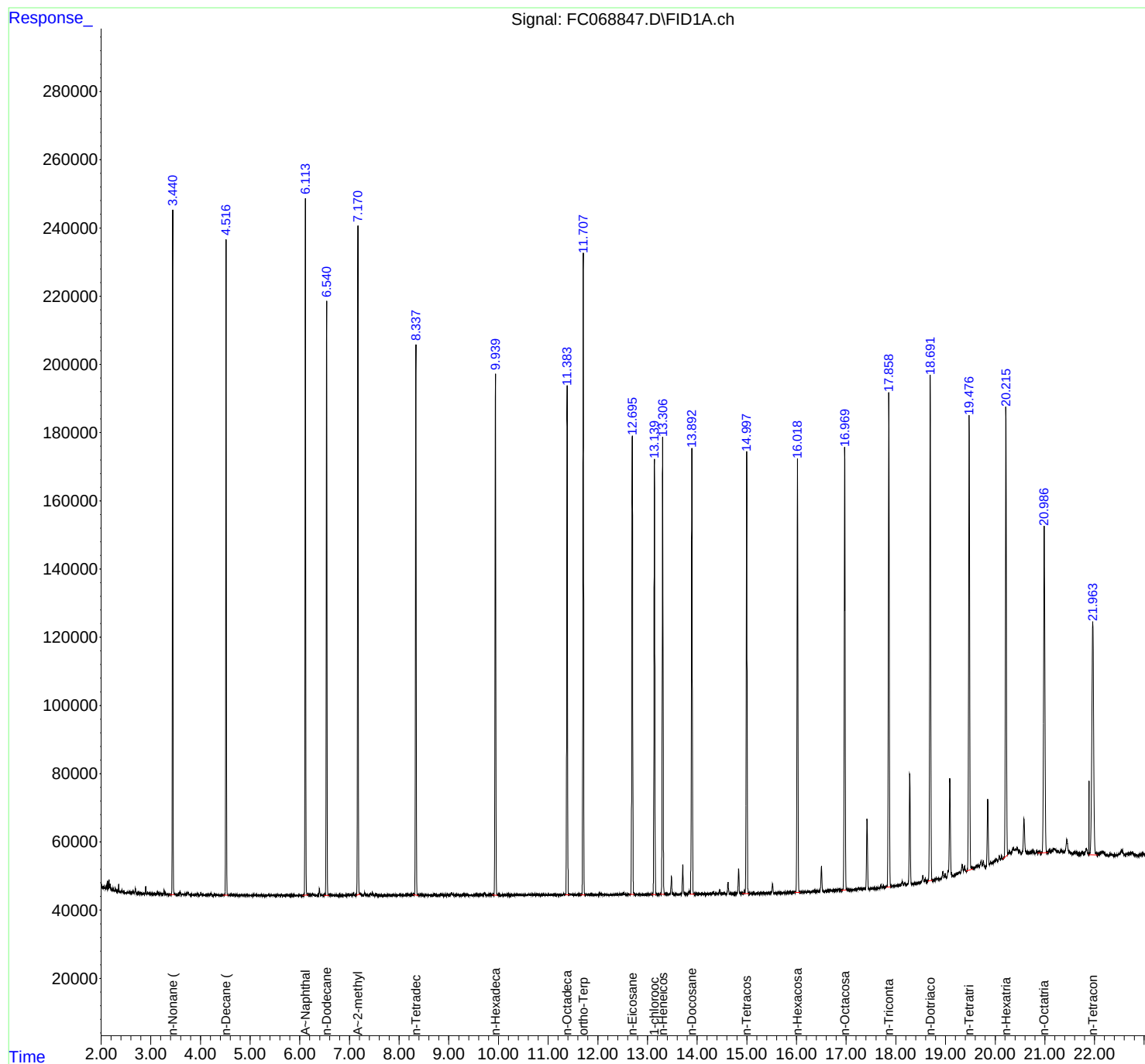
Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 05/14/2025
Supervised By :mohammad ahmed 05/15/2025

Integration File: autoint1.e
Quant Time: May 14 03:12:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC05132
Data File : FC068847.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:26
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/14/2025
Supervised By :mohammad ahmed 05/15/2025

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.441	3.377	3.479	BB	200564	1664991	81.55%	4.363%
2	4.516	4.459	4.562	BB	191509	1708898	83.70%	4.478%
3	6.113	6.055	6.172	BB	203075	1860581	91.13%	4.875%
4	6.541	6.480	6.582	BB	174313	1702226	83.38%	4.460%
5	7.171	7.130	7.204	BB	195773	1832129	89.74%	4.801%
6	8.337	8.280	8.379	BB	161115	1671463	81.87%	4.380%
7	9.940	9.875	9.980	BB	152864	1670747	81.84%	4.378%
8	11.383	11.340	11.434	BB	148964	1655681	81.10%	4.338%
9	11.707	11.647	11.749	BB	188075	2041576	100.00%	5.349%
10	12.694	12.635	12.734	BB	134237	1619601	79.33%	4.244%
11	13.140	13.079	13.175	BB	126986	1510379	73.98%	3.957%
12	13.306	13.244	13.344	BB	134272	1603112	78.52%	4.200%
13	13.892	13.860	13.945	VB	130807	1599262	78.33%	4.190%
14	14.996	14.907	15.042	BB	130081	1601636	78.45%	4.197%
15	16.019	15.959	16.069	BB	126952	1601013	78.42%	4.195%
16	16.970	16.907	17.005	BB	129781	1692923	82.92%	4.436%
17	17.858	17.812	17.899	BB	142847	1922922	94.19%	5.038%
18	18.691	18.619	18.747	BB	148643	2025219	99.20%	5.306%
19	19.476	19.414	19.552	BB	132751	1910773	93.59%	5.007%
20	20.216	20.150	20.254	BV	131438	1807445	88.53%	4.736%
21	20.987	20.862	21.062	BB	95507	1739556	85.21%	4.558%
22	21.964	21.884	22.059	PB	68126	1723068	84.40%	4.515%
Sum of corrected areas:						38165202		

Aliphatic EPH 050625.M Wed May 14 03:36:07 2025

Continuing Calibration Report for SequenceID : FC051325AL

Parameter	AreaCount	Conc.	RT_Min	RT_Max	Response Factor	AVGRF	%DEV
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File ID : FC068859.D

Aliphatic C9-C12	5083896.000	60.000	3.341	6.641	84731.600	99133.167	14.527
Aliphatic C12-C16	3409602.000	40.000	6.642	10.040	85240.050	90984.404	6.314
Aliphatic C16-C21	5004005.000	60.000	10.041	13.406	83400.083	85760.459	2.752
Aliphatic C21-C28	6690971.000	80.000	13.407	17.068	83637.138	83091.075	-0.657
Aliphatic C28-C40	11507836.000	120.000	17.069	22.062	95898.633	84622.692	-13.325
Aliphatic EPH	31696310.000	360.000	3.341	22.062	88045.306	87597.230	-0.512

Lab Sample ID:	20 PPM ALIPHATIC HC 9	Acq On:	13 May 2025 22:06
Client Sample ID:		Operator:	YP/AJ
Data file:	FC068859.D	Misc:	
Instrument:	FID_C	ALS Vial:	2
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	Units
Aliphatic C9-C12	3.341	6.641	5083896.000	60.000	ug/ml
Aliphatic C12-C16	6.642	10.040	3409602.000	40.000	ug/ml
Aliphatic C16-C21	10.041	13.406	5004005.000	60.000	ug/ml
Aliphatic C21-C28	13.407	17.068	6690971.000	80.000	ug/ml
Aliphatic C28-C40	17.069	22.062	11507836.000	120.000	ug/ml
Aliphatic EPH	3.341	22.062	31696310.000	360.000	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068859.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 22:06
 Operator : YP/AJ
 Sample : 20 PPM ALIPHATIC HC STD
 Misc :
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
 Quant Time: May 14 03:14:37 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.706	2085226	18.269 ug/ml
Spiked Amount 50.000		Recovery =	36.54%
12) S 1-chlorooctadecane (S...	13.138	1545155	19.260 ug/ml
Spiked Amount 50.000		Recovery =	38.52%
Target Compounds			
1) T n-Nonane (C9)	3.439	1657381	16.478 ug/ml
2) T n-Decane (C10)	4.515	1709025	17.152 ug/ml
3) T A~Naphthalene (C11.7)	6.111	1864773	16.912 ug/ml
4) T n-Dodecane (C12)	6.540	1717490	17.674 ug/ml
5) T A~2-methylnaphthalene...	7.170	1849536	17.232 ug/ml
6) T n-Tetradecane (C14)	8.337	1699927	18.393 ug/ml
7) T n-Hexadecane (C16)	9.938	1709675	19.093 ug/ml
8) T n-Octadecane (C18)	11.382	1696923	19.345 ug/ml
10) T n-Eicosane (C20)	12.692	1661903	19.502 ug/ml
11) T n-Heneicosane (C21)	13.305	1645179	19.505 ug/ml
13) T n-Docosane (C22)	13.891	1642057	19.628 ug/ml
14) T n-Tetracosane (C24)	14.995	1648699	19.814 ug/ml
15) T n-Hexacosane (C26)	16.016	1650111	19.916 ug/ml
16) T n-Octacosane (C28)	16.967	1750104	21.176 ug/ml
17) T n-Tricontane (C30)	17.856	1999188	23.628 ug/ml
18) T n-Dotriacontane (C32)	18.689	2103475	24.421 ug/ml
19) T n-Tetratriacontane (C34)	19.473	1976782	23.202 ug/ml
20) T n-Hexatriacontane (C36)	20.215	1886517	21.949 ug/ml
21) T n-Octatriacontane (C38)	20.987	1796812	21.420 ug/ml
22) T n-Tetracontane (C40)	21.961	1745062	21.293 ug/ml

(f)=RT Delta > 1/2 Window

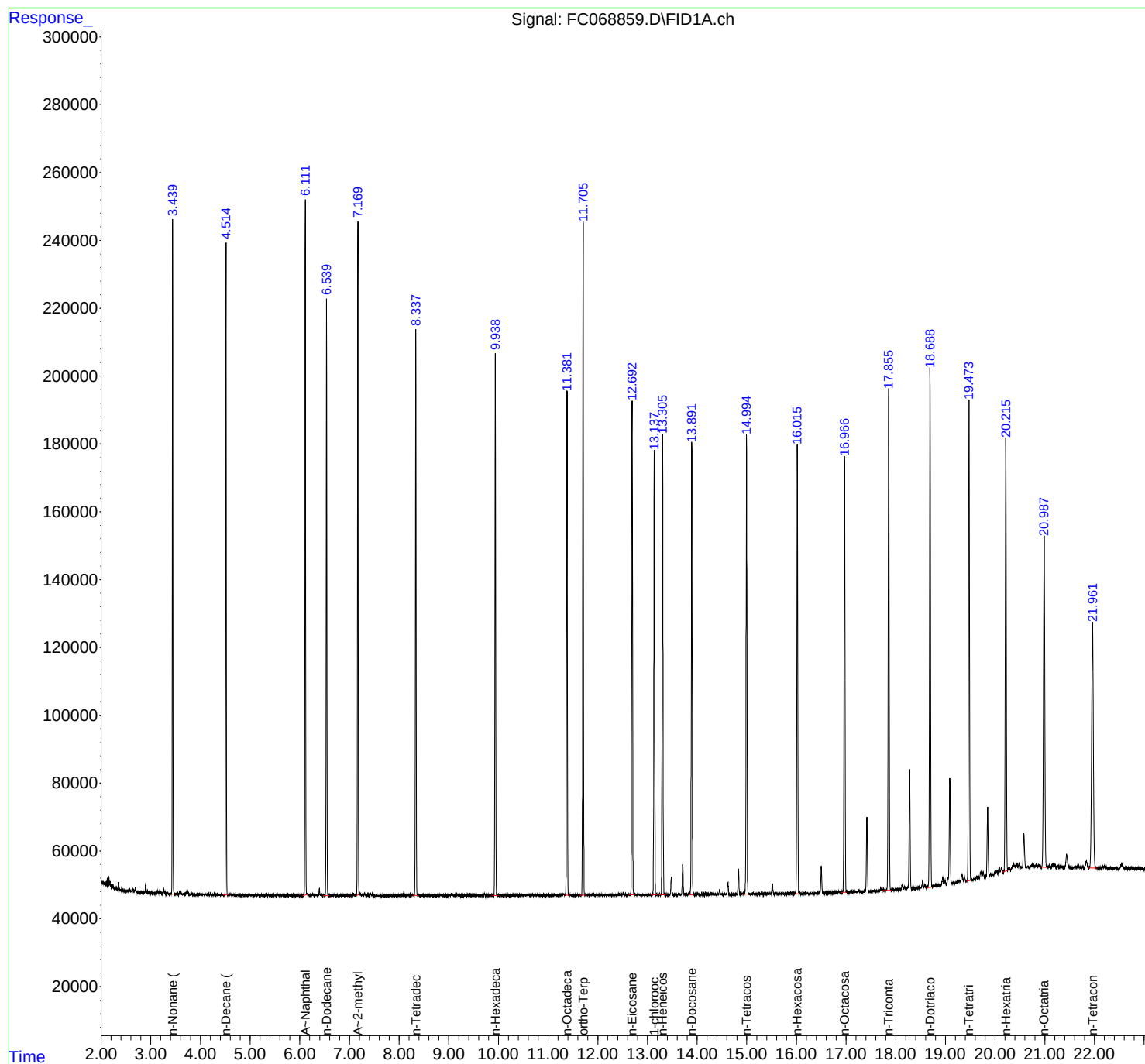
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068859.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 22:06
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
20 PPM ALIPHATIC HC STD

Integration File: autoint1.e
Quant Time: May 14 03:14:37 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068859.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 22:06
 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 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.439	3.377	3.477	BB	199056	1657381	78.79%	4.245%
2	4.515	4.459	4.555	BB	192091	1709025	81.25%	4.378%
3	6.111	6.062	6.149	BB	204734	1864773	88.65%	4.776%
4	6.540	6.479	6.587	BB	176089	1717490	81.65%	4.399%
5	7.170	7.130	7.200	BB	197630	1849536	87.93%	4.737%
6	8.337	8.280	8.380	BB	166782	1699927	80.82%	4.354%
7	9.938	9.874	9.979	BB	159302	1709675	81.28%	4.379%
8	11.382	11.340	11.425	BB	148312	1696923	80.67%	4.347%
9	11.706	11.644	11.749	BB	198741	2085226	99.13%	5.341%
10	12.692	12.634	12.735	BB	145660	1661903	79.01%	4.257%
11	13.138	13.077	13.190	BB	129963	1545155	73.46%	3.958%
12	13.305	13.244	13.359	BB	136549	1645179	78.21%	4.214%
13	13.891	13.859	13.929	VB	133265	1642057	78.06%	4.206%
14	14.995	14.917	15.040	BB	134841	1648699	78.38%	4.223%
15	16.016	15.959	16.062	BB	132305	1650111	78.45%	4.227%
16	16.967	16.905	17.005	BB	127700	1750104	83.20%	4.483%
17	17.856	17.725	17.910	BB	147652	1999188	95.04%	5.121%
18	18.689	18.620	18.752	BB	152184	2103475	100.00%	5.388%
19	19.473	19.425	19.540	BB	142017	1976782	93.98%	5.063%
20	20.215	20.150	20.255	BV	128328	1886517	89.69%	4.832%
21	20.987	20.910	21.059	BB	97480	1796812	85.42%	4.602%
22	21.961	21.887	22.049	BB	72423	1745062	82.96%	4.470%
Sum of corrected areas:							39041000	

Aliphatic EPH 050625.M Wed May 14 03:40:32 2025



QC SAMPLE DATA

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BL	SDG No.:	Q1987
Lab Sample ID:	PB167974BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.02 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 14:31	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	1.18	U	1	1.18	2.00	mg/kg	FC068848.D
Aliphatic C9-C28	Aliphatic C9-C28	0.91	U	1	0.91	3.99	mg/kg	FC068848.D
Total AliphaticEPH	Total AliphaticEPH	2.09	U		2.09	5.99	mg/kg	
Total EPH	Total EPH	2.09	U		2.09	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

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BL	SDG No.:	Q1987
Lab Sample ID:	PB167974BL	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.02 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068848.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	0.91	U	0.91	3.99	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	1.18	U	1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	43.0		40 - 140	86%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	39.4		40 - 140	79%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167974BL	Acq On:	13 May 2025 14:31
Client Sample ID:	PB167974BL	Operator:	YP/AJ
Data file:	FC068848.D	Misc:	
Instrument:	FID_C	ALS Vial:	11
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	0	0	300	ug/ml
Aliphatic C12-C16	6.642	10.040	0	0	200	ug/ml
Aliphatic C16-C21	10.041	13.406	0	0	300	ug/ml
Aliphatic C21-C28	13.407	17.068	0	0	400	ug/ml
Aliphatic C28-C40	17.069	22.062	0	0	600	ug/ml
Aliphatic EPH	3.341	22.062	0	0		ug/ml
ortho-Terphenyl (SURR)	11.709	11.709	4495541	39.39		ug/ml
1-chlorooctadecane (SURR)	13.142	13.142	3453231	43.04		ug/ml
Aliphatic C9-C28	3.341	17.068	0	0	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068848.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 14:31
 Operator : YP/AJ
 Sample : PB167974BL
 Misc :
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB167974BL

Integration File: autoint1.e
 Quant Time: May 14 03:12:53 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	4495541	39.387 ug/ml
Spiked Amount	50.000	Recovery	= 78.77%
12) S 1-chlorooctadecane (S...	13.142	3453231	43.044 ug/ml
Spiked Amount	50.000	Recovery	= 86.09%

Target Compounds

(f)=RT Delta > 1/2 Window

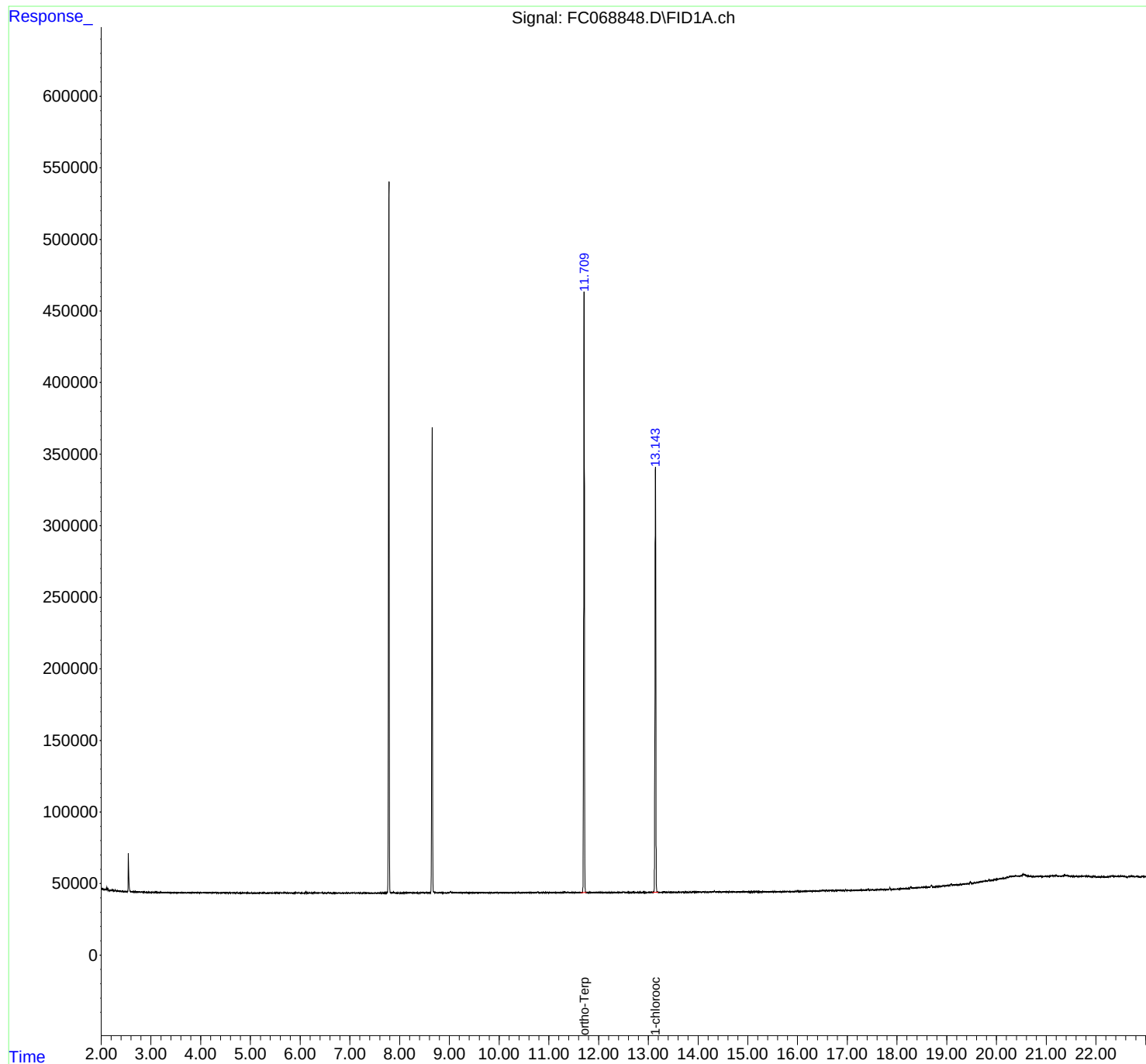
(m)=manual int.

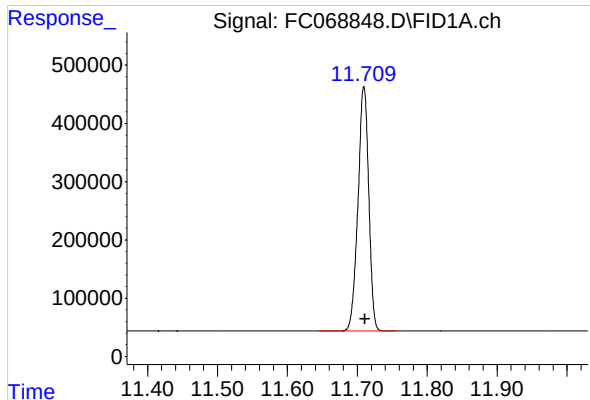
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068848.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 14:31
Operator : YP/AJ
Sample : PB167974BL
Misc :
ALS Vial : 11 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167974BL

Integration File: autoint1.e
Quant Time: May 14 03:12:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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

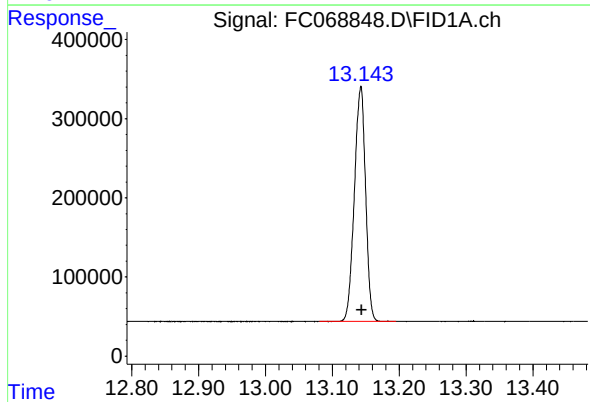




#9 ortho-Terphenyl (SURR)

R.T.: 11.709 min
Delta R.T.: -0.001 min
Response: 4495541
Conc: 39.39 ug/ml

Instrument :
FID_C
ClientSampleId :
PB167974BL



#12 1-chlorooctadecane (SURR)

R.T.: 13.142 min
Delta R.T.: -0.002 min
Response: 3453231
Conc: 43.04 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068848.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 14:31
Sample : PB167974BL
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.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	11.709	11.645	11.755	BB	419408	4495541	100.00%	56.556%
2	13.142	13.080	13.195	BB	295557	3453231	76.81%	43.444%
Sum of corrected areas:							7948773	

Aliphatic EPH 050625.M Wed May 14 03:36:49 2025

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BS	SDG No.:	Q1987
Lab Sample ID:	PB167974BS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 15:08	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	36.6		1	1.18	2.00	mg/kg	FC068849.D
Aliphatic C9-C28	Aliphatic C9-C28	110	E	1	0.91	3.99	mg/kg	FC068849.D
Total AliphaticEPH	Total AliphaticEPH	147			2.09	5.99	mg/kg	
Total EPH	Total EPH	147			2.09	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

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BS	SDG No.:	Q1987
Lab Sample ID:	PB167974BS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068849.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	110	E	0.91	3.99	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	36.6		1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	43.2		40 - 140	86%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	38.8		40 - 140	78%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167974BS	Acq On:	13 May 2025 15:08
Client Sample ID:	PB167974BS	Operator:	YP/AJ
Data file:	FC068849.D	Misc:	
Instrument:	FID_C	ALS Vial:	12
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	25533459	257.567	300	ug/ml
Aliphatic C12-C16	6.642	10.040	33639900	369.733	200	ug/ml
Aliphatic C16-C21	10.041	13.406	38569629	449.737	300	ug/ml
Aliphatic C21-C28	13.407	17.068	47973507	577.361	400	ug/ml
Aliphatic C28-C40	17.069	22.062	46561369	550.223	600	ug/ml
Aliphatic EPH	3.341	22.062	192277864	2200		ug/ml
ortho-Terphenyl (SURR)	11.709	11.709	4422950	38.75		ug/ml
1-chlorooctadecane (SURR)	13.141	13.141	3462600	43.16		ug/ml
Aliphatic C9-C28	3.341	17.068	145716495	1650	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068849.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 15:08
 Operator : YP/AJ
 Sample : PB167974BS
 Misc :
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB167974BS

Integration File: autoint1.e
 Quant Time: May 14 03:13:01 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	4422950	38.751 ug/ml
Spiked Amount 50.000		Recovery =	77.50%
12) S 1-chlorooctadecane (S...	13.141	3462600	43.161 ug/ml
Spiked Amount 50.000		Recovery =	86.32%
Target Compounds			
1) T n-Nonane (C9)	3.449	4609115	45.825 ug/ml
2) T n-Decane (C10)	4.521	4881416	48.990 ug/ml
3) T A~Naphthalene (C11.7)	6.115	5700780	51.702 ug/ml
4) T n-Dodecane (C12)	6.542	5007738	51.532 ug/ml
5) T A~2-methylnaphthalene...	7.173	5256962	48.978 ug/ml
6) T n-Tetradecane (C14)	8.341	5232492	56.614 ug/ml
7) T n-Hexadecane (C16)	9.943	5302293	59.214 ug/ml
8) T n-Octadecane (C18)	11.386	5266443	60.038 ug/ml
10) T n-Eicosane (C20)	12.697	5365249	62.959 ug/ml
11) T n-Heneicosane (C21)	13.309	5128884	60.808 ug/ml
13) T n-Docosane (C22)	13.894	5091739	60.864 ug/ml
14) T n-Tetracosane (C24)	14.994	10476547	125.910 ug/ml
15) T n-Hexacosane (C26)	16.022	4981305	60.122 ug/ml
16) T n-Octacosane (C28)	16.972	5030760	60.871 ug/ml
17) T n-Tricontane (C30)	17.862	5015132	59.272 ug/ml
18) T n-Dotriacontane (C32)	18.693	4992234	57.958 ug/ml
19) T n-Tetratriacontane (C34)	19.478	5073106	59.543 ug/ml
20) T n-Hexatriacontane (C36)	20.218	4904532	57.064 ug/ml
21) T n-Octatriacontane (C38)	20.992	4883801	58.221 ug/ml
22) T n-Tetracontane (C40)	21.968	4876617	59.503 ug/ml

