

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

LAB CHRONICLE

OrderID:	P5147	OrderDate:	12/5/2024 2:58:00 PM
Client:	ENTACT	Project:	North Point
Contact:	Wyatt Seel	Location:	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P5147-01	EX-8-TPH-1	SOIL			12/05/24	12/06/24	12/09/24	12/05/24
			Diesel Range Organics	8015D				
			Gasoline Range Organics	8015D				
P5147-02	EX-8-TPH-2	SOIL			12/05/24	12/06/24	12/09/24	12/05/24
			Diesel Range Organics	8015D				
			Gasoline Range Organics	8015D				



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: ENTACT
Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015137.D	67				0
PIBLK-FF015146.D	91				0
PIBLK-FF015149.D	82				0
PIBLK-FF015154.D	83				0
EX-8-TPH-1	0 *				1
EX-8-TPH-1MS	66				0
EX-8-TPH-1MSD	67				0
EX-8-TPH-2	0 *				1
PB165425BL	76				0
PB165425BS	115				0

QC LIMITS

TETRACOSANE-d50

For Water : 29-130
For Soil : 37-130

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate Diluted Out

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** ENTACT
Lab Code: CHEM **Cas No:** P5147 **SAS No :** P5147 **SDG No:** P5147
Client SampleID : EX-8-TPH-1MS **Datafile:** FF015143.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	8222	1470000	1160000	-3770%	*	68-131

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** ENTACT
Lab Code: CHEM **Cas No:** P5147 **SAS No :** P5147 **SDG No:** P5147
Client SampleID : EX-8-TPH-1MSD **Datafile:** FF015144.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	8217	1470000	1160000	-3772%	*	68-131

MS/MSD % Recovery RPD : 0.05

SOIL DIESEL RANGE ORGANICS LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RI

Lab Name: Chemtech **Client:** ENTACT
Lab Code: CHEM **Cas No:** P5147 **SAS No :** P5147 **SDG No:** P5147
Matrix Spike - EPA Sample No : PB165425BS **Datafile:** FF015141.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6660	0	7619	114	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB165425BL

Lab Name: CHEMTECH

Contract: ENTA05

Lab Code: CHEM Case No.: P5147

SAS No.: P5147 SDG NO.: P5147

Lab File ID: FF015140.D

Lab Sample ID: PB165425BL

Instrument ID: FF

Date Extracted: 12/06/2024

Matrix: (soil/water) Soil

Date Analyzed: 12/06/24

Level: (low/med) low

Time Analyzed: 13:44

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB165425BS	PB165425BS	FF015141.D	12/06/24
EX-8-TPH-1MS	P5147-01MS	FF015143.D	12/06/24
EX-8-TPH-1MSD	P5147-01MSD	FF015144.D	12/06/24
EX-8-TPH-1	P5147-01	FF015152.D	12/09/24
EX-8-TPH-2	P5147-02	FF015153.D	12/09/24

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	ENTACT		Date Collected:	12/05/24	
Project:	North Point		Date Received:	12/05/24	
Client Sample ID:	EX-8-TPH-1		SDG No.:	P5147	
Lab Sample ID:	P5147-01		Matrix:	SOIL	
Analytical Method:	8015D DRO		% Solid:	81	Decanted:
Sample Wt/Vol:	30.06	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	Diesel Range Organics	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015152.D	100	12/06/24 09:03	12/09/24 10:32	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1700000		22800	205000	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	0.00	*	37 - 130	0%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015152.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 10:32
Operator : YP\AJ
Sample : P5147-01 100X
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1

Integration File: autoint1.e
Quant Time: Dec 10 00:55:13 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units
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System Monitoring Compounds

Target Compounds

(f)=RT Delta > 1/2 Window

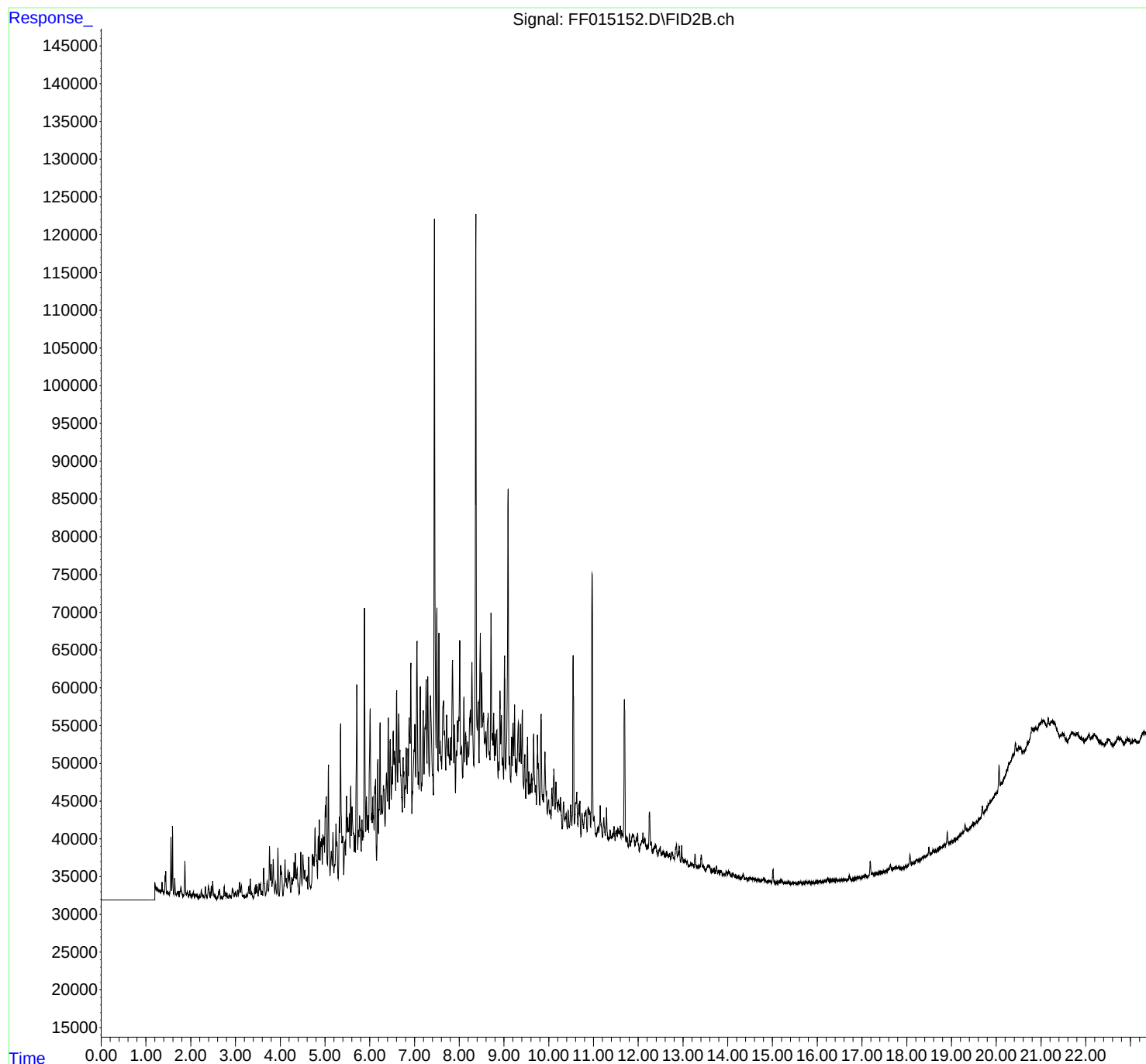
(m)=manual int.

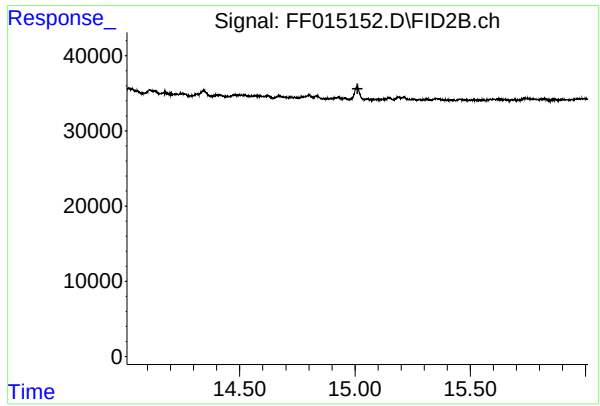
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015152.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 10:32
Operator : YP\AJ
Sample : P5147-01 100X
Misc :
ALS Vial : 61 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1

Integration File: autoint1.e
Quant Time: Dec 10 00:55:13 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 0.000 min
Exp R.T.: 15.011 min
Response: 0
Conc: N.D.

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015152.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 10:32
Sample : P5147-01 100X
Misc :
ALS Vial : 61 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.721	4.682	4.732	VV	4630	56139	3.61%	0.108%
2	4.744	4.732	4.760	VV	4158	61120	3.93%	0.118%
3	4.779	4.760	4.814	VV	7919	161717	10.40%	0.312%
4	4.818	4.814	4.833	VV	3540	31616	2.03%	0.061%
5	4.850	4.833	4.862	VV	6719	73446	4.72%	0.142%
6	4.875	4.862	4.891	VV	8785	105164	6.76%	0.203%
7	4.908	4.891	4.917	VV	5805	78935	5.07%	0.152%
8	4.927	4.917	4.941	VV	6169	68677	4.42%	0.133%
9	4.955	4.941	4.967	VV	6622	84673	5.44%	0.163%
10	4.981	4.967	4.993	VV	6271	83324	5.36%	0.161%
11	5.008	4.993	5.017	VV	10393	118502	7.62%	0.229%
12	5.028	5.017	5.057	VV	11489	158835	10.21%	0.306%
13	5.077	5.057	5.115	VV	15574	224809	14.45%	0.434%
14	5.142	5.115	5.162	VV	4000	77102	4.96%	0.149%
15	5.179	5.162	5.201	VV	6340	84244	5.42%	0.163%
16	5.248	5.201	5.261	VV	7321	129545	8.33%	0.250%
17	5.269	5.261	5.296	VV	4963	58115	3.74%	0.112%
18	5.322	5.296	5.332	PV	8055	88605	5.70%	0.171%
19	5.349	5.332	5.381	VV	20329	315629	20.29%	0.609%
20	5.401	5.381	5.420	VV	5201	90522	5.82%	0.175%
21	5.449	5.420	5.461	PV	2646	40671	2.61%	0.078%
22	5.482	5.461	5.496	PV	6102	60224	3.87%	0.116%
23	5.523	5.500	5.531	BV	474	4852	0.31%	0.009%
24	5.545	5.531	5.558	VV	3707	33332	2.14%	0.064%
25	5.576	5.558	5.592	PV	8246	92799	5.97%	0.179%
26	5.605	5.592	5.635	VV	5598	95574	6.14%	0.184%
27	5.639	5.635	5.656	VV	2374	18992	1.22%	0.037%
28	5.671	5.656	5.683	PV	2282	17147	1.10%	0.033%
29	5.714	5.683	5.734	VV	22306	316286	20.33%	0.610%
30	5.750	5.734	5.760	VV	3100	34306	2.21%	0.066%
31	5.776	5.760	5.811	VV	5053	94594	6.08%	0.183%
32	5.828	5.811	5.843	VV	4641	57122	3.67%	0.110%
33	5.854	5.843	5.861	VV	2984	27520	1.77%	0.053%
34	5.884	5.861	5.914	VV	32762	438135	28.17%	0.845%
35	5.927	5.914	5.952	VV	7876	128780	8.28%	0.248%
36	5.966	5.952	5.978	VV	5421	70116	4.51%	0.135%

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37	6.010	5.978	6.040	VV	19773	419502	26.97%	0.809%
38	6.048	6.040	6.056	VV	6021	52694	3.39%	0.102%
39	6.069	6.056	6.081	VV	8155	98006	6.30%	0.189%
40	6.087	6.081	6.098	VV	5795	54025	3.47%	0.104%
41	6.114	6.098	6.122	VV	9789	108019	6.94%	0.208%
42	6.131	6.122	6.154	VV	10661	115023	7.39%	0.222%
43	6.180	6.154	6.198	PV	13441	164619	10.58%	0.318%
44	6.232	6.198	6.251	VV	18252	314243	20.20%	0.606%
45	6.262	6.251	6.288	VV	8648	160685	10.33%	0.310%
46	6.308	6.288	6.345	VV	9957	264249	16.99%	0.510%
47	6.375	6.345	6.396	VV	11564	270238	17.37%	0.521%
48	6.416	6.396	6.440	VV	18990	325874	20.95%	0.629%
49	6.458	6.440	6.483	VV	16056	310126	19.94%	0.598%
50	6.499	6.483	6.509	VV	12491	163285	10.50%	0.315%
51	6.526	6.509	6.545	VV	17217	309789	19.92%	0.598%
52	6.555	6.545	6.582	VV	14630	285442	18.35%	0.551%
53	6.602	6.582	6.625	VV	22511	392348	25.22%	0.757%
54	6.651	6.625	6.666	VV	19531	376462	24.20%	0.726%
55	6.675	6.666	6.729	VV	14780	415281	26.70%	0.801%
56	6.746	6.729	6.758	VV	13808	192451	12.37%	0.371%
57	6.763	6.758	6.778	VV	11930	120717	7.76%	0.233%
58	6.792	6.778	6.797	VV	10057	104007	6.69%	0.201%
59	6.817	6.797	6.842	VV	15106	313704	20.17%	0.605%
60	6.856	6.842	6.867	VV	14849	183939	11.83%	0.355%
61	6.881	6.867	6.904	VV	19058	364181	23.41%	0.703%
62	6.919	6.904	6.944	VV	26375	425670	27.37%	0.821%
63	7.010	6.944	7.029	VV	18259	649557	41.76%	1.253%
64	7.056	7.029	7.083	VV	29310	609291	39.17%	1.176%
65	7.093	7.083	7.104	VV	11914	135694	8.72%	0.262%
66	7.132	7.104	7.154	VV	23246	494741	31.81%	0.955%
67	7.164	7.154	7.169	VV	10441	93841	6.03%	0.181%
68	7.197	7.169	7.216	VV	20095	416426	26.77%	0.803%
69	7.262	7.216	7.280	VV	24216	688109	44.24%	1.328%
70	7.299	7.280	7.331	VV	24617	532443	34.23%	1.027%
71	7.359	7.331	7.423	VV	22058	851682	54.76%	1.643%
72	7.447	7.423	7.483	VV	85248	1349041	86.73%	2.603%
73	7.501	7.483	7.527	VV	33767	589859	37.92%	1.138%
74	7.548	7.527	7.566	VV	30504	481613	30.96%	0.929%
75	7.575	7.566	7.590	VV	16167	217065	13.96%	0.419%
76	7.597	7.590	7.609	VV	14095	152532	9.81%	0.294%
77	7.650	7.609	7.667	VV	21498	631238	40.58%	1.218%
78	7.674	7.667	7.699	VV	17484	302252	19.43%	0.583%
79	7.721	7.699	7.749	VV	19663	492936	31.69%	0.951%
80	7.761	7.749	7.776	VV	16539	241757	15.54%	0.466%
81	7.780	7.776	7.792	VV	14159	133816	8.60%	0.258%
82	7.808	7.792	7.822	VV	16674	273941	17.61%	0.529%
83	7.851	7.822	7.881	VV	26939	691510	44.46%	1.334%
84	7.898	7.881	7.917	VV	18367	322372	20.73%	0.622%
85	7.937	7.917	7.949	VV	14945	249829	16.06%	0.482%
86	7.964	7.949	7.975	VV	18894	268002	17.23%	0.517%
87	7.989	7.975	7.995	VV	19425	219127	14.09%	0.423%
88	8.014	7.995	8.033	VV	29617	504088	32.41%	0.973%
89	8.040	8.033	8.045	VV	14869	109756	7.06%	0.212%

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90	8.055	8.045	8.076	VV	15541	260904	16.77%	0.503%
91	8.106	8.076	8.125	VV	22070	477313	30.69%	0.921%
92	8.145	8.125	8.170	VV	17401	418166	26.88%	0.807%
93	8.192	8.170	8.210	VV	16089	360831	23.20%	0.696%
94	8.250	8.210	8.267	VV	20465	609592	39.19%	1.176%
95	8.285	8.267	8.327	VV	26791	681759	43.83%	1.315%
96	8.372	8.327	8.405	VV	86065	1555417	100.00%	3.001%
97	8.425	8.405	8.445	VV	21551	441518	28.39%	0.852%
98	8.473	8.445	8.490	VV	30655	622231	40.00%	1.201%
99	8.504	8.490	8.524	VV	25458	445931	28.67%	0.860%
100	8.545	8.524	8.564	VV	20129	449495	28.90%	0.867%
101	8.570	8.564	8.580	VV	16504	159129	10.23%	0.307%
102	8.595	8.580	8.613	VV	17617	330321	21.24%	0.637%
103	8.647	8.613	8.668	VV	20118	576525	37.07%	1.112%
104	8.674	8.668	8.689	VV	14957	190154	12.23%	0.367%
105	8.713	8.689	8.732	VV	33477	582157	37.43%	1.123%
106	8.742	8.732	8.757	VV	17443	248474	15.97%	0.479%
107	8.771	8.757	8.788	VV	20193	331710	21.33%	0.640%
108	8.802	8.788	8.817	VV	17418	271013	17.42%	0.523%
109	8.841	8.817	8.870	VV	17959	490779	31.55%	0.947%
110	8.883	8.870	8.893	VV	13684	180167	11.58%	0.348%
111	8.912	8.893	8.929	VV	23133	386949	24.88%	0.747%
112	8.945	8.929	8.965	VV	19940	368967	23.72%	0.712%
113	8.974	8.965	8.992	VV	14294	220430	14.17%	0.425%
114	9.013	8.992	9.037	VV	27868	491928	31.63%	0.949%
115	9.093	9.037	9.119	VV	49979	1180093	75.87%	2.277%
116	9.126	9.119	9.151	VV	14403	252649	16.24%	0.487%
117	9.172	9.151	9.186	VV	17094	297141	19.10%	0.573%
118	9.202	9.186	9.222	VV	18928	349075	22.44%	0.674%
119	9.239	9.222	9.258	VV	21366	372134	23.93%	0.718%
120	9.271	9.258	9.288	VV	14254	239543	15.40%	0.462%
121	9.321	9.288	9.339	VV	19152	483212	31.07%	0.932%
122	9.347	9.339	9.355	VV	14903	141982	9.13%	0.274%
123	9.370	9.355	9.386	VV	18834	298439	19.19%	0.576%
124	9.410	9.386	9.443	VV	20749	503702	32.38%	0.972%
125	9.464	9.443	9.488	VV	14869	325765	20.94%	0.629%
126	9.527	9.488	9.546	VV	17193	434301	27.92%	0.838%
127	9.559	9.546	9.574	VV	12616	182251	11.72%	0.352%
128	9.583	9.574	9.595	VV	10979	134072	8.62%	0.259%
129	9.613	9.595	9.629	VV	12257	224713	14.45%	0.434%
130	9.664	9.629	9.698	VV	17653	526444	33.85%	1.016%
131	9.709	9.698	9.727	VV	10719	169160	10.88%	0.326%
132	9.750	9.727	9.764	VV	17518	291518	18.74%	0.562%
133	9.771	9.764	9.802	VV	13680	249493	16.04%	0.481%
134	9.830	9.802	9.859	VV	20247	464180	29.84%	0.896%
135	9.870	9.859	9.882	VV	9616	127781	8.22%	0.247%
136	9.917	9.882	9.944	VV	15227	423805	27.25%	0.818%
137	9.950	9.944	9.968	VV	10058	128994	8.29%	0.249%
138	9.997	9.968	10.018	VV	9026	245296	15.77%	0.473%
139	10.033	10.018	10.051	VV	7666	144314	9.28%	0.278%
140	10.072	10.051	10.091	VV	10548	213841	13.75%	0.413%
141	10.117	10.091	10.144	VV	13044	334141	21.48%	0.645%

					rteres			
142	10.163	10.144	10.205	VV	11399	337979	21.73%	0.652%
143	10.221	10.205	10.249	VV	8937	219630	14.12%	0.424%
144	10.265	10.249	10.305	VV	9354	249074	16.01%	0.481%
145	10.333	10.305	10.360	VV	8759	234977	15.11%	0.453%
146	10.376	10.360	10.380	VV	6822	80935	5.20%	0.156%
147	10.391	10.380	10.415	VV	7222	133257	8.57%	0.257%
148	10.436	10.415	10.463	VV	7645	180279	11.59%	0.348%
149	10.491	10.463	10.520	VV	8441	234936	15.10%	0.453%
150	10.547	10.520	10.575	VV	28168	493603	31.73%	0.952%
151	10.602	10.575	10.610	VV	8827	163154	10.49%	0.315%
152	10.627	10.610	10.655	VV	10138	216585	13.92%	0.418%
153	10.672	10.655	10.684	VV	8503	129142	8.30%	0.249%
154	10.696	10.684	10.719	VV	9001	150803	9.70%	0.291%
155	10.745	10.719	10.780	VV	7419	221233	14.22%	0.427%
156	10.810	10.780	10.817	VV	7496	144170	9.27%	0.278%
157	10.830	10.817	10.858	VV	7783	165708	10.65%	0.320%
158	10.879	10.858	10.887	VV	8164	121637	7.82%	0.235%
159	10.895	10.887	10.909	VV	7940	100788	6.48%	0.194%
160	10.918	10.909	10.937	VV	7699	115711	7.44%	0.223%
161	10.970	10.937	10.999	VV	38972	678378	43.61%	1.309%
162	11.015	10.999	11.064	VV	7030	221096	14.21%	0.427%
163	11.111	11.064	11.125	VV	5613	190433	12.24%	0.367%
164	11.151	11.125	11.207	VV	8481	293173	18.85%	0.566%
165	11.231	11.207	11.265	VV	6876	196414	12.63%	0.379%
166	11.292	11.265	11.322	VV	8234	205354	13.20%	0.396%
167	11.334	11.322	11.345	VV	4376	57981	3.73%	0.112%
168	11.375	11.345	11.398	VV	5270	143982	9.26%	0.278%
169	11.428	11.398	11.439	VV	4884	112729	7.25%	0.217%
170	11.458	11.439	11.481	VV	5826	127222	8.18%	0.245%
171	11.509	11.481	11.530	VV	5200	140515	9.03%	0.271%
172	11.547	11.530	11.580	VV	5538	153235	9.85%	0.296%
173	11.597	11.580	11.615	VV	5928	109060	7.01%	0.210%
174	11.627	11.615	11.659	VV	5293	127489	8.20%	0.246%
175	11.692	11.659	11.726	VV	22704	434500	27.93%	0.838%
176	11.750	11.726	11.777	VV	4513	122351	7.87%	0.236%
177	11.803	11.777	11.825	VV	4817	115778	7.44%	0.223%
178	11.870	11.825	11.883	VV	4810	144039	9.26%	0.278%
179	11.889	11.883	11.927	VV	4812	114768	7.38%	0.221%
180	11.955	11.927	11.967	VV	4521	95809	6.16%	0.185%
181	11.985	11.967	12.025	VV	5046	134466	8.65%	0.259%
182	12.049	12.025	12.055	VV	3551	58015	3.73%	0.112%
183	12.076	12.055	12.086	VV	4076	71202	4.58%	0.137%
184	12.104	12.086	12.120	VV	5143	91856	5.91%	0.177%
185	12.142	12.120	12.188	VV	4290	154461	9.93%	0.298%
186	12.209	12.188	12.222	VV	3501	64973	4.18%	0.125%
187	12.250	12.222	12.278	VV	7848	179048	11.51%	0.345%
188	12.290	12.278	12.327	VV	3964	94024	6.04%	0.181%
189	12.355	12.327	12.367	VV	3383	73125	4.70%	0.141%
190	12.388	12.367	12.442	VV	3647	135568	8.72%	0.262%
191	12.489	12.442	12.511	VV	3494	117935	7.58%	0.228%
192	12.521	12.511	12.532	VV	2536	30329	1.95%	0.059%
193	12.539	12.532	12.545	VV	2607	20696	1.33%	0.040%
194	12.548	12.545	12.554	VV	2575	13157	0.85%	0.025%

					rteres			
195	12.571	12.554	12.593	VV	2766	58553	3.76%	0.113%
196	12.610	12.593	12.615	VV	2321	29995	1.93%	0.058%
197	12.635	12.615	12.673	VV	2858	83925	5.40%	0.162%
198	12.701	12.673	12.728	VV	2538	72571	4.67%	0.140%
199	12.745	12.728	12.789	VV	2720	85968	5.53%	0.166%
200	12.792	12.789	12.807	VV	2031	21387	1.38%	0.041%
201	12.852	12.807	12.874	VV	3836	116868	7.51%	0.225%
202	12.914	12.874	12.948	VV	3570	110704	7.12%	0.214%
203	12.969	12.948	13.017	VV	3665	90098	5.79%	0.174%
204	13.024	13.017	13.045	VV	1746	27909	1.79%	0.054%
205	13.057	13.045	13.082	VV	1719	34537	2.22%	0.067%
206	13.095	13.082	13.119	VV	1656	29500	1.90%	0.057%
207	13.122	13.119	13.137	VV	1097	10947	0.70%	0.021%
208	13.142	13.137	13.147	VV	1031	6508	0.42%	0.013%
209	13.161	13.147	13.174	VV	1224	17591	1.13%	0.034%
210	13.188	13.174	13.201	VV	1394	20768	1.34%	0.040%
211	13.209	13.201	13.219	VV	1306	13757	0.88%	0.027%
212	13.227	13.219	13.247	VV	1229	18239	1.17%	0.035%
213	13.267	13.247	13.318	VV	2631	59689	3.84%	0.115%
214	13.332	13.318	13.347	VV	1086	17081	1.10%	0.033%
215	13.368	13.347	13.374	VV	1047	15418	0.99%	0.030%
216	13.378	13.374	13.385	VV	1035	6811	0.44%	0.013%
217	13.407	13.385	13.447	VV	2562	58903	3.79%	0.114%
218	13.455	13.447	13.506	VV	1119	26736	1.72%	0.052%
219	13.543	13.506	13.549	VV	1041	19575	1.26%	0.038%
220	13.571	13.549	13.590	VV	1245	27261	1.75%	0.053%
221	13.600	13.590	13.625	VV	1124	17101	1.10%	0.033%
222	13.628	13.625	13.650	VV	599	6450	0.41%	0.012%
223	13.663	13.650	13.680	VV	594	8591	0.55%	0.017%
224	13.697	13.680	13.716	VV	786	11311	0.73%	0.022%
225	13.748	13.716	13.780	VV	1116	23188	1.49%	0.045%
226	13.800	13.780	13.825	VV	439	9656	0.62%	0.019%
227	13.853	13.825	13.890	VV	545	10568	0.68%	0.020%
228	13.906	13.890	13.920	VV	127	1368	0.09%	0.003%
229	13.933	13.920	13.947	VV	213	1925	0.12%	0.004%
230	13.966	13.947	13.990	PV	488	6402	0.41%	0.012%
231	14.023	14.000	14.077	BV	411	9869	0.63%	0.019%
232	14.083	14.077	14.088	PV	94	363	0.02%	0.001%
233	14.109	14.088	14.125	VV	557	7685	0.49%	0.015%
234	14.132	14.125	14.153	VV	399	4472	0.29%	0.009%
235	14.174	14.153	14.235	VV	302	7318	0.47%	0.014%
236	14.252	14.235	14.300	VV	270	3972	0.26%	0.008%
237	14.344	14.300	14.372	PV	784	15184	0.98%	0.029%
238	14.377	14.372	14.382	PV	129	296	0.02%	0.001%
239	14.389	14.382	14.393	VV	123	640	0.04%	0.001%
240	14.415	14.393	14.444	VV	247	4455	0.29%	0.009%
241	14.473	14.444	14.504	VV	330	7745	0.50%	0.015%
242	14.510	14.504	14.547	VV	323	6615	0.43%	0.013%
243	14.569	14.547	14.579	VV	309	4422	0.28%	0.009%
244	14.590	14.579	14.599	VV	319	3241	0.21%	0.006%
245	14.603	14.599	14.608	VV	241	1214	0.08%	0.002%
246	14.621	14.608	14.647	VV	384	5020	0.32%	0.010%

					rteres			
247	14.671	14.647	14.700	PV	364	6652	0.43%	0.013%
248	14.704	14.700	14.712	VV	211	1063	0.07%	0.002%
249	14.716	14.712	14.743	VV	193	2859	0.18%	0.006%
250	14.747	14.743	14.760	VV	163	1365	0.09%	0.003%
251	14.768	14.760	14.780	VV	320	2947	0.19%	0.006%
252	14.798	14.780	14.820	VV	544	8764	0.56%	0.017%
253	14.832	14.820	14.867	VV	429	6395	0.41%	0.012%
254	14.873	14.867	14.880	VV	82	666	0.04%	0.001%
255	14.883	14.880	14.893	VV	110	844	0.05%	0.002%
256	14.899	14.893	14.904	VV	159	759	0.05%	0.001%
257	14.929	14.904	14.948	VV	306	5242	0.34%	0.010%
258	14.955	14.948	14.984	VV	192	2482	0.16%	0.005%
259	15.010	14.984	15.040	VV	1763	26035	1.67%	0.050%
260	15.053	15.040	15.075	VV	179	2004	0.13%	0.004%
261	15.080	15.075	15.085	PV	143	418	0.03%	0.001%
262	15.098	15.085	15.133	VV	161	2989	0.19%	0.006%
263	15.149	15.133	15.167	VV	349	4570	0.29%	0.009%
264	15.188	15.167	15.204	VV	465	6501	0.42%	0.013%
265	15.213	15.204	15.234	VV	405	5160	0.33%	0.010%
266	15.238	15.234	15.243	VV	150	613	0.04%	0.001%
267	15.257	15.243	15.274	VV	148	2174	0.14%	0.004%
268	15.282	15.274	15.297	VV	174	1490	0.10%	0.003%
269	15.311	15.297	15.327	VV	207	2365	0.15%	0.005%
270	15.353	15.327	15.382	VV	285	6070	0.39%	0.012%
271	15.392	15.382	15.407	VV	171	1426	0.09%	0.003%
272	15.412	15.407	15.435	VV	115	1390	0.09%	0.003%
273	15.454	15.435	15.474	PV	243	3252	0.21%	0.006%
274	15.484	15.474	15.494	VV	184	1220	0.08%	0.002%
275	15.497	15.494	15.502	VV	136	446	0.03%	0.001%
276	15.507	15.502	15.529	VV	132	1332	0.09%	0.003%
277	15.540	15.529	15.560	VV	163	1540	0.10%	0.003%
278	15.587	15.560	15.594	PV	221	2402	0.15%	0.005%
279	15.599	15.594	15.610	VV	227	1722	0.11%	0.003%
280	15.624	15.610	15.630	VV	205	2264	0.15%	0.004%
281	15.633	15.630	15.657	VV	219	2247	0.14%	0.004%
282	15.662	15.657	15.671	VV	161	717	0.05%	0.001%
283	15.679	15.671	15.683	VV	107	491	0.03%	0.001%
284	15.694	15.683	15.712	VV	135	1397	0.09%	0.003%
285	15.734	15.712	15.743	VV	296	3436	0.22%	0.007%
286	15.747	15.743	15.767	VV	310	3469	0.22%	0.007%
287	15.775	15.767	15.805	VV	228	2984	0.19%	0.006%
288	15.820	15.805	15.843	VV	242	2958	0.19%	0.006%
289	15.856	15.843	15.889	VV	149	1798	0.12%	0.003%
290	15.900	15.889	15.912	PV	103	635	0.04%	0.001%
291	15.917	15.912	15.925	VV	60	345	0.02%	0.001%
292	15.930	15.925	15.946	VV	72	507	0.03%	0.001%
293	15.971	15.946	15.975	PV	142	1723	0.11%	0.003%
294	15.986	15.975	15.990	VV	207	1307	0.08%	0.003%
295	15.998	15.990	16.023	VV	236	2330	0.15%	0.004%
296	16.041	16.023	16.074	VV	233	4317	0.28%	0.008%
297	16.096	16.074	16.105	VV	101	1272	0.08%	0.002%
298	16.114	16.105	16.118	VV	135	701	0.05%	0.001%
299	16.127	16.118	16.140	VV	177	1462	0.09%	0.003%

					rters			
300	16.150	16.140	16.158	VV	168	1570	0.10%	0.003%
301	16.162	16.158	16.174	VV	161	1171	0.08%	0.002%
302	16.190	16.174	16.215	VV	232	4125	0.27%	0.008%
303	16.236	16.215	16.254	VV	612	8816	0.57%	0.017%
304	16.259	16.254	16.265	VV	289	1593	0.10%	0.003%
305	16.268	16.265	16.287	VV	272	2669	0.17%	0.005%
306	16.296	16.287	16.315	VV	185	2195	0.14%	0.004%
307	16.336	16.315	16.344	VV	223	2453	0.16%	0.005%
308	16.349	16.344	16.370	VV	121	1721	0.11%	0.003%
309	16.374	16.370	16.387	VV	201	1177	0.08%	0.002%
310	16.434	16.387	16.477	VV	254	7310	0.47%	0.014%
311	16.481	16.477	16.505	VV	144	1608	0.10%	0.003%
312	16.543	16.505	16.589	VV	196	7486	0.48%	0.014%
313	16.602	16.589	16.610	VV	144	1407	0.09%	0.003%
314	16.621	16.610	16.650	VV	153	2147	0.14%	0.004%
315	16.712	16.650	16.774	PV	574	15117	0.97%	0.029%
316	16.803	16.774	16.817	PV	180	2078	0.13%	0.004%
317	16.836	16.817	16.864	VV	152	2638	0.17%	0.005%
318	16.928	16.864	16.969	PV	211	8657	0.56%	0.017%
319	16.992	16.969	17.010	PV	126	2204	0.14%	0.004%
320	17.029	17.010	17.060	VV	228	5212	0.34%	0.010%
321	17.084	17.060	17.129	VV	261	5720	0.37%	0.011%
322	17.184	17.129	17.221	PV	1854	31282	2.01%	0.060%
323	17.235	17.221	17.250	VBA	185	2458	0.16%	0.005%
					Sum of corrected areas:		51829624	