(f)=RT Delta > 1/2 Window

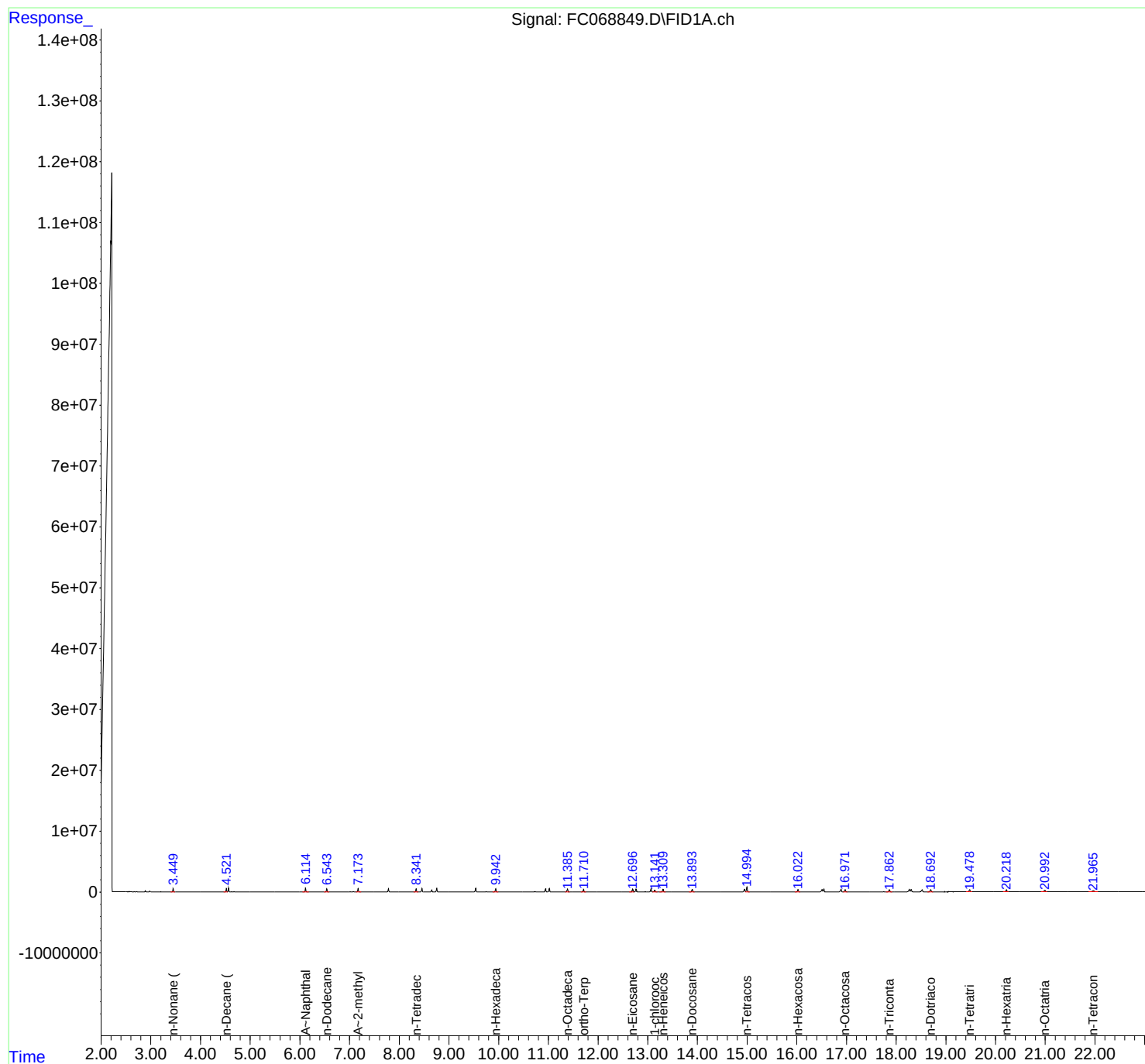
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068849.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:08
Operator : YP/AJ
Sample : PB167974BS
Misc :
ALS Vial : 12 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167974BS

Integration File: autoint1.e
Quant Time: May 14 03:13:01 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068849.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:08
Sample : PB167974BS
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.449	3.395	3.487	BB	551698	4609115	43.99%	2.303%
2	4.521	4.467	4.543	BV	553684	4881416	46.59%	2.439%
3	4.566	4.543	4.609	VV	608418	5334410	50.92%	2.665%
4	6.115	6.050	6.180	BB	621326	5700780	54.41%	2.848%
5	6.542	6.484	6.589	BB	511178	5007738	47.80%	2.502%
6	7.173	7.130	7.234	BB	550654	5256962	50.18%	2.626%
7	8.341	8.285	8.382	BB	523160	5232492	49.94%	2.614%
8	8.458	8.390	8.499	BB	607020	5888427	56.21%	2.942%
9	8.756	8.707	8.792	BB	597468	5929615	56.60%	2.962%
10	9.540	9.474	9.604	BB	589016	6030111	57.56%	3.013%
11	9.943	9.875	9.994	BB	489092	5302293	50.61%	2.649%
12	10.945	10.859	10.984	BV	526457	5800726	55.37%	2.898%
13	11.021	10.984	11.075	VV	545601	5707012	54.47%	2.851%
14	11.386	11.340	11.427	BB	448874	5266443	50.27%	2.631%
15	11.709	11.652	11.757	BB	405649	4422950	42.22%	2.210%
16	12.697	12.627	12.728	BV	446910	5365249	51.21%	2.680%
17	12.767	12.728	12.815	PB	481796	5710742	54.51%	2.853%
18	13.067	12.994	13.095	BV	498441	5590573	53.36%	2.793%
19	13.141	13.095	13.197	VB	288053	3462600	33.05%	1.730%
20	13.309	13.237	13.359	BB	434213	5128884	48.96%	2.562%
21	13.894	13.827	13.944	BB	415017	5091739	48.60%	2.544%
22	14.947	14.880	14.966	BV	431382	5526870	52.75%	2.761%
23	14.994	14.966	15.054	VB	797239	10476547	100.00%	5.234%
24	16.022	15.959	16.069	BB	389670	4981305	47.55%	2.489%
25	16.507	16.424	16.523	BV	381431	5712243	54.52%	2.854%
26	16.543	16.523	16.602	VB	470832	5659179	54.02%	2.827%
27	16.890	16.812	16.930	BV	407759	5494864	52.45%	2.745%
28	16.972	16.930	17.015	VB	365362	5030760	48.02%	2.513%
29	17.862	17.795	17.917	BB	354188	5015132	47.87%	2.506%
30	18.265	18.177	18.279	BV	374989	5872345	56.05%	2.934%
31	18.302	18.279	18.370	VB	395399	5367208	51.23%	2.681%
32	18.522	18.439	18.567	BB	354842	5576394	53.23%	2.786%
33	18.693	18.627	18.742	BB	349328	4992234	47.65%	2.494%
34	19.478	19.407	19.525	BB	349828	5073106	48.42%	2.534%
35	20.218	20.150	20.260	BB	338942	4904532	46.81%	2.450%

						rteres		
36	20.992	20.910	21.039	BB	274878	4883801	46.62%	2.440%
37	21.968	21.870	22.062	BB	189404	4876617	46.55%	2.436%
					Sum of corrected areas:			200163412

Aliphatic EPH 050625.M Wed May 14 03:37:58 2025

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BSD	SDG No.:	Q1987
Lab Sample ID:	PB167974BSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.01 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 15:46	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	36.4		1	1.18	2.00	mg/kg	FC068850.D
Aliphatic C9-C28	Aliphatic C9-C28	109	E	1	0.91	4.00	mg/kg	FC068850.D
Total AliphaticEPH	Total AliphaticEPH	146			2.09	6.00	mg/kg	
Total EPH	Total EPH	146			2.09	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:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	PB167974BSD	SDG No.:	Q1987
Lab Sample ID:	PB167974BSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	100
Sample Wt/Vol:	30.01 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068850.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	109	E	0.91	4.00	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	36.4		1.18	2.00	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	42.6		40 - 140	85%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	38.2		40 - 140	76%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	PB167974BSD	Acq On:	13 May 2025 15:46
Client Sample ID:	PB167974BSD	Operator:	YP/AJ
Data file:	FC068850.D	Misc:	
Instrument:	FID_C	ALS Vial:	13
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	25563580	257.871	300	ug/ml
Aliphatic C12-C16	6.642	10.040	33240251	365.34	200	ug/ml
Aliphatic C16-C21	10.041	13.406	38095758	444.211	300	ug/ml
Aliphatic C21-C28	13.407	17.068	47425618	570.767	400	ug/ml
Aliphatic C28-C40	17.069	22.062	46176524	545.675	600	ug/ml
Aliphatic EPH	3.341	22.062	190501731	2180		ug/ml
ortho-Terphenyl (SURR)	11.710	11.710	4358963	38.19		ug/ml
1-chlorooctadecane (SURR)	13.141	13.141	3420285	42.63		ug/ml
Aliphatic C9-C28	3.341	17.068	144325207	1640	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068850.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 15:46
 Operator : YP/AJ
 Sample : PB167974BSD
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 PB167974BSD

Integration File: autoint1.e
 Quant Time: May 14 03:13:14 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.710	4358963	38.190 ug/ml
Spiked Amount 50.000		Recovery =	76.38%
12) S 1-chlorooctadecane (S...	13.141	3420285	42.633 ug/ml
Spiked Amount 50.000		Recovery =	85.27%
Target Compounds			
1) T n-Nonane (C9)	3.450	4644219	46.174 ug/ml
2) T n-Decane (C10)	4.521	4906571	49.242 ug/ml
3) T A~Naphthalene (C11.7)	6.115	5674741	51.466 ug/ml
4) T n-Dodecane (C12)	6.543	4989369	51.343 ug/ml
5) T A~2-methylnaphthalene...	7.173	5214519	48.583 ug/ml
6) T n-Tetradecane (C14)	8.341	5173808	55.979 ug/ml
7) T n-Hexadecane (C16)	9.943	5228995	58.396 ug/ml
8) T n-Octadecane (C18)	11.386	5195780	59.233 ug/ml
10) T n-Eicosane (C20)	12.696	5295180	62.137 ug/ml
11) T n-Heneicosane (C21)	13.308	5063729	60.036 ug/ml
13) T n-Docosane (C22)	13.896	5027362	60.094 ug/ml
14) T n-Tetracosane (C24)	14.994	10362672	124.541 ug/ml
15) T n-Hexacosane (C26)	16.023	4923519	59.424 ug/ml
16) T n-Octacosane (C28)	16.972	4966626	60.095 ug/ml
17) T n-Tricontane (C30)	17.862	4947948	58.478 ug/ml
18) T n-Dotriacontane (C32)	18.695	4928684	57.220 ug/ml
19) T n-Tetratriacontane (C34)	19.478	5007147	58.769 ug/ml
20) T n-Hexatriacontane (C36)	20.218	4852149	56.454 ug/ml
21) T n-Octatriacontane (C38)	20.992	4848446	57.800 ug/ml
22) T n-Tetracontane (C40)	21.968	4842928	59.092 ug/ml

(f)=RT Delta > 1/2 Window

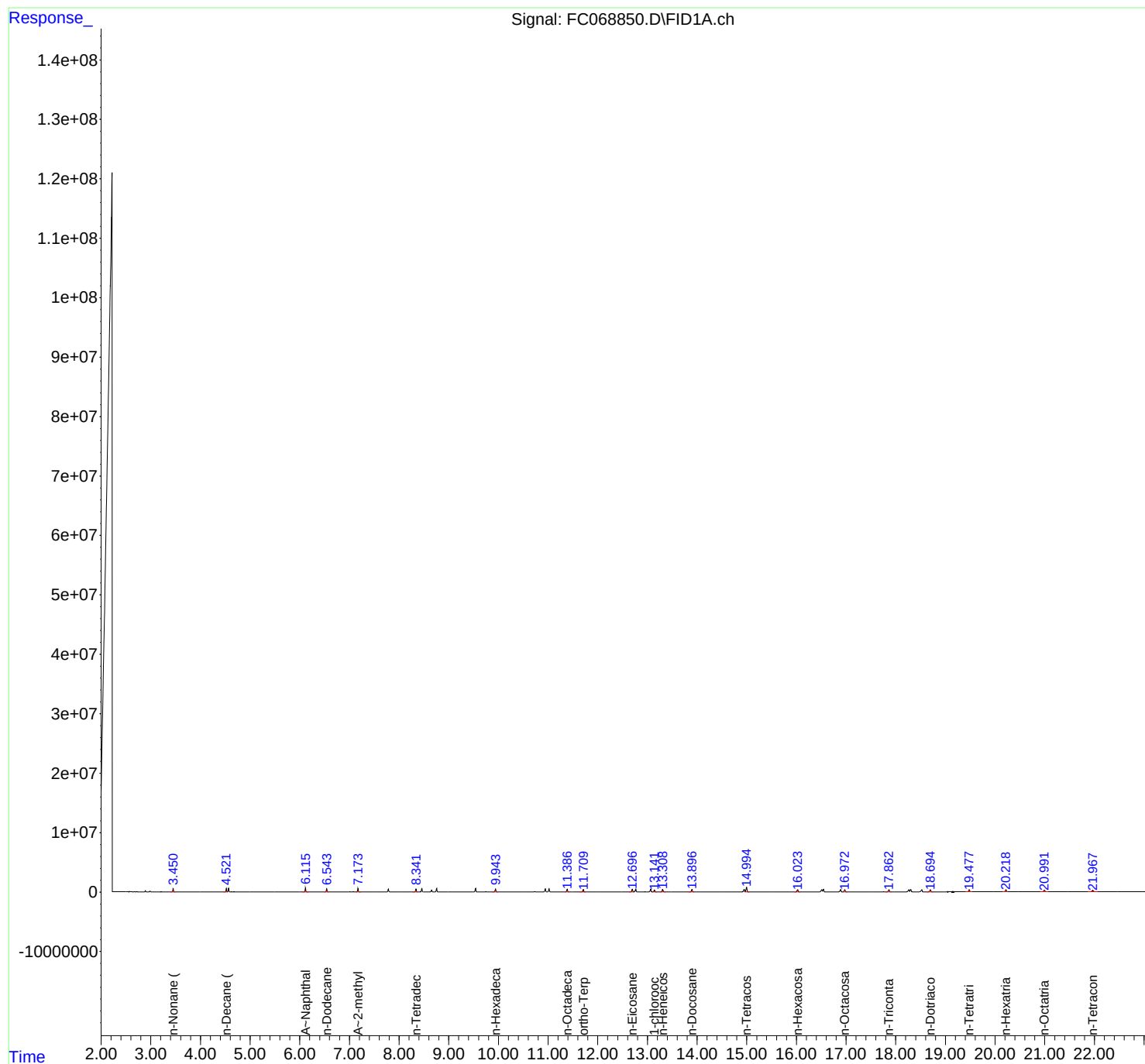
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068850.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:46
Operator : YP/AJ
Sample : PB167974BSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
PB167974BSD

Integration File: autoint1.e
Quant Time: May 14 03:13:14 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



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Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068850.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 15:46
 Sample : PB167974BSD
 Misc :
 ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.450	3.397	3.502	BB	564756	4644219	44.82%	2.342%
2	4.521	4.465	4.544	BV	553191	4906571	47.35%	2.475%
3	4.566	4.544	4.608	VV	613680	5348680	51.61%	2.698%
4	6.115	6.052	6.180	BB	634448	5674741	54.76%	2.862%
5	6.543	6.487	6.580	BB	524922	4989369	48.15%	2.516%
6	7.173	7.130	7.233	BB	554394	5214519	50.32%	2.630%
7	8.341	8.273	8.375	BB	490584	5173808	49.93%	2.609%
8	8.459	8.403	8.498	BB	578717	5814665	56.11%	2.933%
9	8.757	8.707	8.793	BB	603018	5851788	56.47%	2.951%
10	9.540	9.473	9.603	BB	591674	5956476	57.48%	3.004%
11	9.943	9.875	9.992	BB	489438	5228995	50.46%	2.637%
12	10.945	10.860	10.980	BV	530148	5732966	55.32%	2.891%
13	11.021	10.980	11.075	VV	527324	5653207	54.55%	2.851%
14	11.386	11.340	11.423	BB	448245	5195780	50.14%	2.620%
15	11.710	11.640	11.753	BB	395275	4358963	42.06%	2.198%
16	12.696	12.627	12.728	BV	443602	5295180	51.10%	2.671%
17	12.768	12.728	12.813	VB	489538	5635735	54.38%	2.842%
18	13.067	12.993	13.095	BV	489325	5519161	53.26%	2.784%
19	13.141	13.095	13.197	VB	298702	3420285	33.01%	1.725%
20	13.308	13.250	13.363	BB	422921	5063729	48.87%	2.554%
21	13.896	13.827	13.940	BB	418755	5027362	48.51%	2.535%
22	14.946	14.873	14.966	BV	404949	5481552	52.90%	2.765%
23	14.994	14.966	15.055	VB	787026	10362672	100.00%	5.226%
24	16.023	15.957	16.077	BB	374034	4923519	47.51%	2.483%
25	16.507	16.435	16.522	BV	365759	5607800	54.12%	2.828%
26	16.543	16.522	16.613	VB	444963	5620929	54.24%	2.835%
27	16.889	16.813	16.932	BV	418001	5435158	52.45%	2.741%
28	16.972	16.932	17.025	VB	375603	4966626	47.93%	2.505%
29	17.862	17.797	17.903	BB	365249	4947948	47.75%	2.495%
30	18.264	18.178	18.278	BV	369347	5807301	56.04%	2.929%
31	18.302	18.278	18.372	VB	411706	5410807	52.21%	2.729%
32	18.524	18.438	18.585	BB	371865	5531114	53.38%	2.790%
33	18.695	18.628	18.748	BB	360151	4928684	47.56%	2.486%
34	19.478	19.407	19.535	BB	350295	5007147	48.32%	2.525%
35	20.218	20.150	20.255	BB	332000	4852149	46.82%	2.447%
36	20.992	20.910	21.068	BB	263462	4848446	46.79%	2.445%

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37 21.968 21.865 22.065 BB 200133 4842928 46.73% 2.442%
Sum of corrected areas: 198280978

Aliphatic EPH 050625.M Wed May 14 03:39:21 2025

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	GC1MS	SDG No.:	Q1987
Lab Sample ID:	Q1987-01MS	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86.6
Sample Wt/Vol:	30.03 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 17:41	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	47.3	E	1	1.36	2.31	mg/kg	FC068853.D
Aliphatic C9-C28	Aliphatic C9-C28	127	E	1	1.05	4.61	mg/kg	FC068853.D
Total AliphaticEPH	Total AliphaticEPH	174			2.41	6.92	mg/kg	
Total EPH	Total EPH	174			2.41	6.92	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:	G Environmental		Date Collected:		
Project:	Hillside		Date Received:		
Client Sample ID:	GC1MS		SDG No.:	Q1987	
Lab Sample ID:	Q1987-01MS		Matrix:	Solid	
Analytical Method:	NJEPH		% Solid:	86.6	
Sample Wt/Vol:	30.03	Units: g	Final Vol:	2000	uL
Soil Aliquot Vol:		uL	Test:	EPH_NF	
Prep Method :					

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068853.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	127	E	1.05	4.61	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	47.3	E	1.36	2.31	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	36.0		40 - 140	72%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	31.9		40 - 140	64%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1987-01MS	Acq On:	13 May 2025 17:41
Client Sample ID:	GC1MS	Operator:	YP/AJ
Data file:	FC068853.D	Misc:	
Instrument:	FID_C	ALS Vial:	16
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	23401905	236.065	300	ug/ml
Aliphatic C12-C16	6.642	10.040	33231391	365.243	200	ug/ml
Aliphatic C16-C21	10.041	13.406	40245810	469.282	300	ug/ml
Aliphatic C21-C28	13.407	17.068	48208559	580.189	400	ug/ml
Aliphatic C28-C40	17.069	22.062	52100219	615.677	600	ug/ml
Aliphatic EPH	3.341	22.062	197187884	2270		ug/ml
ortho-Terphenyl (SURR)	11.709	11.709	3646047	31.94		ug/ml
1-chlorooctadecane (SURR)	13.141	13.141	2889403	36.02		ug/ml
Aliphatic C9-C28	3.341	17.068	145087665	1650	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068853.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 17:41
 Operator : YP/AJ
 Sample : Q1987-01MS
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 GC1MS

Integration File: autoint1.e
 Quant Time: May 14 03:13:43 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	3646047	31.944 ug/ml
Spiked Amount 50.000		Recovery =	63.89%
12) S 1-chlorooctadecane (S...	13.141	2889403	36.016 ug/ml
Spiked Amount 50.000		Recovery =	72.03%
Target Compounds			
1) T n-Nonane (C9)	3.445	3824941	38.029 ug/ml
2) T n-Decane (C10)	4.519	4387774	44.036 ug/ml
3) T A~Naphthalene (C11.7)	6.114	5314897	48.203 ug/ml
4) T n-Dodecane (C12)	6.542	4714507	48.514 ug/ml
5) T A~2-methylnaphthalene...	7.173	4980650	46.404 ug/ml
6) T n-Tetradecane (C14)	8.341	4959775	53.663 ug/ml
7) T n-Hexadecane (C16)	9.943	5178939	57.837 ug/ml
8) T n-Octadecane (C18)	11.386	5268092	60.057 ug/ml
10) T n-Eicosane (C20)	12.697	5445200	63.897 ug/ml
11) T n-Heneicosane (C21)	13.309	5234271	62.058 ug/ml
13) T n-Docosane (C22)	13.896	5224478	62.450 ug/ml
14) T n-Tetracosane (C24)	14.994	10677355	128.323 ug/ml
15) T n-Hexacosane (C26)	16.023	5125223	61.859 ug/ml
16) T n-Octacosane (C28)	16.972	5142575	62.224 ug/ml
17) T n-Tricontane (C30)	17.862	5107177	60.360 ug/ml
18) T n-Dotriacontane (C32)	18.694	5069289	58.852 ug/ml
19) T n-Tetratriacontane (C34)	19.478	5124982	60.152 ug/ml
20) T n-Hexatriacontane (C36)	20.218	4985804	58.009 ug/ml
21) T n-Octatriacontane (C38)	20.993	5006508	59.684 ug/ml
22) T n-Tetracontane (C40)	21.969	5044507	61.552 ug/ml

(f)=RT Delta > 1/2 Window

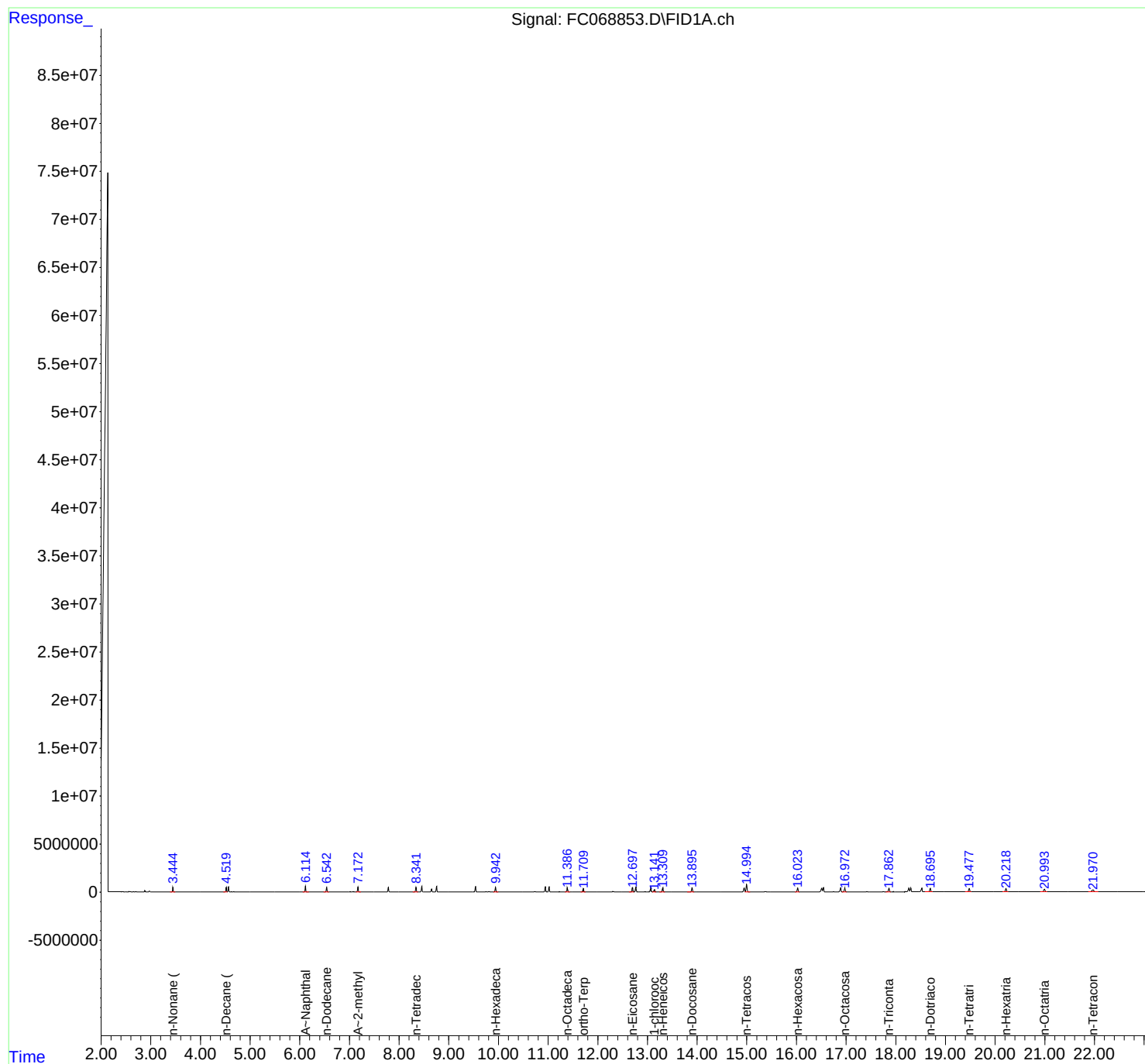
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068853.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 17:41
Operator : YP/AJ
Sample : Q1987-01MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
GC1MS