FF112124.M Tue Dec 10 03:22:00 2024

Report of Analysis

Client:	ENTACT		Date Collected:	12/05/24	
Project:	North Point		Date Received:	12/05/24	
Client Sample ID:	EX-8-TPH-2		SDG No.:	P5147	
Lab Sample ID:	P5147-02		Matrix:	SOIL	
Analytical Method:	8015D DRO		% Solid:	79.3	Decanted:
Sample Wt/Vol:	30.09	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	Diesel Range Organics	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015153.D	100	12/06/24 09:03	12/09/24 11:00	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1480000		23200	210000	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	0.00	*	37 - 130	0%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015153.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:00
Operator : YP\AJ
Sample : P5147-02 100X
Misc :
ALS Vial : 62 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-2

Integration File: autoint1.e
Quant Time: Dec 10 00:55:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units
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System Monitoring Compounds

Target Compounds

(f)=RT Delta > 1/2 Window

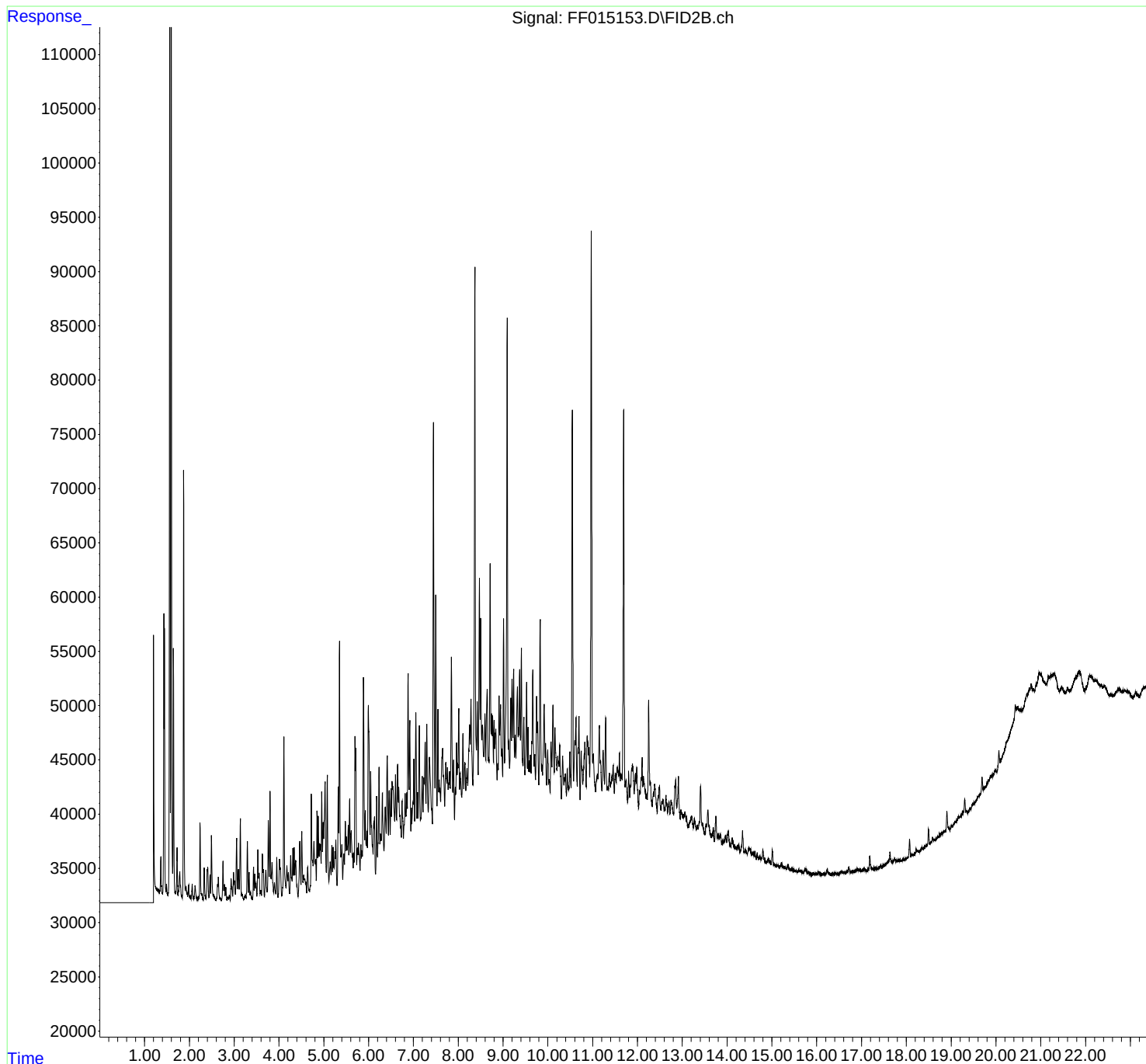
(m)=manual int.

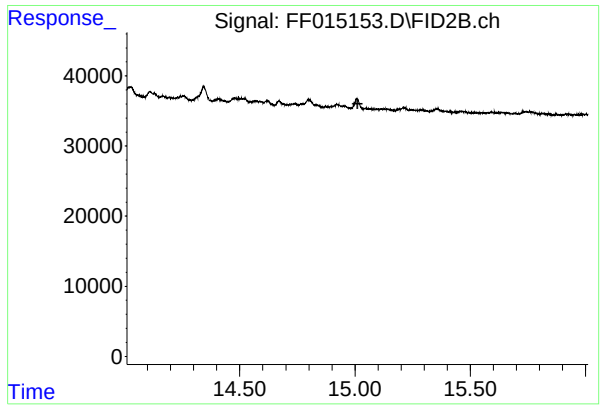
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015153.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:00
Operator : YP\AJ
Sample : P5147-02 100X
Misc :
ALS Vial : 62 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-2

Integration File: autoint1.e
Quant Time: Dec 10 00:55:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 0.000 min
Exp R.T.: 15.011 min
Response: 0
Conc: N.D.

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-2

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015153.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:00
Sample : P5147-02 100X
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.310	4.293	4.324	VV	4479	55539	5.22%	0.126%
2	4.339	4.324	4.354	VV	4532	56393	5.30%	0.128%
3	4.373	4.354	4.398	VV	3339	63041	5.93%	0.143%
4	4.402	4.398	4.427	VV	951	8523	0.80%	0.019%
5	4.463	4.427	4.490	PV	5029	85665	8.06%	0.194%
6	4.508	4.490	4.537	VV	5868	84735	7.97%	0.192%
7	4.551	4.537	4.569	VV	1792	28174	2.65%	0.064%
8	4.577	4.569	4.591	VV	1333	15811	1.49%	0.036%
9	4.600	4.591	4.620	VV	1083	10756	1.01%	0.024%
10	4.639	4.620	4.678	PV	2295	33496	3.15%	0.076%
11	4.722	4.678	4.763	PV	8690	130597	12.29%	0.296%
12	4.780	4.763	4.808	VV	3927	70471	6.63%	0.160%
13	4.819	4.808	4.833	VV	2064	21033	1.98%	0.048%
14	4.850	4.833	4.863	PV	6175	57112	5.37%	0.129%
15	4.876	4.863	4.896	VV	5253	63980	6.02%	0.145%
16	4.909	4.896	4.920	VV	2254	26957	2.54%	0.061%
17	4.928	4.920	4.939	VV	1913	15008	1.41%	0.034%
18	4.955	4.939	4.971	PV	6075	52416	4.93%	0.119%
19	4.987	4.971	5.000	PBA	1896	16039	1.51%	0.036%
20	5.028	5.000	5.058	BV	6653	88093	8.29%	0.200%
21	5.078	5.058	5.115	PV	9286	105993	9.97%	0.240%
22	5.143	5.115	5.163	PV	1850	31281	2.94%	0.071%
23	5.180	5.163	5.196	VV	3380	41454	3.90%	0.094%
24	5.210	5.196	5.229	VV	3358	43270	4.07%	0.098%
25	5.249	5.229	5.258	VV	2985	38494	3.62%	0.087%
26	5.269	5.258	5.296	VV	4056	47811	4.50%	0.108%
27	5.323	5.296	5.334	PV	9097	96569	9.08%	0.219%
28	5.350	5.334	5.380	VV	22457	279879	26.33%	0.634%
29	5.404	5.380	5.423	VV	3689	65259	6.14%	0.148%
30	5.450	5.423	5.462	VV	2855	47407	4.46%	0.107%
31	5.482	5.462	5.496	VV	5814	83084	7.82%	0.188%
32	5.506	5.496	5.517	VV	4382	47810	4.50%	0.108%
33	5.523	5.517	5.529	VV	3520	25884	2.43%	0.059%
34	5.546	5.529	5.559	VV	5407	75508	7.10%	0.171%
35	5.577	5.559	5.593	VV	7876	107942	10.15%	0.244%
36	5.607	5.593	5.638	VV	4654	99027	9.32%	0.224%

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37	5.642	5.638	5.657	VV	2687	25069	2.36%	0.057%
38	5.671	5.657	5.680	VV	2807	31497	2.96%	0.071%
39	5.697	5.680	5.706	VV	13502	140868	13.25%	0.319%
40	5.715	5.706	5.735	VV	12447	133386	12.55%	0.302%
41	5.750	5.735	5.761	VV	3248	42622	4.01%	0.097%
42	5.776	5.761	5.809	VV	3689	76239	7.17%	0.173%
43	5.828	5.809	5.842	VV	3520	51074	4.80%	0.116%
44	5.852	5.842	5.863	VV	2885	33117	3.12%	0.075%
45	5.886	5.863	5.914	VV	18882	298551	28.08%	0.676%
46	5.926	5.914	5.950	VV	6641	102424	9.63%	0.232%
47	5.964	5.950	5.975	VV	4682	60409	5.68%	0.137%
48	5.994	5.975	6.034	VV	16303	358183	33.69%	0.811%
49	6.047	6.034	6.062	VV	10168	119185	11.21%	0.270%
50	6.066	6.062	6.083	VV	5119	54577	5.13%	0.124%
51	6.088	6.083	6.099	VV	3432	29532	2.78%	0.067%
52	6.114	6.099	6.122	VV	5407	61410	5.78%	0.139%
53	6.131	6.122	6.155	VV	5974	70542	6.64%	0.160%
54	6.181	6.155	6.198	VV	7825	101651	9.56%	0.230%
55	6.234	6.198	6.252	VV	10498	182116	17.13%	0.412%
56	6.264	6.252	6.276	VV	4307	56611	5.33%	0.128%
57	6.279	6.276	6.287	VV	3825	24576	2.31%	0.056%
58	6.307	6.287	6.345	VV	8021	173537	16.32%	0.393%
59	6.371	6.345	6.393	VV	6761	146884	13.82%	0.333%
60	6.416	6.393	6.442	VV	11414	226658	21.32%	0.513%
61	6.459	6.442	6.483	VV	8239	154815	14.56%	0.351%
62	6.499	6.483	6.510	VV	8412	109290	10.28%	0.248%
63	6.525	6.510	6.535	VV	8971	113420	10.67%	0.257%
64	6.540	6.535	6.583	VV	8631	207658	19.53%	0.470%
65	6.601	6.583	6.625	VV	9617	178350	16.78%	0.404%
66	6.647	6.625	6.664	VV	10549	198379	18.66%	0.449%
67	6.674	6.664	6.692	VV	8414	120092	11.30%	0.272%
68	6.697	6.692	6.715	VV	5859	73194	6.89%	0.166%
69	6.720	6.715	6.730	VV	4850	41846	3.94%	0.095%
70	6.746	6.730	6.780	VV	7153	158438	14.90%	0.359%
71	6.816	6.780	6.830	VV	7791	175639	16.52%	0.398%
72	6.854	6.830	6.864	VV	7856	132545	12.47%	0.300%
73	6.881	6.864	6.903	VV	18845	288958	27.18%	0.654%
74	6.919	6.903	6.943	VV	14414	235219	22.13%	0.533%
75	6.955	6.943	6.965	VV	6388	73356	6.90%	0.166%
76	7.011	6.965	7.030	VV	10883	276413	26.00%	0.626%
77	7.056	7.030	7.080	VV	15155	286868	26.99%	0.650%
78	7.092	7.080	7.105	VV	7733	99827	9.39%	0.226%
79	7.133	7.105	7.154	VV	13833	264249	24.86%	0.598%
80	7.163	7.154	7.167	VV	5358	42511	4.00%	0.096%
81	7.197	7.167	7.216	VV	9229	207635	19.53%	0.470%
82	7.232	7.216	7.240	VV	9030	114671	10.79%	0.260%
83	7.262	7.240	7.280	VV	12279	227391	21.39%	0.515%
84	7.299	7.280	7.333	VV	13983	294152	27.67%	0.666%
85	7.357	7.333	7.408	VV	10860	372842	35.07%	0.844%
86	7.410	7.408	7.423	VV	6104	52289	4.92%	0.118%
87	7.447	7.423	7.482	VV	41619	684430	64.38%	1.550%
88	7.499	7.482	7.527	VV	25818	389835	36.67%	0.883%
89	7.548	7.527	7.566	VV	15247	242328	22.80%	0.549%

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90	7.576	7.566	7.587	VV	8723	102270	9.62%	0.232%
91	7.593	7.587	7.609	VV	7971	96566	9.08%	0.219%
92	7.652	7.609	7.699	VV	11569	497046	46.76%	1.126%
93	7.723	7.699	7.748	VV	10246	256528	24.13%	0.581%
94	7.761	7.748	7.776	VV	9773	146854	13.81%	0.333%
95	7.809	7.776	7.824	VV	9403	242926	22.85%	0.550%
96	7.849	7.824	7.880	VV	19914	423207	39.81%	0.958%
97	7.897	7.880	7.917	VV	10427	183490	17.26%	0.416%
98	7.935	7.917	7.945	VV	7840	114758	10.80%	0.260%
99	7.964	7.945	7.978	VV	11906	190234	17.90%	0.431%
100	7.988	7.978	7.995	VV	10048	102186	9.61%	0.231%
101	8.013	7.995	8.032	VV	15075	255781	24.06%	0.579%
102	8.044	8.032	8.079	VV	9142	229403	21.58%	0.520%
103	8.105	8.079	8.125	VV	12792	263687	24.80%	0.597%
104	8.147	8.125	8.170	VV	10069	242928	22.85%	0.550%
105	8.195	8.170	8.215	VV	9410	226906	21.34%	0.514%
106	8.255	8.215	8.269	VV	13457	365540	34.39%	0.828%
107	8.285	8.269	8.326	VV	15852	400902	37.71%	0.908%
108	8.372	8.326	8.409	VV	55610	1058391	99.56%	2.397%
109	8.425	8.409	8.445	VV	15479	271901	25.58%	0.616%
110	8.475	8.445	8.489	VV	26889	469298	44.15%	1.063%
111	8.503	8.489	8.529	VV	23183	393700	37.04%	0.892%
112	8.540	8.529	8.565	VV	13291	269066	25.31%	0.609%
113	8.571	8.565	8.575	VV	10583	62285	5.86%	0.141%
114	8.598	8.575	8.615	VV	14368	293663	27.62%	0.665%
115	8.647	8.615	8.670	VV	16625	443849	41.75%	1.005%
116	8.675	8.670	8.684	VV	10287	83359	7.84%	0.189%
117	8.713	8.684	8.734	VV	28152	513677	48.32%	1.163%
118	8.747	8.734	8.760	VV	14233	212058	19.95%	0.480%
119	8.770	8.760	8.787	VV	14077	196828	18.52%	0.446%
120	8.802	8.787	8.815	VV	13631	200890	18.90%	0.455%
121	8.841	8.815	8.870	VV	12839	365762	34.41%	0.828%
122	8.883	8.870	8.895	VV	9650	141300	13.29%	0.320%
123	8.913	8.895	8.927	VV	15901	247538	23.29%	0.561%
124	8.945	8.927	8.965	VV	15073	293938	27.65%	0.666%
125	8.975	8.965	8.992	VV	10999	165638	15.58%	0.375%
126	9.013	8.992	9.035	VV	22927	390695	36.75%	0.885%
127	9.093	9.035	9.118	VV	50677	1063040	100.00%	2.407%
128	9.126	9.118	9.146	VV	11575	182013	17.12%	0.412%
129	9.172	9.146	9.186	VV	15475	288190	27.11%	0.653%
130	9.201	9.186	9.220	VV	17241	300239	28.24%	0.680%
131	9.238	9.220	9.257	VV	18156	314310	29.57%	0.712%
132	9.271	9.257	9.288	VV	11978	202717	19.07%	0.459%
133	9.323	9.288	9.338	VV	16556	411059	38.67%	0.931%
134	9.347	9.338	9.354	VV	12772	115566	10.87%	0.262%
135	9.371	9.354	9.388	VV	18106	297510	27.99%	0.674%
136	9.411	9.388	9.447	VV	20072	469119	44.13%	1.062%
137	9.465	9.447	9.488	VV	13661	273578	25.74%	0.620%
138	9.528	9.488	9.545	VV	16871	400695	37.69%	0.907%
139	9.559	9.545	9.574	VV	12694	183544	17.27%	0.416%
140	9.583	9.574	9.596	VV	9594	118509	11.15%	0.268%
141	9.611	9.596	9.628	VV	10134	180224	16.95%	0.408%

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142	9.644	9.628	9.647	VV	11277	118991	11.19%	0.269%
143	9.664	9.647	9.695	VV	17988	367241	34.55%	0.832%
144	9.708	9.695	9.725	VV	10123	162820	15.32%	0.369%
145	9.750	9.725	9.763	VV	15396	267425	25.16%	0.606%
146	9.771	9.763	9.800	VV	13096	233671	21.98%	0.529%
147	9.829	9.800	9.858	VV	22447	480492	45.20%	1.088%
148	9.868	9.858	9.882	VV	9040	129061	12.14%	0.292%
149	9.918	9.882	9.942	VV	14630	406305	38.22%	0.920%
150	9.951	9.942	9.972	VV	11052	166508	15.66%	0.377%
151	9.997	9.972	10.017	VV	10322	236053	22.21%	0.535%
152	10.033	10.017	10.051	VV	7701	148231	13.94%	0.336%
153	10.072	10.051	10.092	VV	11105	228995	21.54%	0.519%
154	10.115	10.092	10.143	VV	14504	346046	32.55%	0.784%
155	10.160	10.143	10.205	VV	12403	373313	35.12%	0.845%
156	10.222	10.205	10.249	VV	9736	244681	23.02%	0.554%
157	10.265	10.249	10.303	VV	10756	275122	25.88%	0.623%
158	10.331	10.303	10.360	VV	9672	269699	25.37%	0.611%
159	10.375	10.360	10.382	VV	7737	96904	9.12%	0.219%
160	10.390	10.382	10.414	VV	8025	141131	13.28%	0.320%
161	10.435	10.414	10.465	VV	8479	215852	20.31%	0.489%
162	10.492	10.465	10.519	VV	10048	258978	24.36%	0.587%
163	10.547	10.519	10.576	VV	41519	701209	65.96%	1.588%
164	10.603	10.576	10.613	VV	10974	212002	19.94%	0.480%
165	10.627	10.613	10.655	VV	13080	259176	24.38%	0.587%
166	10.673	10.655	10.680	VV	10366	133777	12.58%	0.303%
167	10.695	10.680	10.721	VV	13197	242719	22.83%	0.550%
168	10.745	10.721	10.781	VV	9964	290533	27.33%	0.658%
169	10.827	10.781	10.856	VV	10795	391239	36.80%	0.886%
170	10.878	10.856	10.889	VV	11360	184273	17.33%	0.417%
171	10.895	10.889	10.909	VV	10698	123122	11.58%	0.279%
172	10.917	10.909	10.936	VV	10186	149956	14.11%	0.340%
173	10.970	10.936	11.000	VV	57844	998381	93.92%	2.261%
174	11.018	11.000	11.063	VV	9579	301085	28.32%	0.682%
175	11.109	11.063	11.121	VV	7700	249125	23.44%	0.564%
176	11.151	11.121	11.170	VV	12171	286008	26.90%	0.648%
177	11.176	11.170	11.204	VV	8879	159111	14.97%	0.360%
178	11.233	11.204	11.265	VV	9831	289673	27.25%	0.656%
179	11.292	11.265	11.326	VV	12837	325556	30.62%	0.737%
180	11.332	11.326	11.352	VV	6428	97248	9.15%	0.220%
181	11.374	11.352	11.395	VV	7664	179930	16.93%	0.407%
182	11.429	11.395	11.442	VV	7402	193922	18.24%	0.439%
183	11.459	11.442	11.483	VV	8395	180826	17.01%	0.410%
184	11.511	11.483	11.527	VV	7549	184043	17.31%	0.417%
185	11.545	11.527	11.563	VV	8038	164474	15.47%	0.372%
186	11.567	11.563	11.580	VV	7802	76218	7.17%	0.173%
187	11.599	11.580	11.618	VV	9449	185497	17.45%	0.420%
188	11.632	11.618	11.660	VV	7480	184738	17.38%	0.418%
189	11.692	11.660	11.725	VV	41021	737087	69.34%	1.669%
190	11.747	11.725	11.780	VV	6861	202550	19.05%	0.459%
191	11.803	11.780	11.826	VV	7664	174004	16.37%	0.394%
192	11.846	11.826	11.854	VV	6353	99053	9.32%	0.224%
193	11.870	11.854	11.878	VV	7763	106552	10.02%	0.241%
194	11.889	11.878	11.927	VV	8242	215487	20.27%	0.488%

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195	11.956	11.927	11.967	VV	7359	159750	15.03%	0.362%
196	11.986	11.967	12.024	VV	7932	211628	19.91%	0.479%
197	12.046	12.024	12.059	VV	5723	109045	10.26%	0.247%
198	12.079	12.059	12.089	VV	6905	114750	10.79%	0.260%
199	12.104	12.089	12.121	VV	8777	146922	13.82%	0.333%
200	12.134	12.121	12.190	VV	7016	252054	23.71%	0.571%
201	12.205	12.190	12.220	VV	5354	92131	8.67%	0.209%
202	12.251	12.220	12.282	VV	13924	324408	30.52%	0.735%
203	12.290	12.282	12.328	VV	6441	145897	13.72%	0.330%
204	12.358	12.328	12.367	VV	5504	117191	11.02%	0.265%
205	12.384	12.367	12.439	VV	6216	219385	20.64%	0.497%
206	12.487	12.439	12.516	VV	5888	223050	20.98%	0.505%
207	12.520	12.516	12.524	VV	3912	18118	1.70%	0.041%
208	12.542	12.524	12.555	VV	4567	77462	7.29%	0.175%
209	12.568	12.555	12.595	VV	4751	106299	10.00%	0.241%
210	12.610	12.595	12.615	VV	3975	45204	4.25%	0.102%
211	12.636	12.615	12.670	VV	5015	141342	13.30%	0.320%
212	12.704	12.670	12.724	VV	4403	125867	11.84%	0.285%
213	12.746	12.724	12.810	VV	4617	198254	18.65%	0.449%
214	12.835	12.810	12.840	VV	5859	86689	8.15%	0.196%
215	12.852	12.840	12.878	VV	6425	119272	11.22%	0.270%
216	12.915	12.878	12.952	VV	6594	201532	18.96%	0.456%
217	12.970	12.952	12.984	VV	3552	61617	5.80%	0.140%
218	12.989	12.984	12.993	VV	3321	17856	1.68%	0.040%
219	12.997	12.993	13.019	VV	3342	47149	4.44%	0.107%
220	13.030	13.019	13.041	VV	3081	40458	3.81%	0.092%
221	13.057	13.041	13.085	VV	3343	78429	7.38%	0.178%
222	13.096	13.085	13.118	VV	2908	50606	4.76%	0.115%
223	13.134	13.118	13.145	VV	2118	32899	3.09%	0.075%
224	13.189	13.145	13.201	VV	2758	80773	7.60%	0.183%
225	13.210	13.201	13.248	VV	2951	66860	6.29%	0.151%
226	13.269	13.248	13.315	VV	2687	84413	7.94%	0.191%
227	13.337	13.315	13.357	VV	2016	46152	4.34%	0.105%
228	13.378	13.357	13.384	VV	2315	32999	3.10%	0.075%
229	13.407	13.384	13.447	VV	5581	128853	12.12%	0.292%
230	13.454	13.447	13.508	VV	2093	55620	5.23%	0.126%
231	13.527	13.508	13.536	VV	2047	28264	2.66%	0.064%
232	13.541	13.536	13.545	VV	1947	10577	1.00%	0.024%
233	13.573	13.545	13.597	VV	3268	75448	7.10%	0.171%
234	13.598	13.597	13.626	VV	1909	25251	2.38%	0.057%
235	13.632	13.626	13.650	VV	1123	13868	1.30%	0.031%
236	13.666	13.650	13.678	VV	1112	15650	1.47%	0.035%
237	13.693	13.678	13.719	VV	1640	24765	2.33%	0.056%
238	13.748	13.719	13.779	VV	2644	52901	4.98%	0.120%
239	13.796	13.779	13.822	VV	1030	19755	1.86%	0.045%
240	13.842	13.822	13.885	VV	963	22071	2.08%	0.050%
241	13.901	13.885	13.919	PV	348	3435	0.32%	0.008%
242	13.933	13.919	13.942	VV	233	2450	0.23%	0.006%
243	13.965	13.942	13.995	VV	681	10692	1.01%	0.024%
244	14.022	14.000	14.087	BV	1035	19633	1.85%	0.044%
245	14.111	14.087	14.125	PV	875	11276	1.06%	0.026%
246	14.130	14.125	14.154	VV	669	6349	0.60%	0.014%