Integration File: autoint1.e
Quant Time: May 14 03:13:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068853.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 17:41
 Sample : Q1987-01MS
 Misc :
 ALS Vial : 16 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.342	3.304	3.390	PV	348	7016	0.07%	0.003%
2	3.401	3.390	3.409	PV	119	597	0.01%	0.000%
3	3.445	3.409	3.525	VV	471034	3829376	35.83%	1.879%
4	3.572	3.525	3.613	PV	281	6347	0.06%	0.003%
5	3.627	3.613	3.641	VV	242	2910	0.03%	0.001%
6	3.648	3.641	3.677	VV	325	3285	0.03%	0.002%
7	3.693	3.677	3.704	PV	215	2505	0.02%	0.001%
8	3.738	3.704	3.795	VV	1250	21843	0.20%	0.011%
9	3.830	3.795	3.879	VV	452	8339	0.08%	0.004%
10	3.886	3.879	3.904	VV	128	875	0.01%	0.000%
11	3.943	3.904	3.984	VV	450	9161	0.09%	0.004%
12	3.990	3.984	4.004	VV	165	847	0.01%	0.000%
13	4.026	4.004	4.048	PV	308	3895	0.04%	0.002%
14	4.061	4.048	4.072	VV	109	783	0.01%	0.000%
15	4.090	4.072	4.108	VV	1199	10087	0.09%	0.005%
16	4.124	4.108	4.171	VV	258	4706	0.04%	0.002%
17	4.182	4.171	4.201	VV	76	1018	0.01%	0.000%
18	4.213	4.201	4.244	VV	103	1144	0.01%	0.001%
19	4.284	4.244	4.334	PV	561	9151	0.09%	0.004%
20	4.360	4.334	4.388	VV	166	4000	0.04%	0.002%
21	4.431	4.388	4.468	VV	149	4272	0.04%	0.002%
22	4.519	4.468	4.541	VV	482783	4392120	41.10%	2.155%
23	4.564	4.541	4.607	VV	542639	4754945	44.49%	2.333%
24	4.625	4.607	4.647	VV	4865	46337	0.43%	0.023%
25	4.671	4.647	4.737	VV	8449	80265	0.75%	0.039%
26	4.772	4.737	4.791	VV	268	4444	0.04%	0.002%
27	4.804	4.791	4.840	VV	256	4598	0.04%	0.002%
28	4.853	4.840	4.864	VV	188	1960	0.02%	0.001%
29	4.875	4.864	4.920	VV	169	4097	0.04%	0.002%
30	4.933	4.920	4.961	VV	180	2616	0.02%	0.001%
31	4.999	4.961	5.044	PV	148	4023	0.04%	0.002%
32	5.068	5.044	5.081	VV	116	1337	0.01%	0.001%
33	5.110	5.081	5.133	PV	152	2967	0.03%	0.001%
34	5.157	5.133	5.174	VV	271	2961	0.03%	0.001%
35	5.187	5.174	5.197	VV	127	1078	0.01%	0.001%
36	5.213	5.197	5.253	VV	168	2807	0.03%	0.001%

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37	5.267	5.253	5.304	VV	70	1392	0.01%	0.001%
38	5.315	5.304	5.345	VV	61	657	0.01%	0.000%
39	5.375	5.345	5.399	VV	407	4077	0.04%	0.002%
40	5.446	5.399	5.479	VV	120	2434	0.02%	0.001%
41	5.490	5.479	5.504	VV	73	872	0.01%	0.000%
42	5.557	5.504	5.569	VV	1379	14488	0.14%	0.007%
43	5.582	5.569	5.640	VV	1771	20475	0.19%	0.010%
44	5.649	5.640	5.675	VV	166	2367	0.02%	0.001%
45	5.684	5.675	5.695	VV	108	850	0.01%	0.000%
46	5.721	5.695	5.784	VV	148	3881	0.04%	0.002%
47	5.802	5.784	5.818	VV	92	1161	0.01%	0.001%
48	5.864	5.818	5.878	VV	132	2567	0.02%	0.001%
49	5.906	5.878	5.928	VV	178	2365	0.02%	0.001%
50	5.969	5.928	5.988	VV	123	2045	0.02%	0.001%
51	5.991	5.988	5.998	VV	97	361	0.00%	0.000%
52	6.016	5.998	6.047	PV	91	1623	0.02%	0.001%
53	6.068	6.047	6.080	VV	302	3504	0.03%	0.002%
54	6.114	6.080	6.149	VV	590559	5317705	49.76%	2.609%
55	6.158	6.149	6.180	VV	733	9304	0.09%	0.005%
56	6.194	6.180	6.228	VV	411	7532	0.07%	0.004%
57	6.256	6.228	6.314	VV	344	10451	0.10%	0.005%
58	6.387	6.314	6.474	VV	506	17700	0.17%	0.009%
59	6.542	6.474	6.587	VV	481243	4721413	44.18%	2.317%
60	6.610	6.587	6.669	VV	1013	13969	0.13%	0.007%
61	6.689	6.669	6.761	VV	476	7396	0.07%	0.004%
62	6.830	6.761	6.847	VV	219	5696	0.05%	0.003%
63	6.865	6.847	6.889	VV	129	2353	0.02%	0.001%
64	6.903	6.889	6.918	VV	114	1057	0.01%	0.001%
65	6.936	6.918	6.946	VV	322	3721	0.03%	0.002%
66	6.961	6.946	6.978	VV	404	4580	0.04%	0.002%
67	7.012	6.978	7.050	VV	5801	55110	0.52%	0.027%
68	7.078	7.050	7.127	VV	13580	131478	1.23%	0.065%
69	7.173	7.127	7.251	VV	496881	4990493	46.70%	2.449%
70	7.268	7.251	7.288	VV	257	3952	0.04%	0.002%
71	7.309	7.288	7.340	VV	1599	23200	0.22%	0.011%
72	7.361	7.340	7.377	VV	2635	31374	0.29%	0.015%
73	7.387	7.377	7.409	VV	1323	14154	0.13%	0.007%
74	7.438	7.409	7.450	VV	1134	13803	0.13%	0.007%
75	7.465	7.450	7.488	VV	1360	15463	0.14%	0.008%
76	7.511	7.488	7.522	VV	429	5537	0.05%	0.003%
77	7.531	7.522	7.547	VV	417	4973	0.05%	0.002%
78	7.560	7.547	7.581	VV	392	4418	0.04%	0.002%
79	7.644	7.581	7.667	VV	646	10109	0.09%	0.005%
80	7.685	7.667	7.730	VV	313	6539	0.06%	0.003%
81	7.877	7.850	7.907	VV	548	11241	0.11%	0.006%
82	7.921	7.907	7.982	VV	434	8074	0.08%	0.004%
83	8.033	7.982	8.068	VV	613	10503	0.10%	0.005%
84	8.090	8.068	8.132	VV	458	7663	0.07%	0.004%
85	8.150	8.132	8.164	VV	222	2772	0.03%	0.001%
86	8.251	8.164	8.291	VV	377	20041	0.19%	0.010%
87	8.341	8.291	8.388	VV	478577	4967087	46.48%	2.437%
88	8.397	8.388	8.411	VV	179	1688	0.02%	0.001%
89	8.458	8.411	8.501	VV	574001	5636895	52.75%	2.766%

					rteres			
90	8.508	8.501	8.521	VV	210	2425	0.02%	0.001%
91	8.528	8.521	8.551	VV	213	3342	0.03%	0.002%
92	8.567	8.551	8.615	VV	236	5774	0.05%	0.003%
93	8.756	8.719	8.791	VV	559530	5701517	53.35%	2.797%
94	8.807	8.791	8.856	VV	428	8388	0.08%	0.004%
95	8.874	8.856	8.928	VV	184	3339	0.03%	0.002%
96	8.958	8.928	9.004	VV	235	6375	0.06%	0.003%
97	9.023	9.004	9.038	VV	836	10147	0.09%	0.005%
98	9.055	9.038	9.133	VV	704	14336	0.13%	0.007%
99	9.159	9.133	9.209	VV	647	9881	0.09%	0.005%
100	9.220	9.209	9.271	VV	104	2060	0.02%	0.001%
101	9.345	9.271	9.385	PV	150	4821	0.05%	0.002%
102	9.396	9.385	9.444	VV	229	4447	0.04%	0.002%
103	9.460	9.444	9.476	VV	249	2873	0.03%	0.001%
104	9.540	9.476	9.569	VV	566353	5879684	55.02%	2.885%
105	9.578	9.569	9.600	VV	690	8605	0.08%	0.004%
106	9.612	9.600	9.657	VV	274	6147	0.06%	0.003%
107	9.679	9.657	9.694	VV	493	7489	0.07%	0.004%
108	9.716	9.694	9.731	VV	2274	30128	0.28%	0.015%
109	9.750	9.731	9.788	VV	8879	96618	0.90%	0.047%
110	9.811	9.788	9.860	VV	21332	226114	2.12%	0.111%
111	9.875	9.860	9.904	VV	585	7659	0.07%	0.004%
112	9.943	9.904	9.992	VV	475254	5180441	48.47%	2.542%
113	10.005	9.992	10.013	VV	123	1522	0.01%	0.001%
114	10.032	10.013	10.065	VV	348	5889	0.06%	0.003%
115	10.078	10.065	10.111	PV	141	1528	0.01%	0.001%
116	10.123	10.111	10.138	VV	96	1037	0.01%	0.001%
117	10.141	10.138	10.196	VV	88	2024	0.02%	0.001%
118	10.223	10.196	10.260	VV	207	3336	0.03%	0.002%
119	10.285	10.260	10.309	VV	1356	15252	0.14%	0.007%
120	10.330	10.309	10.342	PV	149	1941	0.02%	0.001%
121	10.380	10.342	10.432	VV	223	6097	0.06%	0.003%
122	10.463	10.432	10.528	VV	240	6559	0.06%	0.003%
123	10.539	10.528	10.562	VV	130	2000	0.02%	0.001%
124	10.585	10.562	10.623	VV	178	5435	0.05%	0.003%
125	10.675	10.623	10.703	VV	939	16170	0.15%	0.008%
126	10.730	10.703	10.858	VV	11789	174778	1.64%	0.086%
127	10.945	10.858	10.981	PV	538936	5853051	54.77%	2.872%
128	11.021	10.981	11.071	VV	540765	5774777	54.04%	2.833%
129	11.093	11.071	11.138	VV	963	16641	0.16%	0.008%
130	11.186	11.138	11.202	VV	1099	16388	0.15%	0.008%
131	11.222	11.202	11.255	VV	3956	43635	0.41%	0.021%
132	11.278	11.255	11.287	VV	140	1887	0.02%	0.001%
133	11.313	11.287	11.338	VV	426	6593	0.06%	0.003%
134	11.386	11.338	11.440	VV	463446	5274814	49.36%	2.588%
135	11.461	11.440	11.514	VV	307	7982	0.07%	0.004%
136	11.545	11.514	11.566	VV	221	3938	0.04%	0.002%
137	11.575	11.566	11.608	VV	165	2433	0.02%	0.001%
138	11.635	11.608	11.655	PV	125	1684	0.02%	0.001%
139	11.709	11.655	11.760	VV	346156	3649547	34.15%	1.791%
140	11.798	11.760	11.821	VV	1089	17474	0.16%	0.009%
141	11.838	11.821	11.854	VV	1058	12980	0.12%	0.006%

					rteres			
142	11.868	11.854	11.905	VV	1097	18749	0.18%	0.009%
143	11.918	11.905	11.950	VV	549	7610	0.07%	0.004%
144	11.987	11.950	12.020	VV	394	7156	0.07%	0.004%
145	12.054	12.020	12.079	VV	305	6297	0.06%	0.003%
146	12.097	12.079	12.119	VV	256	4430	0.04%	0.002%
147	12.144	12.119	12.188	VV	278	4918	0.05%	0.002%
148	12.216	12.188	12.224	VV	142	1914	0.02%	0.001%
149	12.232	12.224	12.241	VV	113	871	0.01%	0.000%
150	12.300	12.241	12.372	VV	28776	368894	3.45%	0.181%
151	12.387	12.372	12.463	VV	1293	47651	0.45%	0.023%
152	12.536	12.463	12.610	VV	2677	77261	0.72%	0.038%
153	12.639	12.610	12.661	VV	591	13144	0.12%	0.006%
154	12.697	12.661	12.729	VV	459992	5461290	51.10%	2.680%
155	12.767	12.729	12.832	VV	503811	5877604	55.00%	2.884%
156	12.893	12.832	12.921	VV	195	7537	0.07%	0.004%
157	12.947	12.921	13.028	VV	6081	77759	0.73%	0.038%
158	13.067	13.028	13.094	VV	479913	5732477	53.64%	2.813%
159	13.141	13.094	13.208	VV	234946	2899610	27.13%	1.423%
160	13.252	13.208	13.270	VV	380	8386	0.08%	0.004%
161	13.309	13.270	13.383	VV	443800	5243612	49.07%	2.573%
162	13.400	13.383	13.462	VV	259	7816	0.07%	0.004%
163	13.504	13.462	13.523	VV	416	11423	0.11%	0.006%
164	13.561	13.523	13.630	VV	926	43862	0.41%	0.022%
165	13.649	13.630	13.664	VV	641	11265	0.11%	0.006%
166	13.684	13.664	13.704	VV	834	14747	0.14%	0.007%
167	13.736	13.704	13.781	VV	1006	24601	0.23%	0.012%
168	13.796	13.781	13.814	VV	378	6061	0.06%	0.003%
169	13.844	13.814	13.857	VV	947	14845	0.14%	0.007%
170	13.896	13.857	13.997	VV	426901	5236263	49.00%	2.569%
171	14.019	13.997	14.050	VV	411	7825	0.07%	0.004%
172	14.070	14.050	14.100	VV	632	9918	0.09%	0.005%
173	14.114	14.100	14.135	VV	203	3499	0.03%	0.002%
174	14.141	14.135	14.194	VV	158	3562	0.03%	0.002%
175	14.200	14.194	14.211	VV	84	807	0.01%	0.000%
176	14.218	14.211	14.240	VV	142	1808	0.02%	0.001%
177	14.283	14.240	14.308	VV	993	16447	0.15%	0.008%
178	14.330	14.308	14.351	VV	764	11149	0.10%	0.005%
179	14.368	14.351	14.415	VV	249	7279	0.07%	0.004%
180	14.420	14.415	14.429	VV	130	1053	0.01%	0.001%
181	14.459	14.429	14.505	VV	470	10741	0.10%	0.005%
182	14.559	14.505	14.606	VV	317	10805	0.10%	0.005%
183	14.626	14.606	14.642	VV	216	2745	0.03%	0.001%
184	14.678	14.642	14.731	VV	414	8325	0.08%	0.004%
185	14.742	14.731	14.764	VV	165	1910	0.02%	0.001%
186	14.770	14.764	14.794	VV	127	1364	0.01%	0.001%
187	14.837	14.794	14.878	VV	438	9678	0.09%	0.005%
188	14.947	14.878	14.966	VV	408260	5625419	52.64%	2.760%
189	14.994	14.966	15.065	VV	783996	10687044	100.00%	5.244%
190	15.077	15.065	15.151	VV	300	9835	0.09%	0.005%
191	15.172	15.151	15.222	VV	1675	24251	0.23%	0.012%
192	15.283	15.222	15.321	VV	170	6168	0.06%	0.003%
193	15.373	15.321	15.488	VV	19709	280795	2.63%	0.138%
194	15.516	15.488	15.555	VV	1468	25893	0.24%	0.013%

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195	15.597	15.555	15.628	VV	1388	22122	0.21%	0.011%
196	15.642	15.628	15.668	VV	210	2795	0.03%	0.001%
197	15.692	15.668	15.708	VV	150	2185	0.02%	0.001%
198	15.722	15.708	15.768	VV	127	4305	0.04%	0.002%
199	15.781	15.768	15.805	VV	231	3023	0.03%	0.001%
200	15.850	15.805	15.872	VV	1074	15710	0.15%	0.008%
201	15.894	15.872	15.954	VV	605	15086	0.14%	0.007%
202	16.023	15.954	16.068	VV	406066	5136023	48.06%	2.520%
203	16.074	16.068	16.128	VV	208	4860	0.05%	0.002%
204	16.158	16.128	16.167	PV	143	2286	0.02%	0.001%
205	16.189	16.167	16.203	VV	455	6433	0.06%	0.003%
206	16.225	16.203	16.274	VV	866	13729	0.13%	0.007%
207	16.326	16.274	16.339	PV	382	7360	0.07%	0.004%
208	16.358	16.339	16.366	VV	718	8354	0.08%	0.004%
209	16.388	16.366	16.428	VV	1855	32928	0.31%	0.016%
210	16.507	16.428	16.522	VV	371317	5760571	53.90%	2.826%
211	16.542	16.522	16.570	VV	457965	5659214	52.95%	2.777%
212	16.582	16.570	16.611	VV	1418	21057	0.20%	0.010%
213	16.629	16.611	16.661	VV	485	9425	0.09%	0.005%
214	16.690	16.661	16.720	VV	219	5402	0.05%	0.003%
215	16.748	16.720	16.784	PV	3231	40987	0.38%	0.020%
216	16.817	16.784	16.836	VV	354	6109	0.06%	0.003%
217	16.889	16.836	16.918	PV	428979	5481035	51.29%	2.689%
218	16.972	16.918	16.991	PBA	361886	4537531	42.46%	2.226%
219	17.019	16.991	17.091	BV	-18208	-721358	-6.75%	-0.354%
220	17.104	17.091	17.151	PV	104	2363	0.02%	0.001%
221	17.254	17.151	17.281	PV	224	11998	0.11%	0.006%
222	17.333	17.281	17.379	VV	1050	24432	0.23%	0.012%
223	17.418	17.379	17.458	VV	2347	38144	0.36%	0.019%
224	17.504	17.458	17.544	VV	214	7055	0.07%	0.003%
225	17.571	17.544	17.621	VV	219	5197	0.05%	0.003%
226	17.645	17.621	17.678	PV	186	3878	0.04%	0.002%
227	17.749	17.678	17.788	PV	4189	68081	0.64%	0.033%
228	17.861	17.788	17.915	VV	377512	5118618	47.90%	2.511%
229	17.948	17.915	17.988	VV	738	11065	0.10%	0.005%
230	18.101	17.988	18.128	PV	287	7028	0.07%	0.003%
231	18.262	18.128	18.280	PV	385614	6236647	58.36%	3.060%
232	18.300	18.280	18.357	VV	387526	5334840	49.92%	2.618%
233	18.377	18.357	18.458	VV	780	31198	0.29%	0.015%
234	18.521	18.458	18.605	VV	376600	5672241	53.08%	2.783%
235	18.693	18.605	18.742	VV	371926	5106464	47.78%	2.505%
236	18.787	18.742	18.828	VV	1062	36450	0.34%	0.018%
237	18.852	18.828	18.884	VV	813	21348	0.20%	0.010%
238	18.972	18.884	18.994	VV	651	34659	0.32%	0.017%
239	19.042	18.994	19.072	VV	6105	130388	1.22%	0.064%
240	19.089	19.072	19.140	VV	3004	76656	0.72%	0.038%
241	19.172	19.140	19.218	VV	1228	45826	0.43%	0.022%
242	19.286	19.218	19.306	VV	1056	48116	0.45%	0.024%
243	19.342	19.306	19.366	VV	1124	35282	0.33%	0.017%
244	19.388	19.366	19.418	VV	1108	31305	0.29%	0.015%
245	19.478	19.418	19.523	VV	347734	5196838	48.63%	2.550%
246	19.580	19.523	19.610	VV	2037	90578	0.85%	0.044%

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247	19.653	19.610	19.691	VV	2099	83302	0.78%	0.041%
248	19.768	19.691	19.788	VV	1921	100785	0.94%	0.049%
249	19.849	19.788	19.921	VV	3805	201581	1.89%	0.099%
250	20.015	19.921	20.040	VV	2875	168557	1.58%	0.083%
251	20.079	20.040	20.095	VV	3617	104562	0.98%	0.051%
252	20.121	20.095	20.154	VV	4506	131171	1.23%	0.064%
253	20.218	20.154	20.271	VV	345223	5210980	48.76%	2.557%
254	20.356	20.271	20.417	VV	6375	364113	3.41%	0.179%
255	20.460	20.417	20.534	VV	3987	260304	2.44%	0.128%
256	20.578	20.534	20.687	VV	4513	342348	3.20%	0.168%
257	20.702	20.687	20.719	VV	3432	64727	0.61%	0.032%
258	20.732	20.719	20.745	VV	3402	52080	0.49%	0.026%
259	20.764	20.745	20.844	VV	3375	189373	1.77%	0.093%
260	20.856	20.844	20.908	VV	3129	114598	1.07%	0.056%
261	20.992	20.908	21.119	VV	271173	5356518	50.12%	2.628%
262	21.160	21.119	21.287	VV	2540	237044	2.22%	0.116%
263	21.305	21.287	21.351	VV	2159	78987	0.74%	0.039%
264	21.375	21.351	21.394	VV	1966	50088	0.47%	0.025%
265	21.441	21.394	21.498	VV	2456	124270	1.16%	0.061%
266	21.539	21.498	21.601	VV	1645	97484	0.91%	0.048%
267	21.656	21.601	21.681	VV	1537	70091	0.66%	0.034%
268	21.696	21.681	21.737	VV	1442	44146	0.41%	0.022%
269	21.776	21.737	21.796	VV	1183	41116	0.38%	0.020%
270	21.813	21.796	21.851	VV	1112	34682	0.32%	0.017%
271	21.867	21.851	21.894	VV	1027	24019	0.22%	0.012%
272	21.969	21.894	22.113	VV	195385	5126598	47.97%	2.515%
273	22.184	22.113	22.388	VV	1172	73564	0.69%	0.036%
					Sum of corrected areas:	203810606		

Aliphatic EPH 050625.M Wed May 14 03:45:20 2025

Report of Analysis

Client:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	GC1MSD	SDG No.:	Q1987
Lab Sample ID:	Q1987-01MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86.6
Sample Wt/Vol:	30.04 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

Prep Date :	Date Analyzed :	Prep Batch ID
05/13/25 09:35	05/13/25 18:19	PB167974

Datafile

CAS Number	Parameter	Conc.	Qualifier	Dilution	MDL	LOQ / CRQL	Units(Dry Weight)	
TARGETS								
Aliphatic C28-C40	Aliphatic C28-C40	46.9	E	1	1.36	2.31	mg/kg	FC068854.D
Aliphatic C9-C28	Aliphatic C9-C28	128	E	1	1.05	4.61	mg/kg	FC068854.D
Total AliphaticEPH	Total AliphaticEPH	175			2.41	6.92	mg/kg	
Total EPH	Total EPH	175			2.41	6.92	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:	G Environmental	Date Collected:	
Project:	Hillside	Date Received:	
Client Sample ID:	GC1MSD	SDG No.:	Q1987
Lab Sample ID:	Q1987-01MSD	Matrix:	Solid
Analytical Method:	NJEPH	% Solid:	86.6
Sample Wt/Vol:	30.04 Units: g	Final Vol:	2000 uL
Soil Aliquot Vol:	uL	Test:	EPH_NF
Prep Method :			

File ID :	Dilution:	Prep Date :	Date Analyzed :	Prep Batch ID
FC068854.D	1	05/13/25	05/13/25	PB167974

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
Aliphatic C9-C28	Aliphatic C9-C28	128	E	1.05	4.61	mg/kg
Aliphatic C28-C40	Aliphatic C28-C40	46.9	E	1.36	2.31	mg/kg
SURROGATES						
3383-33-2	1-chlorooctadecane (SURR)	35.7		40 - 140	71%	SPK: 50
84-15-1	ortho-Terphenyl (SURR)	31.8		40 - 140	64%	SPK: 50

Quantitation Report For Aliphatic EPH Range.

Lab Sample ID:	Q1987-01MSD	Acq On:	13 May 2025 18:19
Client Sample ID:	GC1MSD	Operator:	YP/AJ
Data file:	FC068854.D	Misc:	
Instrument:	FID_C	ALS Vial:	17
Dilution Factor:	1	Sample Multiplier:	1.00

Compound	R.T.		Response	Conc	highest_standard	Units
Aliphatic C9-C12	3.341	6.641	22943915	231.445	300	ug/ml
Aliphatic C12-C16	6.642	10.040	32793055	360.425	200	ug/ml
Aliphatic C16-C21	10.041	13.406	43167344	503.348	300	ug/ml
Aliphatic C21-C28	13.407	17.068	47616029	573.058	400	ug/ml
Aliphatic C28-C40	17.069	22.062	51608688	609.868	600	ug/ml
Aliphatic EPH	3.341	22.062	198129031	2280		ug/ml
ortho-Terphenyl (SURR)	11.709	11.709	3632007	31.82		ug/ml
1-chlorooctadecane (SURR)	13.141	13.141	2861387	35.67		ug/ml
Aliphatic C9-C28	3.341	17.068	146520343	1670	1200	ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068854.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 18:19
 Operator : YP/AJ
 Sample : Q1987-01MSD
 Misc :
 ALS Vial : 17 Sample Multiplier: 1

Instrument :
 FID_C
 ClientSampleId :
 GC1MSD

Integration File: autoint1.e
 Quant Time: May 14 03:13:54 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Quant Title : GC Extractables
 QLast Update : Wed May 07 08:52:03 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S ortho-Terphenyl (SURR)	11.709	3632007	31.821 ug/ml
Spiked Amount 50.000		Recovery =	63.64%
12) S 1-chlorooctadecane (S...	13.141	2861387	35.667 ug/ml
Spiked Amount 50.000		Recovery =	71.33%
Target Compounds			
1) T n-Nonane (C9)	3.444	3741865	37.203 ug/ml
2) T n-Decane (C10)	4.519	4298454	43.139 ug/ml
3) T A~Naphthalene (C11.7)	6.114	5216720	47.312 ug/ml
4) T n-Dodecane (C12)	6.542	4633975	47.686 ug/ml
5) T A~2-methylnaphthalene...	7.172	4901961	45.671 ug/ml
6) T n-Tetradecane (C14)	8.341	4894000	52.951 ug/ml
7) T n-Hexadecane (C16)	9.942	5121649	57.197 ug/ml
8) T n-Octadecane (C18)	11.386	5204275	59.330 ug/ml
10) T n-Eicosane (C20)	12.697	5347901	62.755 ug/ml
11) T n-Heneicosane (C21)	13.309	5124888	60.761 ug/ml
13) T n-Docosane (C22)	13.896	5102090	60.987 ug/ml
14) T n-Tetracosane (C24)	14.995	10452446	125.620 ug/ml
15) T n-Hexacosane (C26)	16.023	5019131	60.578 ug/ml
16) T n-Octacosane (C28)	16.971	5038012	60.959 ug/ml
17) T n-Tricontane (C30)	17.863	5003852	59.138 ug/ml
18) T n-Dotriacontane (C32)	18.693	4972422	57.728 ug/ml
19) T n-Tetratriacontane (C34)	19.478	5034952	59.096 ug/ml
20) T n-Hexatriacontane (C36)	20.218	4901919	57.033 ug/ml
21) T n-Octatriacontane (C38)	20.991	4916134	58.607 ug/ml
22) T n-Tetracontane (C40)	21.968	4965121	60.583 ug/ml