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247	14.166	14.154	14.186	VV	357	4380	0.41%	0.010%
248	14.193	14.186	14.224	VV	244	3224	0.30%	0.007%
249	14.255	14.224	14.291	VV	581	12274	1.15%	0.028%
250	14.344	14.291	14.382	PV	2107	41114	3.87%	0.093%
251	14.405	14.382	14.452	VV	509	11295	1.06%	0.026%
252	14.477	14.452	14.492	VV	694	12134	1.14%	0.027%
253	14.496	14.492	14.505	VV	740	5412	0.51%	0.012%
254	14.507	14.505	14.511	VV	757	2521	0.24%	0.006%
255	14.520	14.511	14.544	VV	722	10194	0.96%	0.023%
256	14.572	14.544	14.581	VV	506	8533	0.80%	0.019%
257	14.587	14.581	14.602	VV	470	5113	0.48%	0.012%
258	14.622	14.602	14.653	VV	669	10155	0.96%	0.023%
259	14.670	14.653	14.713	PV	697	11421	1.07%	0.026%
260	14.733	14.713	14.757	VV	430	7825	0.74%	0.018%
261	14.764	14.757	14.774	VV	388	3206	0.30%	0.007%
262	14.795	14.774	14.825	VV	1008	20773	1.95%	0.047%
263	14.830	14.825	14.862	VV	444	4956	0.47%	0.011%
264	14.873	14.862	14.890	VV	188	2389	0.22%	0.005%
265	14.922	14.890	14.946	VV	553	11871	1.12%	0.027%
266	14.953	14.946	14.981	VV	352	4927	0.46%	0.011%
267	15.007	14.981	15.034	VV	1471	21393	2.01%	0.048%
268	15.049	15.034	15.053	VV	187	1385	0.13%	0.003%
269	15.058	15.053	15.064	VV	164	847	0.08%	0.002%
270	15.067	15.064	15.081	VV	162	1194	0.11%	0.003%
271	15.096	15.081	15.106	VV	158	1823	0.17%	0.004%
272	15.112	15.106	15.118	VV	172	1106	0.10%	0.003%
273	15.125	15.118	15.130	VV	230	1272	0.12%	0.003%
274	15.137	15.130	15.170	VV	286	3558	0.33%	0.008%
275	15.192	15.170	15.197	PV	272	2842	0.27%	0.006%
276	15.209	15.197	15.241	VV	594	9103	0.86%	0.021%
277	15.245	15.241	15.276	VV	277	3963	0.37%	0.009%
278	15.285	15.276	15.327	VV	257	4950	0.47%	0.011%
279	15.359	15.327	15.387	VV	568	10219	0.96%	0.023%
280	15.393	15.387	15.429	VV	212	2797	0.26%	0.006%
281	15.459	15.429	15.512	VV	233	5913	0.56%	0.013%
282	15.516	15.512	15.520	PV	67	263	0.02%	0.001%
283	15.525	15.520	15.534	VV	138	614	0.06%	0.001%
284	15.544	15.534	15.570	VV	156	1573	0.15%	0.004%
285	15.576	15.570	15.582	VV	175	892	0.08%	0.002%
286	15.592	15.582	15.601	VV	256	2023	0.19%	0.005%
287	15.604	15.601	15.608	VV	244	710	0.07%	0.002%
288	15.633	15.608	15.652	VV	228	4859	0.46%	0.011%
289	15.660	15.652	15.679	VV	162	2266	0.21%	0.005%
290	15.694	15.679	15.712	VV	206	2147	0.20%	0.005%
291	15.732	15.712	15.754	VV	422	7835	0.74%	0.018%
292	15.758	15.754	15.799	VV	475	8123	0.76%	0.018%
293	15.806	15.799	15.815	VV	233	1789	0.17%	0.004%
294	15.818	15.815	15.834	VV	300	2276	0.21%	0.005%
295	15.838	15.834	15.845	VV	172	812	0.08%	0.002%
296	15.849	15.845	15.862	VV	126	1027	0.10%	0.002%
297	15.871	15.862	15.890	VV	254	2023	0.19%	0.005%
298	15.892	15.890	15.896	VV	103	315	0.03%	0.001%
299	15.914	15.896	15.941	PV	234	3937	0.37%	0.009%

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300	15.949	15.941	15.955	VV	180	1003	0.09%	0.002%
301	15.960	15.955	15.969	VV	139	892	0.08%	0.002%
302	15.977	15.969	15.983	VV	183	1115	0.10%	0.003%
303	15.989	15.983	15.994	VV	244	1086	0.10%	0.002%
304	16.003	15.994	16.020	VV	200	2143	0.20%	0.005%
305	16.046	16.020	16.088	VV	379	8361	0.79%	0.019%
306	16.096	16.088	16.109	VV	107	1017	0.10%	0.002%
307	16.134	16.109	16.139	VV	146	1761	0.17%	0.004%
308	16.147	16.139	16.151	VV	255	857	0.08%	0.002%
309	16.167	16.151	16.176	VV	217	2308	0.22%	0.005%
310	16.188	16.176	16.210	VV	254	3345	0.31%	0.008%
311	16.235	16.210	16.266	VV	587	10846	1.02%	0.025%
312	16.272	16.266	16.318	VV	285	4331	0.41%	0.010%
313	16.330	16.318	16.337	PV	145	1305	0.12%	0.003%
314	16.343	16.337	16.349	VV	120	722	0.07%	0.002%
315	16.354	16.349	16.361	VV	171	628	0.06%	0.001%
316	16.367	16.361	16.373	VV	162	764	0.07%	0.002%
317	16.376	16.373	16.397	VV	193	1385	0.13%	0.003%
318	16.412	16.397	16.425	VV	259	2706	0.25%	0.006%
319	16.428	16.425	16.439	VV	190	1327	0.12%	0.003%
320	16.445	16.439	16.459	VV	158	1287	0.12%	0.003%
321	16.462	16.459	16.480	VV	74	1518	0.14%	0.003%
322	16.485	16.480	16.494	VV	125	678	0.06%	0.002%
323	16.521	16.494	16.525	PV	260	2861	0.27%	0.006%
324	16.561	16.525	16.575	VV	296	7103	0.67%	0.016%
325	16.579	16.575	16.590	VV	264	1586	0.15%	0.004%
326	16.598	16.590	16.602	VV	211	1249	0.12%	0.003%
327	16.607	16.602	16.654	VV	219	4786	0.45%	0.011%
328	16.680	16.654	16.684	VV	259	2995	0.28%	0.007%
329	16.717	16.684	16.749	VV	631	13048	1.23%	0.030%
330	16.753	16.749	16.776	VV	142	2161	0.20%	0.005%
331	16.797	16.776	16.817	VV	242	3928	0.37%	0.009%
332	16.824	16.817	16.835	VV	209	1434	0.13%	0.003%
333	16.897	16.835	16.916	VV	297	8907	0.84%	0.020%
334	16.927	16.916	16.970	VV	309	6479	0.61%	0.015%
335	16.985	16.970	16.997	VV	207	2455	0.23%	0.006%
336	17.002	16.997	17.011	VV	166	1023	0.10%	0.002%
337	17.044	17.011	17.071	VV	261	6548	0.62%	0.015%
338	17.077	17.071	17.105	VV	255	3124	0.29%	0.007%
339	17.120	17.105	17.127	VV	134	887	0.08%	0.002%
340	17.134	17.127	17.140	PV	137	764	0.07%	0.002%
341	17.145	17.140	17.161	VV	181	1329	0.13%	0.003%
342	17.183	17.161	17.219	VV	1283	19668	1.85%	0.045%
343	17.224	17.219	17.227	VV	72	387	0.04%	0.001%
344	17.231	17.227	17.236	VV	129	361	0.03%	0.001%
345	17.242	17.236	17.251	PBA	74	-983	-0.09%	-0.002%

Sum of corrected areas: 44155689

FF112124.M Tue Dec 10 03:24:37 2024



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: ENTA05
 ProjectID: North Point
 Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147

Calibration Sequence : FF112124		Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID
1000	114761269	114761	FF015114.D
500	57441693	114883	FF015115.D
200	24757500	123788	FF015116.D
100	13920062	139201	FF015117.D
50	6675603	133512	FF015118.D
AVG RF : 125229		% RSD : 8.77	AVG RT : 15.012

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: ENTA05
ProjectID: North Point
Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147
DataFile: FF015138.D Analyst Name: YP\AJ Analyst Date: 12-06-2024

Conc. (PPM)	Area Count	RF	Average RF	%D
500	55029334	110059	125229	12.114

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
 Data File : FF015138.D
 Signal(s) : FID2B.ch
 Acq On : 06 Dec 2024 10:50
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Dec 06 23:05:51 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.012	4718088	42.688 ug/ml
Target Compounds			
2) N-DECANE	4.567	5936978	46.954 ug/ml
3) N-DODECANE	6.730	5954173	45.703 ug/ml
4) N-TETRADECANE	8.555	5915776	46.672 ug/ml
5) N-HEXADECANE	10.162	5815831	45.158 ug/ml
6) N-OCTADECANE	11.604	5778664	43.795 ug/ml
7) N-EICOSANE	12.914	5667929	44.449 ug/ml
8) N-DOCOSANE	14.112	5316213	42.819 ug/ml
10) N-TETRACOSANE	15.215	5087119	41.797 ug/ml
11) N-HEXACOSANE	16.236	4877254	41.281 ug/ml
12) N-OCTACOSANE	17.187	4679397	40.148 ug/ml

(f)=RT Delta > 1/2 Window

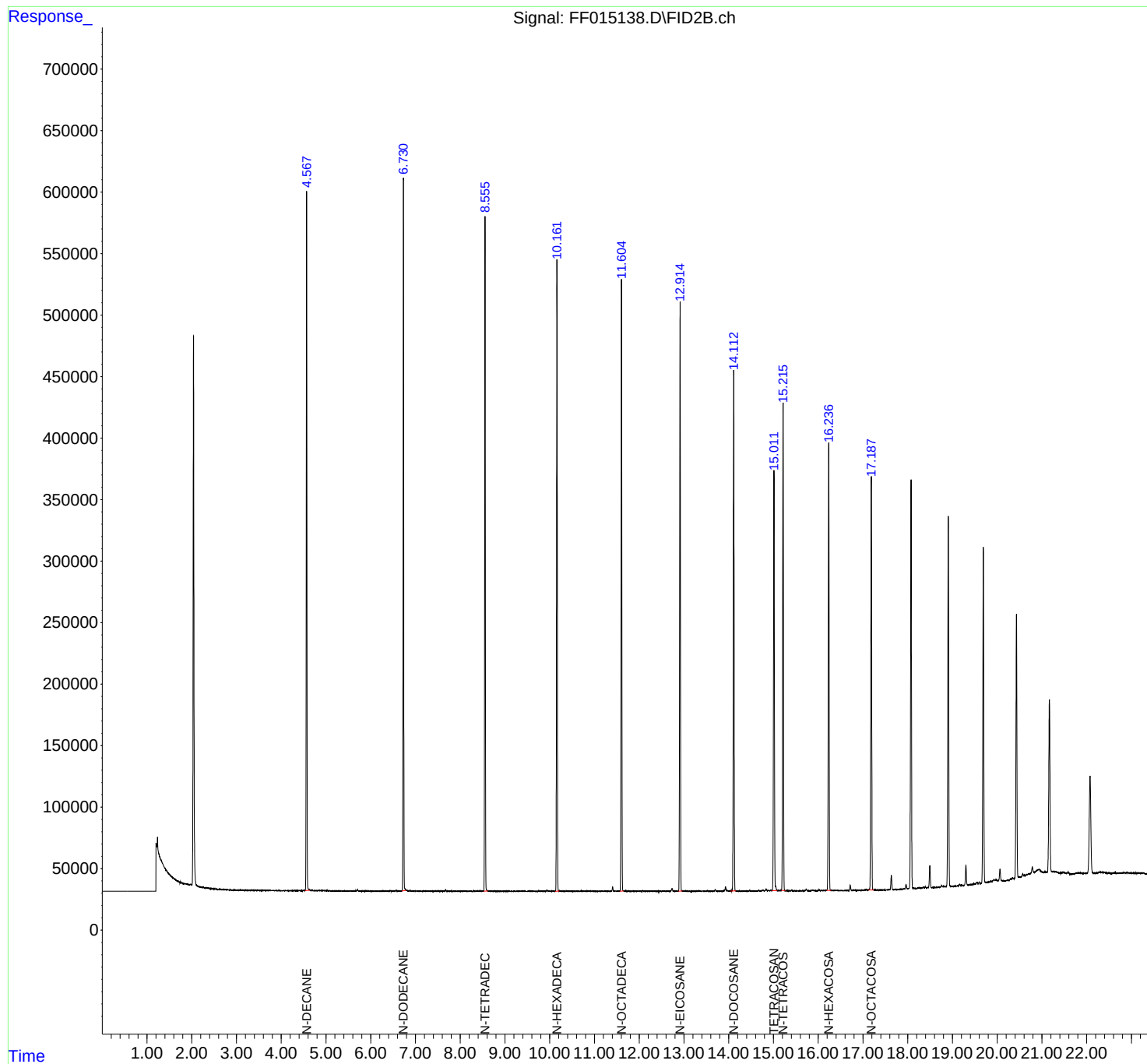
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015138.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 10:50
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Dec 06 23:05:51 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015138.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 10:50
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.567	4.532	4.642	BB	568448	5936978	99.71%	9.937%
2	6.730	6.697	6.796	BB	580085	5954173	100.00%	9.966%
3	8.555	8.519	8.617	BB	549836	5915776	99.36%	9.901%
4	10.162	10.121	10.217	BB	513579	5815831	97.68%	9.734%
5	11.604	11.564	11.651	BB	497380	5778664	97.05%	9.672%
6	12.914	12.874	12.967	BB	478927	5667929	95.19%	9.486%
7	14.112	14.039	14.162	BB	423274	5316213	89.29%	8.898%
8	15.012	14.969	15.084	BB	341877	4718088	79.24%	7.897%
9	15.215	15.176	15.267	BB	397773	5087119	85.44%	8.514%
10	16.236	16.189	16.292	BB	363226	4877254	81.91%	8.163%
11	17.187	17.122	17.242	BB	336574	4679397	78.59%	7.832%
Sum of corrected areas:						59747423		

FF112124.M Fri Dec 06 23:49:42 2024

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: ENTA05
ProjectID: North Point
Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147
DataFile: FF015147.D Analyst Name: YP\AJ Analyst Date: 12-06-2024

Conc. (PPM)	Area Count	RF	Average RF	%D
500	60389088	120778	125229	3.554

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
 Data File : FF015147.D
 Signal(s) : FID2B.ch
 Acq On : 06 Dec 2024 17:02
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 12/09/2024
 Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
 Quant Time: Dec 06 23:17:31 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.012	5313769	48.078 ug/mlm
Target Compounds			
2) N-DECANE	4.568	6095673	48.209 ug/ml
3) N-DODECANE	6.731	6168238	47.346 ug/ml
4) N-TETRADECANE	8.556	6180092	48.758 ug/ml
5) N-HEXADECANE	10.162	6176157	47.956 ug/ml
6) N-OCTADECANE	11.605	6246136	47.338 ug/ml
7) N-EICOSANE	12.915	6230084	48.858 ug/ml
8) N-DOCOSANE	14.113	5972954	48.108 ug/ml
10) N-TETRACOSANE	15.216	5853973	48.098 ug/ml
11) N-HEXACOSANE	16.237	5758256	48.738 ug/ml
12) N-OCTACOSANE	17.187	5707525	48.969 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015147.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 17:02
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

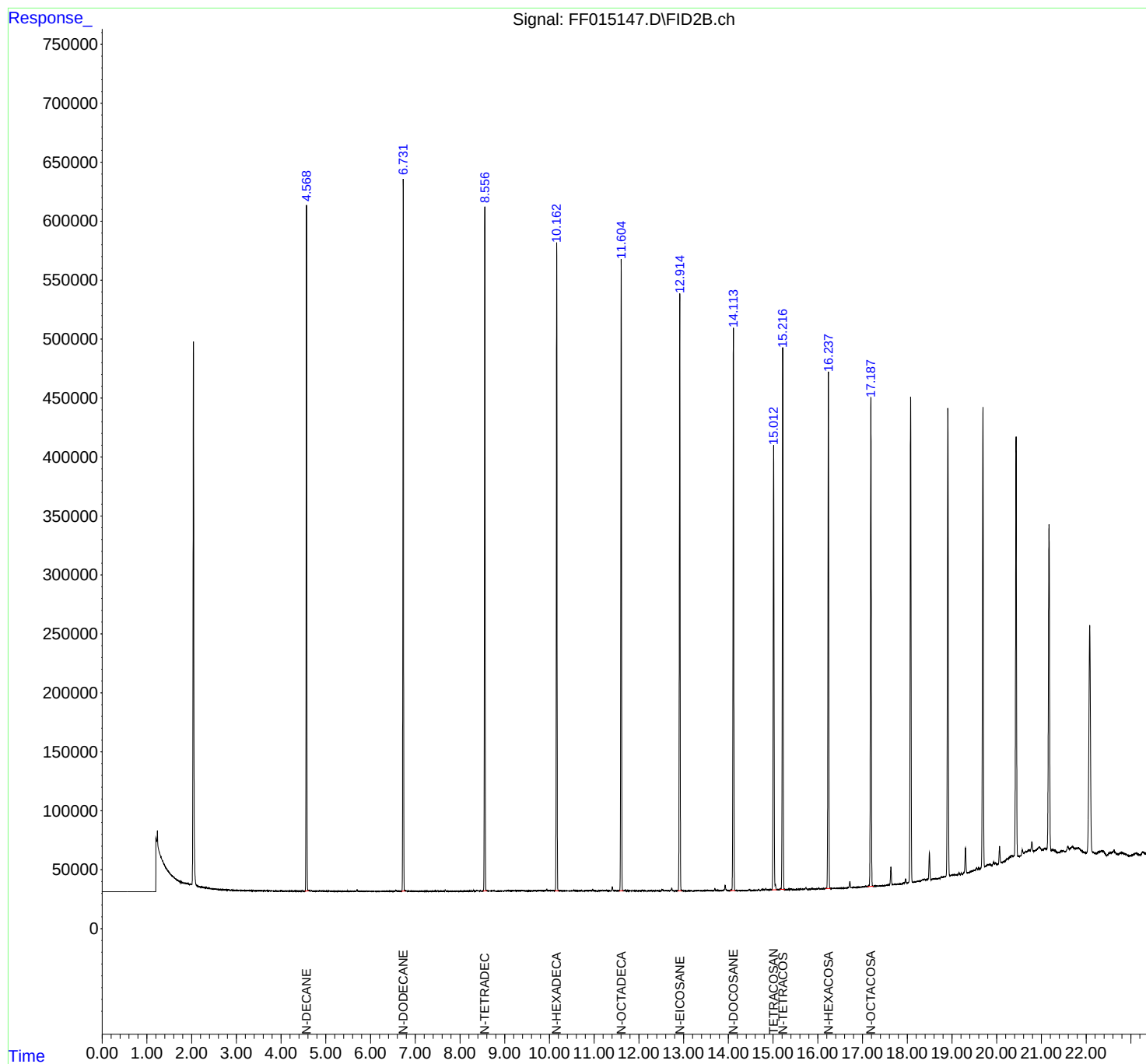
Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
Quant Time: Dec 06 23:17:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



rteres

Instrument :

FID_F

LabSampleId :

50 PPM TRPH STD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024

Supervised By :Ankita Jodhani 12/09/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF12062
Data File : FF015147.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 17:02
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.568	4.532	4.617	BB	581666	6095673	97.59%	9.301%
2	6.731	6.692	6.779	BB	603018	6168238	98.75%	9.412%
3	8.556	8.519	8.604	BB	578453	6180092	98.94%	9.430%
4	10.162	10.125	10.209	BB	549319	6176157	98.88%	9.424%
5	11.605	11.559	11.652	BB	534045	6246136	100.00%	9.530%
6	12.915	12.870	12.960	BB	506097	6230084	99.74%	9.506%
7	14.113	14.037	14.154	BB	477753	5972954	95.63%	9.114%
8	15.013	14.952	15.045	BV	375074	5150079	82.45%	7.858%
9	15.216	15.155	15.265	BB	457156	5853973	93.72%	8.932%
10	16.237	16.175	16.282	BB	438511	5758256	92.19%	8.786%
11	17.187	17.109	17.244	BB	414753	5707525	91.38%	8.709%
Sum of corrected areas:						65539165		

FF112124.M Fri Dec 06 23:52:50 2024

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: ENTA05
ProjectID: North Point
Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147
DataFile: FF015150.D Analyst Name: YP\AJ Analyst Date: 12-09-2024

Conc. (PPM)	Area Count	RF	Average RF	%D
500	66856700	133713	125229	6.775

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
 Data File : FF015150.D
 Signal(s) : FID2B.ch
 Acq On : 09 Dec 2024 09:28
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 12/10/2024
 Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
 Quant Time: Dec 10 00:54:28 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.012	5782670	52.320 ug/mlm
Target Compounds			
2) N-DECANE	4.569	7124404	56.345 ug/ml
3) N-DODECANE	6.731	7120234	54.653 ug/ml
4) N-TETRADECANE	8.556	7036432	55.514 ug/ml
5) N-HEXADECANE	10.163	6920873	53.739 ug/ml
6) N-OCTADECANE	11.605	6906072	52.339 ug/ml
7) N-EICOSANE	12.915	6821484	53.496 ug/ml
8) N-DOCOSANE	14.114	6471592	52.124 ug/ml
10) N-TETRACOSANE	15.217	6314150	51.879 ug/ml
11) N-HEXACOSANE	16.238	6133975	51.918 ug/ml
12) N-OCTACOSANE	17.189	6007484	51.543 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015150.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 09:28
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

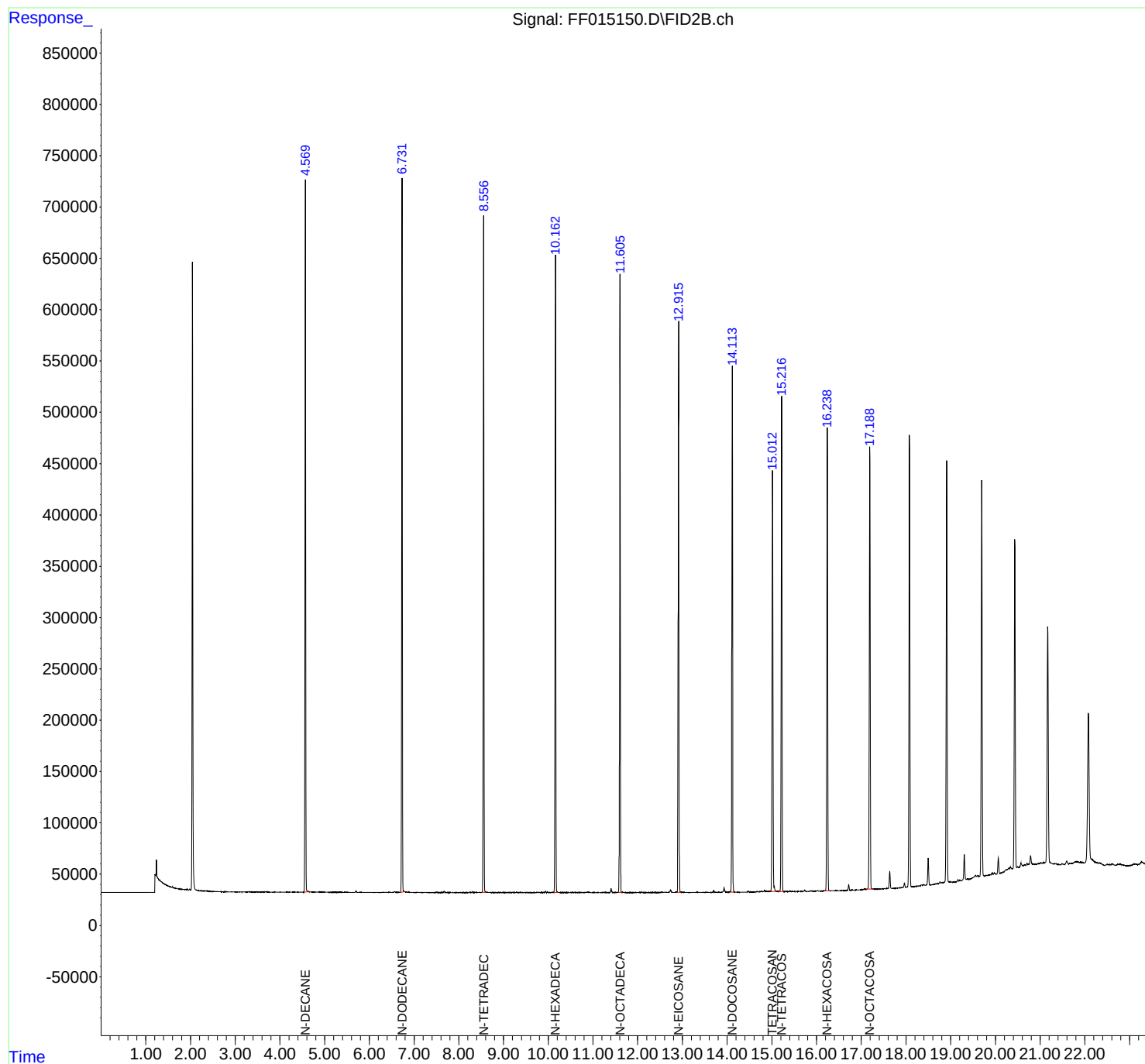
Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 00:54:28 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



rteres

Instrument :
FID_F
LabSampleId :
50 PPM TRPH STD
Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF12092
Data File : FF015150.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 09:28
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.569	4.536	4.634	BB	694533	7124404	100.00%	9.828%
2	6.731	6.694	6.789	BB	692999	7120234	99.94%	9.822%
3	8.556	8.519	8.611	BB	657561	7036432	98.77%	9.706%
4	10.163	10.126	10.216	BB	621286	6920873	97.14%	9.547%
5	11.605	11.567	11.651	BB	602702	6906072	96.94%	9.527%
6	12.915	12.876	12.966	BB	557968	6821484	95.75%	9.410%
7	14.114	14.075	14.164	VB	511612	6471592	90.84%	8.927%
8	15.013	14.969	15.046	BV	407437	5636142	79.11%	7.775%
9	15.217	15.141	15.267	BB	481801	6314150	88.63%	8.710%
10	16.238	16.176	16.287	BB	450921	6133975	86.10%	8.461%
11	17.189	17.112	17.249	BB	430686	6007484	84.32%	8.287%
Sum of corrected areas:						72492842		

FF112124.M Tue Dec 10 01:18:13 2024

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: ENTA05
ProjectID: North Point
Lab Code: CHEM Case No.: P5147 SAS No.: P5147 SDG No.: P5147
DataFile: FF015155.D Analyst Name: YP\AJ Analyst Date: 12-09-2024

Conc. (PPM)	Area Count	RF	Average RF	%D
500	59114790	118230	125229	5.589

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
 Data File : FF015155.D
 Signal(s) : FID2B.ch
 Acq On : 09 Dec 2024 12:25
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 12/10/2024
 Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
 Quant Time: Dec 10 00:56:07 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.010	5153317	46.626 ug/mlm
Target Compounds			
2) N-DECANE	4.568	6138715	48.550 ug/ml
3) N-DODECANE	6.730	6185817	47.481 ug/ml
4) N-TETRADECANE	8.555	6154022	48.552 ug/ml
5) N-HEXADECANE	10.161	6096129	47.335 ug/ml
6) N-OCTADECANE	11.604	6111312	46.316 ug/ml
7) N-EICOSANE	12.914	6056047	47.493 ug/ml
8) N-DOCOSANE	14.112	5761318	46.404 ug/ml
10) N-TETRACOSANE	15.216	5647710	46.403 ug/ml
11) N-HEXACOSANE	16.237	5520599	46.727 ug/ml
12) N-OCTACOSANE	17.187	5443121	46.701 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015155.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 12:25
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

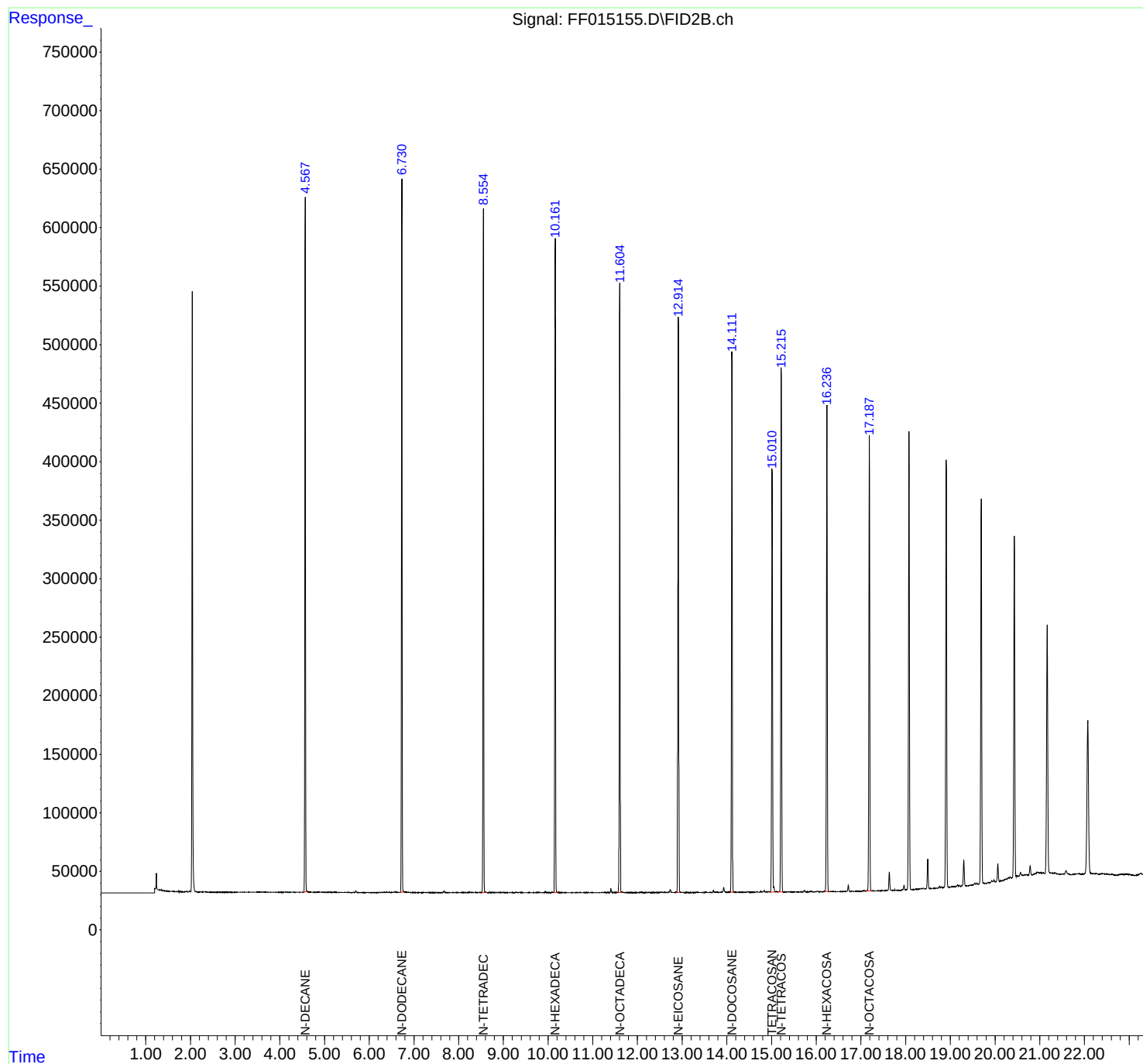
Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 00:56:07 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



rteres

Instrument :
FID_F
LabSampleId :
50 PPM TRPH STD
Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF12092
Data File : FF015155.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 12:25
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.568	4.519	4.621	BB	593340	6138715	99.24%	9.572%
2	6.730	6.692	6.782	BB	609745	6185817	100.00%	9.645%
3	8.555	8.512	8.606	BB	581499	6154022	99.49%	9.596%
4	10.161	10.126	10.211	BB	557676	6096129	98.55%	9.506%
5	11.604	11.566	11.654	BB	520815	6111312	98.80%	9.529%
6	12.914	12.874	12.959	BB	491184	6056047	97.90%	9.443%
7	14.112	14.076	14.161	BB	461054	5761318	93.14%	8.983%
8	15.011	14.964	15.044	BV	358711	5017854	81.12%	7.824%
9	15.216	15.146	15.262	BB	447651	5647710	91.30%	8.806%
10	16.237	16.184	16.287	BB	416628	5520599	89.25%	8.608%
11	17.187	17.112	17.244	BB	390675	5443121	87.99%	8.487%
Sum of corrected areas:						64132643		

FF112124.M Tue Dec 10 01:19:33 2024

Analytical Sequence

Client: ENTACT

SDG No.: P5147

Project: North Point

Instrument ID: FID_F

GC Column: RXI-1MS

ID: 0.18 (mm)

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,
AND STANDARDS IS GIVEN BELOW:

MEAN SUROGATE RT FROM INITIAL CALIBRATION 15.012					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	06 Dec 2024 10:21	FF015137.D	15.009	
50 PPM TRPH STD	50 PPM TRPH STD	06 Dec 2024 10:50	FF015138.D	15.012	
PB165425BL	PB165425BL	06 Dec 2024 13:44	FF015140.D	15.008	
PB165425BS	PB165425BS	06 Dec 2024 14:12	FF015141.D	15.009	
EX-8-TPH-1MS	P5147-01MS	06 Dec 2024 15:09	FF015143.D	14.961	
EX-8-TPH-1MSD	P5147-01MSD	06 Dec 2024 15:37	FF015144.D	14.962	
PIBLK02	LBLK02	06 Dec 2024 16:34	FF015146.D	15.010	
50 PPM TRPH STD	50 PPM TRPH STD	06 Dec 2024 17:02	FF015147.D	15.013	
PIBLK03	LBLK03	09 Dec 2024 08:59	FF015149.D	15.010	
50 PPM TRPH STD	50 PPM TRPH STD	09 Dec 2024 09:28	FF015150.D	15.013	
EX-8-TPH-1	P5147-01	09 Dec 2024 10:32	FF015152.D	00.000	
EX-8-TPH-2	P5147-02	09 Dec 2024 11:00	FF015153.D	00.000	
PIBLK04	LBLK04	09 Dec 2024 11:57	FF015154.D	15.008	
50 PPM TRPH STD	50 PPM TRPH STD	09 Dec 2024 12:25	FF015155.D	15.011	



QC SAMPLE DATA

Report of Analysis

Client:	ENTACT		Date Collected:		
Project:	North Point		Date Received:		
Client Sample ID:	PB165425BL		SDG No.:	P5147	
Lab Sample ID:	PB165425BL		Matrix:	SOIL	
Analytical Method:	8015D DRO		% Solid:	100	Decanted:
Sample Wt/Vol:	30.02	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	Diesel Range Organics	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015140.D	1	12/06/24 09:03	12/06/24 13:44	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	185	U	185	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	15.2		37 - 130	76%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015140.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 13:44
Operator : YP\AJ
Sample : PB165425BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB165425BL

Integration File: autoint1.e
Quant Time: Dec 06 23:06:37 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.008	1683520	15.232 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

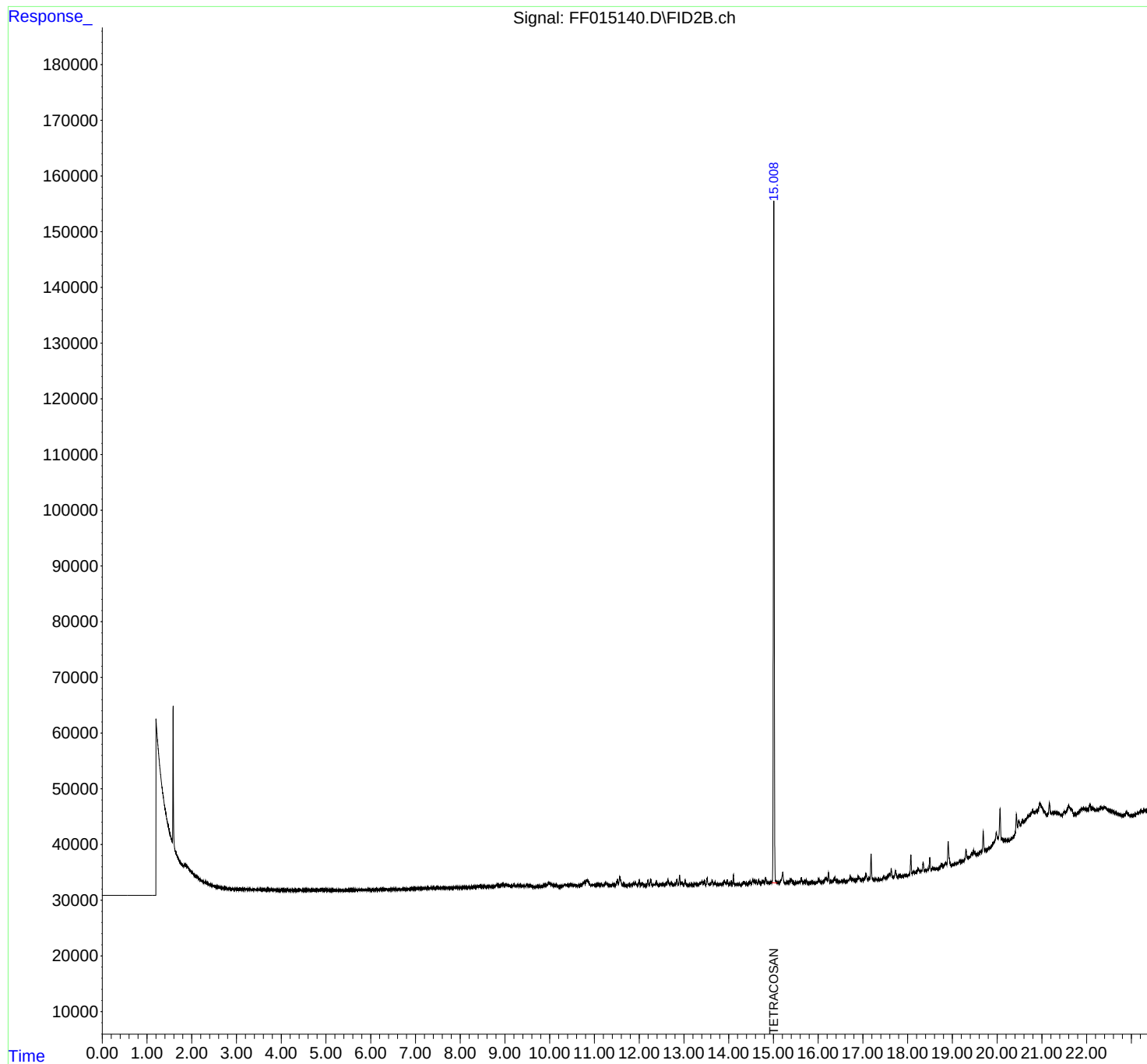
(m)=manual int.

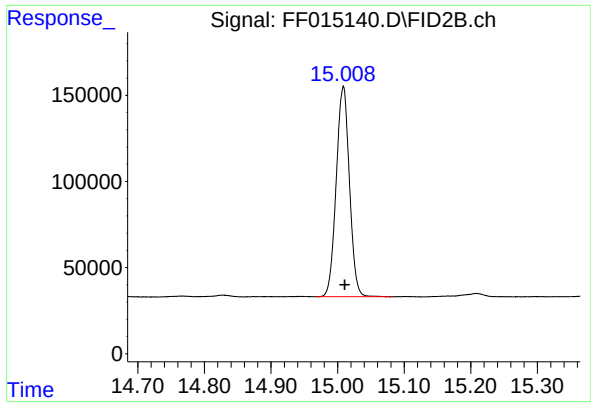
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015140.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 13:44
Operator : YP\AJ
Sample : PB165425BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB165425BL

Integration File: autoint1.e
Quant Time: Dec 06 23:06:37 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.008 min
Delta R.T.: -0.002 min
Response: 1683520
Conc: 15.23 ug/ml

Instrument :
FID_F
ClientSampleId :
PB165425BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015140.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 13:44
Sample : PB165425BL
Misc :
ALS Vial : 55 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.008	14.968	15.081	BB	121627	1683520	100.00%	100.000%
Sum of corrected areas:						1683520		

FF112124.M Fri Dec 06 23:50:41 2024

Report of Analysis

Client:	ENTACT	Date Collected:	12/06/24
Project:	North Point	Date Received:	12/06/24
Client Sample ID:	PIBLK-FF015137.D	SDG No.:	P5147
Lab Sample ID:	I.BLK-FF015137.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015137.D	1		12/06/24	FF120624

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	10.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	13.5		29 - 130	67%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015137.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 10:21
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 06 23:05:35 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.009	1489570	13.477 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

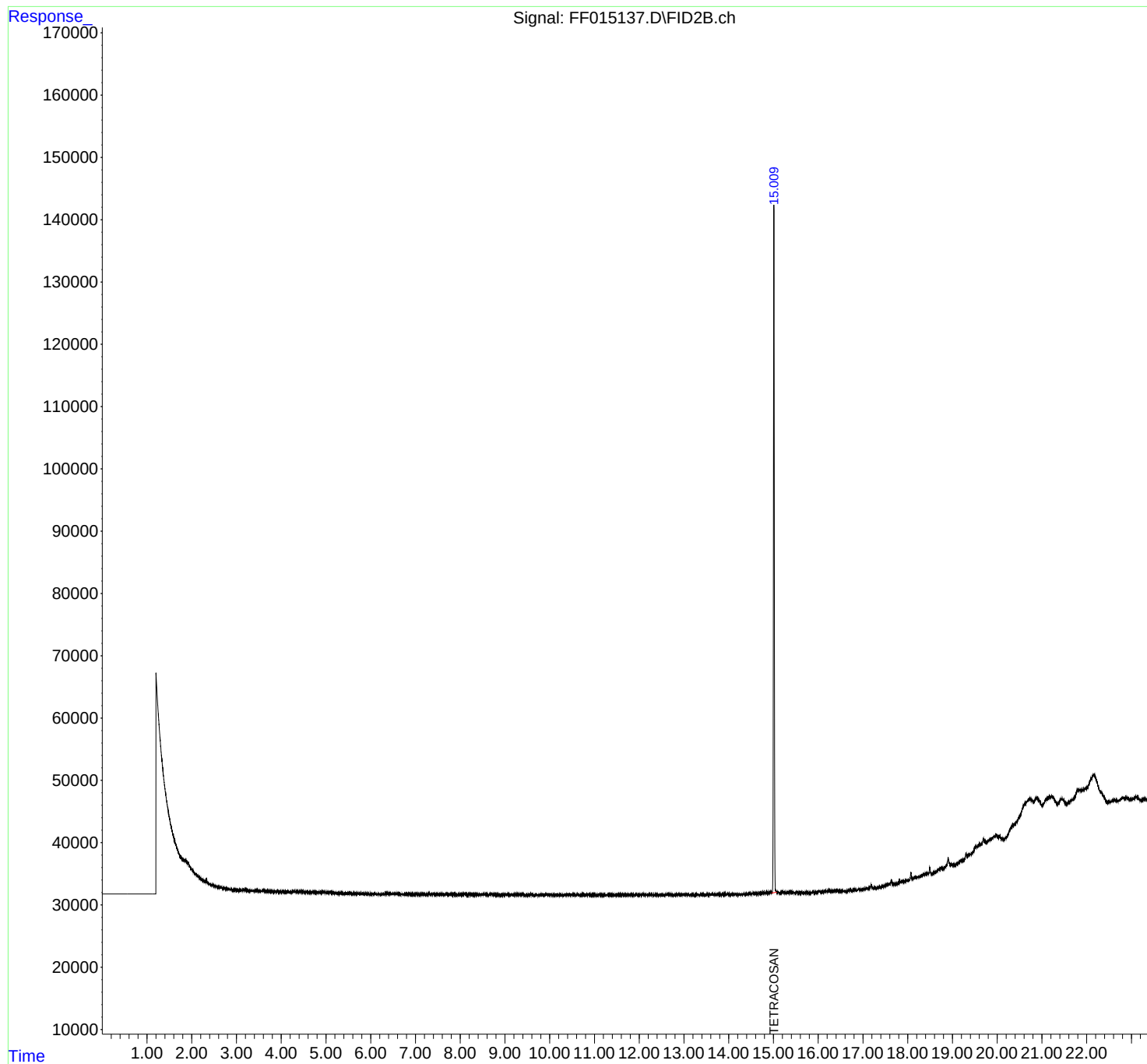
(m)=manual int.

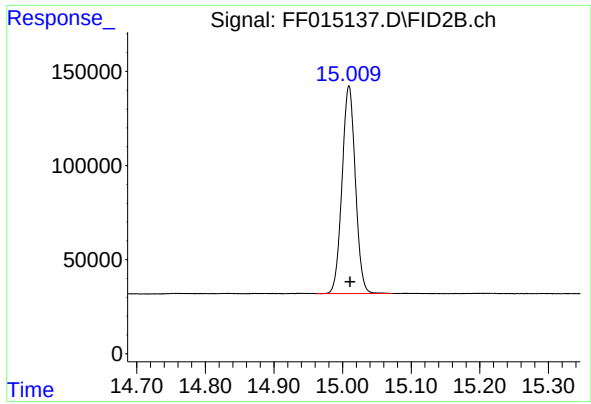
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015137.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 10:21
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 06 23:05:35 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.009 min
Delta R.T.: -0.002 min
Response: 1489570
Conc: 13.48 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015137.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 10:21
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.009	14.962	15.072	BB	110226	1489570	100.00%	100.000%
Sum of corrected areas:						1489570		

FF112124.M Fri Dec 06 23:48:24 2024

Report of Analysis

Client:	ENTACT	Date Collected:	12/06/24
Project:	North Point	Date Received:	12/06/24
Client Sample ID:	PIBLK-FF015146.D	SDG No.:	P5147
Lab Sample ID:	I.BLK-FF015146.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015146.D	1		12/06/24	FF120624

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	10.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.2		29 - 130	91%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015146.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 16:34
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 06 23:17:11 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.010	2007656	18.165 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

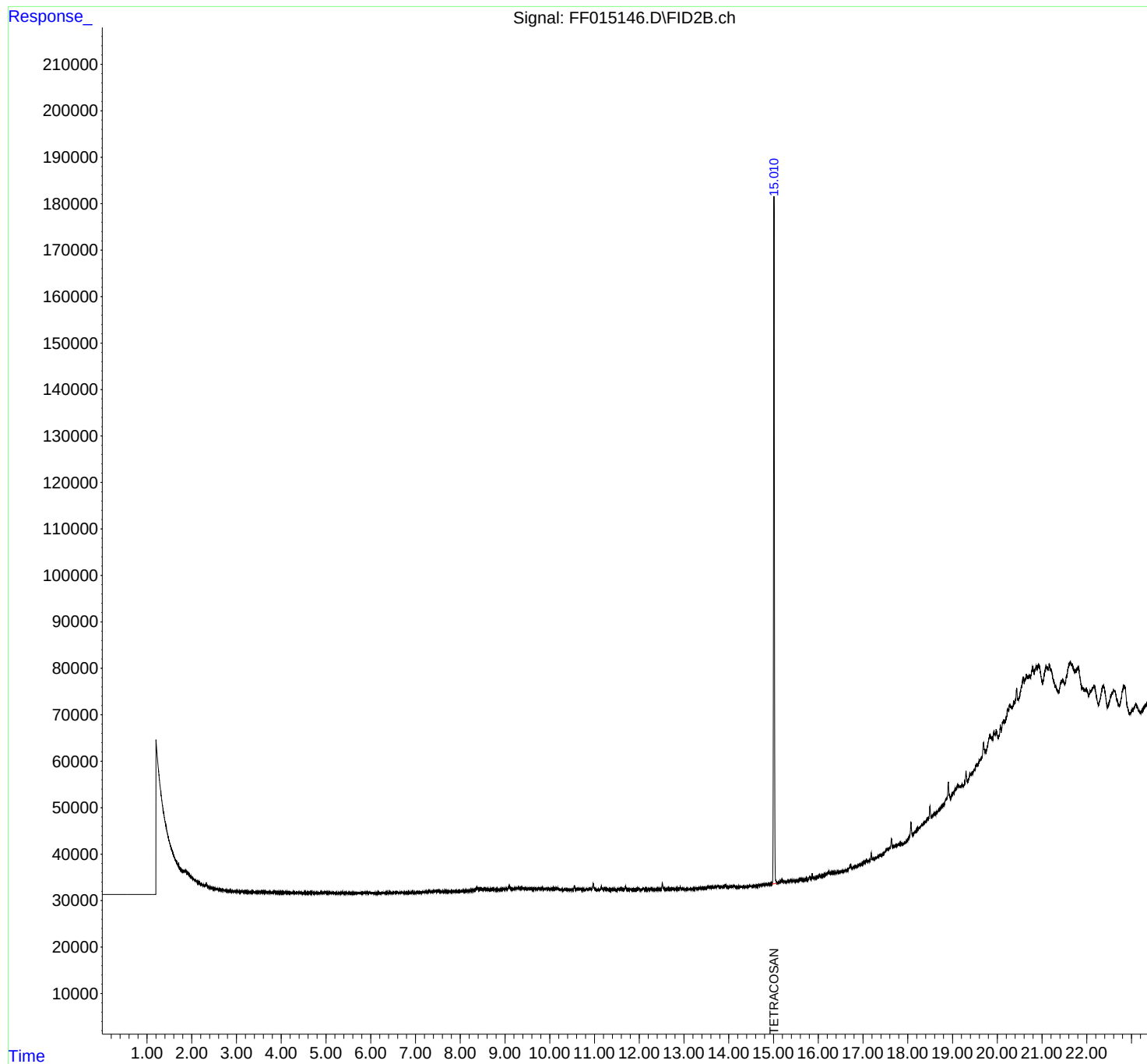
(m)=manual int.

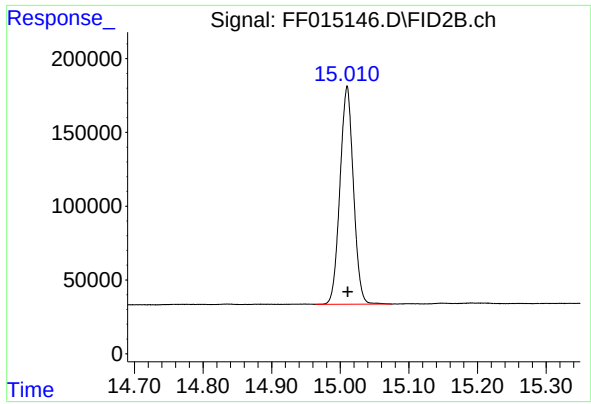
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015146.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 16:34
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 06 23:17:11 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.010 min
Delta R.T.: 0.000 min
Response: 2007656
Conc: 18.16 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015146.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 16:34
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.010	14.965	15.075	BB	146056	2007656	100.00%	100.000%
Sum of corrected areas:						2007656		

FF112124.M Fri Dec 06 23:52:01 2024

Report of Analysis

Client:	ENTACT	Date Collected:	12/09/24
Project:	North Point	Date Received:	12/09/24
Client Sample ID:	PIBLK-FF015149.D	SDG No.:	P5147
Lab Sample ID:	I.BLK-FF015149.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015149.D	1		12/09/24	FF120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	10.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	16.5		29 - 130	82%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015149.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 08:59
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 10 00:54:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.010	1824130	16.504 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

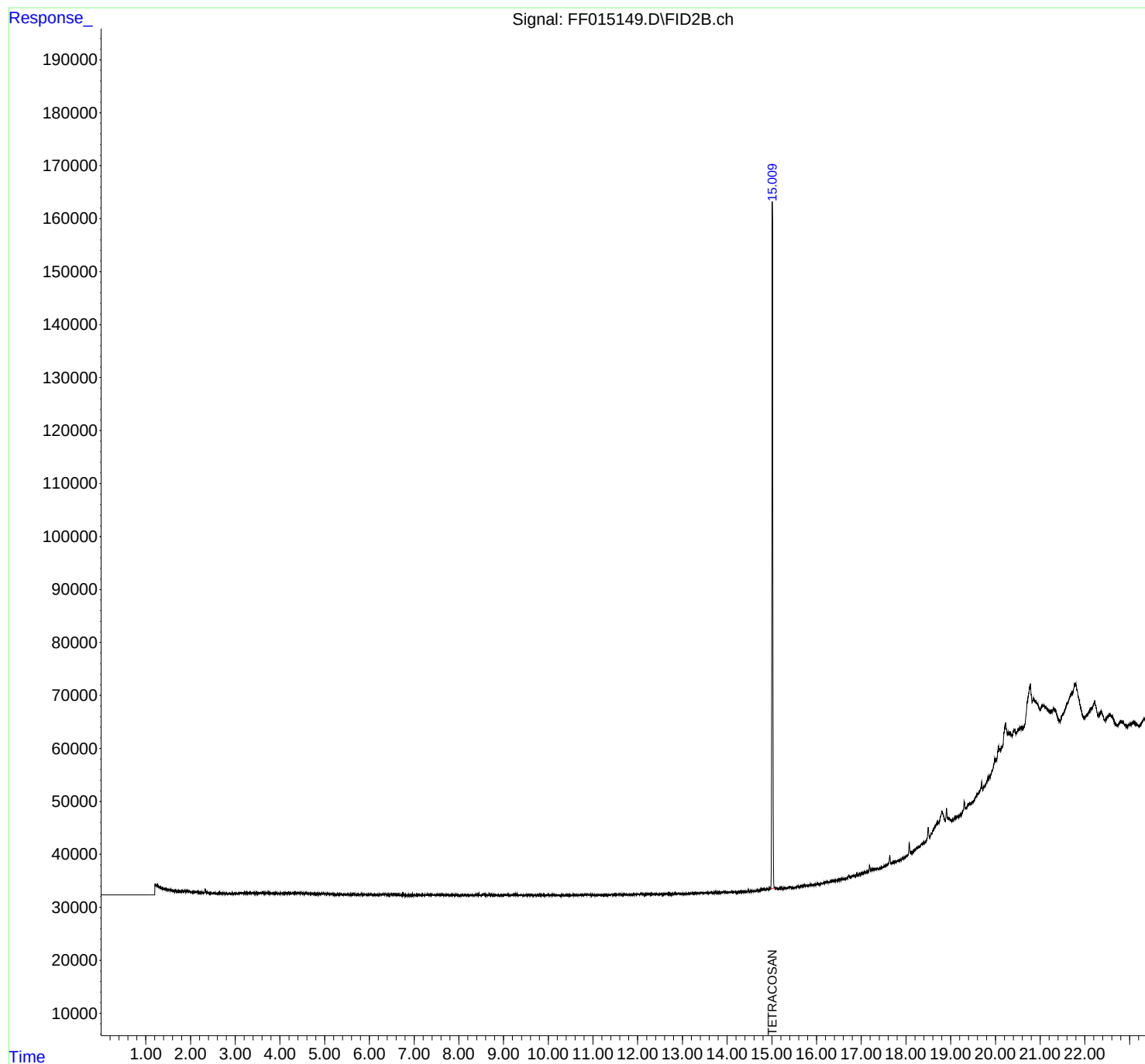
(m)=manual int.

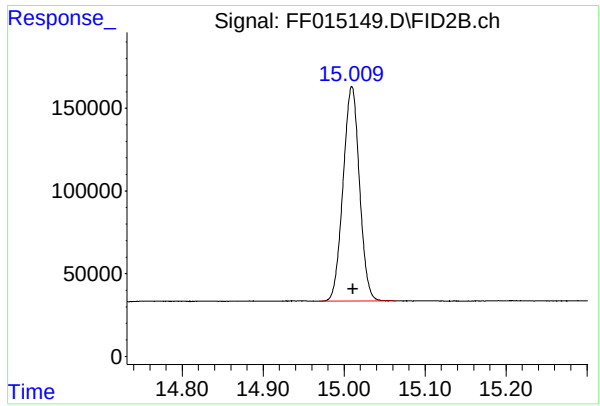
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015149.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 08:59
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 10 00:54:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.010 min
Delta R.T.: -0.001 min
Response: 1824130
Conc: 16.50 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015149.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 08:59
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.010	14.969	15.064	BB	129817	1824130	100.00%	100.000%
Sum of corrected areas:						1824130		

FF112124.M Tue Dec 10 01:16:14 2024

Report of Analysis

Client:	ENTACT		Date Collected:	12/09/24	
Project:	North Point		Date Received:	12/09/24	
Client Sample ID:	PIBLK-FF015154.D		SDG No.:	P5147	
Lab Sample ID:	I.BLK-FF015154.D		Matrix:	Water	
Analytical Method:	8015D DRO		% Solid:	0	Decanted:
Sample Wt/Vol:	1000	Units: mL	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	Diesel Range Organics	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3510				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015154.D	1		12/09/24	FF120924

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	10.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	16.6		29 - 130	83%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015154.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:57
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 10 00:55:51 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.008	1832471	16.580 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

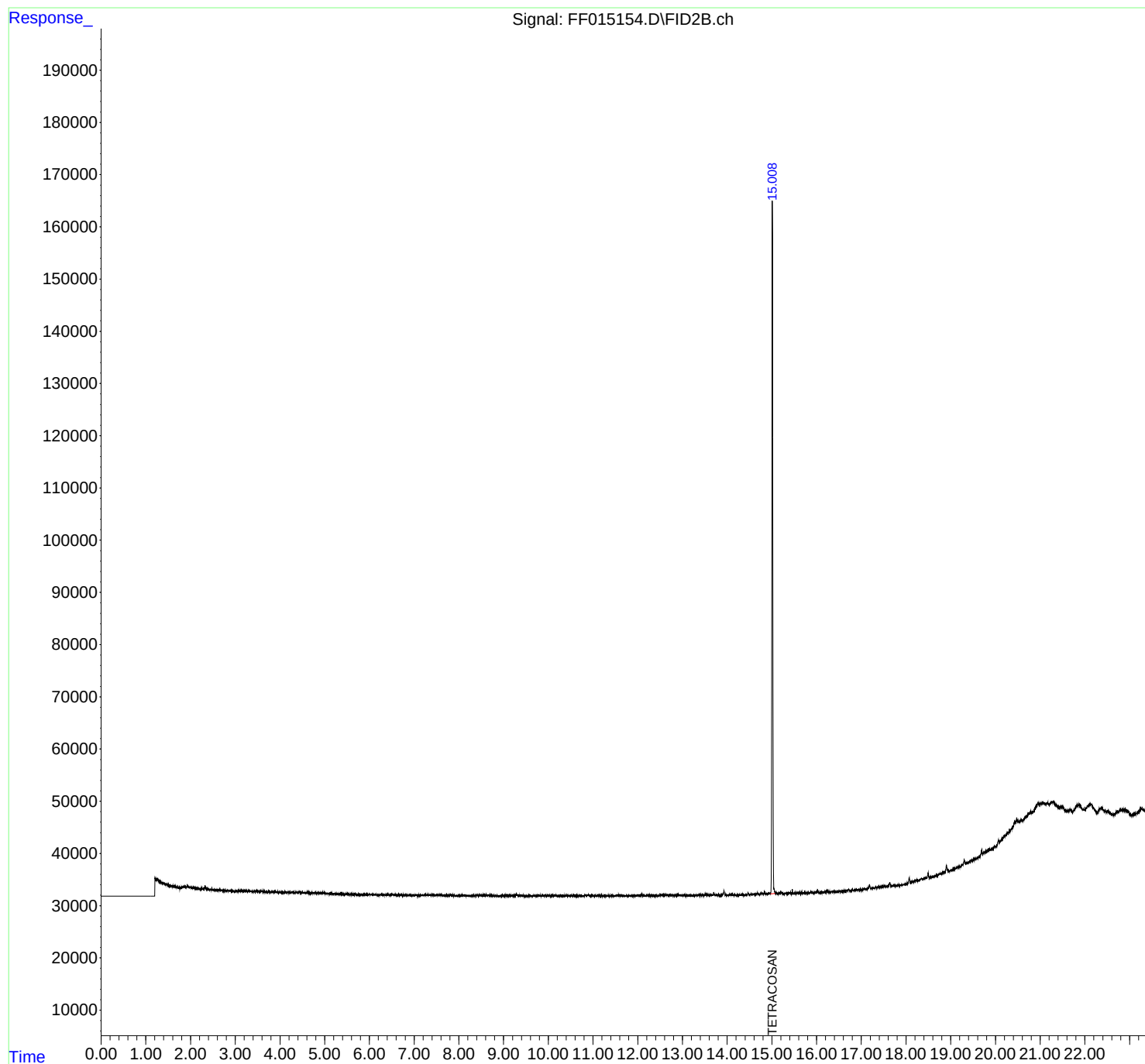
(m)=manual int.