(f)=RT Delta > 1/2 Window

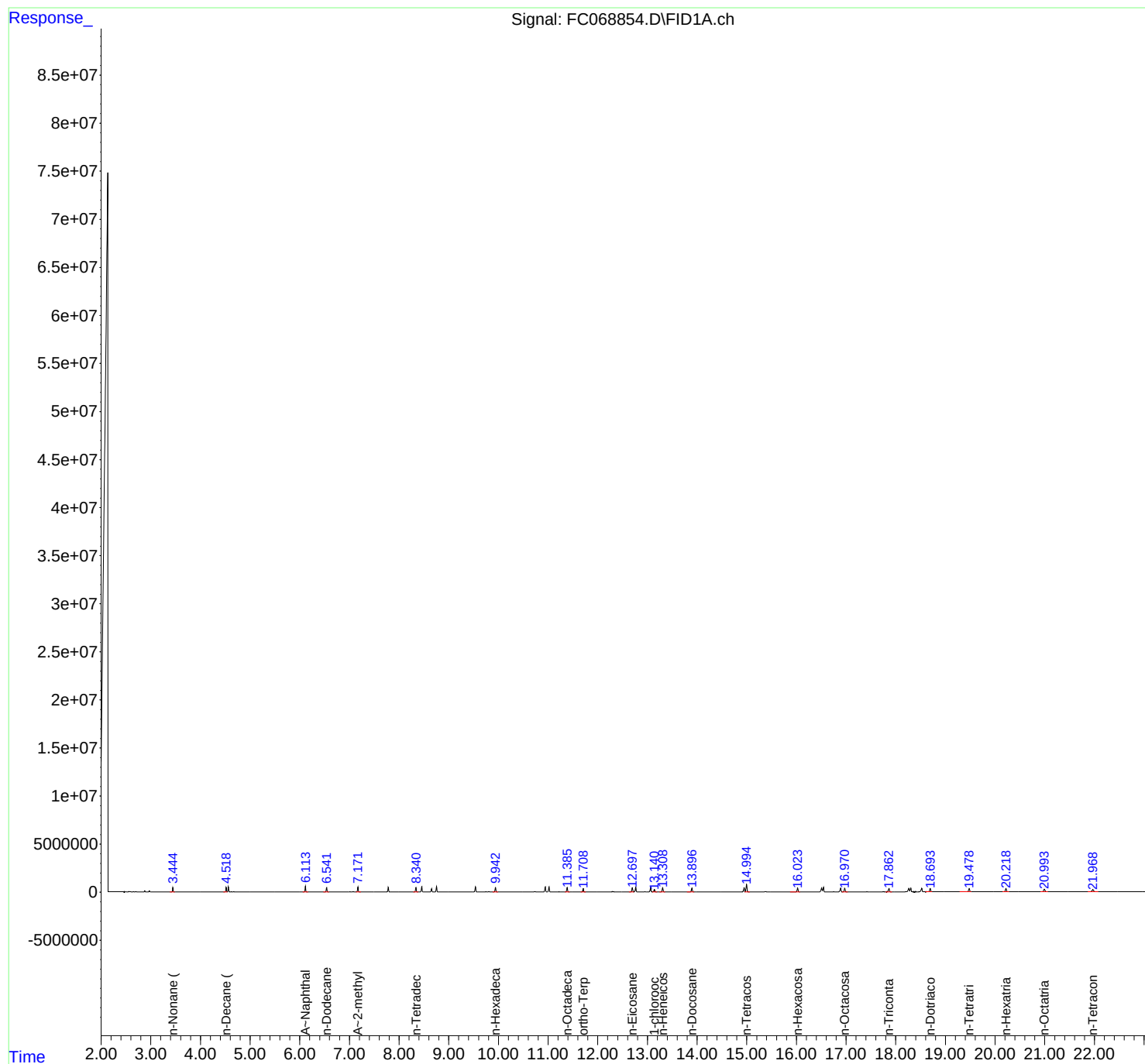
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
Data File : FC068854.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 18:19
Operator : YP/AJ
Sample : Q1987-01MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

Instrument :
FID_C
ClientSampleId :
GC1MSD

Integration File: autoint1.e
Quant Time: May 14 03:13:54 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
Quant Title : GC Extractables
QLast Update : Wed May 07 08:52:03 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC051325AL\
 Data File : FC068854.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 18:19
 Sample : Q1987-01MSD
 Misc :
 ALS Vial : 17 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 050625.M
 Title : GC Extractables

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	3.269	3.242	3.303	PV	227	4374	0.04%	0.002%
2	3.340	3.303	3.379	PV	324	6936	0.07%	0.003%
3	3.387	3.379	3.396	PV	97	690	0.01%	0.000%
4	3.444	3.396	3.542	VV	451805	3747521	35.80%	1.864%
5	3.572	3.542	3.612	PV	279	4942	0.05%	0.002%
6	3.625	3.612	3.633	VV	204	1872	0.02%	0.001%
7	3.647	3.633	3.671	VV	245	3123	0.03%	0.002%
8	3.691	3.671	3.705	VV	260	2841	0.03%	0.001%
9	3.738	3.705	3.795	VV	1202	20177	0.19%	0.010%
10	3.802	3.795	3.812	VV	146	1347	0.01%	0.001%
11	3.829	3.812	3.850	VV	489	5061	0.05%	0.003%
12	3.860	3.850	3.871	VV	86	1173	0.01%	0.001%
13	3.875	3.871	3.904	VV	162	1366	0.01%	0.001%
14	3.942	3.904	3.982	PV	443	9099	0.09%	0.005%
15	3.991	3.982	4.000	VV	47	337	0.00%	0.000%
16	4.027	4.000	4.075	VV	307	4450	0.04%	0.002%
17	4.090	4.075	4.115	VV	1205	10290	0.10%	0.005%
18	4.123	4.115	4.195	VV	237	4301	0.04%	0.002%
19	4.211	4.195	4.241	VV	153	2043	0.02%	0.001%
20	4.248	4.241	4.261	PV	82	708	0.01%	0.000%
21	4.283	4.261	4.306	VV	611	6460	0.06%	0.003%
22	4.343	4.306	4.358	VV	189	3948	0.04%	0.002%
23	4.367	4.358	4.418	VV	199	4130	0.04%	0.002%
24	4.429	4.418	4.458	VV	140	2496	0.02%	0.001%
25	4.467	4.458	4.476	VV	123	1056	0.01%	0.001%
26	4.518	4.476	4.540	VV	488030	4301109	41.09%	2.139%
27	4.563	4.540	4.606	VV	529889	4656715	44.49%	2.316%
28	4.624	4.606	4.646	VV	4843	44025	0.42%	0.022%
29	4.671	4.646	4.751	VV	8243	76852	0.73%	0.038%
30	4.774	4.751	4.787	VV	217	2314	0.02%	0.001%
31	4.804	4.787	4.838	VV	206	2732	0.03%	0.001%
32	4.851	4.838	4.862	VV	212	1820	0.02%	0.001%
33	4.869	4.862	4.890	VV	123	1614	0.02%	0.001%
34	4.899	4.890	4.915	VV	127	1234	0.01%	0.001%
35	4.936	4.927	4.961	VV	141	1338	0.01%	0.001%
36	4.972	4.961	4.982	VV	127	993	0.01%	0.000%

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37	4.996	4.982	5.037	VV	127	2212	0.02%	0.001%
38	5.106	5.037	5.134	VV	137	3483	0.03%	0.002%
39	5.154	5.134	5.185	PV	161	2563	0.02%	0.001%
40	5.212	5.185	5.231	PV	177	2289	0.02%	0.001%
41	5.237	5.231	5.335	VV	122	3428	0.03%	0.002%
42	5.375	5.335	5.419	VV	430	6826	0.07%	0.003%
43	5.447	5.419	5.484	VV	122	3215	0.03%	0.002%
44	5.494	5.484	5.536	VV	96	2324	0.02%	0.001%
45	5.556	5.536	5.569	VV	1391	13347	0.13%	0.007%
46	5.582	5.569	5.641	VV	1705	20659	0.20%	0.010%
47	5.657	5.641	5.678	VV	214	2618	0.03%	0.001%
48	5.723	5.678	5.748	PV	171	3822	0.04%	0.002%
49	5.754	5.748	5.801	VV	140	2930	0.03%	0.001%
50	5.807	5.801	5.820	VV	71	697	0.01%	0.000%
51	5.903	5.820	5.929	VV	210	7396	0.07%	0.004%
52	5.941	5.929	5.984	VV	154	2512	0.02%	0.001%
53	6.011	5.984	6.023	VV	126	1694	0.02%	0.001%
54	6.071	6.023	6.081	VV	324	5170	0.05%	0.003%
55	6.114	6.081	6.148	VV	576530	5220558	49.87%	2.596%
56	6.157	6.148	6.174	VV	664	7777	0.07%	0.004%
57	6.198	6.174	6.231	VV	391	8836	0.08%	0.004%
58	6.258	6.231	6.297	VV	383	8575	0.08%	0.004%
59	6.308	6.297	6.318	VV	171	1844	0.02%	0.001%
60	6.353	6.318	6.365	VV	215	4725	0.05%	0.002%
61	6.385	6.365	6.415	VV	555	8819	0.08%	0.004%
62	6.439	6.415	6.457	VV	248	5416	0.05%	0.003%
63	6.478	6.457	6.498	VV	207	4132	0.04%	0.002%
64	6.542	6.498	6.587	VV	466132	4640850	44.33%	2.308%
65	6.609	6.587	6.657	VV	1077	15021	0.14%	0.007%
66	6.690	6.657	6.736	VV	490	9837	0.09%	0.005%
67	6.746	6.736	6.764	VV	160	2001	0.02%	0.001%
68	6.775	6.764	6.805	VV	167	2590	0.02%	0.001%
69	6.830	6.805	6.851	VV	216	4144	0.04%	0.002%
70	6.862	6.851	6.878	VV	178	2127	0.02%	0.001%
71	6.935	6.878	6.944	VV	282	4734	0.05%	0.002%
72	6.961	6.944	6.980	VV	382	5076	0.05%	0.003%
73	7.011	6.980	7.041	VV	5554	52997	0.51%	0.026%
74	7.077	7.041	7.127	VV	13362	130114	1.24%	0.065%
75	7.172	7.127	7.255	VV	505371	4911169	46.92%	2.442%
76	7.269	7.255	7.284	VV	203	2615	0.02%	0.001%
77	7.309	7.284	7.341	VV	1636	23613	0.23%	0.012%
78	7.361	7.341	7.411	VV	2636	45747	0.44%	0.023%
79	7.437	7.411	7.449	VV	1135	13858	0.13%	0.007%
80	7.464	7.449	7.487	VV	1346	15744	0.15%	0.008%
81	7.512	7.487	7.525	VV	413	6477	0.06%	0.003%
82	7.531	7.525	7.551	VV	380	5145	0.05%	0.003%
83	7.561	7.551	7.605	VV	423	6051	0.06%	0.003%
84	7.644	7.605	7.668	VV	700	9982	0.10%	0.005%
85	7.686	7.668	7.718	VV	388	5968	0.06%	0.003%
86	7.876	7.847	7.910	VV	521	12689	0.12%	0.006%
87	7.921	7.910	7.939	VV	370	3886	0.04%	0.002%
88	7.948	7.939	7.968	VV	174	2465	0.02%	0.001%
89	7.982	7.968	8.012	VV	165	3343	0.03%	0.002%

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90	8.033	8.012	8.067	VV	583	8368	0.08%	0.004%
91	8.089	8.067	8.185	VV	370	9558	0.09%	0.005%
92	8.246	8.185	8.304	VV	349	17097	0.16%	0.009%
93	8.341	8.304	8.386	VV	464310	4899188	46.80%	2.436%
94	8.399	8.386	8.418	VV	139	1865	0.02%	0.001%
95	8.457	8.418	8.515	VV	554651	5557909	53.10%	2.764%
96	8.523	8.515	8.545	VV	177	2314	0.02%	0.001%
97	8.565	8.545	8.604	VV	288	4828	0.05%	0.002%
98	8.756	8.718	8.789	VV	555319	5625623	53.74%	2.798%
99	8.807	8.789	8.855	VV	445	8536	0.08%	0.004%
100	8.870	8.855	8.911	VV	222	3386	0.03%	0.002%
101	8.961	8.911	8.980	PV	211	5198	0.05%	0.003%
102	9.023	8.980	9.039	VV	876	11429	0.11%	0.006%
103	9.057	9.039	9.135	VV	712	13295	0.13%	0.007%
104	9.161	9.135	9.228	VV	626	9783	0.09%	0.005%
105	9.236	9.228	9.275	VV	119	1741	0.02%	0.001%
106	9.284	9.275	9.320	VV	59	866	0.01%	0.000%
107	9.351	9.320	9.380	VV	111	2685	0.03%	0.001%
108	9.417	9.380	9.435	VV	255	3833	0.04%	0.002%
109	9.459	9.435	9.475	VV	235	2662	0.03%	0.001%
110	9.540	9.475	9.568	VV	553748	5807140	55.48%	2.888%
111	9.578	9.568	9.650	VV	719	12837	0.12%	0.006%
112	9.680	9.650	9.693	VV	524	7519	0.07%	0.004%
113	9.717	9.693	9.731	VV	2268	29565	0.28%	0.015%
114	9.750	9.731	9.785	VV	8692	94524	0.90%	0.047%
115	9.810	9.785	9.858	VV	21342	223248	2.13%	0.111%
116	9.874	9.858	9.905	VV	494	7265	0.07%	0.004%
117	9.942	9.905	10.011	PV	465806	5131343	49.02%	2.552%
118	10.031	10.011	10.098	VV	387	7078	0.07%	0.004%
119	10.129	10.098	10.155	VV	110	2121	0.02%	0.001%
120	10.162	10.155	10.199	VV	143	2075	0.02%	0.001%
121	10.221	10.199	10.257	VV	187	3487	0.03%	0.002%
122	10.285	10.257	10.311	VV	1313	15106	0.14%	0.008%
123	10.334	10.311	10.347	VV	182	2422	0.02%	0.001%
124	10.361	10.347	10.367	VV	131	1519	0.01%	0.001%
125	10.381	10.367	10.439	VV	244	5365	0.05%	0.003%
126	10.460	10.439	10.501	VV	264	5352	0.05%	0.003%
127	10.511	10.501	10.545	VV	124	2323	0.02%	0.001%
128	10.583	10.545	10.622	VV	233	8231	0.08%	0.004%
129	10.675	10.622	10.701	VV	932	16260	0.16%	0.008%
130	10.732	10.701	10.771	PV	11715	164239	1.57%	0.082%
131	10.779	10.771	10.831	VV	332	5998	0.06%	0.003%
132	10.944	10.831	10.980	VV	535139	5769395	55.12%	2.869%
133	11.021	10.980	11.074	VV	528901	5695258	54.41%	2.832%
134	11.093	11.074	11.122	VV	1019	14932	0.14%	0.007%
135	11.130	11.122	11.171	VV	213	5220	0.05%	0.003%
136	11.187	11.171	11.203	VV	1126	12514	0.12%	0.006%
137	11.222	11.203	11.267	VV	4020	44490	0.43%	0.022%
138	11.277	11.267	11.290	VV	192	1780	0.02%	0.001%
139	11.314	11.290	11.336	VV	352	6137	0.06%	0.003%
140	11.386	11.336	11.428	VV	466256	5207240	49.75%	2.589%
141	11.459	11.428	11.495	VV	311	6988	0.07%	0.003%

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142	11.515	11.495	11.528	VV	115	1369	0.01%	0.001%
143	11.544	11.528	11.631	VV	202	5556	0.05%	0.003%
144	11.642	11.631	11.665	PV	100	1138	0.01%	0.001%
145	11.708	11.665	11.756	VV	339082	3635493	34.73%	1.808%
146	11.800	11.756	11.820	VV	1034	16619	0.16%	0.008%
147	11.838	11.820	11.853	VV	1010	11656	0.11%	0.006%
148	11.868	11.853	11.905	VV	973	17555	0.17%	0.009%
149	11.919	11.905	11.949	VV	533	7080	0.07%	0.004%
150	11.986	11.949	12.015	VV	435	7024	0.07%	0.003%
151	12.055	12.015	12.079	VV	264	6021	0.06%	0.003%
152	12.103	12.079	12.127	VV	302	4337	0.04%	0.002%
153	12.142	12.127	12.175	VV	221	2910	0.03%	0.001%
154	12.227	12.175	12.251	PV	99	2152	0.02%	0.001%
155	12.299	12.251	12.374	VV	29567	364136	3.48%	0.181%
156	12.388	12.374	12.408	VV	1274	21898	0.21%	0.011%
157	12.417	12.408	12.472	VV	878	25449	0.24%	0.013%
158	12.486	12.472	12.494	VV	635	7640	0.07%	0.004%
159	12.535	12.494	12.574	VV	2702	55898	0.53%	0.028%
160	12.595	12.574	12.611	VV	303	5656	0.05%	0.003%
161	12.640	12.611	12.657	VV	550	10329	0.10%	0.005%
162	12.697	12.657	12.728	VV	441612	5361875	51.22%	2.666%
163	12.767	12.728	12.833	VV	500053	5758043	55.01%	2.863%
164	12.862	12.833	12.884	VV	173	3992	0.04%	0.002%
165	12.897	12.884	12.925	VV	181	3307	0.03%	0.002%
166	12.947	12.925	13.017	VV	6169	74259	0.71%	0.037%
167	13.068	13.017	13.095	VV	481389	5614965	53.64%	2.792%
168	13.141	13.095	13.225	VV	239940	2871776	27.43%	1.428%
169	13.254	13.225	13.271	VV	325	6469	0.06%	0.003%
170	13.309	13.271	13.384	VV	411467	5133461	49.04%	2.553%
171	13.403	13.384	13.418	VV	204	2605	0.02%	0.001%
172	13.426	13.418	13.439	VV	185	1597	0.02%	0.001%
173	13.561	13.439	13.633	VV	951	55624	0.53%	0.028%
174	13.648	13.633	13.665	VV	650	10566	0.10%	0.005%
175	13.684	13.665	13.706	VV	805	14561	0.14%	0.007%
176	13.735	13.706	13.775	VV	981	22347	0.21%	0.011%
177	13.794	13.775	13.815	VV	332	6464	0.06%	0.003%
178	13.843	13.815	13.857	VV	910	14033	0.13%	0.007%
179	13.896	13.857	13.998	VV	415676	5116658	48.88%	2.544%
180	14.021	13.998	14.050	VV	389	6780	0.06%	0.003%
181	14.069	14.050	14.094	VV	658	8725	0.08%	0.004%
182	14.122	14.094	14.161	VV	215	5552	0.05%	0.003%
183	14.172	14.161	14.217	VV	120	3296	0.03%	0.002%
184	14.282	14.217	14.311	VV	955	18750	0.18%	0.009%
185	14.330	14.311	14.364	VV	706	11998	0.11%	0.006%
186	14.381	14.364	14.430	VV	257	5539	0.05%	0.003%
187	14.461	14.430	14.515	VV	385	10478	0.10%	0.005%
188	14.528	14.515	14.539	VV	242	2869	0.03%	0.001%
189	14.563	14.539	14.608	VV	321	7599	0.07%	0.004%
190	14.625	14.608	14.655	VV	224	3503	0.03%	0.002%
191	14.676	14.655	14.715	VV	441	6892	0.07%	0.003%
192	14.732	14.715	14.765	VV	168	3612	0.03%	0.002%
193	14.839	14.765	14.890	VV	521	15193	0.15%	0.008%
194	14.947	14.890	14.966	VV	435108	5532034	52.85%	2.751%

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195	14.995	14.966	15.075	VV	784861	10467733	100.00%	5.205%
196	15.102	15.075	15.143	VV	316	9351	0.09%	0.005%
197	15.172	15.143	15.220	VV	1667	27083	0.26%	0.013%
198	15.240	15.220	15.271	VV	221	5052	0.05%	0.003%
199	15.285	15.271	15.314	VV	206	3712	0.04%	0.002%
200	15.373	15.314	15.452	VV	19820	275700	2.63%	0.137%
201	15.465	15.452	15.489	VV	264	4732	0.05%	0.002%
202	15.517	15.489	15.558	VV	1453	26564	0.25%	0.013%
203	15.597	15.558	15.628	VV	1232	19879	0.19%	0.010%
204	15.646	15.628	15.671	VV	186	3430	0.03%	0.002%
205	15.704	15.671	15.716	VV	155	3163	0.03%	0.002%
206	15.758	15.716	15.772	VV	262	5400	0.05%	0.003%
207	15.785	15.772	15.815	VV	216	2876	0.03%	0.001%
208	15.851	15.815	15.875	PV	1118	15777	0.15%	0.008%
209	15.893	15.875	15.931	VV	608	10608	0.10%	0.005%
210	15.940	15.931	15.949	VV	200	1738	0.02%	0.001%
211	15.958	15.949	15.964	VV	178	1316	0.01%	0.001%
212	16.023	15.964	16.071	VV	389717	5010486	47.87%	2.492%
213	16.081	16.071	16.101	VV	122	1072	0.01%	0.001%
214	16.119	16.101	16.134	PV	97	1196	0.01%	0.001%
215	16.156	16.134	16.175	VV	103	1623	0.02%	0.001%
216	16.190	16.175	16.201	VV	458	4058	0.04%	0.002%
217	16.225	16.201	16.285	VV	894	12505	0.12%	0.006%
218	16.325	16.285	16.339	PV	215	5385	0.05%	0.003%
219	16.388	16.339	16.443	VV	1916	40488	0.39%	0.020%
220	16.506	16.443	16.522	VV	368866	5675413	54.22%	2.822%
221	16.543	16.522	16.615	VV	463859	5587103	53.37%	2.778%
222	16.632	16.615	16.651	VV	582	9045	0.09%	0.004%
223	16.665	16.651	16.721	VV	273	7252	0.07%	0.004%
224	16.749	16.721	16.795	PV	3097	40368	0.39%	0.020%
225	16.817	16.795	16.838	VV	348	3415	0.03%	0.002%
226	16.890	16.838	16.921	PV	412533	5400466	51.59%	2.686%
227	16.971	16.921	16.991	PBA	364420	4540368	43.37%	2.258%
228	17.019	16.991	17.075	BV	-14065	-492998	-4.71%	-0.245%
229	17.092	17.075	17.111	PV	60	1339	0.01%	0.001%
230	17.128	17.111	17.145	VV	116	1317	0.01%	0.001%
231	17.239	17.145	17.258	PV	203	9296	0.09%	0.005%
232	17.333	17.258	17.385	VV	913	25359	0.24%	0.013%
233	17.418	17.385	17.475	VV	2226	35319	0.34%	0.018%
234	17.504	17.475	17.547	PV	334	6336	0.06%	0.003%
235	17.575	17.547	17.614	VV	195	4664	0.04%	0.002%
236	17.651	17.614	17.681	VV	219	4199	0.04%	0.002%
237	17.750	17.681	17.782	PV	4092	64049	0.61%	0.032%
238	17.862	17.782	17.916	VV	344384	5019577	47.95%	2.496%
239	17.948	17.916	17.978	VV	770	11790	0.11%	0.006%
240	18.048	17.978	18.075	PV	178	6860	0.07%	0.003%
241	18.101	18.075	18.151	VV	273	5526	0.05%	0.003%
242	18.261	18.151	18.280	VV	379605	6140997	58.67%	3.054%
243	18.301	18.280	18.358	VV	406728	5296683	50.60%	2.634%
244	18.375	18.358	18.435	VV	861	25531	0.24%	0.013%
245	18.521	18.435	18.607	VV	357291	5590114	53.40%	2.780%
246	18.692	18.607	18.745	VV	354828	5005495	47.82%	2.489%

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247	18.787	18.745	18.828	VV	1055	35058	0.33%	0.017%
248	18.854	18.828	18.891	VV	869	22502	0.21%	0.011%
249	18.974	18.891	18.994	VV	706	29702	0.28%	0.015%
250	19.042	18.994	19.073	VV	6137	128516	1.23%	0.064%
251	19.090	19.073	19.145	VV	2807	73096	0.70%	0.036%
252	19.173	19.145	19.215	VV	1292	42374	0.40%	0.021%
253	19.286	19.215	19.308	VV	957	47188	0.45%	0.023%
254	19.340	19.308	19.368	VV	1250	36982	0.35%	0.018%
255	19.387	19.368	19.409	VV	1202	26734	0.26%	0.013%
256	19.478	19.409	19.522	VV	353928	5115215	48.87%	2.544%
257	19.580	19.522	19.611	VV	2159	96644	0.92%	0.048%
258	19.652	19.611	19.691	VV	2139	86176	0.82%	0.043%
259	19.766	19.691	19.791	VV	1878	103273	0.99%	0.051%
260	19.848	19.791	19.917	VV	3553	186847	1.78%	0.093%
261	20.017	19.917	20.041	VV	2833	176811	1.69%	0.088%
262	20.076	20.041	20.093	VV	3672	99725	0.95%	0.050%
263	20.120	20.093	20.158	VV	4470	141831	1.35%	0.071%
264	20.218	20.158	20.272	VV	343060	5127124	48.98%	2.550%
265	20.355	20.272	20.415	VV	6349	361810	3.46%	0.180%
266	20.538	20.415	20.751	VV	8318	965261	9.22%	0.480%
267	20.774	20.751	20.873	VV	3225	225320	2.15%	0.112%
268	20.894	20.873	20.926	VV	3028	92259	0.88%	0.046%
269	20.991	20.926	21.068	VV	266074	5148994	49.19%	2.561%
270	21.144	21.068	21.203	VV	2594	204576	1.95%	0.102%
271	21.218	21.203	21.281	VV	2427	107730	1.03%	0.054%
272	21.298	21.281	21.365	VV	2238	105491	1.01%	0.052%
273	21.443	21.365	21.511	VV	2566	183702	1.75%	0.091%
274	21.526	21.511	21.565	VV	1797	55188	0.53%	0.027%
275	21.579	21.565	21.608	VV	1652	42172	0.40%	0.021%
276	21.661	21.608	21.741	VV	1560	117275	1.12%	0.058%
277	21.770	21.741	21.792	VV	1432	39499	0.38%	0.020%
278	21.807	21.792	21.869	VV	1286	51515	0.49%	0.026%
279	21.968	21.869	22.108	VV	199725	5077647	48.51%	2.525%
280	22.184	22.108	22.401	VBA	1267	80941	0.77%	0.040%

Sum of corrected areas: 201093058

Aliphatic EPH 050625.M Wed May 14 03:46:02 2025



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

Manual Integration Report

Sequence:

FC050625AL

Instrument

FID_c

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason



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

Manual Integration Report

Sequence:

FC051325AL

Instrument

FID_c

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
20 PPM ALIPHATIC HC	FC068847.D	n-Dotriacontane (C32)	yogesh	5/14/2025 7:38:27 AM	mohammad	5/15/2025 3:42:27	Peak Integrated by Software

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC050625AL

Review By	yogesh	Review On	5/6/2025 2:50:27 PM
Supervise By	mohammad	Supervise On	5/8/2025 2:15:32 AM
SubDirectory	FC050625AL	HP Acquire Method	HP Processing Method FC050625AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM	PP24176		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC068779.D	06 May 2025 14:18	YP/AJ	Ok
2	I.BLK	FC068780.D	06 May 2025 14:55	YP/AJ	Ok
3	100 PPM ALIPHATIC HC STD1	FC068781.D	06 May 2025 15:33	YP/AJ	Ok
4	50 PPM ALIPHATIC HC STD2	FC068782.D	06 May 2025 16:11	YP/AJ	Ok
5	20 PPM ALIPHATIC HC STD3	FC068783.D	06 May 2025 16:48	YP/AJ	Ok
6	10 PPM ALIPHATIC HC STD4	FC068784.D	06 May 2025 17:26	YP/AJ	Ok
7	5 PPM ALIPHATIC HC STD5	FC068785.D	06 May 2025 18:03	YP/AJ	Ok
8	20 PPM ALIPHATIC HC STD ICV	FC068786.D	06 May 2025 18:40	YP/AJ	Ok
9	I.BLK	FC068787.D	06 May 2025 19:55	YP/AJ	Ok
10	20 PPM ALIPHATIC HC STD	FC068788.D	06 May 2025 20:33	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC051325AL

Review By	yogesh	Review On	5/13/2025 10:53:21 AM
Supervise By	mohammad	Supervise On	5/15/2025 3:42:27 AM
SubDirectory	FC051325AL	HP Acquire Method	HP Processing Method FC050625AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24176 PP24174,PP24179		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FC068841.D	13 May 2025 09:01	YP/AJ	Ok
2	I.BLK	FC068842.D	13 May 2025 09:38	YP/AJ	Ok
3	20 PPM ALIPHATIC HC STD	FC068843.D	13 May 2025 10:16	YP/AJ	Ok
4	Q2002-02DL	FC068844.D	13 May 2025 10:53	YP/AJ	Ok
5	Q2004-03	FC068845.D	13 May 2025 11:31	YP/AJ	Ok
6	I.BLK	FC068846.D	13 May 2025 12:47	YP/AJ	Ok
7	20 PPM ALIPHATIC HC STD	FC068847.D	13 May 2025 13:26	YP/AJ	Ok,M
8	PB167974BL	FC068848.D	13 May 2025 14:31	YP/AJ	Ok
9	PB167974BS	FC068849.D	13 May 2025 15:08	YP/AJ	Ok
10	PB167974BSD	FC068850.D	13 May 2025 15:46	YP/AJ	Ok
11	Q1987-01	FC068851.D	13 May 2025 16:24	YP/AJ	Ok
12	Q1987-01D	FC068852.D	13 May 2025 17:02	YP/AJ	Ok
13	Q1987-01MS	FC068853.D	13 May 2025 17:41	YP/AJ	Ok
14	Q1987-01MSD	FC068854.D	13 May 2025 18:19	YP/AJ	Ok
15	Q2007-03	FC068855.D	13 May 2025 18:57	YP/AJ	Ok
16	Q2007-04	FC068856.D	13 May 2025 19:35	YP/AJ	Ok
17	Q2007-05	FC068857.D	13 May 2025 20:12	YP/AJ	Ok
18	I.BLK	FC068858.D	13 May 2025 21:28	YP/AJ	Ok
19	20 PPM ALIPHATIC HC STD	FC068859.D	13 May 2025 22:06	YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC050625AL

Review By	yogesh	Review On	5/6/2025 2:50:27 PM
Supervise By	mohammad	Supervise On	5/8/2025 2:15:32 AM
SubDirectory	FC050625AL	HP Acquire Method	HP Processing Method FC050625AL

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

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC068779.D	06 May 2025 14:18		YP/AJ	Ok
2	I.BLK	I.BLK	FC068780.D	06 May 2025 14:55		YP/AJ	Ok
3	100 PPM ALIPHATIC HC	100 PPM ALIPHATIC HC	FC068781.D	06 May 2025 15:33		YP/AJ	Ok
4	50 PPM ALIPHATIC HC	50 PPM ALIPHATIC HC	FC068782.D	06 May 2025 16:11		YP/AJ	Ok
5	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068783.D	06 May 2025 16:48		YP/AJ	Ok
6	10 PPM ALIPHATIC HC	10 PPM ALIPHATIC HC	FC068784.D	06 May 2025 17:26		YP/AJ	Ok
7	5 PPM ALIPHATIC HC	5 PPM ALIPHATIC HC	FC068785.D	06 May 2025 18:03		YP/AJ	Ok
8	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068786.D	06 May 2025 18:40		YP/AJ	Ok
9	I.BLK	I.BLK	FC068787.D	06 May 2025 19:55		YP/AJ	Ok
10	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068788.D	06 May 2025 20:33		YP/AJ	Ok

M : Manual Integration

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC051325AL

Review By	yogesh	Review On	5/13/2025 10:53:21 AM
Supervise By	mohammad	Supervise On	5/15/2025 3:42:27 AM
SubDirectory	FC051325AL	HP Acquire Method	HP Processing Method FC050625AL
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24170,PP24175,PP24176,PP24177,PP24178		
CCC	PP24176		
Internal Standard/PEM	PP24174,PP24179		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2	MECL2	FC068841.D	13 May 2025 09:01		YP/AJ	Ok
2	I.BLK	I.BLK	FC068842.D	13 May 2025 09:38		YP/AJ	Ok
3	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068843.D	13 May 2025 10:16		YP/AJ	Ok
4	Q2002-02DL	EO-02-05092025-E2DL	FC068844.D	13 May 2025 10:53		YP/AJ	Ok
5	Q2004-03	2811	FC068845.D	13 May 2025 11:31		YP/AJ	Ok
6	I.BLK	I.BLK	FC068846.D	13 May 2025 12:47		YP/AJ	Ok
7	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068847.D	13 May 2025 13:26		YP/AJ	Ok,M
8	PB167974BL	PB167974BL	FC068848.D	13 May 2025 14:31		YP/AJ	Ok
9	PB167974BS	PB167974BS	FC068849.D	13 May 2025 15:08		YP/AJ	Ok
10	PB167974BSD	PB167974BSD	FC068850.D	13 May 2025 15:46		YP/AJ	Ok
11	Q1987-01	GC1	FC068851.D	13 May 2025 16:24		YP/AJ	Ok
12	Q1987-01D	Q1987-01D	FC068852.D	13 May 2025 17:02		YP/AJ	Ok
13	Q1987-01MS	GC1MS	FC068853.D	13 May 2025 17:41	FC068851.D	YP/AJ	Ok
14	Q1987-01MSD	GC1MSD	FC068854.D	13 May 2025 18:19	FC068851.D!FC068853.D	YP/AJ	Ok
15	Q2007-03	OR-636-28	FC068855.D	13 May 2025 18:57		YP/AJ	Ok
16	Q2007-04	OR-636-29	FC068856.D	13 May 2025 19:35		YP/AJ	Ok
17	Q2007-05	OR-636-30	FC068857.D	13 May 2025 20:12		YP/AJ	Ok
18	I.BLK	I.BLK	FC068858.D	13 May 2025 21:28		YP/AJ	Ok

Instrument ID: FID_C

Daily Analysis Runlog For Sequence/QC Batch ID # FC051325AL

Review By	yogesh	Review On	5/13/2025 10:53:21 AM
Supervise By	mohammad	Supervise On	5/15/2025 3:42:27 AM
SubDirectory	FC051325AL	HP Acquire Method	HP Processing Method FC050625AL

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

19	20 PPM ALIPHATIC HC	20 PPM ALIPHATIC HC	FC068859.D	13 May 2025 22:06		YP/AJ	Ok
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M : Manual Integration

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:20
In Date: 05/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1929-14	WC-A4-02-C	1	1.15	10.65	11.8	10.38	86.7	
Q1929-15	WC-A1-03-C	2	1.18	10.06	11.24	9.00	77.7	
Q1929-16	WC-A1-04-C	3	1.17	10.24	11.41	9.52	81.5	
Q1982-01	TP-1	4	1.15	10.33	11.48	9.51	80.9	
Q1982-02	TP-2B	5	1.18	10.20	11.38	9.85	85.0	
Q1982-03	TP-3	6	1.18	10.54	11.72	10.74	90.7	
Q1982-04	TP-4	7	1.19	10.07	11.26	9.99	87.4	
Q1982-05	TP-5	8	1.18	10.08	11.26	10.24	89.9	
Q1982-06	TP-6	9	1.16	10.74	11.9	10.42	86.2	
Q1982-07	TP-7	10	1.19	10.23	11.42	9.75	83.7	
Q1982-08	TP-8	11	1.16	10.42	11.58	9.63	81.3	
Q1983-01	OR-636-COMP-01	12	1.16	10.07	11.23	10.1	88.8	
Q1983-02	OR-636-VOC-01	13	1.18	10.23	11.41	9.74	83.7	
Q1983-03	OR-636-01	14	1.16	9.92	11.08	9.73	86.4	
Q1983-04	OR-636-02	15	1.19	10.30	11.49	10.15	87.0	
Q1983-05	OR-636-03	16	1.15	9.56	10.71	9.77	90.2	
Q1983-07	OR-636-COMP-02	17	1.17	10.61	11.78	10.6	88.9	
Q1983-08	OR-636-VOC-02	18	1.12	10.72	11.84	10.58	88.2	
Q1983-09	OR-636-04	19	1.17	10.05	11.22	9.89	86.8	
Q1983-10	OR-636-05	20	1.19	10.59	11.78	10.78	90.6	
Q1983-11	OR-636-06	21	1.18	10.14	11.32	10.02	87.2	
Q1983-13	OR-636-COMP-03	22	1.14	10.30	11.44	10.75	93.3	
Q1983-14	OR-636-VOC-03	23	1.15	10.36	11.51	10.61	91.3	
Q1983-15	OR-636-07	24	1.16	10.64	11.8	11.39	96.1	
Q1983-16	OR-636-08	25	1.14	10.73	11.87	10.89	90.9	
Q1983-17	OR-636-09	26	1.18	10.44	11.62	10.74	91.6	
Q1983-19	OR-636-COMP-04	27	1.18	10.81	11.99	11.05	91.3	
Q1983-20	OR-636-VOC-04	28	1.15	10.33	11.48	9.6	81.8	

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:20
In Date: 05/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1983-21	OR-636-10	29	1.19	10.51	11.7	10.72	90.7	
Q1983-22	OR-636-11	30	1.19	10.59	11.78	10.5	87.9	
Q1983-23	OR-636-12	31	1.15	10.43	11.58	9.76	82.6	
Q1983-25	OR-636-COMP-05	32	1.17	9.97	11.14	9.07	79.2	
Q1983-26	OR-636-VOC-05	33	1.16	10.04	11.2	9.08	78.9	
Q1983-27	OR-636-13	34	1.14	10.53	11.67	11.04	94.0	
Q1983-28	OR-636-14	35	1.15	10.52	11.67	10.00	84.1	
Q1983-29	OR-636-15	36	1.16	10.35	11.51	9.74	82.9	
Q1983-31	OR-636-COMP-06	37	1.15	9.84	10.99	9.52	85.1	
Q1983-32	OR-636-VOC-06	38	1.17	10.61	11.78	10.78	90.6	
Q1983-33	OR-636-16	39	1.19	9.73	10.92	10.4	94.7	
Q1983-34	OR-636-17	40	1.13	10.55	11.68	10.37	87.6	
Q1983-35	OR-636-18	41	1.18	10.15	11.33	9.59	82.9	
Q1983-37	OR-636-COMP-07	42	1.18	10.44	11.62	10.35	87.8	
Q1983-38	OR-636-VOC-07	43	1.12	10.77	11.89	10.88	90.6	
Q1983-39	OR-636-19	44	1.15	9.66	10.81	9.34	84.8	
Q1983-40	OR-636-20	45	1.18	10.29	11.47	10.21	87.8	
Q1983-41	OR-636-21	46	1.14	10.58	11.72	10.5	88.5	
Q1983-43	OR-636-COMP-08	47	1.15	10.25	11.4	10.45	90.7	
Q1983-44	OR-636-VOC-08	48	1.16	9.97	11.13	10.78	96.5	
Q1983-45	OR-636-22	49	1.13	10.62	11.75	10.91	92.1	
Q1983-46	OR-636-23	50	1.19	9.96	11.15	10.05	89.0	
Q1983-47	OR-636-24	51	1.13	10.33	11.46	11.18	97.3	
Q1983-49	OR-636-COMP-09	52	1.13	10.36	11.49	10.31	88.6	
Q1983-50	OR-636-VOC-09	53	1.19	10.54	11.73	10.1	84.5	
Q1983-51	OR-636-25	54	1.16	10.09	11.25	9.61	83.7	
Q1983-52	OR-636-26	55	1.18	10.11	11.29	9.93	86.5	
Q1983-53	OR-636-27	56	1.16	9.66	10.82	10.34	95.0	

PERCENT SOLID

Supervisor: rubina
Analyst: jignesh
Date: 5/9/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:20
In Date: 05/08/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135705

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
Q1984-01	OU4-PCS-TC-33-050725	57	1.15	9.96	11.11	10.62	95.1	
Q1984-03	OU4-PCS-TC-34-050725	58	1.16	10.82	11.98	11.51	95.7	
Q1984-05	OU4-PCS-TC-35-050725	59	1.19	9.50	10.69	10.16	94.4	
Q1984-07	OU4-TS-24-050725	60	1.15	10.00	11.15	8.12	69.7	
Q1984-09	OU4-TS-25-050725	61	1.17	10.51	11.68	8.32	68.0	
Q1984-11	OU4-TS-26-050725	62	1.17	10.18	11.35	7.29	60.1	
Q1984-13	OU4-TS-27-050725	63	1.16	9.67	10.83	7.2	62.5	
Q1984-15	OU4-TS-28-050725	64	1.16	9.98	11.14	7.61	64.6	
Q1986-01	COMP-8	65	1.18	10.04	11.22	10.5	92.8	
Q1986-03	COMP-9	66	1.18	10.05	11.23	10.44	92.1	
Q1986-05	COMP-10	67	1.16	9.77	10.93	9.84	88.8	
Q1986-07	COMP-11	68	1.19	10.33	11.52	10.55	90.6	
Q1986-09	COMP-218	69	1.16	10.18	11.34	10.45	91.3	
Q1987-01	GC1	70	1.14	9.89	11.03	9.7	86.6	
Q1990-01	43025-A	71	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1990-02	43025-B	72	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1991-01	1217	73	1.00	1.00	2.00	2.00	100.0	oil sample
Q1991-03	30425	74	1.00	1.00	2.00	2.00	100.0	oil sample

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

WORKLIST(Hardcopy Internal Chain)

135865

WorkList Name : %1-050825

WorkList ID : 139376

Department : Wet-Chemistry

Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1929-14	WC-A4-02-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1929-15	WC-A1-03-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1929-16	WC-A1-04-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	04/30/2025	Chemtech -SO
Q1982-01	TP-1	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-02	TP-2B	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-03	TP-3	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-04	TP-4	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-05	TP-5	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-06	TP-6	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-07	TP-7	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1982-08	TP-8	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/07/2025	Chemtech -SO
Q1983-01	OR-636-COMP-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-02	OR-636-VOC-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-03	OR-636-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-04	OR-636-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-05	OR-636-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-07	OR-636-COMP-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-08	OR-636-VOC-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-09	OR-636-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-10	OR-636-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-11	OR-636-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO

Date/Time 05/08/25 15:00
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 05/08/25 17:15
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

WORKLIST(Hardcopy Internal Chain)

135403

WorkList Name : %1-050825 WorkList ID : 189376 Department : Wet-Chemistry Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1983-13	OR-636-COMP-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-14	OR-636-VOC-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-15	OR-636-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-16	OR-636-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-17	OR-636-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-19	OR-636-COMP-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-20	OR-636-VOC-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-21	OR-636-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-22	OR-636-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-23	OR-636-12	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-25	OR-636-COMP-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-26	OR-636-VOC-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-27	OR-636-13	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-28	OR-636-14	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-29	OR-636-15	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-31	OR-636-COMP-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-32	OR-636-VOC-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-33	OR-636-16	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-34	OR-636-17	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-35	OR-636-18	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-37	OR-636-COMP-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO

Date/Time 05/08/25 15:00 Date/Time 05/08/25 17:30
 Raw Sample Received by: SB WOC Raw Sample Received by: CP
 Raw Sample Relinquished by: CP Raw Sample Relinquished by: SB WOC

WORKLIST(Hardcopy Internal Chain)

9135405

WorkList Name : %1-050825 WorkList ID : 189376 Department : Wet-Chemistry Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1983-38	OR-636-VOC-07	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-39	OR-636-19	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-40	OR-636-20	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-41	OR-636-21	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-43	OR-636-COMP-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-44	OR-636-VOC-08	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-45	OR-636-22	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-46	OR-636-23	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-47	OR-636-24	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-49	OR-636-COMP-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-50	OR-636-VOC-09	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-51	OR-636-25	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-52	OR-636-26	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1983-53	OR-636-27	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/07/2025	Chemtech -SO
Q1984-01	OU4-PCS-TC-33-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-03	OU4-PCS-TC-34-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-05	OU4-PCS-TC-35-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-07	OU4-TS-24-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-09	OU4-TS-25-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-11	OU4-TS-26-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q1984-13	OU4-TS-27-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO

Date/Time 05/08/25 15:00
 Raw Sample Received by: CP 5001
 Raw Sample Relinquished by: CP 5001
 Date/Time 05/08/25 17:30
 Raw Sample Received by: CP 5001
 Raw Sample Relinquished by: CP 5001

17735705

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-050825 WorkList ID : 189376 Department : Wet-Chemistry Date : 05-08-2025 08:10:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1984-15	OU4-TS-28-050725	Solid	Percent Solids	Cool 4 deg C	NOBIO3	L41	05/07/2025	Chemtech -SO
Q1986-01	COMP-8	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-03	COMP-9	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-05	COMP-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-07	COMP-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1986-09	COMP-218	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	05/08/2025	Chemtech -SO
Q1987-01	GC1	Solid	Percent Solids	Cool 4 deg C	GENV01	L41	05/07/2025	Chemtech -SO
Q1990-01	43025-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1990-02	43025-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1991-01	1217	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO
Q1991-03	30425	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	05/08/2025	Chemtech -SO

Date/Time 05/08/25 15:00
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

Date/Time 05/08/25 17:130
Raw Sample Received by: [Signature]
Raw Sample Relinquished by: [Signature]

SOP ID:	MNJDEP-EPH-7		
Clean Up SOP #:	N/A	Extraction Start Date :	05/13/2025
Matrix :	Solid	Extraction Start Time :	09:35
Wegh By:	EH	Extraction By:	RJ
Balance check:	RJ	Extraction End Date :	05/13/2025
Balance ID:	EX-SC-2	Filter By:	RJ
pH Strlp Lot#:	N/A	Extraction End Time :	13:45
		Concentration By:	EH
		Supervisor By :	RUPESH
Extraction Method:	☐ Seperatory Funnel ☐ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet		

Standardized Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	100 PPM	PP24462
Surrogate	1.0ML	100 PPM	PP24491
Fractionation Surrogate	1.0ML	100 PPM	PP24499
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	EP2612
Baked Na2SO4	N/A	EP2611
Sand	N/A	E2865
Hexane	N/A	E3933
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	Envap ID:	NEVAP-02
KD Bath Temperature:	N/A	Envap Temperature:	40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
5/13/25	RS (Ext-bch)	Y.P. Prestipco
13:50	Preparation Group	Analysis Group

Analytical Method: MNJDEP-EPH-7

Concentration Date: 05/13/2025

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB167974BL	PB167974BL	EPH_NF	30.02	N/A	ritesh	Evelyn	2			U3-1
PB167974BS	PB167974BS	EPH_NF	30.03	N/A	ritesh	Evelyn	2			2
PB167974BSD	PB167974BSD	EPH_NF	30.01	N/A	ritesh	Evelyn	2			3
Q1987-01	GC1	EPH_NF	30.06	N/A	ritesh	Evelyn	2	E		4
Q1987-01DUP	GC1DUP	EPH_NF	30.02	N/A	ritesh	Evelyn	2	E		5
Q1987-01MS	GC1MS	EPH_NF	30.03	N/A	ritesh	Evelyn	2	E		6
Q1987-01MSD	GC1MSD	EPH_NF	30.04	N/A	ritesh	Evelyn	2	E		U6-1
Q2007-03	OR-636-28	EPH_NF	30.01	N/A	ritesh	Evelyn	2			2
Q2007-04	OR-636-29	EPH_NF	30.04	N/A	ritesh	Evelyn	2			3
Q2007-05	OR-636-30	EPH_NF	30.05	N/A	ritesh	Evelyn	2			4
Q2007-09	OR-636-31	EPH_NF	30.07	N/A	ritesh	Evelyn	2			5
Q2007-10	OR-636-32	EPH_NF	30.08	N/A	ritesh	Evelyn	2			6
Q2007-11	OR-636-33	EPH_NF	30.03	N/A	ritesh	Evelyn	2			U1-1
Q2007-15	OR-636-34	EPH_NF	30.01	N/A	ritesh	Evelyn	2			2
Q2007-16	OR-636-35	EPH_NF	30.04	N/A	ritesh	Evelyn	2			3
Q2007-17	OR-636-36	EPH_NF	30.06	N/A	ritesh	Evelyn	2			4
Q2007-21	OR-636-37	EPH_NF	30.02	N/A	ritesh	Evelyn	2			5
Q2007-22	OR-636-38	EPH_NF	30.07	N/A	ritesh	Evelyn	2			6
Q2007-23	OR-636-39	EPH_NF	30.05	N/A	ritesh	Evelyn	2			U2-1
Q2007-27	OR-636-40	EPH_NF	30.01	N/A	ritesh	Evelyn	2			2
Q2007-28	OR-636-41	EPH_NF	30.04	N/A	ritesh	Evelyn	2			3
Q2007-29	OR-636-42	EPH_NF	30.09	N/A	ritesh	Evelyn	2			4
Q2007-33	OR-636-43	EPH_NF	30.02	N/A	ritesh	Evelyn	2			5
Q2007-34	OR-636-44	EPH_NF	30.03	N/A	ritesh	Evelyn	2			6
Q2007-35	OR-636-45	EPH_NF	30.06	N/A	ritesh	Evelyn	2			U7-1

* Extracts relinquished on the same date as received.

RS
5/13

167974
9:35

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2007 WorkList ID : 189482 Department : Extraction Date : 05-13-2025 08:53:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1987-01	GC1	Solid	EPH_NF	Cool 4 deg C	GENV01	L41	05/07/2025	NJEPH
Q2007-03	OR-636-28	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-04	OR-636-29	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-05	OR-636-30	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-09	OR-636-31	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-10	OR-636-32	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-11	OR-636-33	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-15	OR-636-34	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-16	OR-636-35	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-17	OR-636-36	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-21	OR-636-37	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-22	OR-636-38	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-23	OR-636-39	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-27	OR-636-40	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-28	OR-636-41	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-29	OR-636-42	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-33	OR-636-43	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-34	OR-636-44	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH
Q2007-35	OR-636-45	Solid	EPH_NF	Cool 4 deg C	PSEG03	L41	05/09/2025	NJEPH

Date/Time 05/13/25 9:30
Raw Sample Received by: RS (L41-456)
Raw Sample Relinquished by: OP SM

Date/Time 05/13/25 10:05
Raw Sample Received by: OP SM
Raw Sample Relinquished by: RS (L41-456)

Prep Standard - Chemical Standard Summary

Order ID : Q1987

Test : EPH_NF

Prepbatch ID : PB167974,

Sequence ID/Qc Batch ID: FC051325AL,

Standard ID :

EP2611,EP2612,PP24170,PP24174,PP24175,PP24176,PP24177,PP24178,PP24179,PP24462,PP24491,PP24499,

Chemical ID :

E2865,E3551,E3928,E3929,E3930,E3932,E3933,P12363,P12981,P12983,P12989,P12990,P13050,P13279,P13596,P13650,P13660,P13662,P13664,P13667,P13671,P13709,P13865,P13896,P13897,P13898,P13899,P13900,P13901,P13903,P13905,P13906,P13912,P13919,P13920,P13921,P13923,P13926,P13927,P13928,P13931,P13950,P13951,P13952,P13953,W3177,



<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	EP2611	05/09/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 05/09/2025
<u>FROM</u> 4000.00000gram of E3551 = 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>PipettelD</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2612	05/09/2025	11/05/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 05/09/2025
<u>FROM</u> 8000.00000ml of E3930 + 8000.00000ml of E3932 = Final Quantity: 16000.000 ml								

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
781	100 PPM Aliphatic HC Working STD (Restek)	PP24170	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.25000ml of P12981 + 0.25000ml of P13671 + 1.25000ml of P12363 + 23.25000ml of W3177 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2900	100 PPM Aliphatic HC STD (Absolute)	PP24174	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.25000ml of P12983 + 0.25000ml of P13650 + 2.50000ml of P13279 + 22.00000ml of W3177 = Final Quantity: 25.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
783	50 PPM Aliphatic HC STD	PP24175	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.50000ml of W3177 + 0.50000ml of PP24170 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
784	20 PPM Aliphatic HC STD	PP24176	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.80000ml of W3177 + 0.20000ml of PP24170 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
785	10 PPM Aliphatic HC STD	PP24177	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
02/03/2025								

FROM 0.90000ml of W3177 + 0.10000ml of PP24170 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
786	5 PPM Aliphatic HC STD	PP24178	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
02/03/2025								

FROM 0.90000ml of W3177 + 0.10000ml of PP24175 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2901	20 PPM Aliphatic HC STD ICV (Absolute)	PP24179	02/03/2025	08/03/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 0.80000ml of W3177 + 0.20000ml of PP24174 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1330	100 PPM NJEPH Spike Solution	PP24462	04/15/2025	10/15/2025	Yogesh Patel	None	None	Abdul Mirza
								04/21/2025

FROM 5.00000ml of P13709 + 5.00000ml of P13865 + 5.00000ml of P13896 + 5.00000ml of P13897 + 5.00000ml of P13898 + 5.00000ml of P13899 + 5.00000ml of P13900 + 5.00000ml of P13901 + 5.00000ml of P13903 + 5.00000ml of P13905 + 5.00000ml of P13906 + 5.00000ml of P13912 + 5.00000ml of P13919 + 5.00000ml of P13920 + 5.00000ml of P13921 + 5.00000ml of P13923 + 5.00000ml of P13926 + 5.00000ml of P13927 + 5.00000ml of P13928 + 5.00000ml of P13931 = Final Quantity: 100.000 ml



Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1339	100 PPM NJEPH Surrogate Spike	PP24491	04/25/2025	10/25/2025	Abdul Mirza	None	None	Yogesh Patel 05/03/2025

FROM 1.25000ml of P12989 + 1.25000ml of P12990 + 1.25000ml of P13050 + 1.25000ml of P13596 + 1.25000ml of P13660 + 1.25000ml of P13662 + 1.25000ml of P13664 + 1.25000ml of P13667 + 490.00000ml of E3929 = Final Quantity: 500.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1331	100 PPM NJEPH Fractionating Surrogate	PP24499	05/01/2025	10/22/2025	Abdul Mirza	None	None	Yogesh Patel 05/03/2025

FROM 1.25000ml of P13950 + 1.25000ml of P13951 + 1.25000ml of P13952 + 1.25000ml of P13953 + 195.00000ml of E3928 = 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	06/30/2025	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	07/01/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	25C0362005	10/22/2025	04/18/2025 / RUPESH	04/16/2025 / RUPESH	E3928

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H2762008	04/18/2027	04/18/2025 / RUPESH	04/16/2025 / RUPESH	E3929

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)	25A0262002	02/20/2026	05/02/2025 / RUPESH	03/09/2025 / RUPESH	E3930

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)	24H1462005	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3932

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	25C0362005	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3933

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	08/03/2025	02/03/2025 / yogesh	12/20/2023 / Yogesh	P12981

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/25/2025	04/25/2025 / Abdul	12/20/2023 / Yogesh	P12989

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0204989	10/25/2025	04/25/2025 / Abdul	12/20/2023 / Yogesh	P12990

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0200707	10/25/2025	04/25/2025 / Abdul	12/26/2023 / Yogesh	P13050

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95899 / NJ EPH Aliphatic n-Hydrocarbons-Revised, 1000 PPM	040524	08/03/2025	02/03/2025 / yogesh	04/11/2024 / yogesh	P13279

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31098 / 1-Chlorooctadecane Standard	A0213283	10/25/2025	04/25/2025 / Abdul	10/16/2024 / yogesh	P13596

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/25/2025	04/25/2025 / Abdul	10/16/2024 / yogesh	P13660

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/25/2025	04/25/2025 / Abdul	10/16/2024 / yogesh	P13662

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/25/2025	04/25/2025 / Abdul	10/16/2024 / yogesh	P13664

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31097 / o-Terphenyl Standard	A0216631	10/25/2025	04/25/2025 / Abdul	10/16/2024 / yogesh	P13667

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0211254	10/15/2025	04/15/2025 / yogesh	10/24/2024 / yogesh	P13709

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A0220580	10/15/2025	04/15/2025 / yogesh	01/08/2025 / yogesh	P13865

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13896

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13897

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13898

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13899

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13900

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13901

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13903

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13905

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0217408	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13906

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30542 / Custom NJEPH Aliphatics Matrix Spike Mix	A0220449	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13912

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13919

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13920

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13921

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	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13923

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13926

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13927

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13928

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30543 / Custom NJEPH Aromatics Matrix Spike Mix	A022580	10/15/2025	04/15/2025 / yogesh	03/06/2025 / yogesh	P13931

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0219106	11/01/2025	05/01/2025 / Abdul	03/10/2025 / yogesh	P13950

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	A0219106	11/01/2025	05/01/2025 / Abdul	03/10/2025 / yogesh	P13951

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0219106	11/01/2025	05/01/2025 / Abdul	03/10/2025 / yogesh	P13952

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31480 / MA Fractionation Surrogate Spike Mix	A0219106	11/01/2025	05/01/2025 / Abdul	03/10/2025 / yogesh	P13953

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	02/03/2025 / jignesh	01/31/2025 / jignesh	W3177

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

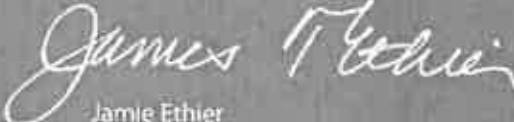
Certificate of Analysis

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



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MONTERREY, S.A. DE C.V.**

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MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO ₄)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreign matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

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

Recd. by R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

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

 **avantors[™]**



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	≤ 5	5
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	100 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	$< 0.01 \%$

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

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3928



Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials U.S.