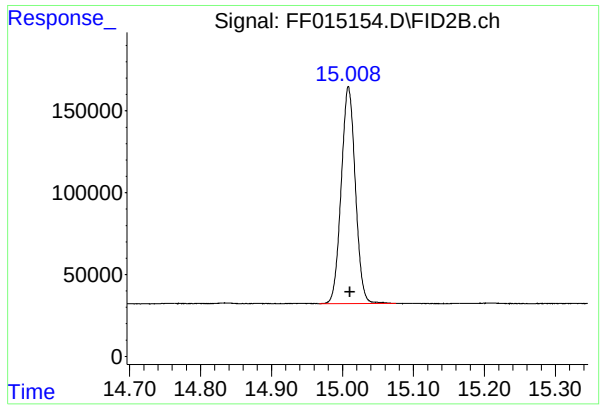
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015154.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:57
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Dec 10 00:55:51 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.008 min
Delta R.T.: -0.002 min
Response: 1832471
Conc: 16.58 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120924\
Data File : FF015154.D
Signal(s) : FID2B.ch
Acq On : 09 Dec 2024 11:57
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.008	14.967	15.075	BB	132550	1832471	100.00%	100.000%
Sum of corrected areas:						1832471		

FF112124.M Tue Dec 10 01:19:02 2024

Report of Analysis

Client:	ENTACT		Date Collected:		
Project:	North Point		Date Received:		
Client Sample ID:	PB165425BS		SDG No.:	P5147	
Lab Sample ID:	PB165425BS		Matrix:	SOIL	
Analytical Method:	8015D DRO		% Solid:	100	Decanted:
Sample Wt/Vol:	30.03	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	Diesel Range Organics	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015141.D	1	12/06/24 09:03	12/06/24 14:12	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	7620		185	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	23.1		37 - 130	115%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance 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

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
 Data File : FF015141.D
 Signal(s) : FID2B.ch
 Acq On : 06 Dec 2024 14:12
 Operator : YP\AJ
 Sample : PB165425BS
 Misc :
 ALS Vial : 56 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 PB165425BS

Integration File: autoint1.e
 Quant Time: Dec 06 23:06:52 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.009	2550203	23.074 ug/ml
Target Compounds			
2) N-DECANE	4.568	3020849	23.891 ug/ml
3) N-DODECANE	6.728	3081201	23.650 ug/ml
4) N-TETRADECANE	8.552	3098094	24.442 ug/ml
5) N-HEXADECANE	10.158	3076420	23.888 ug/ml
6) N-OCTADECANE	11.601	3065122	23.230 ug/ml
7) N-EICOSANE	12.911	3006945	23.581 ug/ml
8) N-DOCOSANE	14.110	2804047	22.585 ug/ml
10) N-TETRACOSANE	15.213	2664300	21.891 ug/ml
11) N-HEXACOSANE	16.235	2507871	21.227 ug/ml
12) N-OCTACOSANE	17.184	2327554	19.970 ug/ml

(f)=RT Delta > 1/2 Window

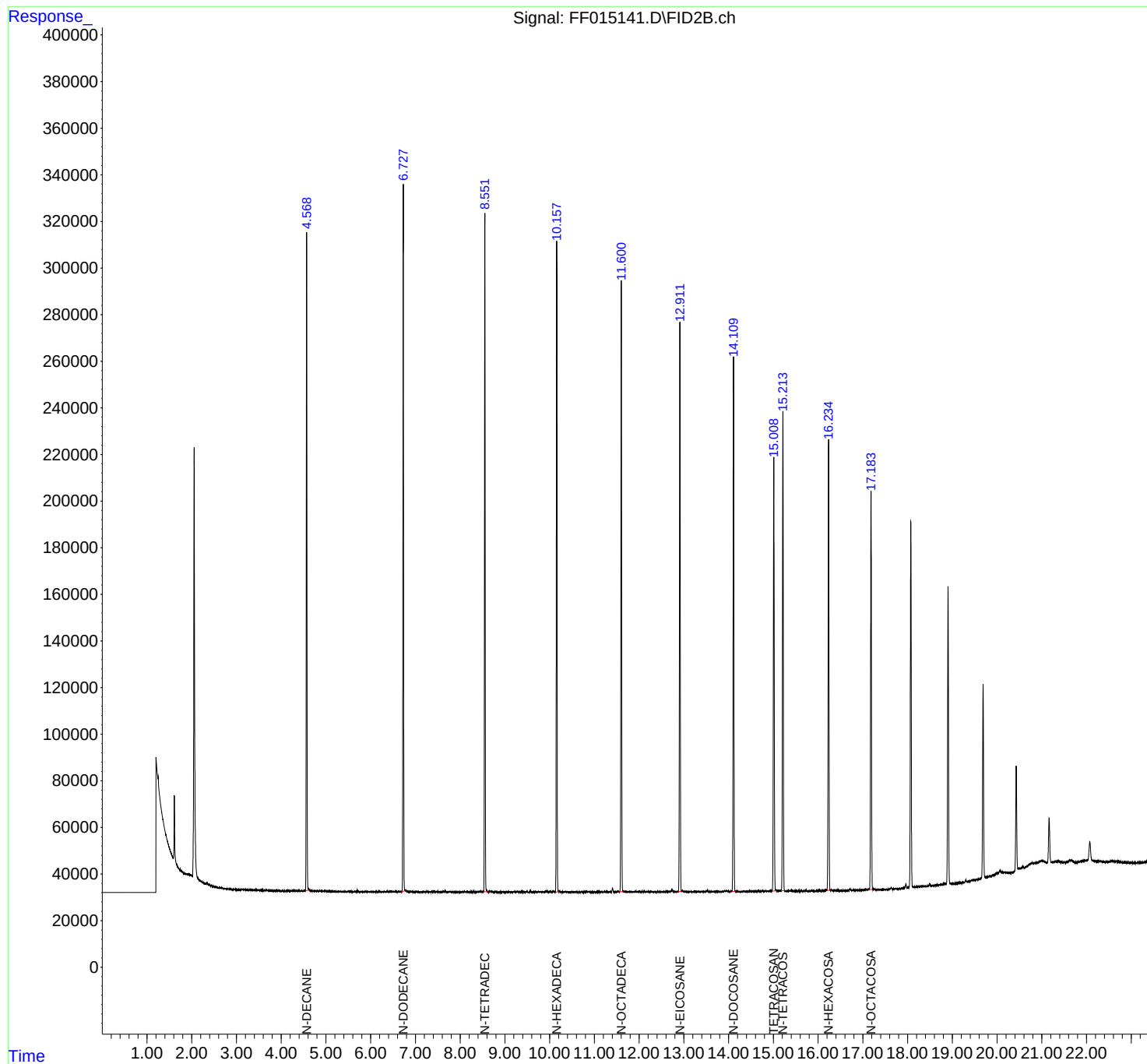
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015141.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 14:12
Operator : YP\AJ
Sample : PB165425BS
Misc :
ALS Vial : 56 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB165425BS

Integration File: autoint1.e
Quant Time: Dec 06 23:06:52 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015141.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 14:12
Sample : PB165425BS
Misc :
ALS Vial : 56 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.568	4.534	4.624	BB	283267	3020849	97.51%	9.681%
2	6.728	6.687	6.777	BB	303464	3081201	99.45%	9.875%
3	8.552	8.516	8.609	BB	290088	3098094	100.00%	9.929%
4	10.158	10.119	10.209	BB	279140	3076420	99.30%	9.859%
5	11.601	11.551	11.651	BB	262497	3065122	98.94%	9.823%
6	12.911	12.871	12.954	BB	244419	3006945	97.06%	9.637%
7	14.110	14.071	14.162	BB	228456	2804047	90.51%	8.987%
8	15.009	14.966	15.071	BB	186356	2550203	82.32%	8.173%
9	15.213	15.166	15.266	BB	205357	2664300	86.00%	8.539%
10	16.235	16.194	16.287	BB	193411	2507871	80.95%	8.037%
11	17.184	17.126	17.227	BB	169736	2327554	75.13%	7.459%
Sum of corrected areas:						31202606		

FF112124.M Fri Dec 06 23:51:25 2024

Report of Analysis

Client:	ENTACT	Date Collected:	12/05/24
Project:	North Point	Date Received:	12/05/24
Client Sample ID:	EX-8-TPH-1MS	SDG No.:	P5147
Lab Sample ID:	P5147-01MS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	81
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015143.D	1	12/06/24 09:03	12/06/24 15:09	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1160000	E	228	2060	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.2		37 - 130	66%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
 Data File : FF015143.D
 Signal(s) : FID2B.ch
 Acq On : 06 Dec 2024 15:09
 Operator : YP\AJ
 Sample : P5147-01MS
 Misc :
 ALS Vial : 58 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 EX-8-TPH-1MS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 12/09/2024
 Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
 Quant Time: Dec 06 23:07:38 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.013	1461557	13.224 ug/mlm
Target Compounds			
2) N-DECANE	4.569	4361863	34.497 ug/mlm
3) N-DODECANE	6.766	7724718	59.293 ug/mlm
4) N-TETRADECANE	8.539	8023661	63.302 ug/mlm
5) N-HEXADECANE	10.180	8001844	62.132 ug/mlm
6) N-OCTADECANE	11.616	3552118	26.921 ug/mlm
7) N-EICOSANE	12.923	4618231	36.217 ug/mlm
8) N-DOCOSANE	14.117	2770971	22.318 ug/mlm
10) N-TETRACOSANE	15.217	2798531	22.994 ug/mlm
11) N-HEXACOSANE	16.239	2117541	17.923 ug/ml
12) N-OCTACOSANE	17.187	2121722	18.204 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015143.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 15:09
Operator : YP\AJ
Sample : P5147-01MS
Misc :
ALS Vial : 58 Sample Multiplier: 1

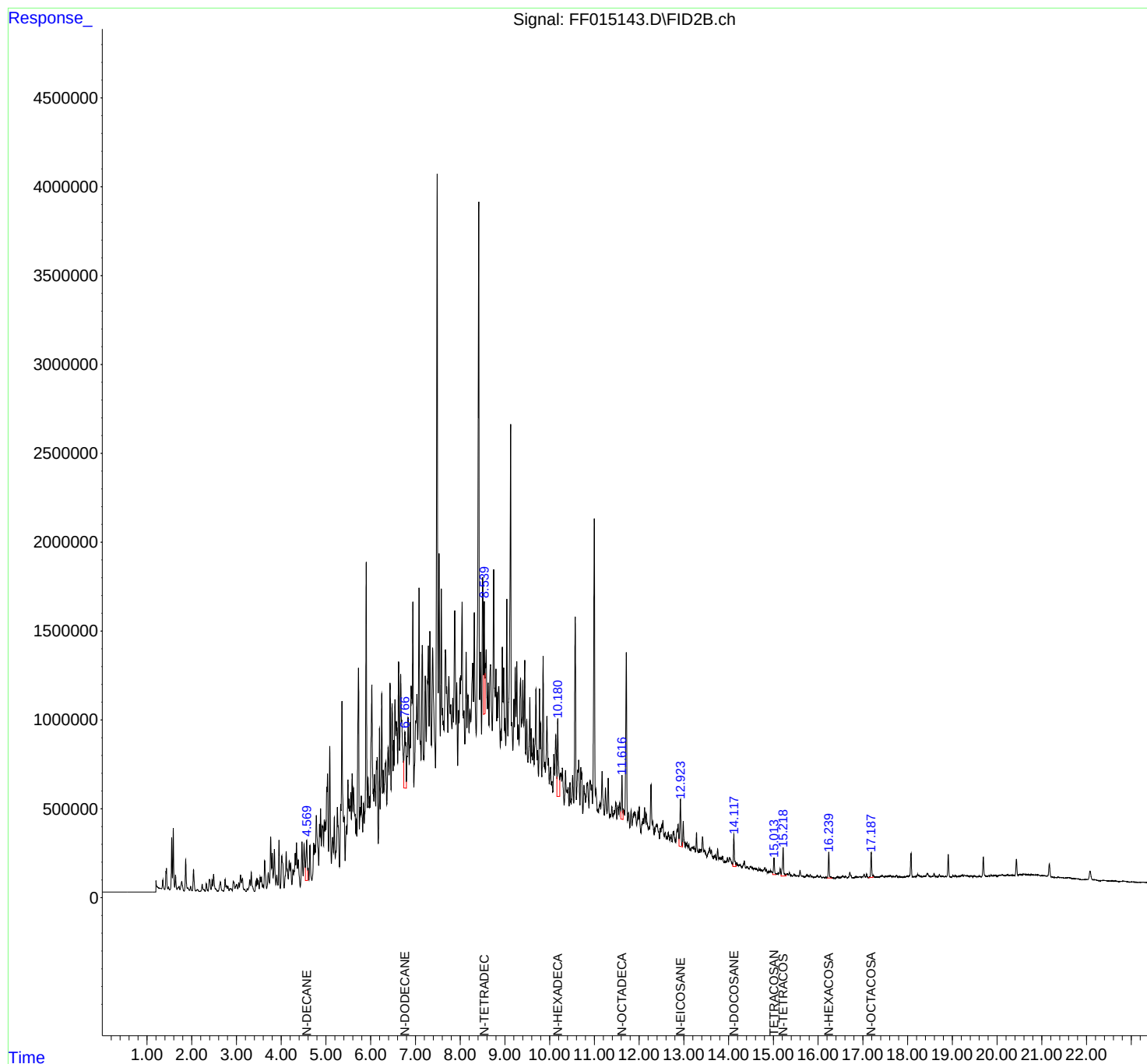
Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1MS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
Quant Time: Dec 06 23:07:38 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MS

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF12062
Data File : FF015143.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 15:09
Sample : P5147-01MS
Misc :
ALS Vial : 58 Sample Multiplier: 1

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.511	4.500	4.538	BV	119488	1457908	1.71%	0.041%
2	4.569	4.538	4.594	VV	185546	2975024	3.48%	0.084%
3	4.603	4.594	4.620	VV	52000	503074	0.59%	0.014%
4	4.642	4.620	4.686	PV	196811	2819930	3.30%	0.080%
5	4.724	4.686	4.736	PV	211548	2679940	3.14%	0.076%
6	4.750	4.736	4.765	VV	198853	3015009	3.53%	0.086%
7	4.785	4.765	4.839	VV	366254	10162040	11.90%	0.288%
8	4.857	4.839	4.867	VV	317000	3864584	4.53%	0.110%
9	4.881	4.867	4.898	VV	404378	5645194	6.61%	0.160%
10	4.919	4.898	4.926	VV	308108	4465972	5.23%	0.127%
11	4.932	4.926	4.948	VV	303330	3564480	4.17%	0.101%
12	4.963	4.948	4.976	VV	340751	4848535	5.68%	0.138%
13	4.991	4.976	5.001	VV	328108	4468489	5.23%	0.127%
14	5.019	5.001	5.025	VV	527200	6314341	7.39%	0.179%
15	5.036	5.025	5.059	VV	599662	8345328	9.77%	0.237%
16	5.086	5.059	5.122	VV	754892	13570558	15.89%	0.385%
17	5.149	5.122	5.170	VV	241496	5420909	6.35%	0.154%
18	5.188	5.170	5.209	VV	354918	5592542	6.55%	0.159%
19	5.256	5.209	5.303	VV	411027	13100957	15.34%	0.372%
20	5.331	5.303	5.338	VV	427850	5587922	6.54%	0.159%
21	5.359	5.338	5.394	VV	1008251	19907627	23.31%	0.565%
22	5.409	5.394	5.430	VV	355148	5903193	6.91%	0.167%
23	5.458	5.430	5.470	VV	304164	5883090	6.89%	0.167%
24	5.492	5.470	5.506	VV	565844	9348429	10.95%	0.265%
25	5.516	5.506	5.529	VV	457636	5862140	6.87%	0.166%
26	5.555	5.529	5.569	VV	493173	9997291	11.71%	0.284%
27	5.587	5.569	5.603	VV	601237	10190331	11.93%	0.289%
28	5.617	5.603	5.645	VV	520761	11125176	13.03%	0.316%
29	5.651	5.645	5.667	VV	373409	4396257	5.15%	0.125%
30	5.681	5.667	5.694	VV	342363	4762346	5.58%	0.135%
31	5.728	5.694	5.749	VV	1194079	24216914	28.36%	0.687%
32	5.764	5.749	5.775	VV	411249	5860373	6.86%	0.166%
33	5.789	5.775	5.823	VV	475041	10863333	12.72%	0.308%
34	5.841	5.823	5.857	VV	433485	7472063	8.75%	0.212%
35	5.901	5.857	5.926	VV	1789211	33010104	38.66%	0.936%
36	5.941	5.926	5.966	VV	577179	11545104	13.52%	0.327%

rteres									
37	5.979	5.966	5.989	VV	469718	6140261	7.19%	0.174%	
38	6.026	5.989	6.055	VV	1099586	29749028	34.58%	0.174%	
39	6.062	6.055	6.071	VV	510926	4622437	5.10%	0.174%	
40	6.085	6.071	6.112	VV	594722	12508080	14.58%	0.174%	
41	6.128	6.112	6.136	VV	665710	8292202	9.92%	0.377%	
42	6.145	6.136	6.169	VV	691642	9646445	11.56%	0.377%	
43	6.196	6.169	6.213	VV	854460	13286883	15.56%	0.377%	
44	6.247	6.213	6.267	VV	1050399	22020495	25.79%	0.625%	
45	6.279	6.267	6.294	VV	618239	9129489	10.69%	0.259%	
46	6.327	6.294	6.334	VV	658195	14047712	16.45%	0.398%	
47	6.339	6.334	6.360	VV	666908	8512269	9.97%	0.241%	
48	6.389	6.360	6.410	VV	746506	18829182	22.05%	0.534%	
49	6.433	6.410	6.455	VV	1111225	21563737	25.25%	0.612%	
50	6.478	6.455	6.500	VV	987704	21198582	24.83%	0.601%	
51	6.514	6.500	6.525	VV	786845	10606130	12.42%	0.301%	
52	6.543	6.525	6.563	VV	1016521	19786785	23.17%	0.561%	
53	6.575	6.563	6.603	VV	891627	19678465	23.05%	0.558%	
54	6.624	6.603	6.645	VV	1226001	23974835	28.08%	0.680%	
55	6.670	6.645	6.688	VV	1158213	24760318	29.00%	0.702%	
56	6.692	6.688	6.737	VV	901393	23061003	27.01%	0.654%	
57	6.765	6.737	6.777	VV	832495	18187339	21.30%	0.516%	
58	6.782	6.777	6.798	VV	774890	8586826	10.06%	0.244%	
59	6.836	6.798	6.861	VV	915975	28064834	32.87%	0.796%	
60	6.877	6.861	6.887	VV	889127	12217939	14.31%	0.347%	
61	6.904	6.887	6.925	VV	1090642	22519526	26.37%	0.639%	
62	6.942	6.925	6.965	VV	1563813	25870068	30.30%	0.734%	
63	7.004	6.965	7.010	VV	898058	19367514	22.68%	0.549%	
64	7.032	7.010	7.051	VV	1046546	22831013	26.74%	0.648%	
65	7.081	7.051	7.106	VV	1642713	36958898	43.28%	1.048%	
66	7.111	7.106	7.125	VV	781084	8356493	9.79%	0.237%	
67	7.153	7.125	7.179	VV	1319228	31904326	37.36%	0.905%	
68	7.186	7.179	7.192	VV	692935	5431143	6.36%	0.154%	
69	7.219	7.192	7.240	VV	1147921	26733423	31.31%	0.758%	
70	7.288	7.240	7.305	VV	1317274	41442768	48.54%	1.176%	
71	7.323	7.305	7.356	VV	1396474	32367565	37.91%	0.918%	
72	7.384	7.356	7.448	VV	1305266	52424825	61.40%	1.487%	
73	7.486	7.448	7.510	VV	3976375	73653085	86.26%	2.089%	
74	7.528	7.510	7.555	VV	1834185	35665435	41.77%	1.012%	
75	7.578	7.555	7.597	VV	1636808	29847376	34.96%	0.847%	
76	7.604	7.597	7.617	VV	966519	11616931	13.61%	0.330%	
77	7.624	7.617	7.637	VV	891636	10430973	12.22%	0.296%	
78	7.674	7.637	7.692	VV	1295660	36612246	42.88%	1.039%	
79	7.698	7.692	7.725	VV	1086148	19110142	22.38%	0.542%	
80	7.746	7.725	7.777	VV	1142332	31616243	37.03%	0.897%	
81	7.789	7.777	7.817	VV	984443	22039553	25.81%	0.625%	
82	7.835	7.817	7.849	VV	1024248	17930273	21.00%	0.509%	
83	7.878	7.849	7.906	VV	1516312	40888633	47.89%	1.160%	
84	7.923	7.906	7.944	VV	1108364	20786268	24.34%	0.590%	
85	7.965	7.944	7.976	VV	955165	16268005	19.05%	0.461%	
86	7.994	7.976	8.003	VV	1131767	16668304	19.52%	0.473%	
87	8.015	8.003	8.020	VV	1147887	11552691	13.53%	0.328%	
88	8.043	8.020	8.061	VV	1561845	30965339	36.26%	0.878%	
89	8.066	8.061	8.074	VV	929559	7395348	8.66%	0.210%	

Instrument :

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ClientSampleId :

EX-8-TPH-1MS

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Supervised By :Ankita Jodhani 12/09/2024

Instrument :

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					rt	Area	Area%	Height
90	8.084	8.074	8.104	VV	950470	15751842	18.45%	0.447%
91	8.134	8.104	8.153	VV	1282854	28850383	33.88%	0.447%
92	8.176	8.153	8.198	VV	1037980	25860993	30.53%	0.447%
93	8.219	8.198	8.239	VV	957532	22617254	26.68%	0.447%
94	8.280	8.239	8.297	VV	1216351	37240995	43.55%	0.447%
95	8.316	8.297	8.359	VV	1502850	41385785	48.55%	0.447%
96	8.415	8.359	8.436	VV	3820296	85386711	100.00%	2.422%
97	8.457	8.436	8.478	VV	1280620	27217200	31.88%	0.772%
98	8.503	8.478	8.523	VV	1699149	37188538	43.55%	1.055%
99	8.539	8.523	8.556	VV	1565334	25698246	30.10%	0.729%
100	8.565	8.556	8.570	VV	1217729	10199884	11.95%	0.289%
101	8.581	8.570	8.608	VV	1294440	26066889	30.53%	0.739%
102	8.624	8.608	8.644	VV	1108248	21588648	25.28%	0.612%
103	8.679	8.644	8.718	VV	1210437	46000952	53.87%	1.305%
104	8.750	8.718	8.785	VV	1746587	49394153	57.85%	1.401%
105	8.800	8.785	8.817	VV	1183177	20671807	24.21%	0.586%
106	8.829	8.817	8.842	VV	1054199	14426937	16.90%	0.409%
107	8.865	8.842	8.897	VV	1089200	32004418	37.48%	0.908%
108	8.910	8.897	8.921	VV	838919	11227128	13.15%	0.318%
109	8.942	8.921	8.959	VV	1308666	24598769	28.81%	0.698%
110	8.974	8.959	8.992	VV	1192748	20597204	24.12%	0.584%
111	9.003	8.992	9.019	VV	906307	13783953	16.14%	0.391%
112	9.044	9.019	9.067	VV	1578348	31494387	36.88%	0.893%
113	9.129	9.067	9.147	VV	2563964	66915288	78.37%	1.898%
114	9.155	9.147	9.177	VV	884920	14965590	17.53%	0.425%
115	9.202	9.177	9.214	VV	1014015	19183360	22.47%	0.544%
116	9.231	9.214	9.249	VV	1190870	21391107	25.05%	0.607%
117	9.266	9.249	9.287	VV	1226133	23284219	27.27%	0.660%
118	9.300	9.287	9.316	VV	868059	14353513	16.81%	0.407%
119	9.351	9.316	9.368	VV	1132049	30803130	36.07%	0.874%
120	9.378	9.368	9.384	VV	897588	8182902	9.58%	0.232%
121	9.402	9.384	9.421	VV	1123038	22127466	25.91%	0.628%
122	9.444	9.421	9.466	VV	1234493	25547361	29.92%	0.725%
123	9.489	9.466	9.512	VV	904184	21631229	25.33%	0.614%
124	9.558	9.512	9.575	VV	1022666	29647179	34.72%	0.841%
125	9.589	9.575	9.602	VV	850535	12241272	14.34%	0.347%
126	9.608	9.602	9.618	VV	706562	6530407	7.65%	0.185%
127	9.636	9.618	9.653	VV	793332	15450523	18.09%	0.438%
128	9.693	9.653	9.719	VV	1073972	32395604	37.94%	0.919%
129	9.731	9.719	9.751	VV	726021	12629510	14.79%	0.358%
130	9.774	9.751	9.789	VV	1072467	18956806	22.20%	0.538%
131	9.801	9.789	9.825	VV	879574	16147457	18.91%	0.458%
132	9.854	9.825	9.882	VV	1255853	29169776	34.16%	0.827%
133	9.892	9.882	9.904	VV	660781	8489330	9.94%	0.241%
134	9.939	9.904	9.966	VV	917455	27145884	31.79%	0.770%
135	9.975	9.966	9.992	VV	683885	9937120	11.64%	0.282%
136	10.018	9.992	10.039	VV	631587	16225752	19.00%	0.460%
137	10.048	10.039	10.071	VV	550276	10409863	12.19%	0.295%
138	10.093	10.071	10.112	VV	697207	15064419	17.64%	0.427%
139	10.136	10.112	10.163	VV	813244	21355846	25.01%	0.606%
140	10.181	10.163	10.225	VV	905418	25194363	29.51%	0.715%
141	10.240	10.225	10.254	VV	599833	10107728	11.84%	0.287%

				rters				
142	10.258	10.254	10.271	VV	588029	5757531	6.74%	0.163%
143	10.285	10.271	10.324	VV	625893	17089510	20.12%	0.230%
144	10.355	10.324	10.376	VV	614182	16135305	18.42%	0.204%
145	10.381	10.376	10.390	VV	499199	4122400	4.52%	0.109%
146	10.392	10.390	10.398	VV	496671	2395384	2.41%	0.058%
147	10.410	10.398	10.434	VV	516972	10435710	12.12%	0.149%
148	10.455	10.434	10.482	VV	543107	13325385	15.61%	0.378%
149	10.513	10.482	10.538	VV	585341	16713751	19.57%	0.474%
150	10.571	10.538	10.596	VV	1477295	30621687	35.86%	0.869%
151	10.626	10.596	10.635	VV	616285	12770851	14.96%	0.362%
152	10.649	10.635	10.677	VV	671222	14137221	16.56%	0.401%
153	10.695	10.677	10.704	VV	631503	8892167	10.41%	0.252%
154	10.715	10.704	10.740	VV	601474	10897313	12.76%	0.309%
155	10.765	10.740	10.801	VV	526647	16867250	19.75%	0.478%
156	10.846	10.801	10.878	VV	544637	22389344	26.22%	0.635%
157	10.898	10.878	10.905	VV	557367	8112551	9.50%	0.230%
158	10.913	10.905	10.927	VV	552749	7191705	8.42%	0.204%
159	10.938	10.927	10.956	VV	530665	8556694	10.02%	0.243%
160	10.997	10.956	11.020	VV	2030099	40309641	47.21%	1.143%
161	11.033	11.020	11.084	VV	507407	16736950	19.60%	0.475%
162	11.125	11.084	11.142	VV	428566	13971565	16.36%	0.396%
163	11.172	11.142	11.220	VV	607435	21749125	25.47%	0.617%
164	11.248	11.220	11.281	VV	514947	15653746	18.33%	0.444%
165	11.309	11.281	11.339	VV	569685	15315590	17.94%	0.434%
166	11.345	11.339	11.364	VV	361712	5410185	6.34%	0.153%
167	11.388	11.364	11.416	VV	409621	11590098	13.57%	0.329%
168	11.446	11.416	11.458	VV	384929	9402688	11.01%	0.267%
169	11.478	11.458	11.502	VV	433365	10360739	12.13%	0.294%
170	11.525	11.502	11.547	VV	410040	10509829	12.31%	0.298%
171	11.566	11.547	11.591	VV	430735	10669080	12.50%	0.303%
172	11.616	11.591	11.634	VV	585507	11953315	14.00%	0.339%
173	11.646	11.634	11.657	VV	397161	5308021	6.22%	0.151%
174	11.663	11.657	11.677	VV	384138	4629884	5.42%	0.131%
175	11.713	11.677	11.742	VV	1277551	27138601	31.78%	0.770%
176	11.765	11.742	11.793	VV	374041	10368532	12.14%	0.294%
177	11.820	11.793	11.842	VV	387920	9960796	11.67%	0.283%
178	11.882	11.842	11.894	VV	372342	10842244	12.70%	0.308%
179	11.911	11.894	11.945	VV	378962	10599361	12.41%	0.301%
180	11.973	11.945	11.987	VV	378231	8853044	10.37%	0.251%
181	12.003	11.987	12.040	VV	406616	10452491	12.24%	0.296%
182	12.066	12.040	12.071	VV	314069	5399584	6.32%	0.153%
183	12.089	12.071	12.103	VV	341038	6329594	7.41%	0.180%
184	12.122	12.103	12.139	VV	402322	7643870	8.95%	0.217%
185	12.157	12.139	12.204	VV	368470	12742081	14.92%	0.361%
186	12.221	12.204	12.235	VV	293883	5351937	6.27%	0.152%
187	12.265	12.235	12.293	VV	531368	13654808	15.99%	0.387%
188	12.307	12.293	12.337	VV	325315	7815021	9.15%	0.222%
189	12.395	12.337	12.430	VV	308176	16017888	18.76%	0.454%
190	12.435	12.430	12.455	VV	269874	3857839	4.52%	0.109%
191	12.475	12.455	12.488	VV	283179	5086563	5.96%	0.144%
192	12.506	12.488	12.518	VV	305889	5253981	6.15%	0.149%
193	12.532	12.518	12.566	VV	330987	7982989	9.35%	0.226%
194	12.586	12.566	12.609	VV	263558	6432097	7.53%	0.182%