Acetone

BAKER RESI-ANALYZED® Reagent

For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3929

Jamie Croak

Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC

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

avantor



Material No.: 9266-A4
Batch No.: 25A0262002
Manufactured Date: 2024-11-21
Expiration Date: 2026-02-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	4
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid (μ eq/g)	≤ 0.3	<0.1
Chloride (Cl)	≤ 10 ppm	<5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	<0.01%

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

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3930

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA, 19087, U.S.A. Phone 610.386.1700

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

 avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
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

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932



Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC

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

 **avantors**TM



Material No.: 9262-03

Batch No.: 25C0362005

Manufactured Date: 2025-01-29

Expiration Date: 2026-04-30

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	≤ 5	5
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	100 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	$< 0.01 \%$

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3933



Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials LLC



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.:** A0190424

Description : NJEPH Aliphatics Calibration Standard

Aliphatics Calibration Standard 2000µg/mL, Hexane/Carbon Disulfide (80:20), 1mL/ampul

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

Expiration Date : November 30, 2029 **Storage:** 25°C nominal

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

P12361
↓
P12370 } Y.P.
031/6/23

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	n-Nonane (C9) CAS # 111-84-2 Purity 99% (Lot SHBN5361)	2,014.0 µg/mL	+/- 11.8193	µg/mL	Gravimetric	
			+/- 50.0027	µg/mL	Unstressed	
			+/- 59.9491	µg/mL	Stressed	
2	n-Decane (C10) CAS # 124-18-5 Purity 99% (Lot SHBN8619)	2,014.7 µg/mL	+/- 11.8232	µg/mL	Gravimetric	
			+/- 50.0193	µg/mL	Unstressed	
			+/- 59.9689	µg/mL	Stressed	
3	Naphthalene CAS # 91-20-3 Purity 99% (Lot MKCH0219)	2,015.3 µg/mL	+/- 11.8271	µg/mL	Gravimetric	
			+/- 50.0358	µg/mL	Unstressed	
			+/- 59.9888	µg/mL	Stressed	
4	n-Dodecane (C12) CAS # 112-40-3 Purity 99% (Lot SHBN7174)	2,008.0 µg/mL	+/- 11.7841	µg/mL	Gravimetric	
			+/- 49.8538	µg/mL	Unstressed	
			+/- 59.7705	µg/mL	Stressed	
5	2-Methylnaphthalene CAS # 91-57-6 Purity 96% (Lot STBK0259)	2,007.0 µg/mL	+/- 11.7784	µg/mL	Gravimetric	
			+/- 49.8299	µg/mL	Unstressed	
			+/- 59.7419	µg/mL	Stressed	
6	n-Tetradecane (C14) CAS # 629-59-4 Purity 99% (Lot STBK2282)	2,016.7 µg/mL	+/- 11.8349	µg/mL	Gravimetric	
			+/- 50.0689	µg/mL	Unstressed	
			+/- 60.0284	µg/mL	Stressed	
7	n-Hexadecane (C16) CAS # 544-76-3 Purity 98% (Lot SHBM4146)	2,014.9 µg/mL	+/- 11.8244	µg/mL	Gravimetric	
			+/- 50.0246	µg/mL	Unstressed	
			+/- 59.9753	µg/mL	Stressed	

8	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	(Lot VZKOJ)	2,004.7 µg/mL	+/-	11.7645	µg/mL	Gravimetric
				+/-	49.7710	µg/mL	Unstressed
				+/-	59.6712	µg/mL	Stressed
9	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	(Lot MKCF7888)	2,018.0 µg/mL	+/-	11.8428	µg/mL	Gravimetric
				+/-	50.1020	µg/mL	Unstressed
				+/-	60.0681	µg/mL	Stressed
10	n-Heneicosane (C21) CAS # 629-94-7 Purity 99%	(Lot MKCL3226)	2,000.7 µg/mL	+/-	11.7410	µg/mL	Gravimetric
				+/-	49.6717	µg/mL	Unstressed
				+/-	59.5522	µg/mL	Stressed
11	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	2,005.3 µg/mL	+/-	11.7684	µg/mL	Gravimetric
				+/-	49.7876	µg/mL	Unstressed
				+/-	59.6911	µg/mL	Stressed
12	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	2,018.0 µg/mL	+/-	11.8428	µg/mL	Gravimetric
				+/-	50.1020	µg/mL	Unstressed
				+/-	60.0681	µg/mL	Stressed
13	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	2,014.0 µg/mL	+/-	11.8193	µg/mL	Gravimetric
				+/-	50.0027	µg/mL	Unstressed
				+/-	59.9491	µg/mL	Stressed
14	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	2,002.0 µg/mL	+/-	11.7489	µg/mL	Gravimetric
				+/-	49.7048	µg/mL	Unstressed
				+/-	59.5919	µg/mL	Stressed
15	n-Triacontane (C30) CAS # 638-68-6 Purity 97%	(Lot MKCQ9436)	2,011.1 µg/mL	+/-	11.8025	µg/mL	Gravimetric
				+/-	49.9316	µg/mL	Unstressed
				+/-	59.8637	µg/mL	Stressed
16	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	2,012.0 µg/mL	+/-	11.8075	µg/mL	Gravimetric
				+/-	49.9531	µg/mL	Unstressed
				+/-	59.8895	µg/mL	Stressed
17	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	2,006.7 µg/mL	+/-	11.7762	µg/mL	Gravimetric
				+/-	49.8207	µg/mL	Unstressed
				+/-	59.7308	µg/mL	Stressed
18	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot Z27H018)	2,017.3 µg/mL	+/-	11.8388	µg/mL	Gravimetric
				+/-	50.0855	µg/mL	Unstressed
				+/-	60.0483	µg/mL	Stressed
19	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 96%	(Lot 0000145137)	2,017.3 µg/mL	+/-	11.8385	µg/mL	Gravimetric
				+/-	50.0842	µg/mL	Unstressed
				+/-	60.0467	µg/mL	Stressed
20	n-Tetracontane (C40) CAS # 4181-95-7 Purity 99%	(Lot BSBME)	2,008.7 µg/mL	+/-	11.7880	µg/mL	Gravimetric
				+/-	49.8703	µg/mL	Unstressed
				+/-	59.7903	µg/mL	Stressed
Solvent: Hexane/Carbon disulfide (80:20)							
	CAS # 110-54-3/75-15-0						
	Purity 99%						

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

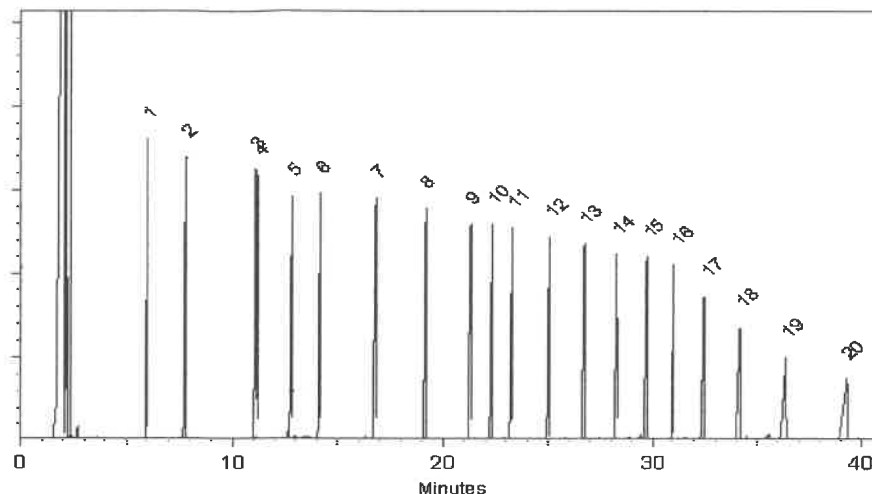
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



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


Morgan Craighead - Mix Technician

Date Mixed: 10-Oct-2022 Balance: 1128360905


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Oct-2022

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 31098 **Lot No.:** A0204989

Description: 1-Chlorooctadecane Standard

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

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

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

Ship: Ambient

P12960
↓
P12991 } Y.P.
12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	14738400	99%	10,097.3 µg/mL	+/- 567.2675

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

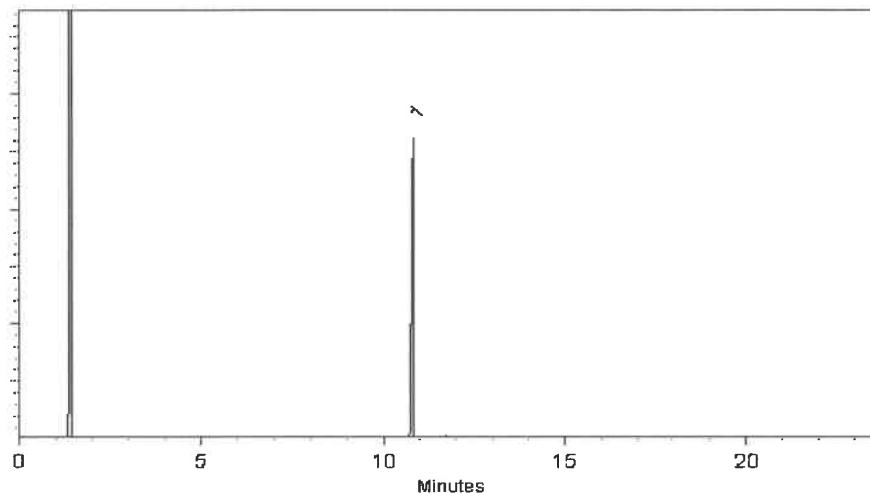
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Peter Robbins - Operations Technician I

Date Mixed: 02-Dec-2023

Balance Serial # B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 31098 **Lot No.:** A0204989
Description: 1-Chlorooctadecane Standard
1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul
Container Size: 2 mL **Pkg Amt:** > 1 mL
Expiration Date: January 31, 2031 **Storage:** 10°C or colder
Ship: Ambient

P12960
↓
P12991 } Y.P.
12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	14738400	99%	10,097.3 µg/mL	+/- 567.2675

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

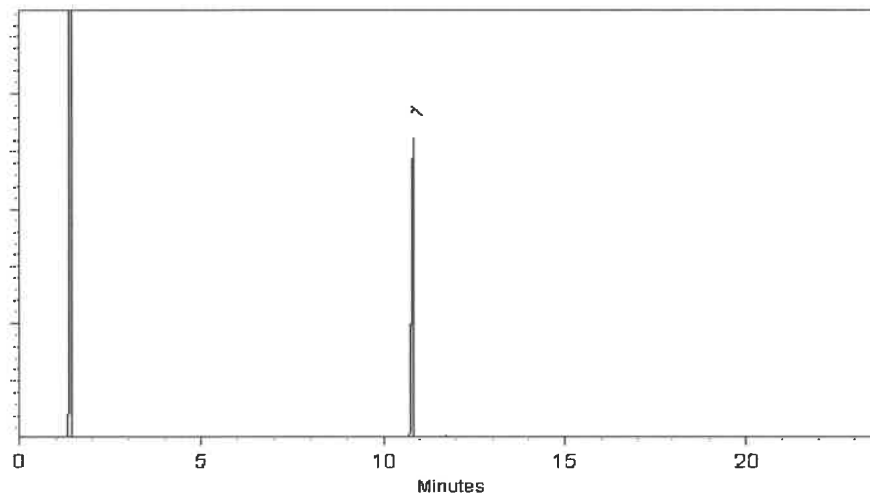
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Peter Robbins - Operations Technician I

Date Mixed: 02-Dec-2023

Balance Serial # B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 31098 **Lot No.:** A0204989

Description: 1-Chlorooctadecane Standard

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

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

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

Ship: Ambient

P12960
↓
P12991 } Y.P.
12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	14738400	99%	10,097.3 µg/mL	+/- 567.2675

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

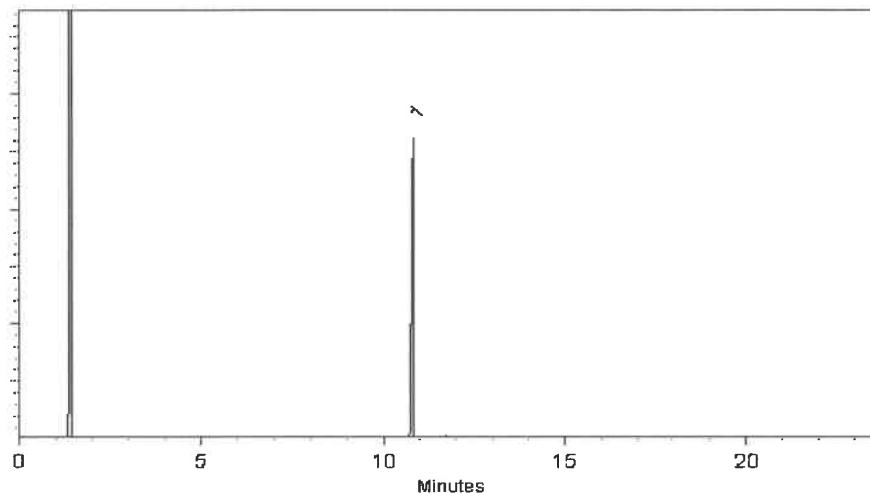
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Peter Robbins - Operations Technician I

Date Mixed: 02-Dec-2023

Balance Serial # B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No.: 31098 **Lot No.:** A0204989

Description: 1-Chlorooctadecane Standard

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

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

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

Ship: Ambient

P12960
↓
P12991 } Y.P.
12/21/2023

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	14738400	99%	10,097.3 µg/mL	+/- 567.2675

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

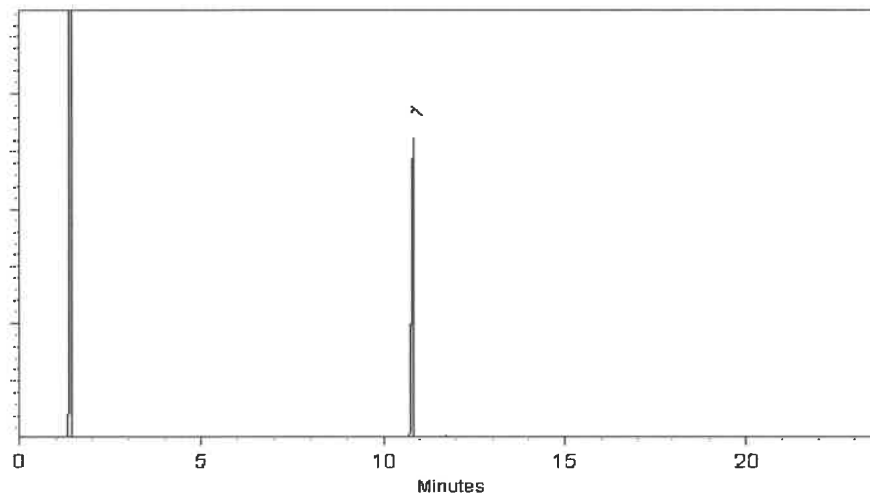
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Peter Robbins - Operations Technician I

Date Mixed: 02-Dec-2023

Balance Serial # B345965662

Christie Mills - Operations Lead Tech - ARM QC

Date Passed: 08-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31098 **Lot No.:** A0200707

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

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

Expiration Date : September 30, 2030 **Storage:** 10°C or colder
Ship: Ambient

P130hh
2
P13051 } Y.B.
12/26/23

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	E230426RSRB	99%	10,018.0 µg/mL	+/- 562.8106

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

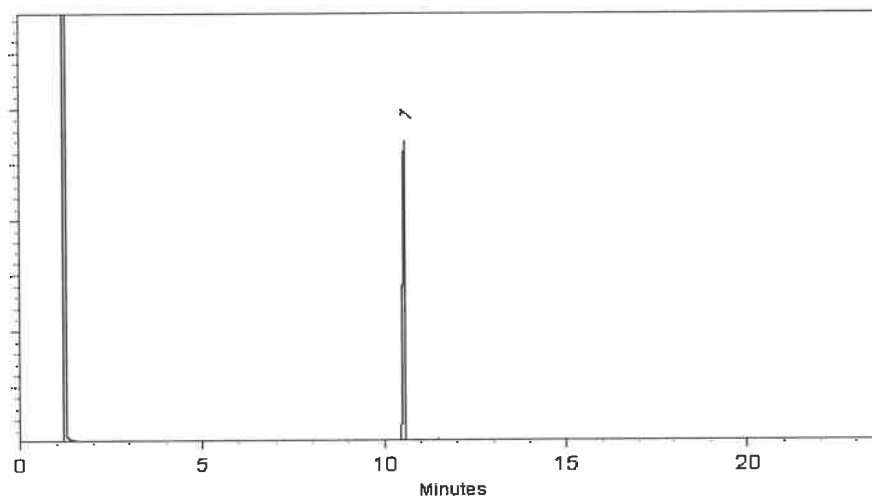
FID

Split Vent:

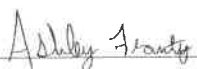
10 ml/min.

Inj. Vol

1µl



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


Ashley Frantz - Quoting Technician

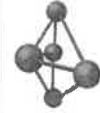
Date Mixed: 07-Aug-2023

Balance Serial # 1128360905


Dillan Murphy - Operations Technician I

Date Passed: 10-Aug-2023

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



CERTIFIED WEIGHT REPORT

Part Number: 95999

Lot Number: 040524

Description: NJ EPH Aliphatic n-Hydrocarbons - Revised
20 components

Expiration Date: 040534

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test ID#: 6UTB

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

CAUTION: Sonicate Before Use

Solvent(s):
Cyclohexane

Lot#
28930

P13278
2
P13287
Y.P.
04/11/24

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Formulated By:	Anthony Mahoney	040524	DATE
Reviewed By:	Pedro L. Rentas	040524	DATE

Compound		Part Number	(RM#)	Lot Number	DIL Factor	Initial Vol. (mL)	Initial Conc (µg/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Pipette	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information	
																(Solvent Safety Info. On Attached pg.)	
																CAS#	
																OSHA PEL (TWA)	
																LD50	
1.	2-Methylnaphthalene	(0214)	MKBF3783V	NA	NA	NA	NA	1000	97	0.2	NA	0.02579	0.02594	1005.7	5.7	91-57-6	N/A
2.	Naphthalene	(0222)	MKB28680V	NA	NA	NA	NA	1000	100	0.2	NA	0.02502	0.02511	1003.7	5.7	91-20-3	10 ppm (50mg/m ³ 8H) orl-rat 1630mg/kg
3.	n-Nonane	95708	120222	1.00	25.00	1000.7	1000.7	1000	NA	NA	0.013	NA	NA	1000.0	4.2	111-84-2	200 ppm (1050mg/m ³ 8H) orl-rat 490mg/kg
4.	n-Decane	95708	120222	1.00	25.00	1000.9	1000.9	1000	NA	NA	0.013	NA	NA	1000.2	4.2	124-18-5	ivn-mus 218mg/kg
5.	n-Dodecane	95708	120222	1.00	25.00	1000.7	1000.7	1000	NA	NA	0.013	NA	NA	1000.0	4.2	112-40-3	N/A
6.	n-Tetradecane	95708	120222	1.00	25.00	1002.1	1002.1	1000	NA	NA	0.013	NA	NA	1001.3	4.2	629-59-4	ivn-mus 3494mg/kg
7.	n-Hexadecane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	NA	0.013	NA	NA	999.7	4.2	544-76-3	N/A
8.	n-Octadecane	95708	120222	1.00	25.00	1001.0	1001.0	1000	NA	NA	0.013	NA	NA	1000.3	4.1	583-45-3	N/A
9.	n-Eicosane	95708	120222	1.00	25.00	1001.0	1001.0	1000	NA	NA	0.013	NA	NA	1000.3	4.2	112-95-8	N/A
10.	n-Henicosane	95708	120222	1.00	25.00	1002.4	1002.4	1000	NA	NA	0.013	NA	NA	1001.6	4.2	629-94-7	N/A
11.	n-Docosane	95708	120222	1.00	25.00	1001.9	1001.9	1000	NA	NA	0.013	NA	NA	1001.2	4.2	629-97-0	N/A
12.	n-Tetracosane	95708	120222	1.00	25.00	1000.8	1000.8	1000	NA	NA	0.013	NA	NA	1000.1	4.2	646-31-1	N/A
13.	n-Hexacosane	95708	120222	1.00	25.00	1001.2	1001.2	1000	NA	NA	0.013	NA	NA	1000.4	4.2	630-01-3	N/A
14.	n-Octacosane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	NA	0.013	NA	NA	999.8	4.2	630-02-4	N/A
15.	n-Triacontane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	NA	0.013	NA	NA	999.8	4.2	638-68-6	N/A
16.	n-Dotriacontane	95708	120222	1.00	25.00	1000.5	1000.5	1000	NA	NA	0.013	NA	NA	999.8	4.3	544-85-4	ivn-mus 100mg/kg
17.	n-Tetracontane	95708	120222	1.00	25.00	1000.4	1000.4	1000	NA	NA	0.013	NA	NA	999.7	4.2	14167-59-0	N/A
18.	n-Hexatriacontane	95708	120222	1.00	25.00	1001.5	1001.5	1000	NA	NA	0.013	NA	NA	1000.8	4.2	630-08-8	N/A
19.	n-Octatriacontane	95708	120222	1.00	25.00	1000.3	1000.3	1000	NA	NA	0.013	NA	NA	999.6	4.3	7184-86-6	N/A
20.	n-Tetracontane	95708	120222	1.00	25.00	1000.6	1000.6	1000	NA	NA	0.013	NA	NA	999.9	4.3	4181-95-7	N/A

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



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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.:** A0213283

Description : 1-Chlorooctadecane Standard

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

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

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

Ship: Ambient

P13595
↓
P13624 } Y.P.
10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Chlorooctadecane	3386-33-2	15018900	99%	10,058.0 µg/mL	+/- 565.0578

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

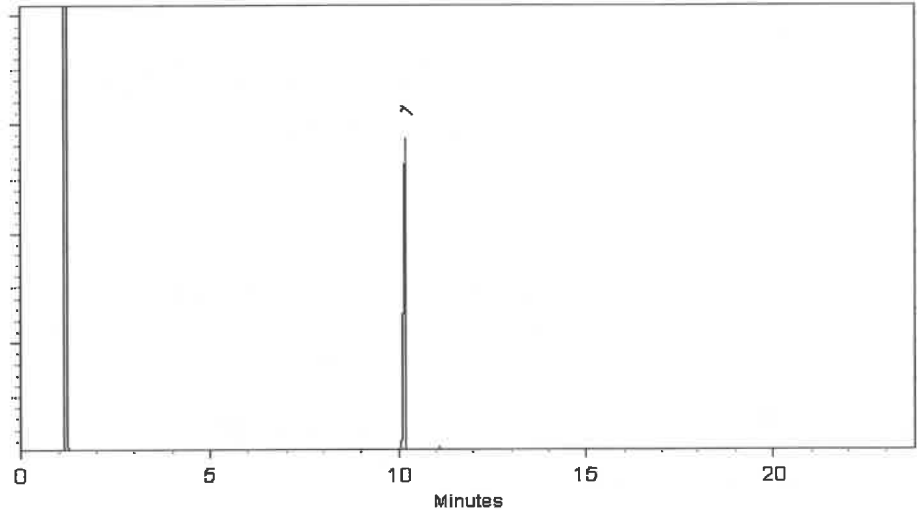
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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Stacey Wanner - Operations Technician I

Date Mixed: 28-Jun-2024

Balance Serial # B345965662

Dillan Murphy - Operations Technician I

Date Passed: 01-Jul-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Catalog No. : 31097 **Lot No.:** A0216631
Description : o-Terphenyl Standard
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,065.0 µg/mL	+/- 453.3336

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

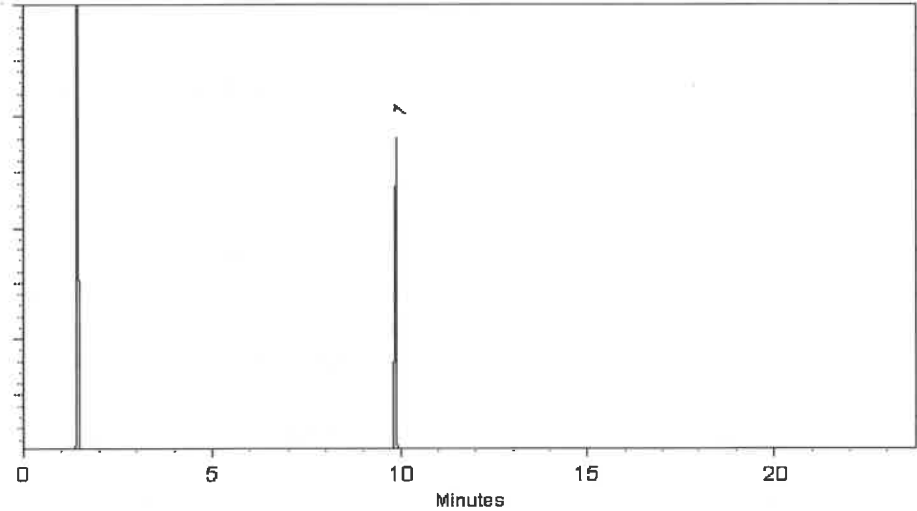
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31097 **Lot No.:** A0216631
Description : o-Terphenyl Standard
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,065.0 µg/mL	+/- 453.3336

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

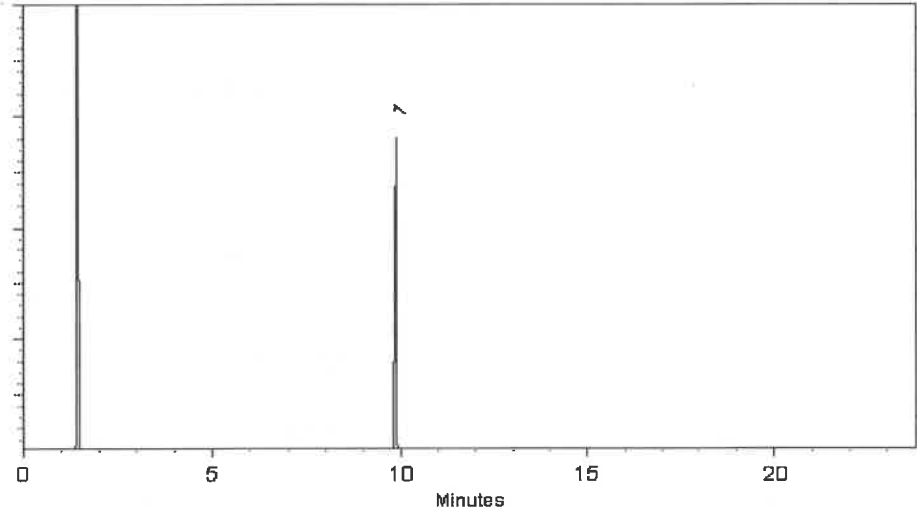
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31097 **Lot No.:** A0216631
Description : o-Terphenyl Standard
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,065.0 µg/mL	+/- 453.3336