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195	12.622	12.609	12.632	VV	240029	3282879	3.84%	0.093%
196	12.650	12.632	12.685	VV	262323	7636934		
197	12.715	12.685	12.737	VV	249078	7255443		
198	12.762	12.737	12.819	VV	266176	11514352		
199	12.846	12.819	12.855	VV	278433	5467647		
200	12.871	12.855	12.892	VV	307259	5953608		
201	12.923	12.892	12.966	VV	446906	12670126	14.84%	0.359%
202	12.986	12.966	13.028	VV	325157	8804631	10.31%	0.250%
203	13.040	13.028	13.054	VV	199798	2981954	3.49%	0.085%
204	13.063	13.054	13.096	VV	200345	4831200	5.66%	0.137%
205	13.110	13.096	13.131	VV	195860	3748952	4.39%	0.106%
206	13.144	13.131	13.156	VV	168243	2524113	2.96%	0.072%
207	13.176	13.156	13.184	VV	176978	2847713	3.34%	0.081%
208	13.197	13.184	13.210	VV	179880	2784896	3.26%	0.079%
209	13.227	13.210	13.234	VV	177494	2496096	2.92%	0.071%
210	13.239	13.234	13.260	VV	173333	2546451	2.98%	0.072%
211	13.283	13.260	13.325	VV	259821	7163563	8.39%	0.203%
212	13.340	13.325	13.358	VV	166002	3179216	3.72%	0.090%
213	13.380	13.358	13.396	VV	165404	3582761	4.20%	0.102%
214	13.417	13.396	13.447	VV	239070	5984170	7.01%	0.170%
215	13.459	13.447	13.516	VV	159475	5973358	7.00%	0.169%
216	13.578	13.516	13.598	VV	171885	7421883	8.69%	0.211%
217	13.614	13.598	13.660	VV	162814	5058971	5.92%	0.143%
218	13.676	13.660	13.687	VV	131409	2032589	2.38%	0.058%
219	13.704	13.687	13.727	VV	136934	2977465	3.49%	0.084%
220	13.755	13.727	13.781	VV	168829	4288124	5.02%	0.122%
221	13.802	13.781	13.825	VV	118776	3039151	3.56%	0.086%
222	13.865	13.825	13.894	VV	126662	4647124	5.44%	0.132%
223	13.913	13.894	13.926	VV	100494	1817156	2.13%	0.052%
224	13.940	13.926	13.954	VV	97312	1610348	1.89%	0.046%
225	13.973	13.954	13.999	VV	119267	2860590	3.35%	0.081%
226	14.022	13.999	14.089	VV	120407	5499373	6.44%	0.156%
227	14.117	14.089	14.166	VV	250855	6020980	7.05%	0.171%
228	14.183	14.166	14.216	VV	89107	2410210	2.82%	0.068%
229	14.235	14.216	14.238	VV	77153	1022979	1.20%	0.029%
230	14.257	14.238	14.294	VV	79375	2459913	2.88%	0.070%
231	14.351	14.294	14.391	VV	100249	4349029	5.09%	0.123%
232	14.423	14.391	14.444	VV	67154	2045930	2.40%	0.058%
233	14.448	14.444	14.461	VV	57326	561277	0.66%	0.016%
234	14.483	14.461	14.502	VV	69359	1558326	1.83%	0.044%
235	14.507	14.502	14.552	VV	66396	1830236	2.14%	0.052%
236	14.561	14.552	14.568	VV	59805	565490	0.66%	0.016%
237	14.575	14.568	14.582	VV	58186	460367	0.54%	0.013%
238	14.595	14.582	14.611	VV	58771	971424	1.14%	0.028%
239	14.628	14.611	14.655	VV	57520	1367221	1.60%	0.039%
240	14.680	14.655	14.725	VV	55750	2034219	2.38%	0.058%
241	14.742	14.725	14.762	VV	48131	1009362	1.18%	0.029%
242	14.781	14.762	14.787	VV	51027	743029	0.87%	0.021%
243	14.806	14.787	14.827	VV	62316	1285155	1.51%	0.036%
244	14.843	14.827	14.863	VV	51484	936652	1.10%	0.027%
245	14.899	14.863	14.912	VV	38629	1113496	1.30%	0.032%
246	14.936	14.912	14.954	VV	43125	982815	1.15%	0.028%

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247	14.961	14.954	14.986	VV	39754	702747	0.82%	0.020%	
248	15.014	14.986	15.054	VV	116816	2383295			
249	15.066	15.054	15.077	VV	26466	361333			
250	15.085	15.077	15.089	VV	26322	179090			
251	15.105	15.089	15.127	VV	28836	641430			
252	15.152	15.127	15.173	VV	56019	1033495			
253	15.218	15.173	15.277	VV	174920	3659663	4.29%	0.104%	
254	15.313	15.277	15.332	VV	28287	816925	0.96%	0.023%	
255	15.357	15.332	15.405	VV	32152	1004426	1.18%	0.028%	
256	15.408	15.405	15.430	VV	16883	228572	0.27%	0.006%	
257	15.462	15.430	15.519	VV	24129	939785	1.10%	0.027%	
258	15.543	15.519	15.567	VV	15819	416577	0.49%	0.012%	
259	15.596	15.567	15.632	VV	44829	959131	1.12%	0.027%	
260	15.652	15.632	15.658	VV	13838	202357	0.24%	0.006%	
261	15.665	15.658	15.699	VV	13772	262838	0.31%	0.007%	
262	15.705	15.699	15.712	VV	9343	73876	0.09%	0.002%	
263	15.745	15.712	15.752	VV	18657	347065	0.41%	0.010%	
264	15.757	15.752	15.770	VV	18346	183021	0.21%	0.005%	
265	15.774	15.770	15.803	VV	17282	261182	0.31%	0.007%	
266	15.825	15.803	15.844	VV	22413	383366	0.45%	0.011%	
267	15.865	15.844	15.897	VV	12309	281234	0.33%	0.008%	
268	15.913	15.897	15.921	VV	7647	98403	0.12%	0.003%	
269	15.930	15.921	15.935	VV	8128	65759	0.08%	0.002%	
270	15.985	15.935	16.016	VV	14956	508767	0.60%	0.014%	
271	16.021	16.016	16.025	VV	6660	34254	0.04%	0.001%	
272	16.050	16.025	16.089	VV	14511	356702	0.42%	0.010%	
273	16.123	16.089	16.141	VV	7040	173962	0.20%	0.005%	
274	16.152	16.141	16.170	VV	6019	84209	0.10%	0.002%	
275	16.182	16.170	16.204	VV	6368	98071	0.11%	0.003%	
276	16.239	16.204	16.317	VV	148704	2275052	2.66%	0.065%	
277	16.327	16.317	16.354	VV	4488	61820	0.07%	0.002%	
278	16.364	16.354	16.372	VV	2153	13105	0.02%	0.000%	
279	16.426	16.372	16.472	PV	9283	291093	0.34%	0.008%	
280	16.506	16.472	16.511	VV	6148	103402	0.12%	0.003%	
281	16.556	16.511	16.592	VV	10390	373079	0.44%	0.011%	
282	16.621	16.592	16.654	VV	10016	246794	0.29%	0.007%	
283	16.709	16.654	16.761	PV	33150	774389	0.91%	0.022%	
284	16.766	16.761	16.788	VV	2468	19498	0.02%	0.001%	
285	16.810	16.788	16.820	VV	3595	46018	0.05%	0.001%	
286	16.839	16.820	16.862	VV	9156	128382	0.15%	0.004%	
287	16.888	16.862	16.892	VV	5402	71330	0.08%	0.002%	
288	16.897	16.892	16.912	VV	5185	51309	0.06%	0.001%	
289	16.933	16.912	16.969	VV	8204	201995	0.24%	0.006%	
290	17.029	16.969	17.059	VV	20922	478478	0.56%	0.014%	
291	17.086	17.059	17.126	VV	21779	317708	0.37%	0.009%	
292	17.187	17.126	17.226	PV	138258	2023795	2.37%	0.057%	
293	17.235	17.226	17.251	VBA	5643	26379	0.03%	0.001%	

Sum of corrected areas: 3525430912

Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024

Supervised By :Ankita Jodhani 12/09/2024

Report of Analysis

Client:	ENTACT	Date Collected:	12/05/24
Project:	North Point	Date Received:	12/05/24
Client Sample ID:	EX-8-TPH-1MSD	SDG No.:	P5147
Lab Sample ID:	P5147-01MSD	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	81
Sample Wt/Vol:	30.05	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015144.D	1	12/06/24 09:03	12/06/24 15:37	PB165425

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1160000	E	228	2050	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.4		37 - 130	67%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance 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
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
 Data File : FF015144.D
 Signal(s) : FID2B.ch
 Acq On : 06 Dec 2024 15:37
 Operator : YP\AJ
 Sample : P5147-01MSD
 Misc :
 ALS Vial : 59 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 EX-8-TPH-1MSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 12/09/2024
 Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
 Quant Time: Dec 06 23:08:03 2024
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
 Quant Title :
 QLast Update : Thu Nov 21 01:46:50 2024
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 1uL
 Signal Phase : Rxi-1ms
 Signal Info : 20mx0.18mmx0.18um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.013	1476284	13.357 ug/mlm
Target Compounds			
2) N-DECANE	4.570	4765232	37.687 ug/mlm
3) N-DODECANE	6.765	5396053	41.419 ug/mlm
4) N-TETRADECANE	8.538	7613916	60.070 ug/mlm
5) N-HEXADECANE	10.179	8562686	66.487 ug/mlm
6) N-OCTADECANE	11.615	4108823	31.140 ug/mlm
7) N-EICOSANE	12.923	4846653	38.009 ug/mlm
8) N-DOCOSANE	14.116	3146284	25.341 ug/mlm
10) N-TETRACOSANE	15.217	3018634	24.802 ug/ml
11) N-HEXACOSANE	16.237	2147093	18.173 ug/ml
12) N-OCTACOSANE	17.188	2229800	19.131 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF120624\
Data File : FF015144.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 15:37
Operator : YP\AJ
Sample : P5147-01MSD
Misc :
ALS Vial : 59 Sample Multiplier: 1

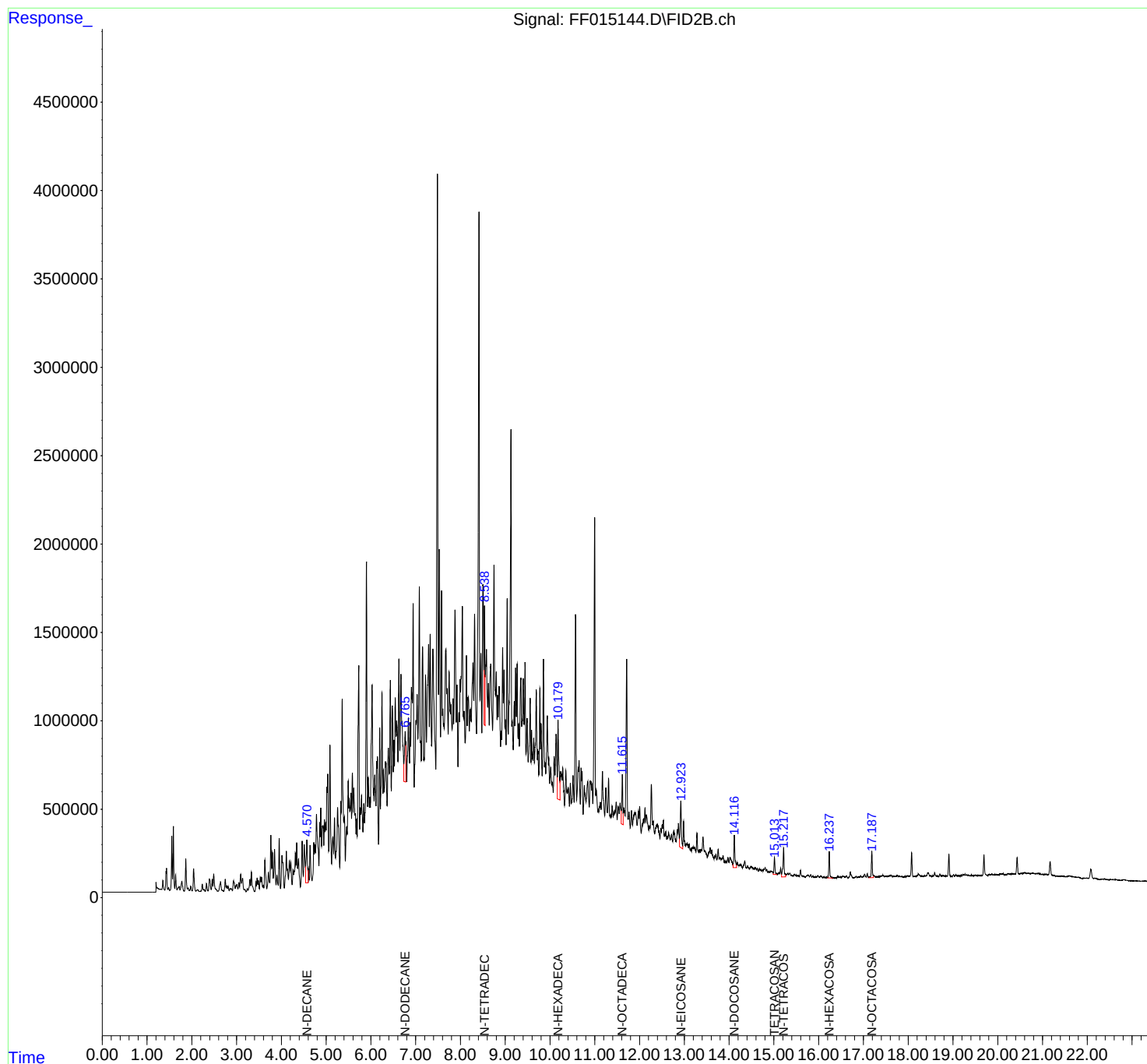
Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1MSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Integration File: autoint1.e
Quant Time: Dec 06 23:08:03 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Quant Title :
QLast Update : Thu Nov 21 01:46:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um



Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MSD

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF12062
Data File : FF015144.D
Signal(s) : FID2B.ch
Acq On : 06 Dec 2024 15:37
Sample : P5147-01MSD
Misc :
ALS Vial : 59 Sample Multiplier: 1

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF112124.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.512	4.500	4.539	BV	127895	1689550	1.98%	0.048%
2	4.570	4.539	4.594	VV	194017	3141187	3.68%	0.089%
3	4.603	4.594	4.621	VV	53298	536193	0.63%	0.015%
4	4.642	4.621	4.687	PV	199171	2870711	3.36%	0.081%
5	4.725	4.687	4.737	PV	216247	2831286	3.31%	0.080%
6	4.750	4.737	4.764	VV	203859	2904617	3.40%	0.082%
7	4.785	4.764	4.839	VV	375128	10361505	12.13%	0.292%
8	4.857	4.839	4.868	VV	329254	3934111	4.61%	0.111%
9	4.881	4.868	4.898	VV	411864	5689482	6.66%	0.160%
10	4.919	4.898	4.928	VV	310522	4784497	5.60%	0.135%
11	4.934	4.928	4.948	VV	306884	3328973	3.90%	0.094%
12	4.963	4.948	4.978	VV	346005	5038629	5.90%	0.142%
13	4.992	4.978	5.001	VV	330405	4403916	5.16%	0.124%
14	5.018	5.001	5.026	VV	529741	6506004	7.62%	0.183%
15	5.037	5.026	5.059	VV	602943	8164375	9.56%	0.230%
16	5.086	5.059	5.123	VV	766089	13836283	16.20%	0.390%
17	5.150	5.123	5.171	VV	245506	5414013	6.34%	0.153%
18	5.188	5.171	5.210	VV	356508	5663597	6.63%	0.160%
19	5.257	5.210	5.305	VV	413861	13294423	15.56%	0.375%
20	5.331	5.305	5.339	VV	449412	5750476	6.73%	0.162%
21	5.359	5.339	5.397	VV	1027475	20234041	23.69%	0.570%
22	5.410	5.397	5.430	VV	360513	5674691	6.64%	0.160%
23	5.459	5.430	5.471	VV	303636	5951978	6.97%	0.168%
24	5.494	5.471	5.507	VV	562673	9481268	11.10%	0.267%
25	5.517	5.507	5.529	VV	461400	5636818	6.60%	0.159%
26	5.556	5.529	5.569	VV	495355	10256036	12.01%	0.289%
27	5.588	5.569	5.604	VV	608489	10319355	12.08%	0.291%
28	5.617	5.604	5.645	VV	522006	11060610	12.95%	0.312%
29	5.652	5.645	5.668	VV	379194	4567917	5.35%	0.129%
30	5.682	5.668	5.694	VV	347965	4736740	5.55%	0.134%
31	5.729	5.694	5.749	VV	1215131	24482857	28.66%	0.690%
32	5.764	5.749	5.775	VV	410017	5738344	6.72%	0.162%
33	5.790	5.775	5.823	VV	482071	11050004	12.94%	0.312%
34	5.842	5.823	5.858	VV	434861	7654100	8.96%	0.216%
35	5.902	5.858	5.927	VV	1806902	33272445	38.95%	0.938%
36	5.941	5.927	5.967	VV	582706	11758106	13.76%	0.332%

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37	5.979	5.967	5.989	VV	471227	5915845	6.93%	0.167%
38	6.026	5.989	6.056	VV	1106638	30153776	38.55%	0.555%
39	6.062	6.056	6.072	VV	518039	4658033	5.18%	0.555%
40	6.086	6.072	6.113	VV	597711	12550093	14.59%	0.555%
41	6.129	6.113	6.137	VV	672792	8387897	9.67%	0.377%
42	6.146	6.137	6.170	VV	699235	9670383	11.76%	0.283%
43	6.197	6.170	6.213	VV	863195	13363472	15.64%	0.377%
44	6.248	6.213	6.267	VV	1064066	22181600	25.97%	0.625%
45	6.280	6.267	6.293	VV	625352	8716458	10.20%	0.246%
46	6.325	6.293	6.332	VV	671822	13356331	15.64%	0.377%
47	6.337	6.332	6.361	VV	659202	10041345	11.76%	0.283%
48	6.390	6.361	6.411	VV	749627	18733442	21.93%	0.528%
49	6.434	6.411	6.456	VV	1131730	21660553	25.36%	0.611%
50	6.478	6.456	6.501	VV	987850	21436385	25.10%	0.604%
51	6.514	6.501	6.526	VV	794520	10626678	12.44%	0.300%
52	6.543	6.526	6.563	VV	1031421	19697986	23.06%	0.555%
53	6.577	6.563	6.604	VV	899623	20031031	23.45%	0.565%
54	6.625	6.604	6.646	VV	1253480	24389193	28.55%	0.688%
55	6.670	6.646	6.689	VV	1164068	25326292	29.65%	0.714%
56	6.695	6.689	6.734	VV	894869	20962244	24.54%	0.591%
57	6.765	6.734	6.778	VV	842711	19959612	23.37%	0.563%
58	6.783	6.778	6.799	VV	779884	8908093	10.43%	0.251%
59	6.837	6.799	6.862	VV	918688	28028818	32.81%	0.790%
60	6.877	6.862	6.888	VV	892276	12285356	14.38%	0.346%
61	6.905	6.888	6.927	VV	1090346	23361573	27.35%	0.659%
62	6.943	6.927	6.966	VV	1563782	25355671	29.68%	0.715%
63	7.004	6.966	7.013	VV	904464	20680560	24.21%	0.583%
64	7.032	7.013	7.050	VV	1050649	20933892	24.51%	0.590%
65	7.081	7.050	7.125	VV	1663515	46268051	54.17%	1.304%
66	7.154	7.125	7.179	VV	1320071	31920967	37.37%	0.900%
67	7.186	7.179	7.192	VV	694859	5615772	6.57%	0.158%
68	7.221	7.192	7.240	VV	1160863	26690493	31.25%	0.753%
69	7.287	7.240	7.305	VV	1333088	41668937	48.78%	1.175%
70	7.323	7.305	7.357	VV	1391115	32830134	38.43%	0.926%
71	7.384	7.357	7.449	VV	1306853	53114893	62.18%	1.497%
72	7.486	7.449	7.510	VV	3986013	73746101	86.33%	2.079%
73	7.529	7.510	7.555	VV	1870329	35878276	42.00%	1.012%
74	7.579	7.555	7.598	VV	1636806	30341650	35.52%	0.855%
75	7.606	7.598	7.620	VV	967953	12768927	14.95%	0.360%
76	7.625	7.620	7.636	VV	886054	8377279	9.81%	0.236%
77	7.669	7.636	7.692	VV	1298160	37390474	43.77%	1.054%
78	7.700	7.692	7.726	VV	1082257	19751417	23.12%	0.557%
79	7.747	7.726	7.778	VV	1177905	31687818	37.10%	0.893%
80	7.788	7.778	7.814	VV	992396	20131589	23.57%	0.568%
81	7.836	7.814	7.849	VV	1025977	19817565	23.20%	0.559%
82	7.879	7.849	7.907	VV	1525719	41185412	48.21%	1.161%
83	7.923	7.907	7.945	VV	1104908	20986901	24.57%	0.592%
84	7.966	7.945	7.977	VV	947259	16482461	19.30%	0.465%
85	7.995	7.977	8.005	VV	1136759	17321135	20.28%	0.488%
86	8.043	8.005	8.061	VV	1545604	42087467	49.27%	1.187%
87	8.066	8.061	8.074	VV	934676	7196899	8.43%	0.203%
88	8.083	8.074	8.105	VV	954243	16473327	19.28%	0.464%
89	8.134	8.105	8.153	VV	1270063	28325692	33.16%	0.799%

Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

							Instrument : FID_F ClientSampleId : EX-8-TPH-1MSD	
					rt	Area	Area%	Yield%
90	8.175	8.153	8.198	VV	1033216	26417178	30.93%	0.745%
Manual IntegrationsAPPROVED								
91	8.221	8.198	8.238	VV	960584	22002485	25.83%	0.670%
92	8.279	8.238	8.297	VV	1228483	37759395	44.86%	1.080%
93	8.316	8.297	8.360	VV	1503589	42593395	49.99%	1.002%
94	8.415	8.360	8.437	VV	3784895	85420437	100.00%	1.308%
95	8.458	8.437	8.478	VV	1281916	27198013	31.22%	0.318%
96	8.504	8.478	8.524	VV	1666387	37885986	44.35%	1.068%
97	8.539	8.524	8.554	VV	1550241	23768706	27.83%	0.670%
98	8.582	8.554	8.609	VV	1304234	38315570	44.86%	1.080%
99	8.625	8.609	8.644	VV	1111869	21350537	24.99%	0.602%
100	8.677	8.644	8.718	VV	1221457	46382331	54.30%	1.308%
101	8.750	8.718	8.787	VV	1780377	50702847	59.36%	1.429%
102	8.801	8.787	8.818	VV	1177267	20148801	23.59%	0.568%
103	8.831	8.818	8.843	VV	1044701	14740388	17.26%	0.416%
104	8.867	8.843	8.897	VV	1093864	31437845	36.80%	0.886%
105	8.911	8.897	8.921	VV	839951	11293888	13.22%	0.318%
106	8.943	8.921	8.958	VV	1311333	24216033	28.35%	0.683%
107	8.974	8.958	8.993	VV	1187101	22010939	25.77%	0.621%
108	9.002	8.993	9.019	VV	905330	13109923	15.35%	0.370%
109	9.044	9.019	9.068	VV	1590621	32305003	37.82%	0.911%
110	9.129	9.068	9.147	VV	2548944	66555737	77.92%	1.876%
111	9.157	9.147	9.179	VV	893499	16083819	18.83%	0.453%
112	9.202	9.179	9.214	VV	1008835	18698997	21.89%	0.527%
113	9.232	9.214	9.250	VV	1196857	22049588	25.81%	0.622%
114	9.267	9.250	9.287	VV	1221572	23023241	26.95%	0.649%
115	9.299	9.287	9.316	VV	881529	14386472	16.84%	0.406%
116	9.350	9.316	9.368	VV	1140655	30686826	35.92%	0.865%
117	9.402	9.368	9.425	VV	1138081	32822547	38.42%	0.925%
118	9.443	9.425	9.465	VV	1227374	23061995	27.00%	0.650%
119	9.489	9.465	9.513	VV	910997	22435911	26.27%	0.633%
120	9.558	9.513	9.575	VV	1026171	29759809	34.84%	0.839%
121	9.589	9.575	9.602	VV	844337	12428554	14.55%	0.350%
122	9.609	9.602	9.619	VV	709890	6817080	7.98%	0.192%
123	9.636	9.619	9.653	VV	803307	15065895	17.64%	0.425%
124	9.694	9.653	9.719	VV	1074127	32693061	38.27%	0.922%
125	9.731	9.719	9.750	VV	725102	12363188	14.47%	0.349%
126	9.774	9.750	9.789	VV	1080456	19480852	22.81%	0.549%
127	9.801	9.789	9.825	VV	881293	16048295	18.79%	0.452%
128	9.854	9.825	9.880	VV	1243311	28794342	33.71%	0.812%
129	9.891	9.880	9.906	VV	660791	9785203	11.46%	0.276%
130	9.939	9.906	9.965	VV	925987	26458485	30.97%	0.746%
131	9.973	9.965	9.991	VV	688018	9992236	11.70%	0.282%
132	10.016	9.991	10.040	VV	633193	17307059	20.26%	0.488%
133	10.050	10.040	10.072	VV	551444	10131754	11.86%	0.286%
134	10.093	10.072	10.112	VV	695068	14874338	17.41%	0.419%
135	10.136	10.112	10.163	VV	822528	21479626	25.15%	0.606%
136	10.180	10.163	10.223	VV	898713	24681437	28.89%	0.696%
137	10.238	10.223	10.268	VV	611252	15997522	18.73%	0.451%
138	10.284	10.268	10.323	VV	632968	17716789	20.74%	0.499%
139	10.353	10.323	10.384	VV	615364	18840824	22.06%	0.531%
140	10.393	10.384	10.399	VV	503617	4447586	5.21%	0.125%
141	10.408	10.399	10.434	VV	517614	10143061	11.87%	0.286%

				rters				
142	10.454	10.434	10.477	VV	546678	12167771	14.24%	0.343%
143	10.513	10.477	10.538	VV	586013	18158066	21.51%	0.343%
144	10.571	10.538	10.595	VV	1498422	30547460	35.81%	0.343%
145	10.628	10.595	10.637	VV	625983	13816522	16.34%	0.343%
146	10.648	10.637	10.676	VV	672608	13372532	15.81%	0.304%
147	10.695	10.676	10.704	VV	629792	9149556	10.81%	0.304%
148	10.715	10.704	10.740	VV	613138	10774332	12.61%	0.304%
149	10.767	10.740	10.804	VV	530712	17776236	20.81%	0.501%
150	10.843	10.804	10.876	VV	551379	21413210	25.07%	0.604%
151	10.897	10.876	10.905	VV	556545	8696486	10.18%	0.245%
152	10.914	10.905	10.928	VV	556401	7182866	8.41%	0.203%
153	10.938	10.928	10.956	VV	539217	8376449	9.81%	0.236%
154	10.997	10.956	11.021	VV	2046102	40653725	47.59%	1.146%
155	11.032	11.021	11.072	VV	506584	13957360	16.34%	0.394%
156	11.078	11.072	11.085	VV	389841	2994207	3.51%	0.084%
157	11.126	11.085	11.140	VV	433487	13543777	15.86%	0.382%
158	11.172	11.140	11.224	VV	609947	23033567	26.96%	0.649%
159	11.247	11.224	11.282	VV	518648	15149299	17.73%	0.427%
160	11.308	11.282	11.340	VV	568574	15453884	18.09%	0.436%
161	11.349	11.340	11.368	VV	361461	5984615	7.01%	0.169%
162	11.388	11.368	11.411	VV	413882	9750911	11.42%	0.275%
163	11.447	11.411	11.458	VV	388747	10545818	12.35%	0.297%
164	11.478	11.458	11.500	VV	434594	10107326	11.83%	0.285%
165	11.527	11.500	11.545	VV	409248	10435996	12.22%	0.294%
166	11.565	11.545	11.589	VV	431598	10520101	12.32%	0.297%
167	11.616	11.589	11.634	VV	593284	12592211	14.74%	0.355%
168	11.646	11.634	11.657	VV	403648	5409433	6.33%	0.153%
169	11.662	11.657	11.679	VV	389455	4892525	5.73%	0.138%
170	11.713	11.679	11.745	VV	1246883	27526698	32.22%	0.776%
171	11.765	11.745	11.792	VV	379838	9763018	11.43%	0.275%
172	11.821	11.792	11.844	VV	388476	10620518	12.43%	0.299%
173	11.864	11.844	11.868	VV	350055	4731145	5.54%	0.133%
174	11.883	11.868	11.894	VV	374975	5640924	6.60%	0.159%
175	11.911	11.894	11.945	VV	374830	10863741	12.72%	0.306%
176	11.974	11.945	11.987	VV	383951	8597587	10.07%	0.242%
177	12.003	11.987	12.039	VV	410726	10435641	12.22%	0.294%
178	12.064	12.039	12.072	VV	312224	5911979	6.92%	0.167%
179	12.088	12.072	12.103	VV	339663	6077945	7.12%	0.171%
180	12.122	12.103	12.140	VV	403090	7856312	9.20%	0.221%
181	12.155	12.140	12.205	VV	363819	12742254	14.92%	0.359%
182	12.222	12.205	12.235	VV	298196	5315512	6.22%	0.150%
183	12.264	12.235	12.292	VV	536348	13540926	15.85%	0.382%
184	12.307	12.292	12.338	VV	328506	8176764	9.57%	0.231%
185	12.374	12.338	12.383	VV	305071	7702129	9.02%	0.217%
186	12.392	12.383	12.402	VV	307140	3423540	4.01%	0.097%
187	12.409	12.402	12.431	VV	301804	5014071	5.87%	0.141%
188	12.435	12.431	12.455	VV	267043	3665930	4.29%	0.103%
189	12.476	12.455	12.489	VV	283729	5275738	6.18%	0.149%
190	12.507	12.489	12.518	VV	306614	5205250	6.09%	0.147%
191	12.532	12.518	12.566	VV	332533	8045464	9.42%	0.227%
192	12.586	12.566	12.607	VV	268959	6037625	7.07%	0.170%
193	12.621	12.607	12.631	VV	242516	3395535	3.98%	0.096%
194	12.649	12.631	12.686	VV	261184	8045985	9.42%	0.227%

Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

195	12.715	12.686	12.740	VV	251840	7518368	8.80%	0.212%
196	12.762	12.740	12.820	VV	266267	11381335	13.52%	0.085%
197	12.844	12.820	12.854	VV	278106	5041820	8.24%	0.199%
198	12.870	12.854	12.890	VV	315074	6039745	0.85%	0.020%
199	12.923	12.890	12.964	VV	443100	12651266	5.65%	0.136%
200	12.985	12.964	13.024	VV	326686	8585974	8.67%	0.209%
201	13.041	13.024	13.050	VV	196719	3009541	3.52%	0.085%
202	13.064	13.050	13.094	VV	200327	4996725	5.85%	0.141%
203	13.110	13.094	13.135	VV	198184	4433616	5.19%	0.125%
204	13.146	13.135	13.157	VV	166553	2209364	2.59%	0.062%
205	13.182	13.157	13.187	VV	175839	3074870	3.60%	0.087%
206	13.197	13.187	13.214	VV	179433	2828029	3.31%	0.080%
207	13.225	13.214	13.235	VV	176953	2269174	2.66%	0.064%
208	13.237	13.235	13.259	VV	174416	2294956	2.69%	0.065%
209	13.283	13.259	13.324	VV	260005	7261876	8.50%	0.205%
210	13.341	13.324	13.359	VV	165797	3299738	3.86%	0.093%
211	13.374	13.359	13.389	VV	165355	2820807	3.30%	0.080%
212	13.417	13.389	13.451	VV	237332	7041322	8.24%	0.199%
213	13.456	13.451	13.459	VV	157122	722994	0.85%	0.020%
214	13.464	13.459	13.515	VV	160210	4828238	5.65%	0.136%
215	13.578	13.515	13.598	VV	174596	7405687	8.67%	0.209%
216	13.613	13.598	13.660	VV	162777	5086949	5.96%	0.143%
217	13.676	13.660	13.687	VV	132814	2044704	2.39%	0.058%
218	13.705	13.687	13.727	VV	136184	2936066	3.44%	0.083%
219	13.755	13.727	13.784	VV	165687	4568793	5.35%	0.129%
220	13.805	13.784	13.826	VV	117476	2840570	3.33%	0.080%
221	13.831	13.826	13.834	VV	113766	585858	0.69%	0.017%
222	13.866	13.834	13.896	VV	128133	4170898	4.88%	0.118%
223	13.912	13.896	13.925	VV	99538	1676313	1.96%	0.047%
224	13.946	13.925	13.954	VV	96817	1602462	1.88%	0.045%
225	13.973	13.954	13.997	VV	119218	2750477	3.22%	0.078%
226	14.026	13.997	14.087	VV	119258	5499551	6.44%	0.155%
227	14.117	14.087	14.165	VV	246929	6092047	7.13%	0.172%
228	14.185	14.165	14.211	VV	88074	2218383	2.60%	0.063%
229	14.227	14.211	14.231	VV	75833	924456	1.08%	0.026%
230	14.255	14.231	14.301	VV	82164	3063198	3.59%	0.086%
231	14.347	14.301	14.391	VV	99128	4090919	4.79%	0.115%
232	14.418	14.391	14.462	VV	67767	2601638	3.05%	0.073%
233	14.483	14.462	14.515	VV	68098	2041426	2.39%	0.058%
234	14.521	14.515	14.545	VV	63796	1097428	1.28%	0.031%
235	14.566	14.545	14.585	VV	58077	1346263	1.58%	0.038%
236	14.594	14.585	14.613	VV	58208	928091	1.09%	0.026%
237	14.632	14.613	14.655	VV	55905	1256825	1.47%	0.035%
238	14.680	14.655	14.693	VV	54341	1122186	1.31%	0.032%
239	14.702	14.693	14.727	VV	49281	950108	1.11%	0.027%
240	14.744	14.727	14.760	VV	47128	923798	1.08%	0.026%
241	14.805	14.760	14.828	VV	62218	2092880	2.45%	0.059%
242	14.843	14.828	14.861	VV	50903	887639	1.04%	0.025%
243	14.883	14.861	14.889	VV	39251	610294	0.71%	0.017%
244	14.897	14.889	14.911	VV	39028	503218	0.59%	0.014%
245	14.934	14.911	14.950	VV	42813	902274	1.06%	0.025%
246	14.962	14.950	14.985	VV	39654	765912	0.90%	0.022%

Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024

Supervised By :Ankita Jodhani 12/09/2024

				rters				
247	15.013	14.985	15.067	VV	119309	2598734	3.04%	0.073%
248	15.073	15.067	15.086	VV	27356	295904		
249	15.109	15.086	15.126	VV	28851	652503		
250	15.151	15.126	15.172	VV	58087	1058499		
251	15.217	15.172	15.278	VV	172405	3686735		
252	15.310	15.278	15.334	VV	28930	816624		
253	15.356	15.334	15.387	VV	30565	775336	0.91%	0.022%
254	15.392	15.387	15.417	VV	18796	296676	0.35%	0.008%
255	15.424	15.417	15.432	VV	14508	132620	0.16%	0.004%
256	15.461	15.432	15.515	VV	23829	894318	1.05%	0.025%
257	15.541	15.515	15.571	VV	15088	466518	0.55%	0.013%
258	15.594	15.571	15.631	VV	46563	905247	1.06%	0.026%
259	15.641	15.631	15.710	VV	12955	513804	0.60%	0.014%
260	15.752	15.710	15.798	VV	18112	744643	0.87%	0.021%
261	15.823	15.798	15.848	VV	21858	422349	0.49%	0.012%
262	15.864	15.848	15.895	VV	12085	248864	0.29%	0.007%
263	15.911	15.895	15.919	VV	7140	83999	0.10%	0.002%
264	15.928	15.919	15.947	VV	7729	117328	0.14%	0.003%
265	15.968	15.947	15.974	VV	11534	147289	0.17%	0.004%
266	15.988	15.974	16.016	VV	13588	268101	0.31%	0.008%
267	16.053	16.016	16.087	VV	13645	371620	0.44%	0.010%
268	16.094	16.087	16.100	VV	4591	33087	0.04%	0.001%
269	16.121	16.100	16.139	VV	6926	128412	0.15%	0.004%
270	16.156	16.139	16.164	VV	5358	67255	0.08%	0.002%
271	16.184	16.164	16.189	VV	5950	63103	0.07%	0.002%
272	16.195	16.189	16.201	VV	5581	35810	0.04%	0.001%
273	16.237	16.201	16.319	VV	151878	2259746	2.65%	0.064%
274	16.329	16.319	16.359	VV	3423	40445	0.05%	0.001%
275	16.368	16.359	16.379	PV	1716	9177	0.01%	0.000%
276	16.426	16.379	16.449	PV	9871	210636	0.25%	0.006%
277	16.451	16.449	16.456	VV	5067	20303	0.02%	0.001%
278	16.459	16.456	16.466	VV	5397	27975	0.03%	0.001%
279	16.486	16.466	16.499	VV	5018	78978	0.09%	0.002%
280	16.502	16.499	16.508	VV	4213	24617	0.03%	0.001%
281	16.514	16.508	16.519	VV	4748	27479	0.03%	0.001%
282	16.543	16.519	16.562	VV	10373	216175	0.25%	0.006%
283	16.569	16.562	16.588	VV	8570	104427	0.12%	0.003%
284	16.617	16.588	16.622	VV	10368	154272	0.18%	0.004%
285	16.626	16.622	16.660	VV	10432	105749	0.12%	0.003%
286	16.707	16.660	16.780	VV	33626	781148	0.91%	0.022%
287	16.791	16.780	16.795	VV	1602	11354	0.01%	0.000%
288	16.841	16.795	16.860	VV	8967	166834	0.20%	0.005%
289	16.878	16.860	16.885	VV	4496	54641	0.06%	0.002%
290	16.893	16.885	16.913	VV	5367	76320	0.09%	0.002%
291	16.939	16.913	16.967	VV	8593	194807	0.23%	0.005%
292	16.974	16.967	16.979	VV	5704	32711	0.04%	0.001%
293	16.993	16.979	17.004	VV	7695	95355	0.11%	0.003%
294	17.029	17.004	17.056	VV	21144	378436	0.44%	0.011%
295	17.086	17.056	17.122	VV	22160	360216	0.42%	0.010%
296	17.188	17.122	17.225	PV	144873	2039183	2.39%	0.057%
297	17.236	17.225	17.250	VBA	5511	24065	0.03%	0.001%
Sum of corrected areas:					3546909187			

Instrument :

FID_F

ClientSampleId :

EX-8-TPH-1MSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024

Supervised By :Ankita Jodhani 12/09/2024

FF112124.M Sat Dec 07 02:14:21 2024

rteres

Instrument :
FID_F
ClientSampleId :
EX-8-TPH-1MSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 12/09/2024
Supervised By :Ankita Jodhani 12/09/2024

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
FF112124ICV		FF015119.D	FF112124	N-HEXATRIACONTANE	Ankita	11/21/2024 10:00:57 AM	Peak Integrated by Software incorrectly
FF112124ICV		FF015119.D	FF112124	N-OCTATRIACONTANE	Ankita	11/21/2024 10:00:57 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
P5147-01		FF015142.D	FF120624	TETRACOSANE-d50 (SURROGA	Ankita	12/9/2024 10:19:37 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-DECANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-DOCOSANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-DODECANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-EICOSANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-HEXADECANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-OCTADECANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-TETRACOSANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	N-TETRADECANE	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MS		FF015143.D	FF120624	TETRACOSANE-d50 (SURROGA	Ankita	12/9/2024 10:19:38 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-DECANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-DOCOSANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-DODECANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-EICOSANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-HEXADECANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-OCTADECANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	N-TETRADECANE	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-01MSD		FF015144.D	FF120624	TETRACOSANE-d50 (SURROGA	Ankita	12/9/2024 10:19:40 AM	Peak Integrated by Software incorrectly
P5147-02		FF015145.D	FF120624	TETRACOSANE-d50 (SURROGA	Ankita	12/9/2024 10:19:42 AM	Peak Integrated by Software incorrectly
50 PPM TRPH STD		FF015147.D	FF120624	TETRACOSANE-d50 (SURROGA	Ankita	12/9/2024 10:19:43 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
50 PPM TRPH STD		FF015150.D	FF120924	TETRACOSANE-d50 (SURROGA	Ankita	12/10/2024 10:26:21 AM	Peak Integrated by Software incorrectly
50 PPM TRPH STD		FF015155.D	FF120924	TETRACOSANE-d50 (SURROGA	Ankita	12/10/2024 10:26:22 AM	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF112124

Review By	yogesh	Review On	11/20/2024 3:16:52 PM
Supervise By	Ankita	Supervise On	11/21/2024 10:01:02 AM
SubDirectory	FF112124	HP Acquire Method	HP Processing Method FF112124
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966		
CCC Internal Standard/PEM	PP23963		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23962,PP23967		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015112.D	20 Nov 2024 15:14	YP\AJ	Ok
2	I.BLK	FF015113.D	20 Nov 2024 15:42	YP\AJ	Ok
3	100 TRPH STD	FF015114.D	20 Nov 2024 16:39	YP\AJ	Ok
4	50 TRPH STD	FF015115.D	20 Nov 2024 17:36	YP\AJ	Ok
5	20 TRPH STD	FF015116.D	20 Nov 2024 18:32	YP\AJ	Ok
6	10 TRPH STD	FF015117.D	20 Nov 2024 19:01	YP\AJ	Ok
7	5 TRPH STD	FF015118.D	20 Nov 2024 19:29	YP\AJ	Ok
8	FF112124ICV	FF015119.D	20 Nov 2024 20:54	YP\AJ	Ok,M

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF120624

Review By	yogesh	Review On	12/9/2024 11:01:10 AM
Supervise By	Ankita	Supervise On	12/9/2024 11:04:09 AM
SubDirectory	FF120624	HP Acquire Method	HP Processing Method FF112124
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966		
CCC Internal Standard/PEM	PP23963		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23962,PP23967		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015136.D	06 Dec 2024 09:53	YP\AJ	Ok
2	I.BLK	FF015137.D	06 Dec 2024 10:21	YP\AJ	Ok
3	50 PPM TRPH STD	FF015138.D	06 Dec 2024 10:50	YP\AJ	Ok
4	RT MARKER	FF015139.D	06 Dec 2024 11:18	YP\AJ	Ok
5	PB165425BL	FF015140.D	06 Dec 2024 13:44	YP\AJ	Ok
6	PB165425BS	FF015141.D	06 Dec 2024 14:12	YP\AJ	Ok
7	P5147-01	FF015142.D	06 Dec 2024 14:40	YP\AJ	Dilution
8	P5147-01MS	FF015143.D	06 Dec 2024 15:09	YP\AJ	Ok,M
9	P5147-01MSD	FF015144.D	06 Dec 2024 15:37	YP\AJ	Ok,M
10	P5147-02	FF015145.D	06 Dec 2024 16:05	YP\AJ	Dilution
11	I.BLK	FF015146.D	06 Dec 2024 16:34	YP\AJ	Ok
12	50 PPM TRPH STD	FF015147.D	06 Dec 2024 17:02	YP\AJ	Ok,M

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF120924

Review By	yogesh	Review On	12/9/2024 11:40:19 AM
Supervise By	Ankita	Supervise On	12/10/2024 10:26:27 AM
SubDirectory	FF120924	HP Acquire Method	HP Processing Method FF112124
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966		
CCC Internal Standard/PEM	PP23963		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP23962,PP23967		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015148.D	09 Dec 2024 08:31	YP\AJ	Ok
2	I.BLK	FF015149.D	09 Dec 2024 08:59	YP\AJ	Ok
3	50 PPM TRPH STD	FF015150.D	09 Dec 2024 09:28	YP\AJ	Ok,M
4	RT MARKER	FF015151.D	09 Dec 2024 10:03	YP\AJ	Ok
5	P5147-01	FF015152.D	09 Dec 2024 10:32	YP\AJ	Ok
6	P5147-02	FF015153.D	09 Dec 2024 11:00	YP\AJ	Ok
7	I.BLK	FF015154.D	09 Dec 2024 11:57	YP\AJ	Ok
8	50 PPM TRPH STD	FF015155.D	09 Dec 2024 12:25	YP\AJ	Ok,M

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF112124

Review By	yogesh	Review On	11/20/2024 3:16:52 PM
Supervise By	Ankita	Supervise On	11/21/2024 10:01:02 AM
SubDirectory	FF112124	HP Acquire Method	HP Processing Method FF112124

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015112.D	20 Nov 2024 15:14		YP\AJ	Ok
2	I.BLK		FF015113.D	20 Nov 2024 15:42		YP\AJ	Ok
3	100 TRPH STD		FF015114.D	20 Nov 2024 16:39		YP\AJ	Ok
4	50 TRPH STD		FF015115.D	20 Nov 2024 17:36		YP\AJ	Ok
5	20 TRPH STD		FF015116.D	20 Nov 2024 18:32		YP\AJ	Ok
6	10 TRPH STD		FF015117.D	20 Nov 2024 19:01		YP\AJ	Ok
7	5 TRPH STD		FF015118.D	20 Nov 2024 19:29		YP\AJ	Ok
8	FF112124ICV		FF015119.D	20 Nov 2024 20:54		YP\AJ	Ok,M

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF120624

Review By	yogesh	Review On	12/9/2024 11:01:10 AM
Supervise By	Ankita	Supervise On	12/9/2024 11:04:09 AM
SubDirectory	FF120624	HP Acquire Method	HP Processing Method FF112124

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015136.D	06 Dec 2024 09:53		YP\AJ	Ok
2	I.BLK		FF015137.D	06 Dec 2024 10:21		YP\AJ	Ok
3	50 PPM TRPH STD		FF015138.D	06 Dec 2024 10:50		YP\AJ	Ok
4	RT MARKER		FF015139.D	06 Dec 2024 11:18		YP\AJ	Ok
5	PB165425BL		FF015140.D	06 Dec 2024 13:44		YP\AJ	Ok
6	PB165425BS		FF015141.D	06 Dec 2024 14:12		YP\AJ	Ok
7	P5147-01		FF015142.D	06 Dec 2024 14:40	need 100x dilution	YP\AJ	Dilution
8	P5147-01MS		FF015143.D	06 Dec 2024 15:09		YP\AJ	Ok,M
9	P5147-01MSD		FF015144.D	06 Dec 2024 15:37		YP\AJ	Ok,M
10	P5147-02		FF015145.D	06 Dec 2024 16:05	need 100x dilution	YP\AJ	Dilution
11	I.BLK		FF015146.D	06 Dec 2024 16:34		YP\AJ	Ok
12	50 PPM TRPH STD		FF015147.D	06 Dec 2024 17:02		YP\AJ	Ok,M

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF120924

Review By	yogesh	Review On	12/9/2024 11:40:19 AM
Supervise By	Ankita	Supervise On	12/10/2024 10:26:27 AM
SubDirectory	FF120924	HP Acquire Method	HP Processing Method FF112124

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	Sampleld	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015148.D	09 Dec 2024 08:31		YP\AJ	Ok
2	I.BLK		FF015149.D	09 Dec 2024 08:59		YP\AJ	Ok
3	50 PPM TRPH STD		FF015150.D	09 Dec 2024 09:28		YP\AJ	Ok,M
4	RT MARKER		FF015151.D	09 Dec 2024 10:03		YP\AJ	Ok
5	P5147-01		FF015152.D	09 Dec 2024 10:32		YP\AJ	Ok
6	P5147-02		FF015153.D	09 Dec 2024 11:00		YP\AJ	Ok
7	I.BLK		FF015154.D	09 Dec 2024 11:57		YP\AJ	Ok
8	50 PPM TRPH STD		FF015155.D	09 Dec 2024 12:25		YP\AJ	Ok,M

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 12/6/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 12/05/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:15
Out Date: 12/06/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB133767

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
P5112-01	10TH-ST-SOIL	1	1.15	8.38	9.53	8.81	91.4	
P5113-01	FES-SB406-4345	2	1.15	8.81	9.96	8.94	88.4	
P5113-02	FES-SB406-7375	3	1.15	8.61	9.76	7.93	78.7	
P5117-01	TAPIAL3-SB04I-10-12032 4-00-T1	4	1.15	8.59	9.74	9.37	95.7	
P5117-02	TAPIAL2-IDW-SOIL-12042 4-00-T2	5	1.15	8.38	9.53	7.84	79.8	
P5120-01	TAPIAL2-IDW-SOIL-12042 4-00-T2	6	1.15	8.38	9.53	7.84	79.8	
P5133-01	MOO-24-00374	9	1.15	8.35	9.5	9.14	95.7	
P5134-01	MOO-24-00373	10	1.00	1.00	2.00	2.00	100.0	debris
P5135-01	LAW-23-00193	11	1.16	8.44	9.6	9.05	93.5	
P5136-01	COMP-1	12	1.16	8.49	9.65	7.26	71.8	
P5137-01	LAW-OILY-STONES	13	1.00	1.00	2.00	2.00	100.0	oily stone
P5137-02	LAW-OILY-STONES-E2	14	1.00	1.00	2.00	2.00	100.0	oily stone
P5144-01	60400	15	1.00	1.00	2.00	2.00	100.0	wipe sample
P5147-01	EX-8-TPH-1	7	1.15	8.82	9.97	8.29	81.0	
P5147-02	EX-8-TPH-2	8	1.15	8.76	9.91	8.1	79.3	

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

WORKLIST(Hardcopy Internal Chain)

133767

WorkList Name : %1-120524

WorkList ID : 185988

Department : Wet-Chemistry

Date : 12-05-2024 08:21:57

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5112-01	10TH-ST-SOIL	Solid	Percent Solids	Cool 4 deg C	TULL02	L51	12/05/2024	Chemtech -SO
P5113-01	FES-SB406-4345	Solid	Percent Solids	Cool 4 deg C	TETRO6	L31	12/04/2024	Chemtech -SO
P5113-02	FES-SB406-7375	Solid	Percent Solids	Cool 4 deg C	TETRO6	L31	12/04/2024	Chemtech -SO
P5117-01	TAPIAL3-SB04I-10-120324-00-	Solid	Percent Solids	Cool 4 deg C	WEST04	L41	12/05/2024	Chemtech -SO
P5117-02	TAPIAL2-IDW-SOIL-120424-00-	Solid	Percent Solids	Cool 4 deg C	WEST04	L41	12/05/2024	Chemtech -SO
P5120-01	TAPIAL2-IDW-SOIL-120424-00-	Solid	Percent Solids	Cool 4 deg C	WEST04	L51	11/27/2024	Chemtech -SO
P5133-01	MOO-24-00374	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	12/05/2024	Chemtech -SO
P5134-01	MOO-24-00373	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	12/05/2024	Chemtech -SO
P5135-01	LAW-23-00193	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	12/05/2024	Chemtech -SO
P5136-01	COMP-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	12/05/2024	Chemtech -SO
P5137-01	LAW-OILY-STONES	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	12/05/2024	Chemtech -SO
P5137-02	LAW-OILY-STONES-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L61	12/05/2024	Chemtech -SO
P5147-01	EX-8-TPH-1	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	12/05/2024	Chemtech -SO
P5147-02	EX-8-TPH-2	Solid	Percent Solids	Cool 4 deg C	ENTA05	L41	12/05/2024	Chemtech -SO

Date/Time 12/05/24 15:40
 Raw Sample Received by: JH werc
 Raw Sample Relinquished by: RJ cext-(ab)

Date/Time 12/05/24 18:10
 Raw Sample Received by: RJ cext-(ab)
 Raw Sample Relinquished by: JH werc

Prep Standard - Chemical Standard Summary

Order ID : P5147

Test : Diesel Range Organics

Prepbatch ID : PB165425,

Sequence ID/Qc Batch ID: FF120624,FF120924,

Standard ID :

EP2560,EP2570,PP23454,PP23935,PP23961,PP23962,PP23963,PP23964,PP23965,PP23966,PP23967,

Chemical ID :

E2865,E3551,E3759,E3822,E3827,E3828,E3845,P11950,P11958,P11959,P11960,P13213,P13218,P13219,P13492,P13493,P13494,P13495,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2560	11/14/2024	05/08/2025	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 11/14/2024

FROM 8000.00000ml of E3827 + 8000.00000ml of E3828 = Final Quantity: 16000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2570	12/02/2024	01/03/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 12/02/2024

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3609	20 PPM DRO SPIKE SOLUTION (RESTEK)	PP23454	06/10/2024	12/08/2024	Yogesh Patel	None	None	Ankita Jodhani
								06/12/2024

FROM 1.00000ml of P11950 + 1.00000ml of P11960 + 48.00000ml of E3759 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
147	20 PPM DRO Surrogate Spike Solution	PP23935	11/01/2024	04/23/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/04/2024

FROM 1.00000ml of P13492 + 1.00000ml of P13493 + 1.00000ml of P13494 + 1.00000ml of P13495 + 196.00000ml of E3822 = Final Quantity: 200.000 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>
433	100/100 PPM DRO (Restek)	PP23961	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 1.00000ml of P11958 + 1.00000ml of P11959 + 1.00000ml of P13213 + 7.00000ml of E3828 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3796	100/100 PPM DRO STD (CPI)	PP23962	11/13/2024	02/14/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 1.00000ml of P13213 + 1.00000ml of P13218 + 1.00000ml of P13219 + 7.00000ml of E3828 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
435	50 PPM ICC DRO STD (Restek)	PP23963	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 0.50000ml of E3828 + 0.50000ml of PP23961 = 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>
437	20 PPM ICC DRO STD (Restek)	PP23964	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 0.80000ml of E3828 + 0.20000ml of PP23961 = 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>
438	10 PPM ICC DRO STD (Restek)	PP23965	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23961 = 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>
439	5 PPM ICC DRO STD (Restek)	PP23966	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani
								11/13/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23963 = 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>
3797	50 PPM DRO ICV STD (CPI)	PP23967	11/13/2024	02/14/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024
<u>FROM</u>	0.80000ml of E3828 + 0.50000ml of PP23962 = Final Quantity: 1.000 ml							

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	0000243821	12/31/2024	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24D1962005	12/08/2024	06/08/2024 / Rajesh	05/31/2024 / Rajesh	E3759

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)	24I2662006	04/23/2025	10/24/2024 / Rajesh	10/24/2024 / Rajesh	E3822

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	05/08/2025	11/08/2024 / Rajesh	11/07/2024 / Rajesh	E3827

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24G0862003	05/09/2025	11/09/2024 / Rajesh	11/04/2024 / Rajesh	E3828

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	24H2762011	06/06/2025	12/06/2024 / Rajesh	11/11/2024 / Rajesh	E3845

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	12/10/2024	06/10/2024 / yogesh	07/11/2022 / Yogesh	P11950

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	05/13/2025	11/13/2024 / yogesh	07/11/2022 / Yogesh	P11958

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	05/13/2025	11/13/2024 / yogesh	07/11/2022 / Yogesh	P11959

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	12/10/2024	06/10/2024 / yogesh	07/11/2022 / Yogesh	P11960

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	05/13/2025	11/13/2024 / yogesh	01/17/2024 / Ankita	P13213

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	02/14/2025	08/14/2024 / yogesh	01/31/2024 / Ankita	P13218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	05/13/2025	11/13/2024 / yogesh	01/31/2024 / Ankita	P13219

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13492

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13493

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13494

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13495

Sand
Purified
Washed and Ignited



Material No.: 3382-05
Batch No.: 0000243821
Manufactured Date: 2018/04/09
Retest Date: 2025/04/07
Revision No: 1

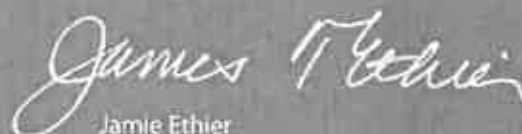
Certificate of Analysis

Test	Specification	Result
Substances Soluble in HCl	$\leq 0.16\%$	0.01

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

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

E 2865


Jamie Ethier
Vice President Global Quality

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

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



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

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3

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



Material No.: 9266-A4
Batch No.: 24D1962005
Manufactured Date: 2024-03-16
Expiration Date: 2025-06-15
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	8
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	99.9 %
Color (APHA)	≤ 10	5
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.1 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	$\leq 10 \text{ ppm}$	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	< 0.01 %

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

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC
Manufacturer source batch: MG24C16563

E 3759

Jamie Croak
Director Quality Operations, Bioscience Production

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



Material No.: 9266-A4

Batch No.: 24I2662006

Manufactured Date: 2024-08-29

Expiration Date: 2025-11-28

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	3
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

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

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

E 3822

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

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

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3827

Rec'd by RS on ~~11/8/24~~ 11/7/24
RS
11/7

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)

 **avantors**™



Material No.: 9266-A4

Batch No.: 24J0862003

Manufactured Date: 2024-09-12

Expiration Date: 2025-12-12

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3828



Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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



Material No.: 9266-A4

Batch No.: 24H2762011

Manufactured Date: 2024-06-05

Expiration Date: 2025-09-04

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	5
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	100.0%
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3845

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

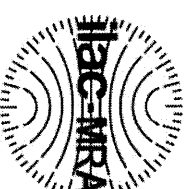
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Octane (C8) CAS # 111-65-9 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 12.4968 µg/mL +/- 14.9795 µg/mL	Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL +/- 12.5390 µg/mL +/- 15.0301 µg/mL	Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL +/- 12.5316 µg/mL +/- 15.0212 µg/mL	Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

P11948 } 7.8
P11962 } 07/11/16

8	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Triacontane (C30) CAS # 638-68-6 Purity 99%	(Lot MKCN9321)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot U25B014)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

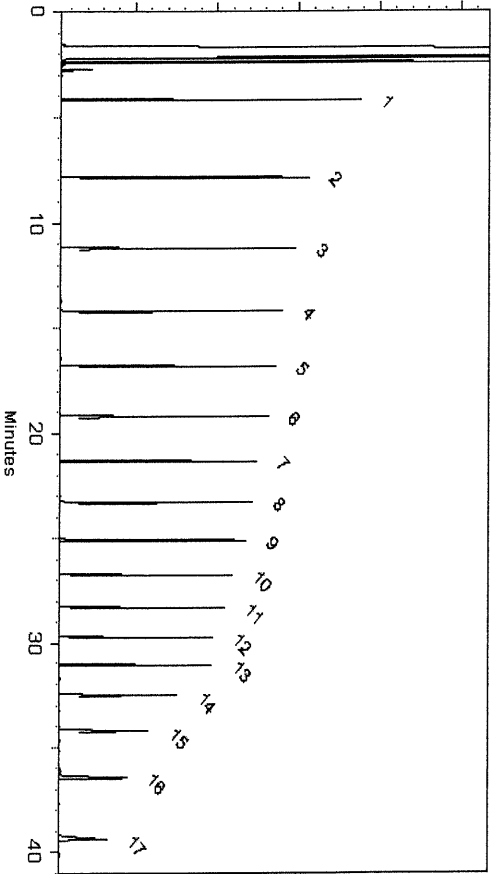
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills
Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-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.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

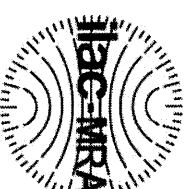
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Octane (C8) CAS # 111-65-9 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 12.4968 µg/mL +/- 14.9795 µg/mL	Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL +/- 12.5390 µg/mL +/- 15.0301 µg/mL	Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL +/- 12.5316 µg/mL +/- 15.0212 µg/mL	Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

P11948 } 7.8
P11962 } 07/11/16

8	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Triacontane (C30) CAS # 638-68-6 Purity 99%	(Lot MKCN9321)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot U25B014)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

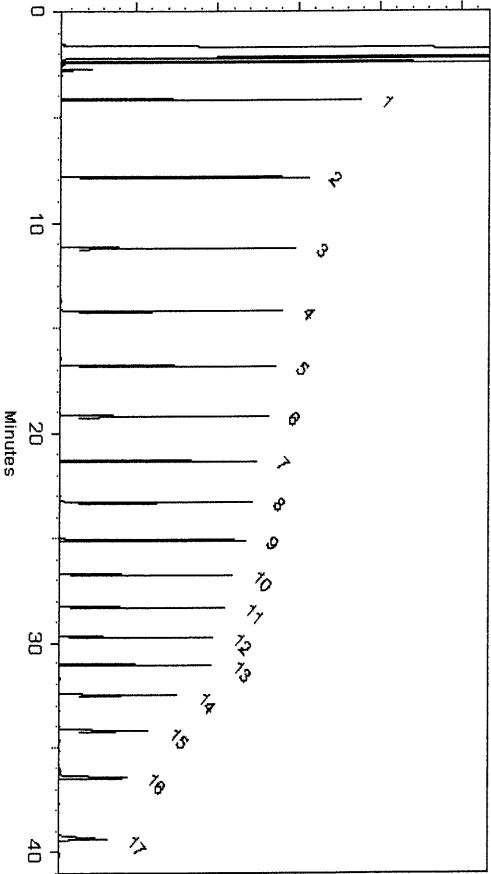
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-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.
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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

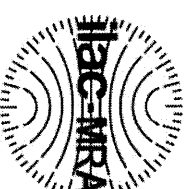
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Octane (C8) CAS # 111-65-9 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 12.4968 µg/mL +/- 14.9795 µg/mL	Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL +/- 12.5390 µg/mL +/- 15.0301 µg/mL	Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL +/- 12.5316 µg/mL +/- 15.0212 µg/mL	Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

P11948 } 7.8
P11962 } 07/11/16

8	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Triacontane (C30) CAS # 638-68-6 Purity 99%	(Lot MKCN9321)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot U25B014)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