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

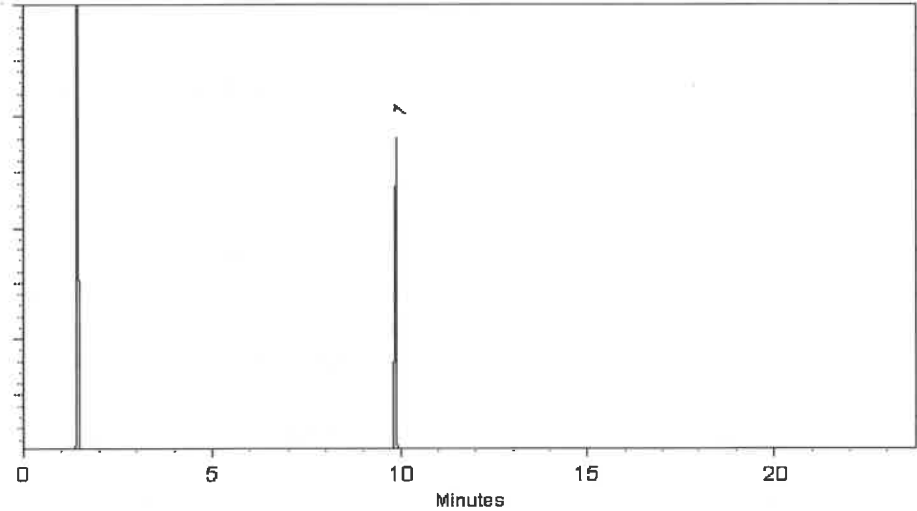
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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

Catalog No. : 31097 **Lot No.:** A0216631
Description : o-Terphenyl Standard
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,065.0 µg/mL	+/- 453.3336

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

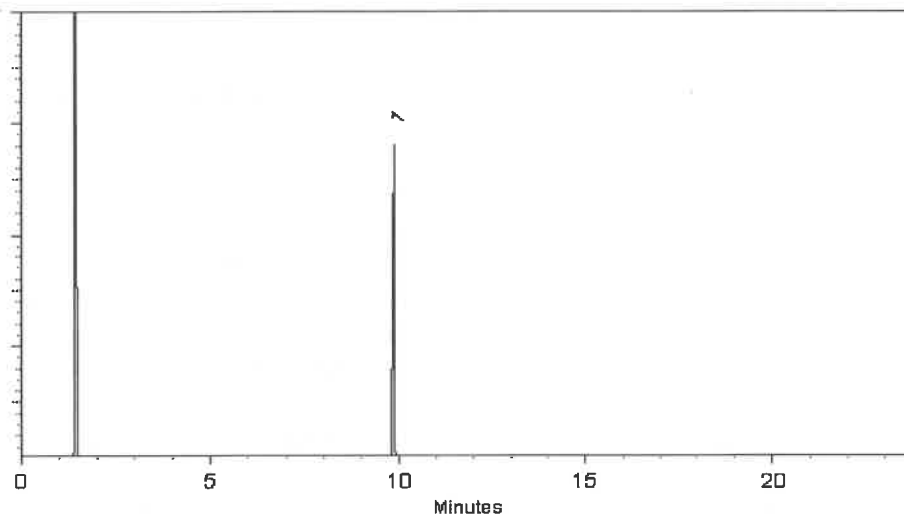
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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

Catalog No. : 31097 **Lot No.:** A0216631
Description : o-Terphenyl Standard
o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2028 **Storage:** 10°C or colder
Handling: Sonicate prior to use. **Ship:** Ambient

P13645 } Y.P.
↓
P13694 } 10/16/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	o-Terphenyl	84-15-1	GKSSA	99%	10,065.0 µg/mL	+/- 453.3336

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

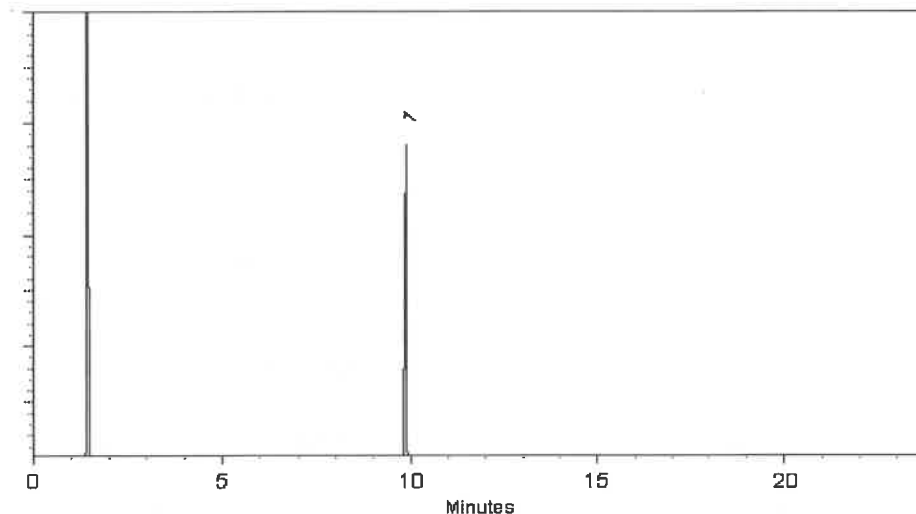
FID

Split Vent:

10 ml/min.

Inj. Vol

1µl



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

Ven Kelley - Operations Tech I

Date Mixed: 17-Sep-2024

Balance Serial # 1128353505

Dillan Murphy - Operations Technician I

Date Passed: 23-Sep-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

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Handling Notes:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0211254

Description : NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

Container Size : 5 mL

Pkg Amt: > 5 mL

Expiration Date : April 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13408
↓
P13716 } Y.P.
10/26/24

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-38	99%	200.0 µg/mL	+/- 9.0114
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBK0259	96%	200.4 µg/mL	+/- 9.0316
4	Acenaphthylene	208-96-8	214935L31M	98%	200.3 µg/mL	+/- 9.0255
5	Acenaphthene	83-32-9	MKCR7169	99%	202.0 µg/mL	+/- 9.1015
6	Fluorene	86-73-7	10241100	99%	201.2 µg/mL	+/- 9.0655
7	Phenanthrene	85-01-8	MKCS5188	99%	200.4 µg/mL	+/- 9.0294
8	Anthracene	120-12-7	MKCR0570	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.8 µg/mL	+/- 9.0474
10	Pyrene	129-00-0	BCCK2592	99%	201.2 µg/mL	+/- 9.0655
11	Benz(a)anthracene	56-55-3	I30012022BAA	99%	200.8 µg/mL	+/- 9.0474
12	Chrysene	218-01-9	RP231206RSR	99%	200.4 µg/mL	+/- 9.0294
13	Benzo(b)fluoranthene	205-99-2	012013B	99%	200.4 µg/mL	+/- 9.0294
14	Benzo(k)fluoranthene	207-08-9	012022K	99%	200.0 µg/mL	+/- 9.0114
15	Benzo(a)pyrene	50-32-8	O45GL	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	199.8 µg/mL	+/- 9.0033

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	200.0	µg/mL	+/- 9.0114
18	Benzo(g,h,i)perylene	191-24-2	RP240105ECS	99%	200.8	µg/mL	+/- 9.0474

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

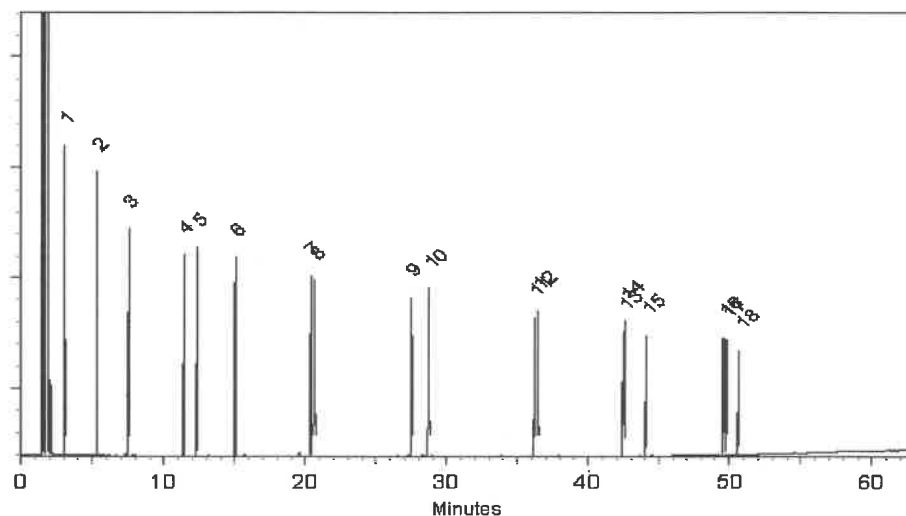
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

Michael Maye
Michael Maye - Operations Tech I

Date Mixed: 09-May-2024 **Balance Serial #** 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 13-May-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543 **Lot No.:** A0220580

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

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

P13863 } y.p.
↓
P13866 } 01/08/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

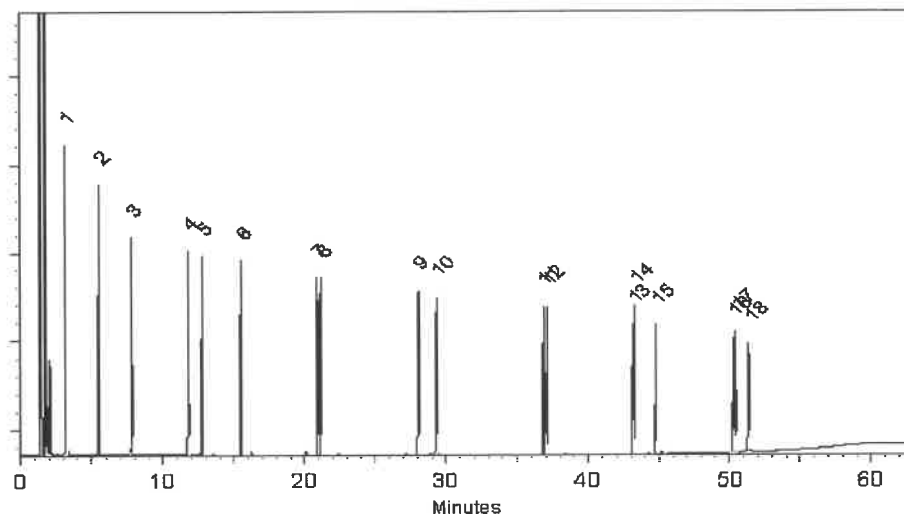
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

Ven Kelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
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P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

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

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

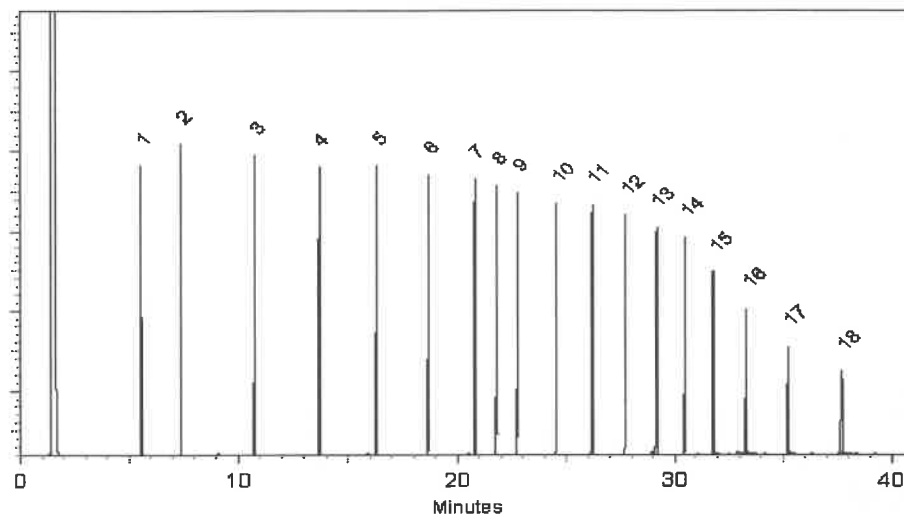
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

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

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

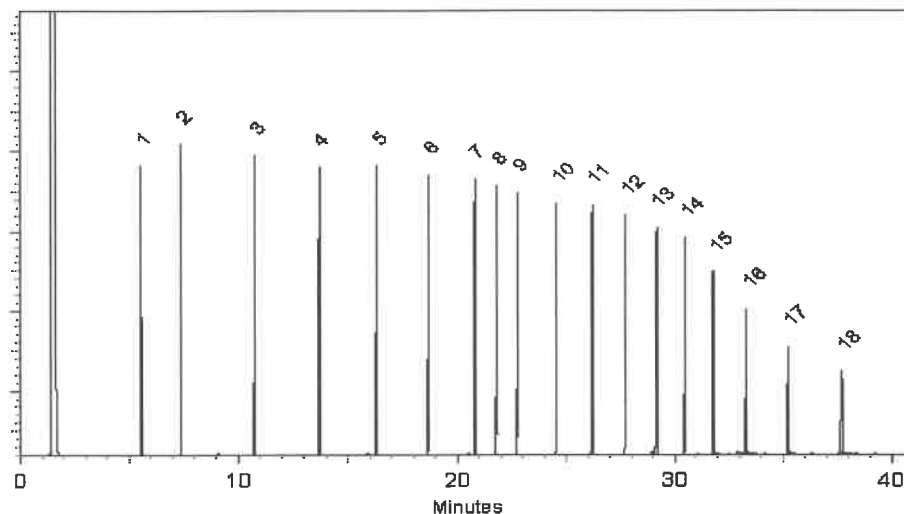
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

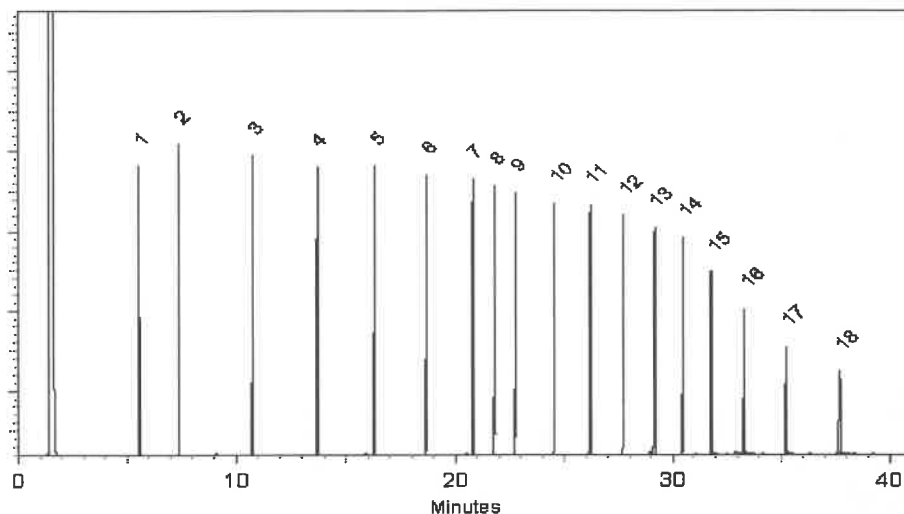
Inj. Temp:
250°C

Det. Temp:
330°C

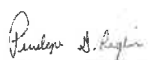
Det. Type:
FID

Split Vent:
2 ml/min.

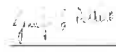
Inj. Vol
1µl



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


Penelope Riglin - Operations Tech I

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


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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Certified Uncertainty Value Notes:

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

Column:30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)**Carrier Gas:**

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

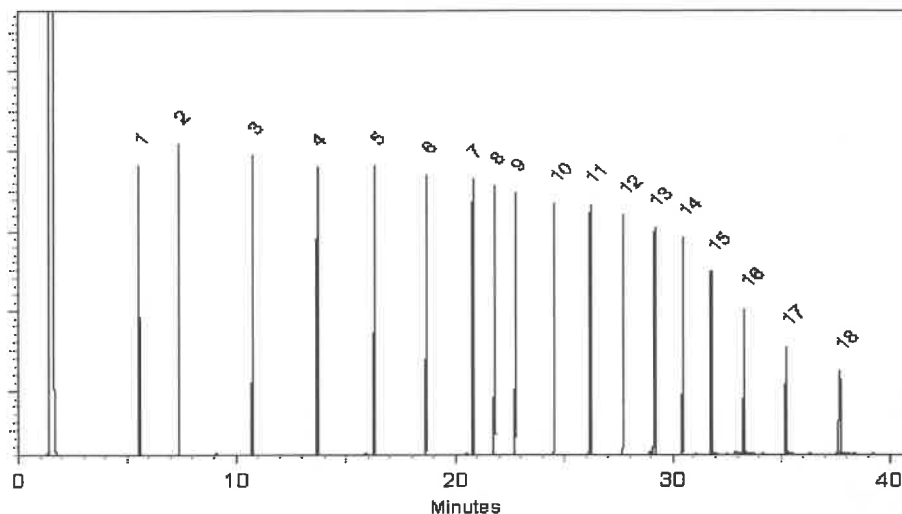
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
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P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

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

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

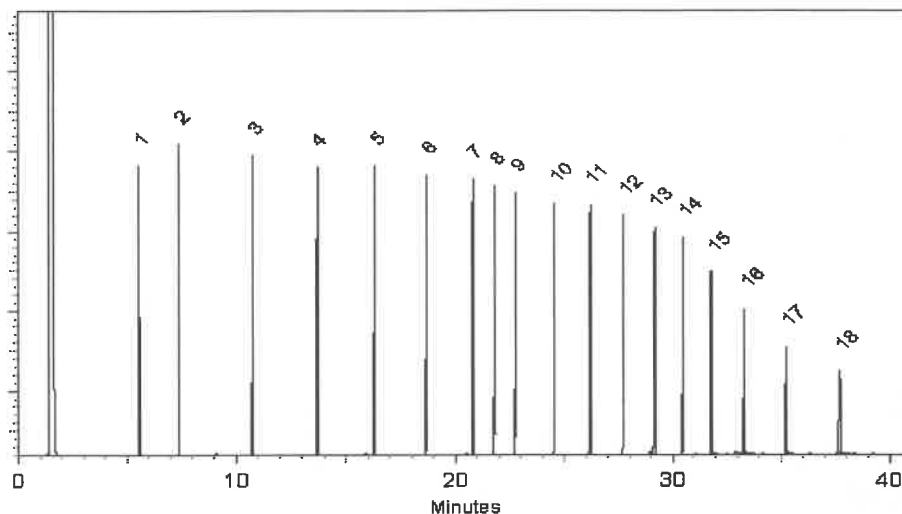
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

Column:30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)**Carrier Gas:**

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

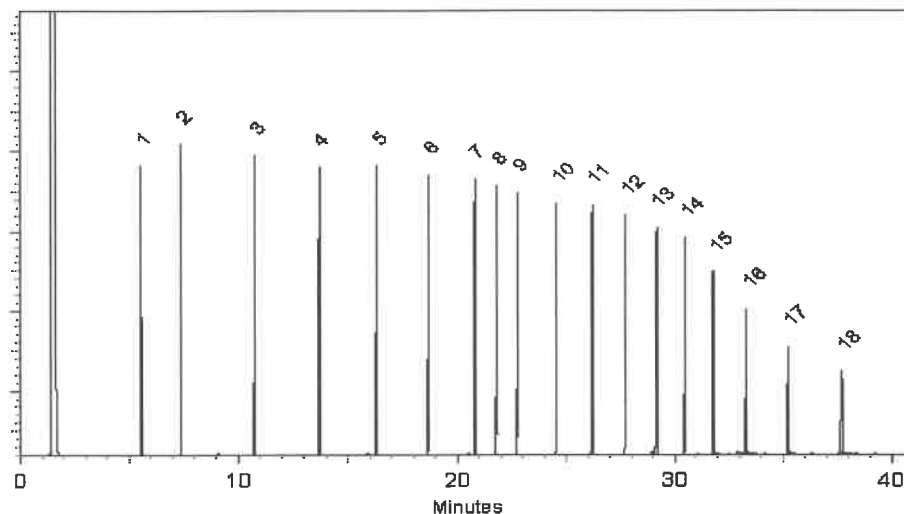
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

Column:30m x 0.25mm x 0.25µm
Rtx-S (cat.#10223)**Carrier Gas:**

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

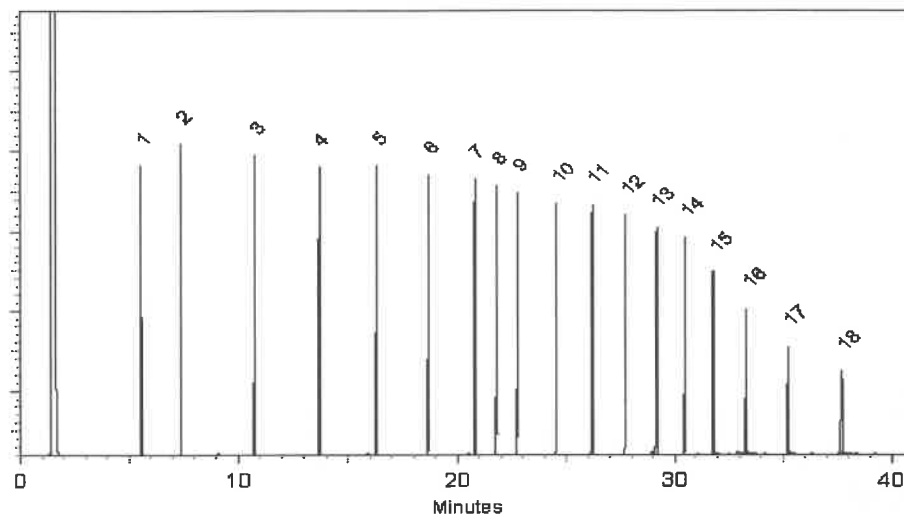
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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Certificate of Analysis

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
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P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

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

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

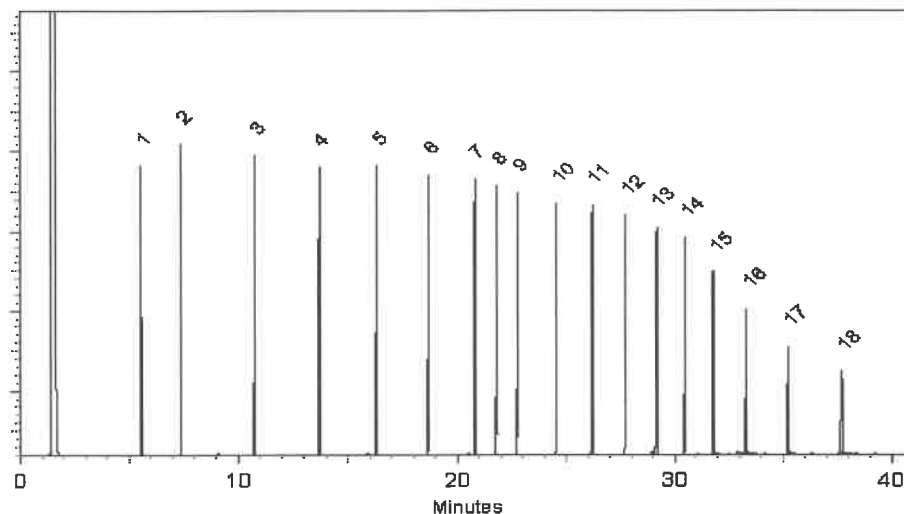
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0217408

Description : NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : November 30, 2031 **Storage:** 10°C or colder

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

P13896
↓
P13906 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	200.7 µg/mL	+/- 5.1839
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.0 µg/mL	+/- 5.1917
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	200.5 µg/mL	+/- 5.1805
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.5 µg/mL	+/- 5.1805
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.7 µg/mL	+/- 5.1857
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1857
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.9 µg/mL	+/- 5.1888
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.5 µg/mL	+/- 5.1805
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.5 µg/mL	+/- 5.1788
10	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	200.6 µg/mL	+/- 5.1822
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	200.5 µg/mL	+/- 5.1796
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.6 µg/mL	+/- 5.1822
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.1 µg/mL	+/- 5.1942
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	200.9 µg/mL	+/- 5.1891
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	200.8 µg/mL	+/- 5.1865
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	200.6 µg/mL	+/- 5.1814
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	199.3 µg/mL	+/- 5.1477

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane**CAS #** 109-66-0**Purity** 99%

Quality Confirmation Test

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

hydrogen-constant pressure 10 psi.

Temp. Program:40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)**Inj. Temp:**

250°C

Det. Temp:

330°C

Det. Type:

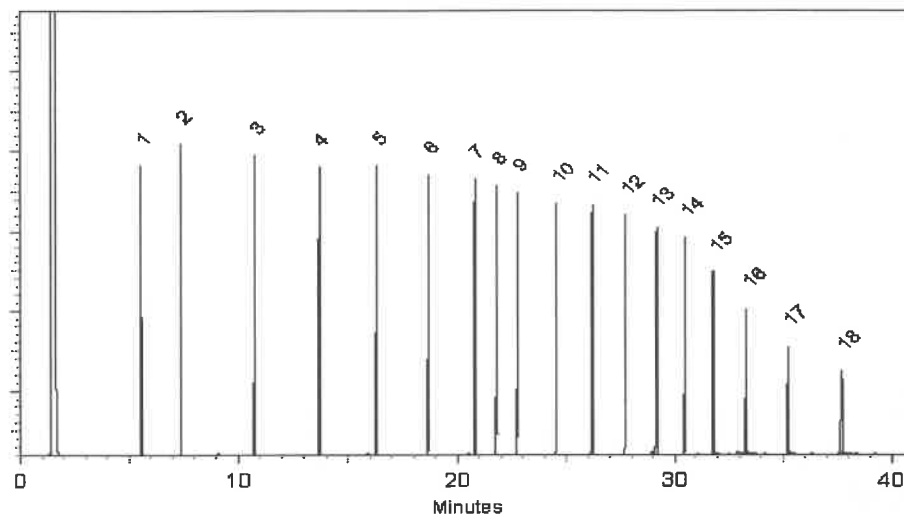
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Penelope B. Riglin
Penelope Riglin - Operations Tech I

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

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 07-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30542 **Lot No.:** A0220449

Description : NJEPH Aliphatics Matrix Spike Mix
NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

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

Expiration Date : January 31, 2032 **Storage:** 10°C or colder

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

P13909
↓
P1395 } Y.P.
03/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Nonane (C9)	111-84-2	SHBP9752	99%	201.3 µg/mL	+/- 5.2012
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	201.7 µg/mL	+/- 5.2098
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	201.3 µg/mL	+/- 5.2012
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	200.7 µg/mL	+/- 5.1839
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	200.3 µg/mL	+/- 5.1753
6	n-Octadecane (C18)	593-45-3	UE5NG	99%	200.7 µg/mL	+/- 5.1839
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	200.1 µg/mL	+/- 5.1704
8	n-Heneicosane (C21)	629-94-7	MKCP1960	99%	200.7 µg/mL	+/- 5.1839
9	n-Docosane (C22)	629-97-0	MKCQ3882	99%	200.3 µg/mL	+/- 5.1753
10	n-Tetracosane (C24)	646-31-1	UH5GN	99%	201.3 µg/mL	+/- 5.2012
11	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	201.0 µg/mL	+/- 5.1926
12	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	200.3 µg/mL	+/- 5.1753
13	n-Triacontane (C30)	638-68-6	MKCV7007	98%	201.2 µg/mL	+/- 5.1984
14	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	201.7 µg/mL	+/- 5.2098
15	n-Tetratriacontane (C34)	14167-59-0	6JNHB	99%	201.3 µg/mL	+/- 5.2012
16	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	201.7 µg/mL	+/- 5.2098
17	n-Octatriacontane (C38)	7194-85-6	0000207852	96%	201.6 µg/mL	+/- 5.2081

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: n-Pentane
CAS # 109-66-0
Purity 99%

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

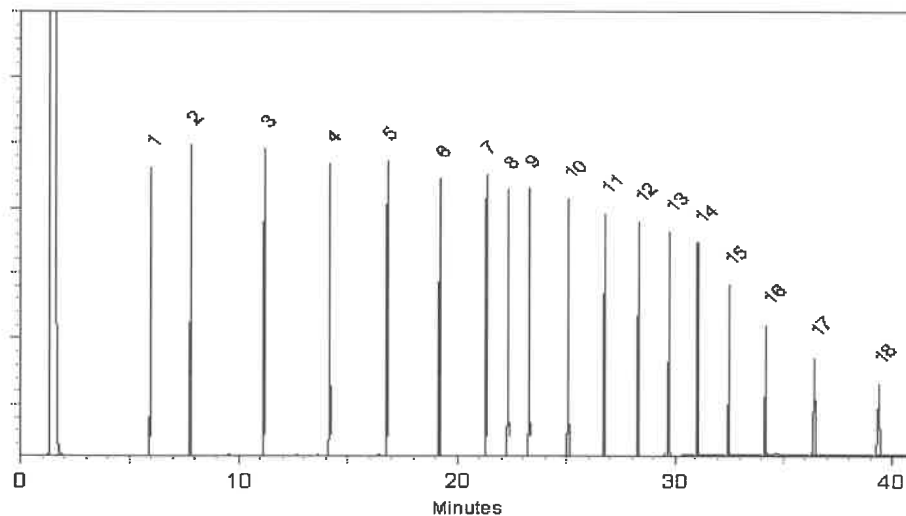
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl



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

Brandon Reish
Brandon Reish - Operations Technician III

Date Mixed: 23-Dec-2024 **Balance Serial #** C322230531

Dillon Murphy
Dillon Murphy - Operations Technician I

Date Passed: 27-Dec-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

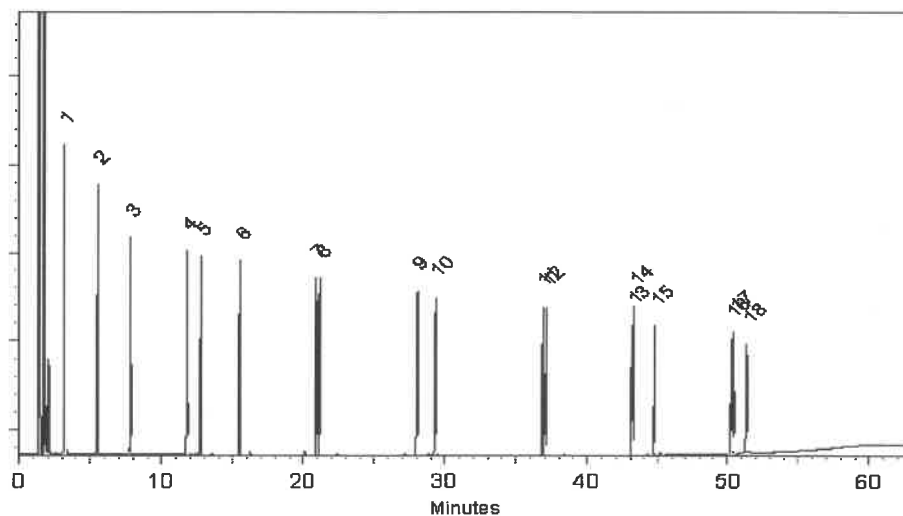
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

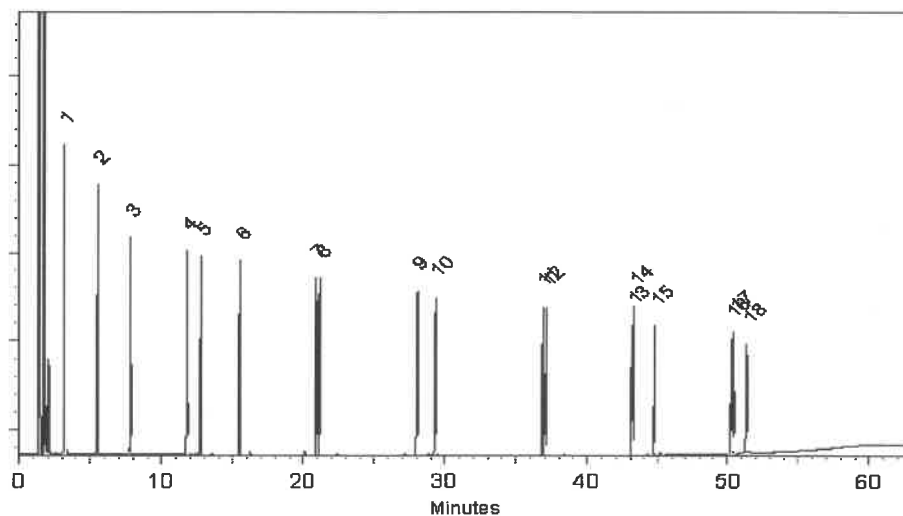
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

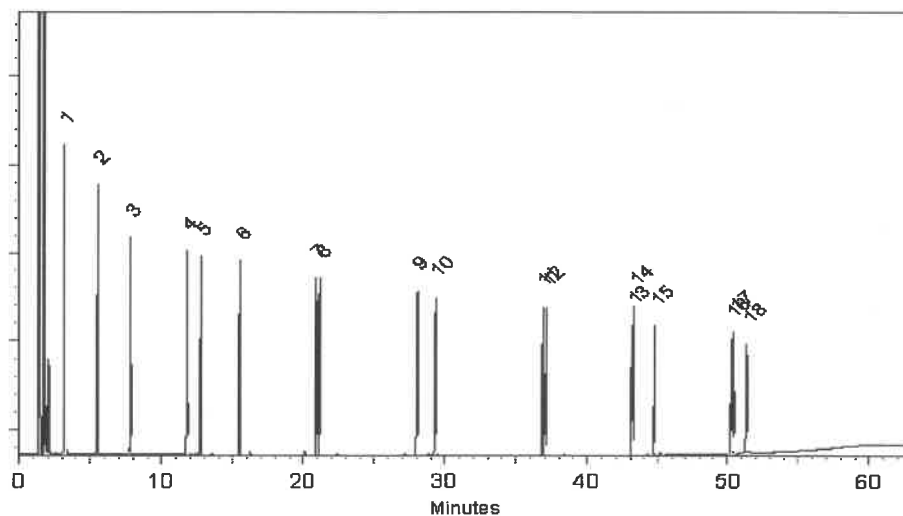
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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Certificate of Analysis

chromatographic plus



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.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

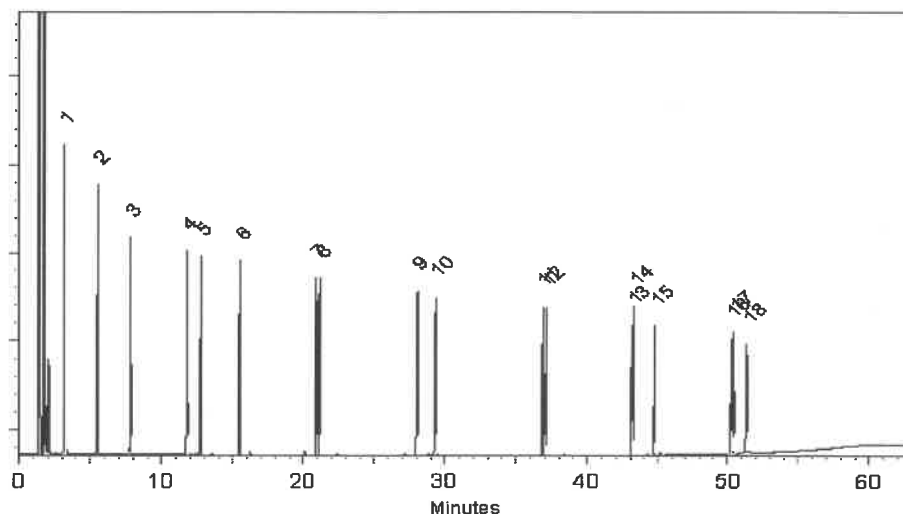
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

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* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

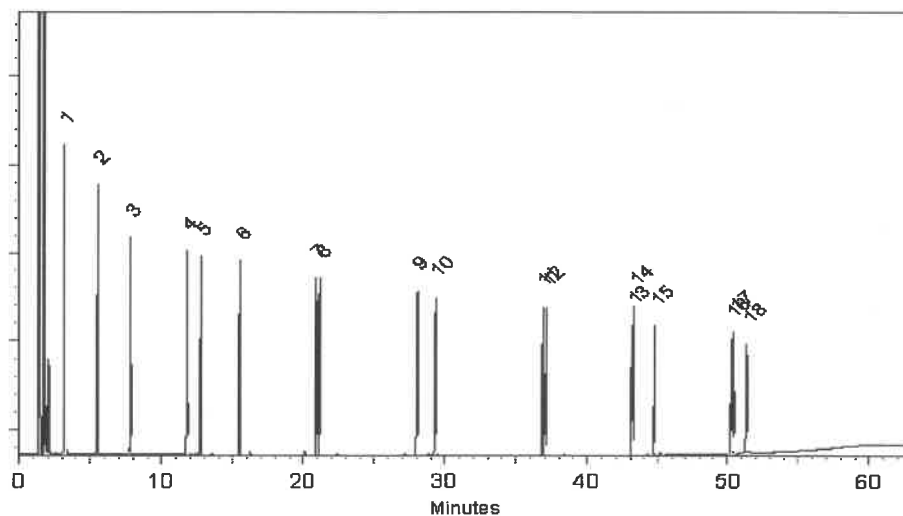
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

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Manufacturing Notes:

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



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Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
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4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
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7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
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9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

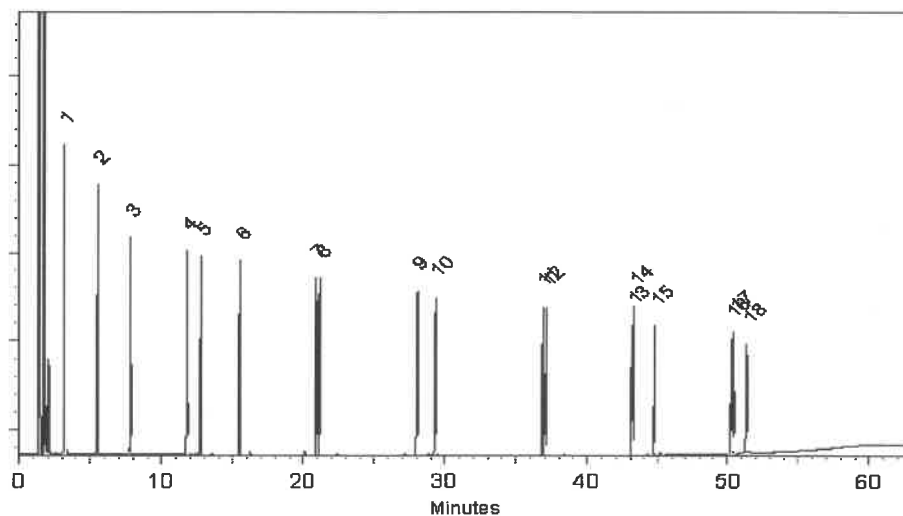
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30543

Lot No.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

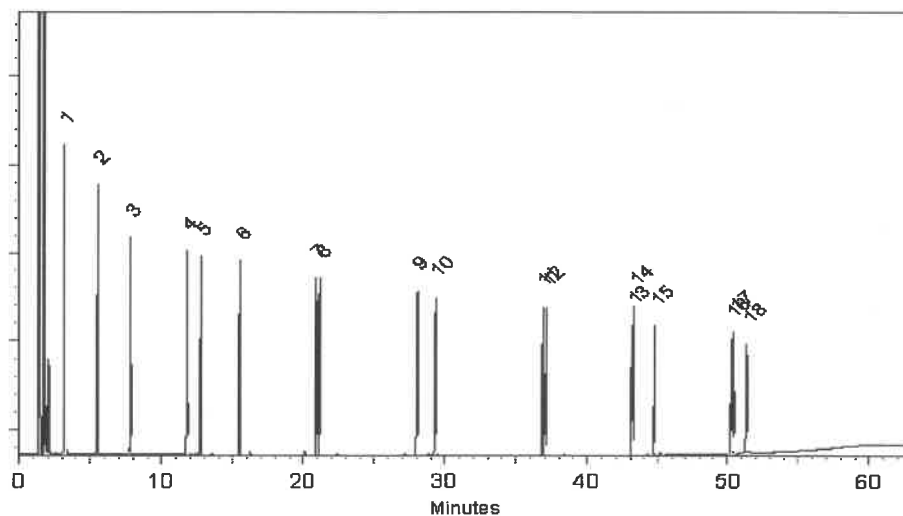
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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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.: A0220580

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 : November 30, 2030

Storage: 10°C or colder

Handling: Sonication required. Mix is photosensitive.

Ship: Ambient

P13916 } Y.P.
↓
P13935 } 08/06/25

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2,3-Trimethylbenzene	526-73-8	8776.10-39	98%	201.9 µg/mL	+/- 9.0961
2	Naphthalene	91-20-3	STBL1057	99%	200.8 µg/mL	+/- 9.0474
3	2-Methylnaphthalene	91-57-6	STBL3028	99%	200.4 µg/mL	+/- 9.0294
4	Acenaphthylene	208-96-8	RP241029RSR	98%	201.9 µg/mL	+/- 9.0961
5	Acenaphthene	83-32-9	MKCR7169	99%	200.4 µg/mL	+/- 9.0294
6	Fluorene	86-73-7	10246250	98%	201.9 µg/mL	+/- 9.0961
7	Phenanthrene	85-01-8	MKCT3391	99%	200.8 µg/mL	+/- 9.0474
8	Anthracene	120-12-7	MKCW9141	99%	200.4 µg/mL	+/- 9.0294
9	Fluoranthene	206-44-0	MKCQ4728	99%	200.4 µg/mL	+/- 9.0294
10	Pyrene	129-00-0	BCCL8032	99%	201.6 µg/mL	+/- 9.0835
11	Benz(a)anthracene	56-55-3	I220012022BAA	99%	202.0 µg/mL	+/- 9.1015
12	Chrysene	218-01-9	RP240719RSR	99%	202.0 µg/mL	+/- 9.1015
13	Benzo(b)fluoranthene	205-99-2	SBS-BBF-FINAL-2	99%	202.0 µg/mL	+/- 9.1015
14	Benzo(k)fluoranthene	207-08-9	012022K	98%	201.5 µg/mL	+/- 9.0784
15	Benzo(a)pyrene	50-32-8	NQLXA	98%	200.7 µg/mL	+/- 9.0431
16	Indeno(1,2,3-cd)pyrene	193-39-5	12-JKL-118-9	97%	200.6 µg/mL	+/- 9.0383

17	Dibenz(a,h)anthracene	53-70-3	2-ASA-59-1	99%	201.2 µg/mL	+/- 9.0655
18	Benzo(g,h,i)perylene	191-24-2	RP241014RSR	98%	200.3 µg/mL	+/- 9.0255

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

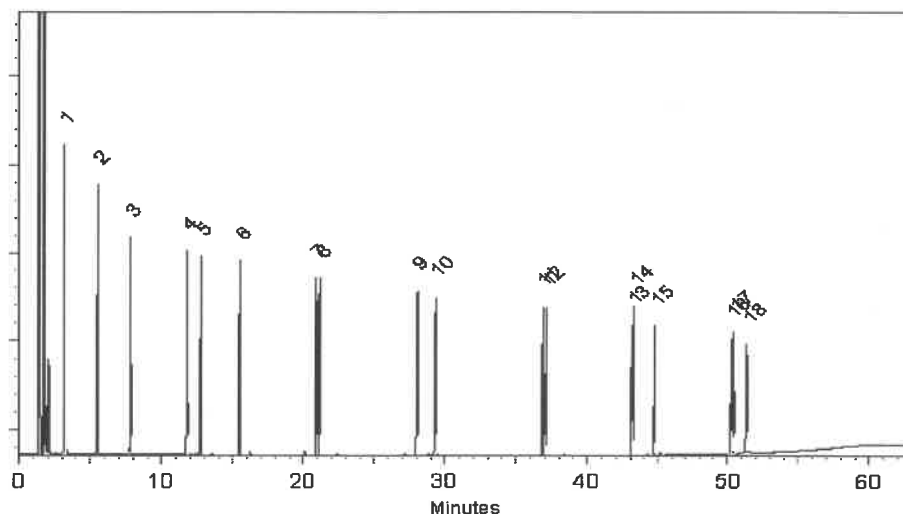
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
20 ml/min.

Inj. Vol
1µl



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

VenKelley
Ven Kelley - Operations Tech I

Date Mixed: 30-Dec-2024 **Balance Serial #** 1128360905

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 03-Jan-2025

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31480 **Lot No.:** A0219106
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 : October 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is photosensitive. **Ship:** Ambient

P13947
L
P1395h

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Fluorobiphenyl	321-60-8	00021384	99%	4,013.5 µg/mL	+/- 180.7988
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,011.0 µg/mL	+/- 180.6862

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

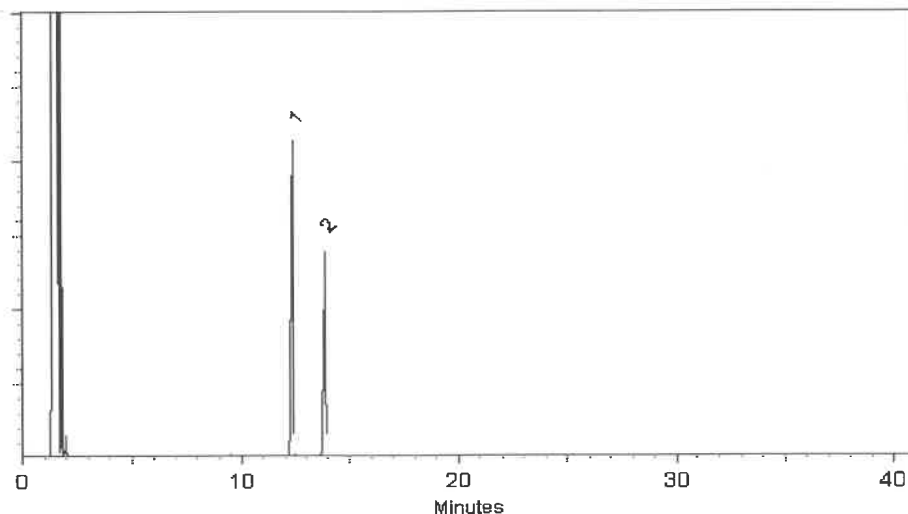
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Wilner Torres
Wilner Torres - Operation Tech I

Date Mixed: 14-Nov-2024

Balance Serial # 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Nov-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31480 **Lot No.:** A0219106
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 : October 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is **Ship:** Ambient
photosensitive.

P13947
L
P1395h

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Fluorobiphenyl	321-60-8	00021384	99%	4,013.5 µg/mL	+/- 180.7988
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,011.0 µg/mL	+/- 180.6862

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

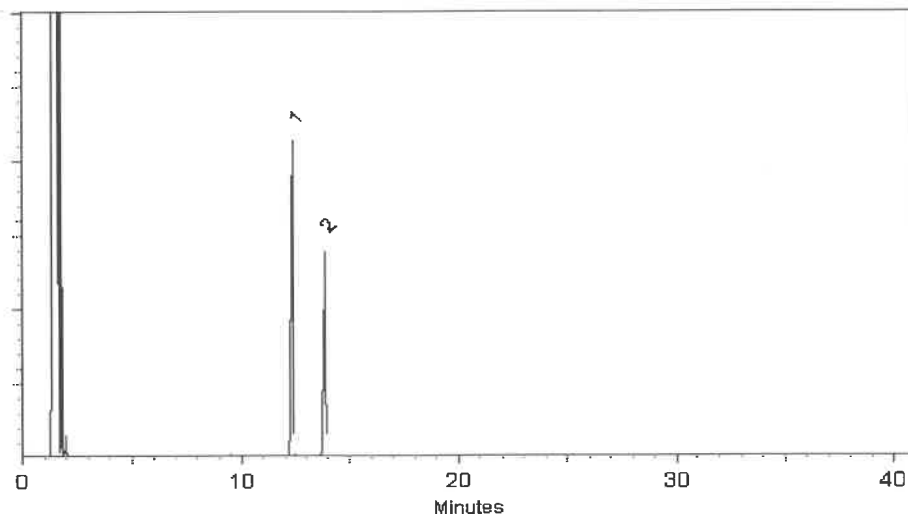
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Wilner Torres
Wilner Torres - Operation Tech I

Date Mixed: 14-Nov-2024

Balance Serial # 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Nov-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31480 **Lot No.:** A0219106
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 : October 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is **Ship:** Ambient
photosensitive.

P13947
L
P1395h

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	2-Fluorobiphenyl	321-60-8	00021384	99%	4,013.5 µg/mL	+/- 180.7988
2	2-Bromonaphthalene	580-13-2	STBC5362V	99%	4,011.0 µg/mL	+/- 180.6862

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

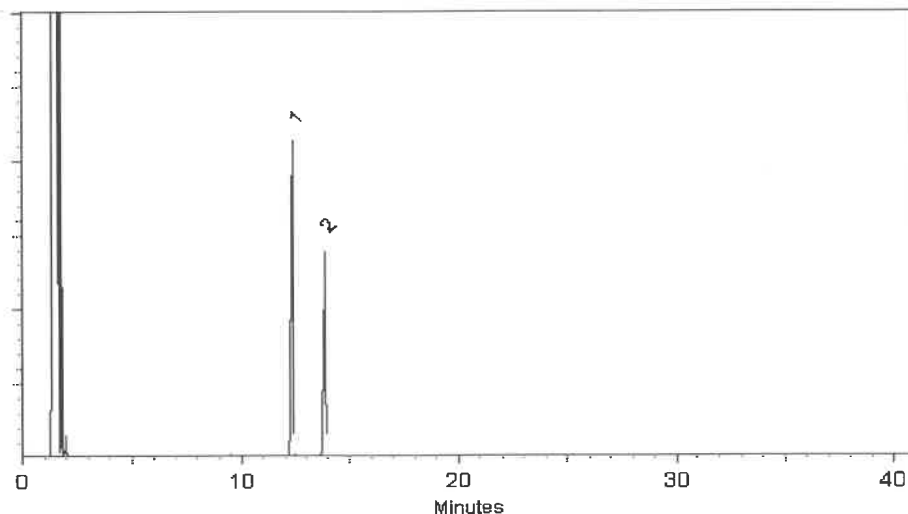
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Wilner Torres
Wilner Torres - Operation Tech I

Date Mixed: 14-Nov-2024

Balance Serial # 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Nov-2024

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

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31480 **Lot No.:** A0219106
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 : October 31, 2030 **Storage:** 10°C or colder
Handling: Sonication required. Mix is **Ship:** Ambient
photosensitive.

P13947
L
P1395h

CERTIFIED VALUES

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

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CAS # 110-54-3
Purity 99%

Quality Confirmation Test

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

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hydrogen-constant pressure 10 psi.

Temp. Program:

40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:

250°C

Det. Temp:

330°C

Det. Type:

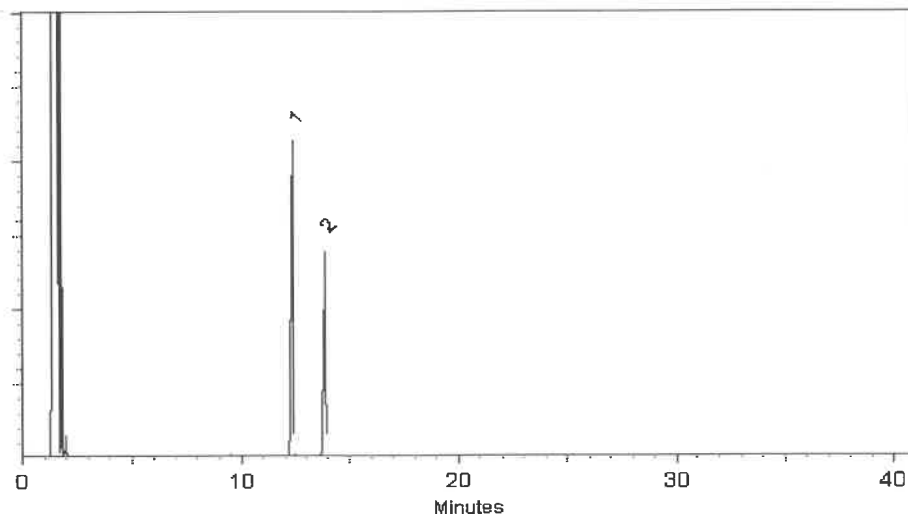
FID

Split Vent:

2 ml/min.

Inj. Vol

1µl



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

Wilner Torres
Wilner Torres - Operation Tech I

Date Mixed: 14-Nov-2024

Balance Serial # 1128353505

Jennifer Pollino
Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 20-Nov-2024

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

General Certified Reference Material Notes

Expiration Notes:

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- Purity values are rounded to the nearest whole number.

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

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



Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C ₆ Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

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

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

Jamie Croak
Director Quality Operations, Bioscience Production



SHIPPING DOCUMENTS

CLIENT INFORMATION				CLIENT PROJECT INFORMATION				CLIENT BILLING INFORMATION											
COMPANY: <u>G Environmental</u>				PROJECT NAME: <u>Hillside</u>				BILL TO: <u>G Environmental</u>											
ADDRESS: <u>8 CARRAGE</u>				PROJECT NO.: _____ LOCATION: _____				ADDRESS: <u>8 CARRAGE</u>											
CITY: <u>Successuma</u> STATE: <u>NJ</u> ZIP: <u>07876</u>				PROJECT MANAGER: <u>GL</u>				CITY: <u>Successuma</u> STATE: <u>NJ</u> ZIP: _____											
ATTENTION: <u>GL</u>				e-mail: _____				ATTENTION: _____ PHONE: _____											
PHONE: _____		FAX: _____		PHONE: _____		FAX: _____		ANALYSIS											
DATA TURNAROUND INFORMATION				DATA DELIVERABLE INFORMATION															
FAX (RUSH) _____ DAYS*				☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)				EQH out 1 Vet 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100											
HARDCOPY (DATA PACKAGE): _____ DAYS*				☐ Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP															
EDD: _____ DAYS*				☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B															
*TO BE APPROVED BY CHEMTECH				☐ + Raw Data ☐ Other _____															
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS				EDD FORMAT: <u>hazmat NJdep</u>															
ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER		
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9			
1.	GC1	Soil	X		5/7/25	1430	5	X	X										
2.																			
3.																			
4.																			
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY																			
RELINQUISHED BY SAMPLER:		DATE/TIME:		RECEIVED BY:		Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C													
1. <u>[Signature]</u>		5/8/25		1. <u>yg</u>		Comments: <u>Adjust Factor +1</u>													
2. _____		DATE/TIME: _____		RECEIVED BY: _____		2. _____													
3. _____		DATE/TIME: _____		RECEIVED BY: _____		3. _____													
Page _____ of _____				CLIENT: ☐ Hand Delivered ☐ Other _____								Shipment Complete ☐ YES ☐ NO							

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1987	GENV01	Order Date : 5/8/2025 1:07:00 PM	Project Mgr :
Client Name : G Environmental		Project Name : Hillside	Report Type : NJ Reduced
Client Contact : Gary Landis		Receive DateTime : 5/8/2025 1:00:00 PM	EDD Type : NJ HAZSITE
Invoice Name : G Environmental		Purchase Order :	Hard Copy Date :
Invoice Contact : Gary Landis			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1987-01	GC1	Solid	05/07/2025	14:30		VOCMS Group1	8260D		5 Bus. Days

Relinquished By :

Date / Time : 5/8/25 1430

Received By :

Date / Time :

Storage Area : VOA Refridgerator Room