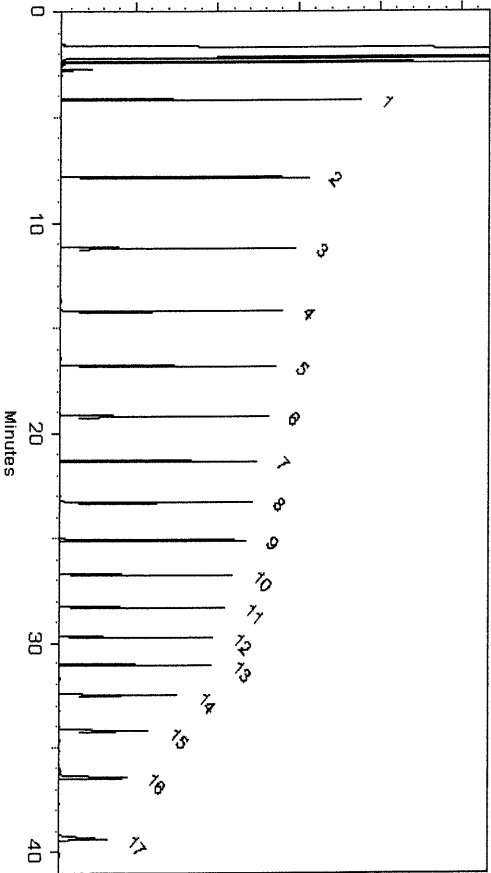
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-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.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

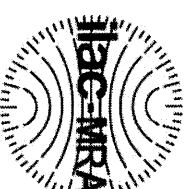
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description :

Florida TRPH Standard

Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul

Container Size :

2 mL

Pkg Amt: > 1 mL

Expiration Date :

July 31, 2029

Storage: 25°C nominal

Handling:

Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Octane (C8) CAS # 111-65-9 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	503.0 µg/mL	+/- 2.9877 µg/mL +/- 12.4968 µg/mL +/- 14.9795 µg/mL	Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	505.0 µg/mL	+/- 2.9995 µg/mL +/- 12.5465 µg/mL +/- 15.0390 µg/mL	Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	504.7 µg/mL	+/- 2.9978 µg/mL +/- 12.5390 µg/mL +/- 15.0301 µg/mL	Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	504.4 µg/mL	+/- 2.9960 µg/mL +/- 12.5316 µg/mL +/- 15.0212 µg/mL	Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

P11948 } 7.8
P11962 } 07/11/16

8	n-Docosane (C22) CAS # 629-97-0 Purity 99%	(Lot MKCL8918)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	n-Tetracosane (C24) CAS # 646-31-1 Purity 99%	(Lot MKCN2863)	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	n-Hexacosane (C26) CAS # 630-01-3 Purity 99%	(Lot MKCD4540)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	n-Octacosane (C28) CAS # 630-02-4 Purity 99%	(Lot BCCG0084)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	n-Triacontane (C30) CAS # 638-68-6 Purity 99%	(Lot MKCN9321)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot U25B014)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

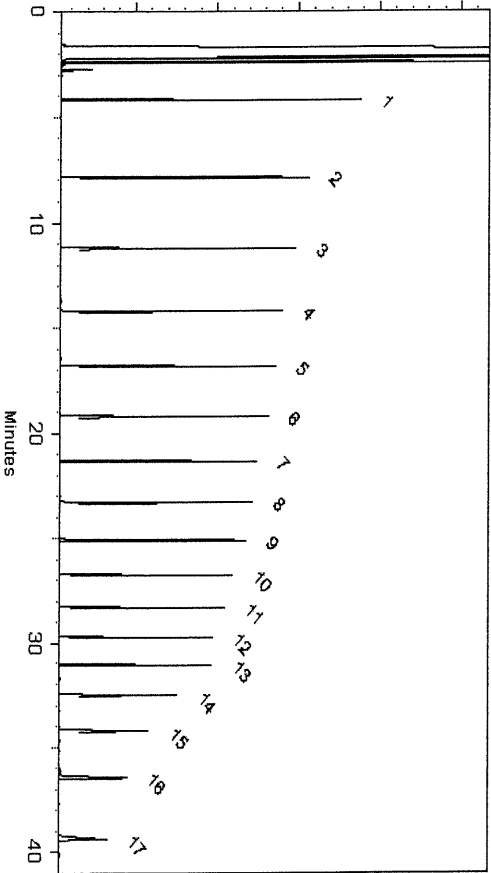
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-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.
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k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

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0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

72072
101122
n-Tetracosane-d50

Solvent(s):
Methylene chloride

Lot#
105345

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

101132
Ambient (20 °C)
1000
6UTB

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL): 200.0

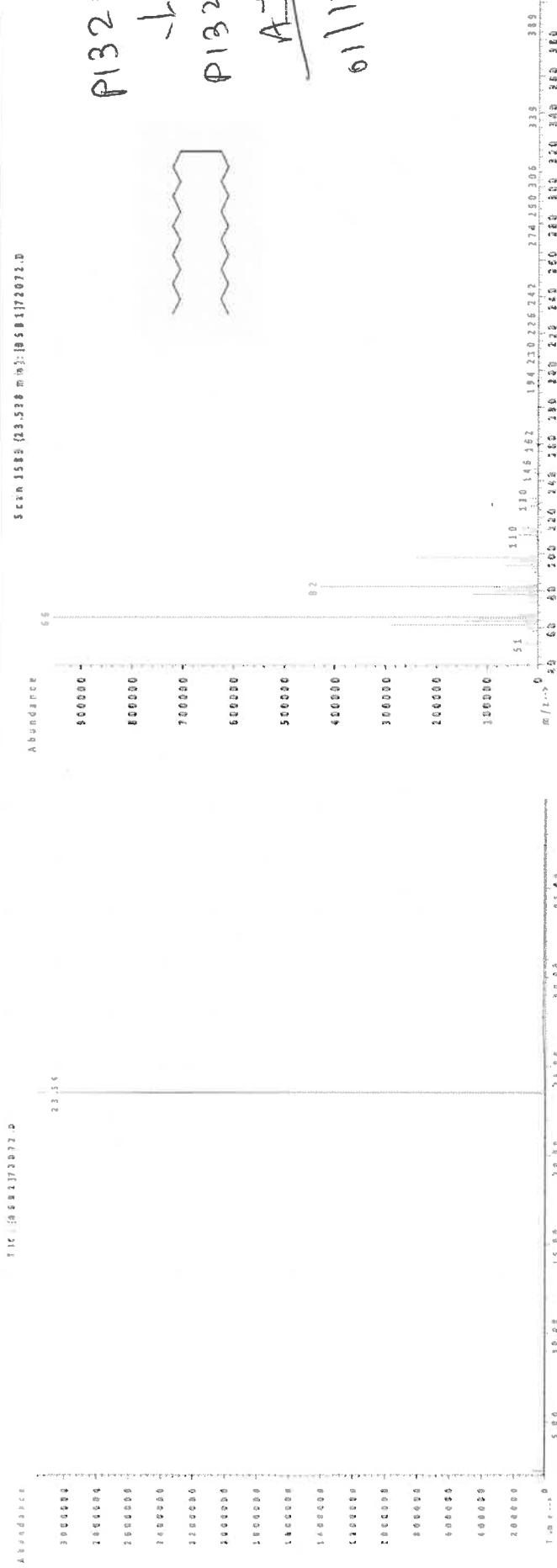
Formulated By:	Prashant Chauhan	101122	DATE
Reviewed By:	Pedro L. Renteria	101122	DATE

Expanded Uncertainty

Actual Weight(g) Target Weight(g) Assay (%D) Purity (%) Nominal Conc (µg/mL) Lot Number RM#

1. n-Tetracosane-d50 2072 PR-26606 1000 98.7 0.2 99.0 0.20471 0.20482 1000.6 4.1 16416-32-3 N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



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).



5580 Skylane Blvd
Santa Rosa, CA 95403

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Date Received: _____

Certificate of Analysis

Page 1 of 1

Catalog No.: Lot No.: Storage:

Z-110400-05 514983 ≤ -10 Degrees C

Solvent:

Hexane

Exp. Date:

11/20/2028

Description:

TRPH Standard (C8-C40), 500 mg/L, 1 ml

-01

Compound

CAS No.

Purity (%)

Compound Lot No.

Concentration, mg/L

decane (C10)

124-18-5

99.7

415.7.2P

498.5 ± 6.92

docosane (C22)

629-97-0

98.8

420.9.1P

499.4 ± 6.93

dodecane (C12)

112-40-3

99.7

416.9.3P

502 ± 6.97

dotriacontane (C32)

544-85-4

97

425.9.2.2P

499.6 ± 8.53

eicosane (C20)

112-95-8

99.8

419.7.1P

501 ± 6.95

hexacosane (C26)

630-01-3

99.3

422.7.2.1P

501 ± 6.95

hexatriacontane (C36)

630-06-8

98

427.29.1.1P

499.3 ± 8.53

n-hexadecane (C16)

544-76-3

99.45

368.27.1.1P

498.7 ± 6.91

octacosane (C28)

630-02-4

99.1

423.24.1P

500.5 ± 6.95

n-octadecane (C18)

593-45-3

99.5

418.29.1P

499.5 ± 6.92

octane (C8)

111-65-9

99.4

385.7.2.1P

498.5 ± 6.92

octatriacontane (C38)

7194-85-6

95

428.1.2P

500.2 ± 6.94

tetracontane (C40)

4181-95-7

97

429.7.2P

499.6 ± 6.93

n-tetracosane (C24)

646-31-1

99.5

421.7.1P

499.5 ± 6.93

n-tetradecane (C14)

629-59-4

99.3

417.9.1P

500 ± 6.94

tetratriacontane (C34)

14167-59-0

96.1

426.7.2.2P

499.7 ± 8.53

triacontane (C30)

638-68-6

99.5

424.7.1.1P

500 ± 6.94

Let the standard warm to room temperature and sonicate before opening.

P13215

↓

P13224

AJ
01131124

*Not a certified value

Andrea Schaible

Andrea Schaible
Chemist

Certified By: _____

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.



5580 Skylane Blvd
Santa Rosa, CA 95403

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Date Received: _____

Certificate of Analysis

Page 1 of 1

Catalog No.: Lot No.: Storage:

Z-110400-05 514983 ≤-10 Degrees C

Solvent:

Hexane

Exp. Date:

11/20/2028

Description:

TRPH Standard (C8-C40), 500 mg/L, 1 ml

-01

Compound

CAS No.

Purity (%)

Compound Lot No.

Concentration, mg/L

decane (C10)

124-18-5

99.7

415.7.2P

498.5 ± 6.92

docosane (C22)

629-97-0

98.8

420.9.1P

499.4 ± 6.93

dodecane (C12)

112-40-3

99.7

416.9.3P

502 ± 6.97

dotriacontane (C32)

544-85-4

97

425.9.2.2P

499.6 ± 8.53

eicosane (C20)

112-95-8

99.8

419.7.1P

501 ± 6.95

hexacosane (C26)

630-01-3

99.3

422.7.2.1P

501 ± 6.95

hexatriacontane (C36)

630-06-8

98

427.29.1.1P

499.3 ± 8.53

n-hexadecane (C16)

544-76-3

99.45

368.27.1.1P

498.7 ± 6.91

octacosane (C28)

630-02-4

99.1

423.24.1P

500.5 ± 6.95

n-octadecane (C18)

593-45-3

99.5

418.29.1P

499.5 ± 6.92

octane (C8)

111-65-9

99.4

385.7.2.1P

498.5 ± 6.92

octatriacontane (C38)

7194-85-6

95

428.1.2P

500.2 ± 6.94

tetracontane (C40)

4181-95-7

97

429.7.2P

499.6 ± 6.93

n-tetracosane (C24)

646-31-1

99.5

421.7.1P

499.5 ± 6.93

n-tetradecane (C14)

629-59-4

99.3

417.9.1P

500 ± 6.94

tetratriacontane (C34)

14167-59-0

96.1

426.7.2.2P

499.7 ± 8.53

triacontane (C30)

638-68-6

99.5

424.7.1.1P

500 ± 6.94

P13215

↓

P13224

AJ
01131124

*Not a certified value

Let the standard warm to room temperature and sonicate before opening.

Andrea Schaible

Certified By: _____
Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values
listed are determined gravimetrically.

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min). Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = aDaq Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	8.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s):
Methylene chloride
Lot#
105345

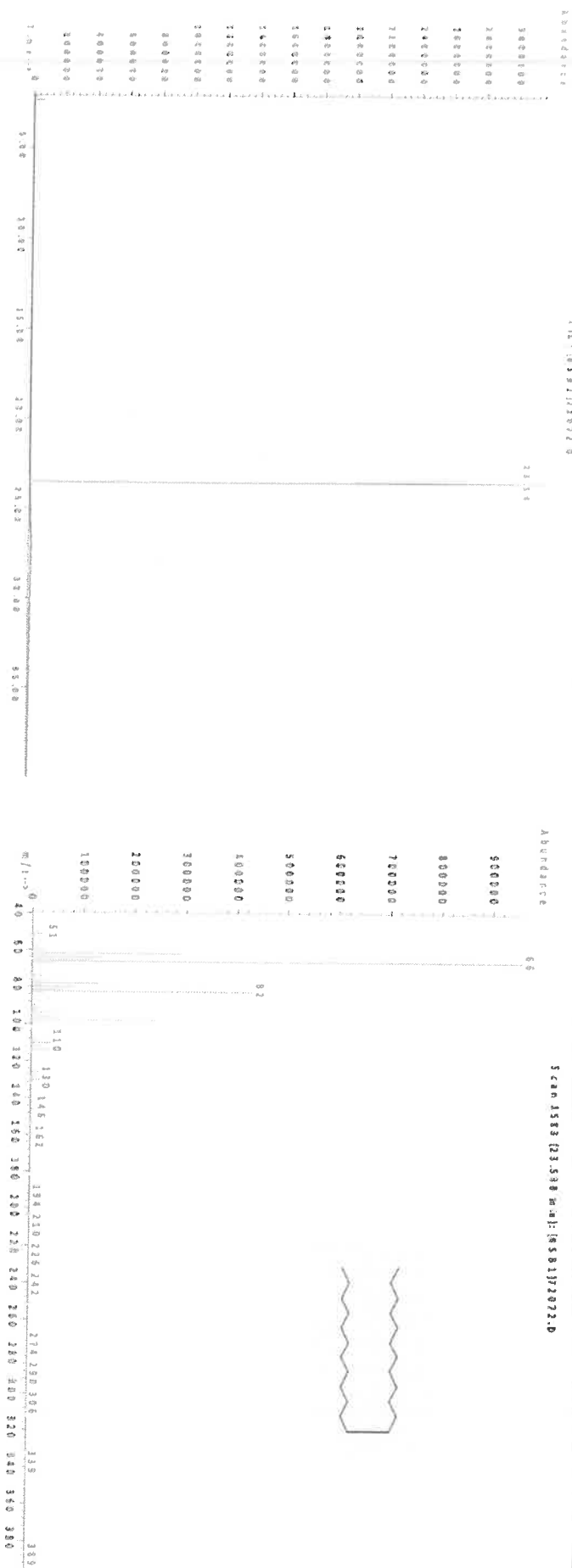
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
DATE		DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%D)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- 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 Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



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Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3)H	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min). Total Run Time = 40 Minutes. Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = sData Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	8.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s):
Methylene chloride
Lot#
105345

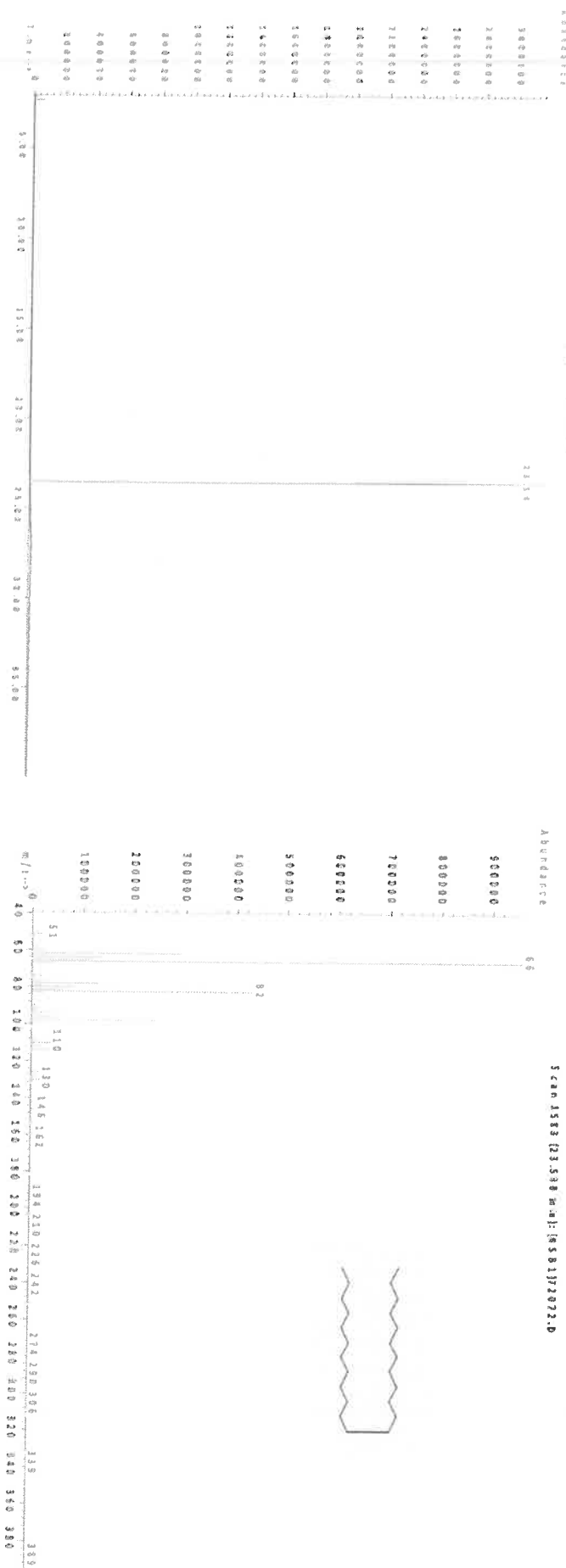
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
	Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- 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 Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

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Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1148-65-2	10 ppm (50mg/m3/8h)	or-rat 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	or-rat 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS", Method "GC-MS".
Analyzed using Method "GC-MS".

Comments:
GC-MS Analysis by Melissa Sicrari
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes, Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = sData Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	8.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s):
Methylene chloride
Lot#
105345

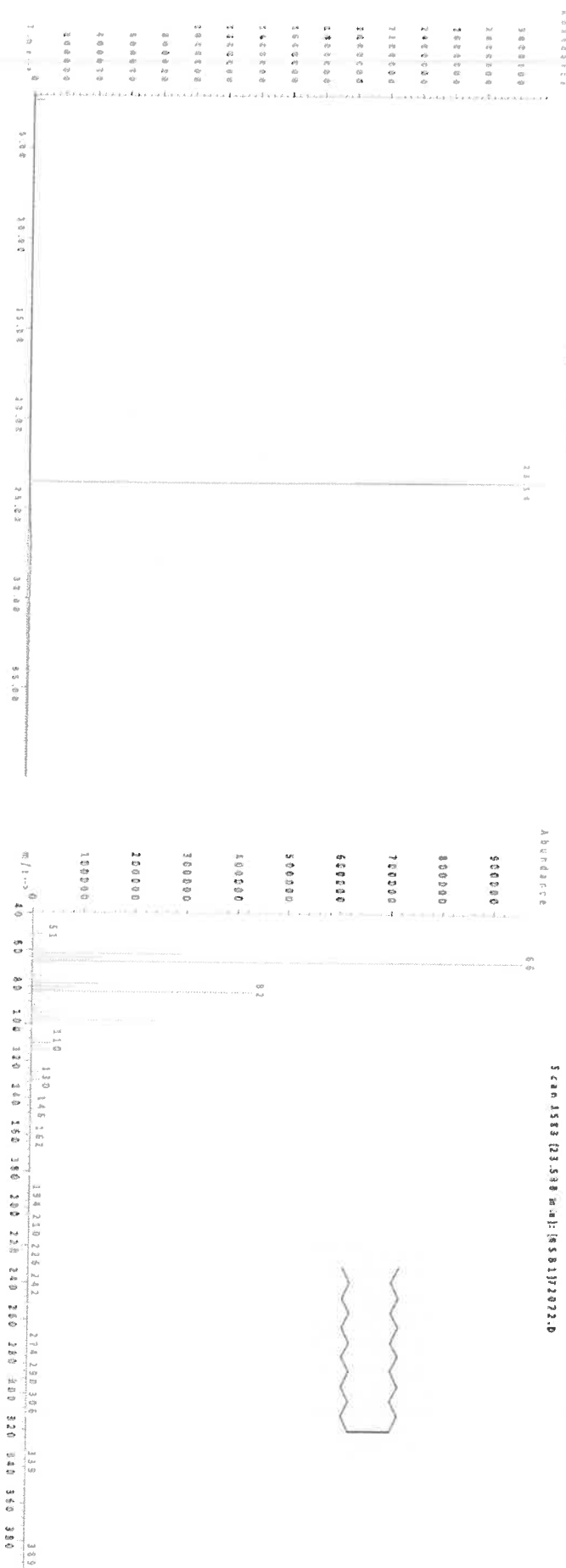
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
DATE		DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
1. n-Tetracosane-d50	2072	PR-26606	1000	98.7	0.2	99.0	0.20471	0.20482	1000.6	4.1	16416-32-3	N/A

Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- 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 Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

Conformance: The "Certificate of Analysis" is applicable for CRM's, fulfilling the requirements in the current version of: ISO 17034.

Health & Safety: See the attached SDS & Certified Weight Report before use.

Intended Use: This Certified Reference Material (CRM) is intended primarily for use in the characterization of unknowns and the establishment of analyzer or instrument response factors by qualified personnel. Typical instrumental organic assays include: GC & LC, and inorganic assays include: ICP & AA. This product is for laboratory use only.

Characterization Values: In production, gravimetric/volumetric readings are certified to be within $\pm 0.5\%$ of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

Homogeneity: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within $\pm 5\%$ unless specifically stated on the Certified Wt. Report.

Stability: Uncertainties for short-term stability are determined in accordance with ISO 17034. Long-term stability is determined in accordance with ISO 17034. The shelf life is limited by the stated expiration for each product. Expiration dates and additional technical information can be found on the Certified Weight Report and on the product label.

Uncertainty: UCRM is the expanded uncertainty which utilizes a $K = 2$ (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

Purity & Identity: Organic solutions are typically formulated from neat materials whose purity & identity have been characterized by GC-MSD & LC-PDA techniques with comparison to a NIST Traceable library of mass spectra when available. Additional characterization techniques may include but are not limited to: refractive index measurements of liquids, melting point measurements of solids, & GC-FID, ECD, PID, ELCD, LC-PDA measurements for purity. Inorganic solutions & neats are typically formulated from materials whose purity & identity have been characterized by ICPMS with comparison to a NIST SRM® when available. Additional characterization techniques may include but are not limited to: titrimetry, and densitometry.

Storage: Sealed ampules and other containers should be stored in the dark and at temperatures indicated on the Certified Weight Report or product label. Certification by Absolute Standards, Inc. is typically valid for 3 years from the date of manufacture. Each product will show its own expiration date as the limit of certification. Certified values are not applicable to opened ampules or for any materials stored in re-sealable containers. Please see the "Certified Weight Report" for specific values and any exceptions.

Usage: Ampules & bottles should be brought to room temperature (18 to 30 °C) before opening. Sonication may be required for high concentration solutions or solutions that may precipitate during storage. After opening, care should be exercised to avoid concentration changes owing to evaporation of the solvent or essential components. We recommend that a suitable re-sealable container be available before opening an ampule to decant the standard for short-term storage and use.

Minimum Sample Size: 0.5 uL for analytical applications.

Legal Notice: Warranty of products are as described when shipped. No warranty as to fitness for any particular application is expressed or implied. Errant shipments and/or quality claims must be made within 10 days of receipt. Liability is limited solely to the replacement of the product or refund of purchase price.

Certifying Officer: Stephen J. Arpie, M.S., Director General

Page 1 of 2



Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

Each Certified Reference Material (CRM) is supported by a Certified Weight Report. Assigned values for concentrations and associated uncertainties are based upon NIST traceable masses & volumes used in production.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ISO 17034 Accredited
Scope: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070721
Expiration Date: Ambient (20 °C)
Recommended Storage: 4000
Nominal Concentration (µg/mL): 822-275872-11
NIST Test ID#: 5E-05 Balance Uncertainty
0.058 Mass Uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes

070716
070716

Weight(s) shown below were combined and diluted to (mL): 500.0

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-nr 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	N/A	or-nr 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-nr 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	N/A

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"

Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS2", Method "GC-MS2".
Analyzed using Method "GC-MS2".

Comments:
GC-MS2 Analysis by Melissa Siciric
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 mL/min, Helium (carrier) = 0.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) = 300 mL, Oven Temp 1 = 50°C (1 min).
Rise = 10°C/min, Oven Temp 2 = 300°C (14 min), Total Run Time = 40 Minutes, Injector Temp = 250°C.
FID Temp = 300°C, FID Signal = sData Channel 1.
Gas Chromatograph = HP 5890, Auto Sampler = HP 7673, Standard Injection = 0.5 µL, Range = 4

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	8.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Printed: 5/8/2019, 12:55:50 PM

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: **72072**
Lot Number: **101122**
Description: **n-Tetracosane-d50**

Solvent(s):
Methylene chloride
Lot#
105345

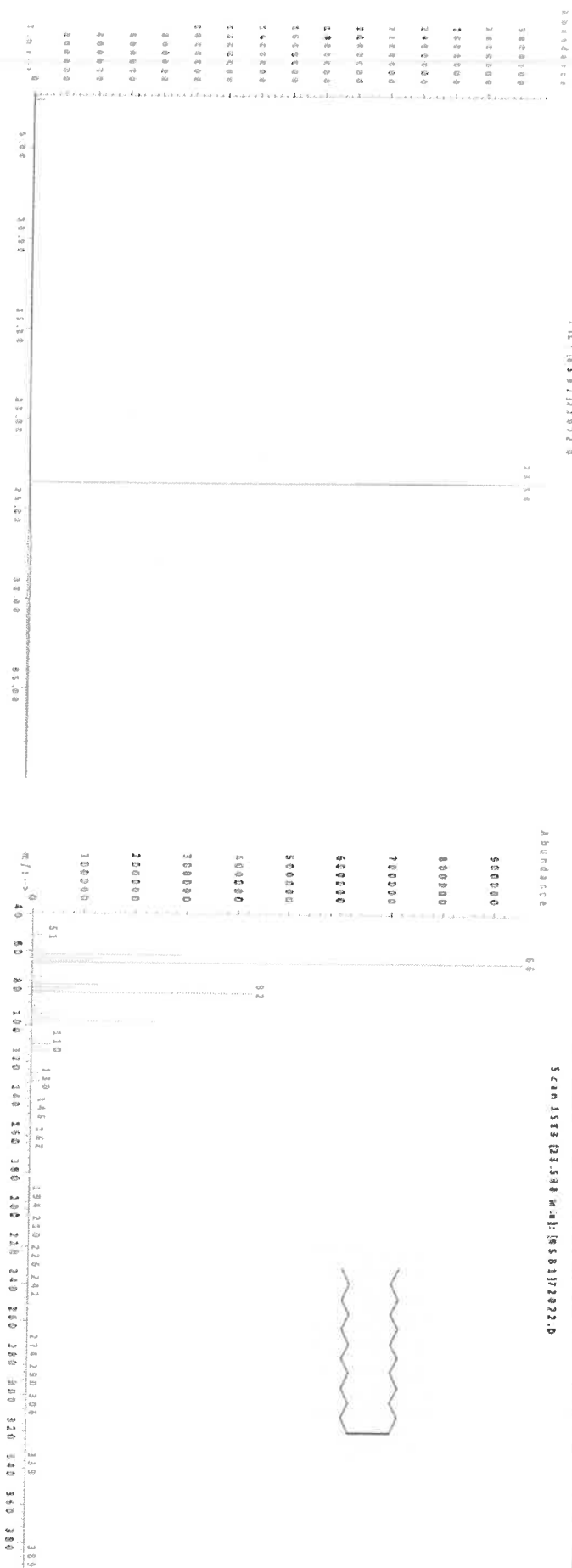
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
DATE		DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%D)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
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1. n-Tetracosane-d50 2072 PR-26606 1000 98.7 0.2 99.0 0.20471 0.20482 1000.6 4.1 16416-32-3 N/A
Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



- 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 Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).



SHIPPING DOCUMENTS

CHAIN OF CUSTODY RECORD

P5147

NO. 1 OF 1

COMPANY INFORMATION			PROJECT INFORMATION				REQUESTED ANALYSIS/METHOD										COMMENTS		
LOCATION	ENTACT LLC		PROJECT	North Point			NUMBER OF CONTAINERS TPH analysis (EPH Cat2, DRO & GRO) (8015)												
ATTN	Wyatt Seel		BILLING INFORMATION																
ADDRESS	150 Bay Street, Suite 801		BILL TO	ENTACT LLC															
	Jersey City, NJ		ADDRESS	999 Oakmont Plaza Drive Suite 300															
PHONE	419-266-4671		PHONE	630-986-2900															
FAX			FAX			PO#	E9306												
SAMPLE ID	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE TYPE	CONTAINER TYPE													
EX-8-TPH-1	TPH	12/5	11:00	Soil	G	Teracore / 8oz	2	X											
EX-8-TPH-2	TPH	12/5	11:00	Soil	G	Teracore / 8oz	2	X											
SAMPLER	A. Farmerie		SHIPMENT	courier				AIRBILL											
REQUIRED TURNAROUND		☐ SAME DAY ☐ 24 HOURS ☐ 48 HOURS ☐ 72 HOURS ☒ 5 DAYS ☐ 10 DAYS ☐ ROUTINE ☐ OTHER: _____																	
1. RELINQUISHED BY		DATE	2. RELINQUISHED BY		DATE	3. RELINQUISHED BY		DATE											
SIGNATURE: <i>Butler et al</i>		9-5-21	SIGNATURE:			SIGNATURE:													
PRINTED NAME/COMPANY: ENTACT LLC			PRINTED NAME/COMPANY:			PRINTED NAME/COMPANY:													
1. RECEIVED BY		DATE	2. RECEIVED BY		DATE	3. RECEIVED BY		DATE											
SIGNATURE: <i>[Signature]</i>		12-5-21	SIGNATURE:			SIGNATURE:													
PRINTED NAME/COMPANY: GORSE DESIGN/ALLIANCE		1455	PRINTED NAME/COMPANY:			PRINTED NAME/COMPANY:													



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

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (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