

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:	Q2074	OrderDate:	5/16/2025 3:13:00 PM
Client:	CDM Smith	Project:	South River WM Replacement
Contact:	Marcie Ann Encinas	Location:	L31,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2074-01	TP-12	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	
			Pesticide-TCL	8081B		05/20/25	05/20/25	
			Gasoline Range Organics	8015D			05/20/25	
Q2074-02	TP-7	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	
			Pesticide-TCL	8081B		05/20/25	05/20/25	
			Gasoline Range Organics	8015D			05/20/25	
Q2074-03	TP-15	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	
			Pesticide-TCL	8081B		05/20/25	05/20/25	
			Gasoline Range Organics	8015D			05/20/25	
Q2074-04	TP-20	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	
			Pesticide-TCL	8081B		05/20/25	05/20/25	
			Gasoline Range Organics	8015D			05/20/25	
Q2074-05	TP-38	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	
			Pesticide-TCL	8081B		05/20/25	05/20/25	
Q2074-06	TP-19	SOIL			05/15/25			05/16/25
			Diesel Range Organics	8015D		05/20/25	05/21/25	
			PCB	8082A		05/20/25	05/20/25	

LAB CHRONICLE

Q2074-07	TP-40	SOIL	Pesticide-TCL	8081B	05/20/25	05/20/25	05/15/25	05/16/25
			Gasoline Range Organics	8015D		05/20/25		
Q2074-08	TP-18	SOIL	Diesel Range Organics	8015D	05/20/25	05/21/25	05/16/25	05/16/25
			PCB	8082A	05/20/25	05/20/25		
			Pesticide-TCL	8081B	05/20/25	05/20/25		
			Diesel Range Organics	8015D	05/20/25	05/21/25		
			PCB	8082A	05/20/25	05/20/25		
			Pesticide-TCL	8081B	05/20/25	05/20/25		



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: CDM Smith
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015880.D	88				0
PIBLK-FF015888.D	81				0
PIBLK-FG015864.D	90				0
PIBLK-FG015875.D	88				0
PIBLK-FG015882.D	91				0
PB168084BL	90				0
PB168084BS	103				0
TP-24MS	66				0
TP-24MSD	67				0
TP-12	74				0
TP-7	100				0
TP-15	64				0
TP-20	55				0
TP-38	68				0
TP-19	57				0
TP-40	57				0
TP-18	54				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:** CDM Smith
Lab Code: CHEM **Cas No:** Q2074 **SAS No :** Q2074 **SDG No:** Q2074
Client SampleID : TP-24MS **Datafile:** FG015873.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	8961	0	13809	154%	*	68-131

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q2074 **SAS No :** Q2074 **SDG No:** Q2074
Client SampleID : TP-24MSD **Datafile:** FG015874.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	8976	0	14151	158%	*	68-131

MS/MSD % Recovery RPD : 2.3

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

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q2074 **SAS No :** Q2074 **SDG No:** Q2074
Matrix Spike - EPA Sample No : PB168084BS **Datafile:** FG015868.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6660	0	6529	98	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168084BL

Lab Name: CHEMTECH

Contract: CAMP02

Lab Code: CHEM Case No.: Q2074

SAS No.: Q2074 SDG NO.: Q2074

Lab File ID: FG015867.D

Lab Sample ID: PB168084BL

Instrument ID: FG

Date Extracted: 05/21/2025

Matrix: (soil/water) Soil

Date Analyzed: 05/21/25

Level: (low/med) low

Time Analyzed: 11:18

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TP-20	Q2074-04	FF015883.D	05/21/25
TP-38	Q2074-05	FF015884.D	05/21/25
TP-19	Q2074-06	FF015885.D	05/21/25
TP-40	Q2074-07	FF015886.D	05/21/25
TP-18	Q2074-08	FF015887.D	05/21/25
PB168084BS	PB168084BS	FG015868.D	05/21/25
TP-24MS	Q2032-05MS	FG015873.D	05/21/25
TP-24MSD	Q2032-06MSD	FG015874.D	05/21/25
TP-12	Q2074-01	FG015879.D	05/21/25
TP-7	Q2074-02	FG015880.D	05/21/25
TP-15	Q2074-03	FG015881.D	05/21/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-12	SDG No.:	Q2074
Lab Sample ID:	Q2074-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.5
Sample Wt/Vol:	30.01	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
FG015879.D	1	05/20/25 10:15	05/21/25 17:09	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	28000		202	2000	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	14.9		37 - 130	74%	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_G\Data\FG052125\
Data File : FG015879.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:09
Operator : YP\AJ
Sample : Q2074-01
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-12

Integration File: autoint1.e
Quant Time: May 22 00:42:17 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.984	1753180	14.891 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

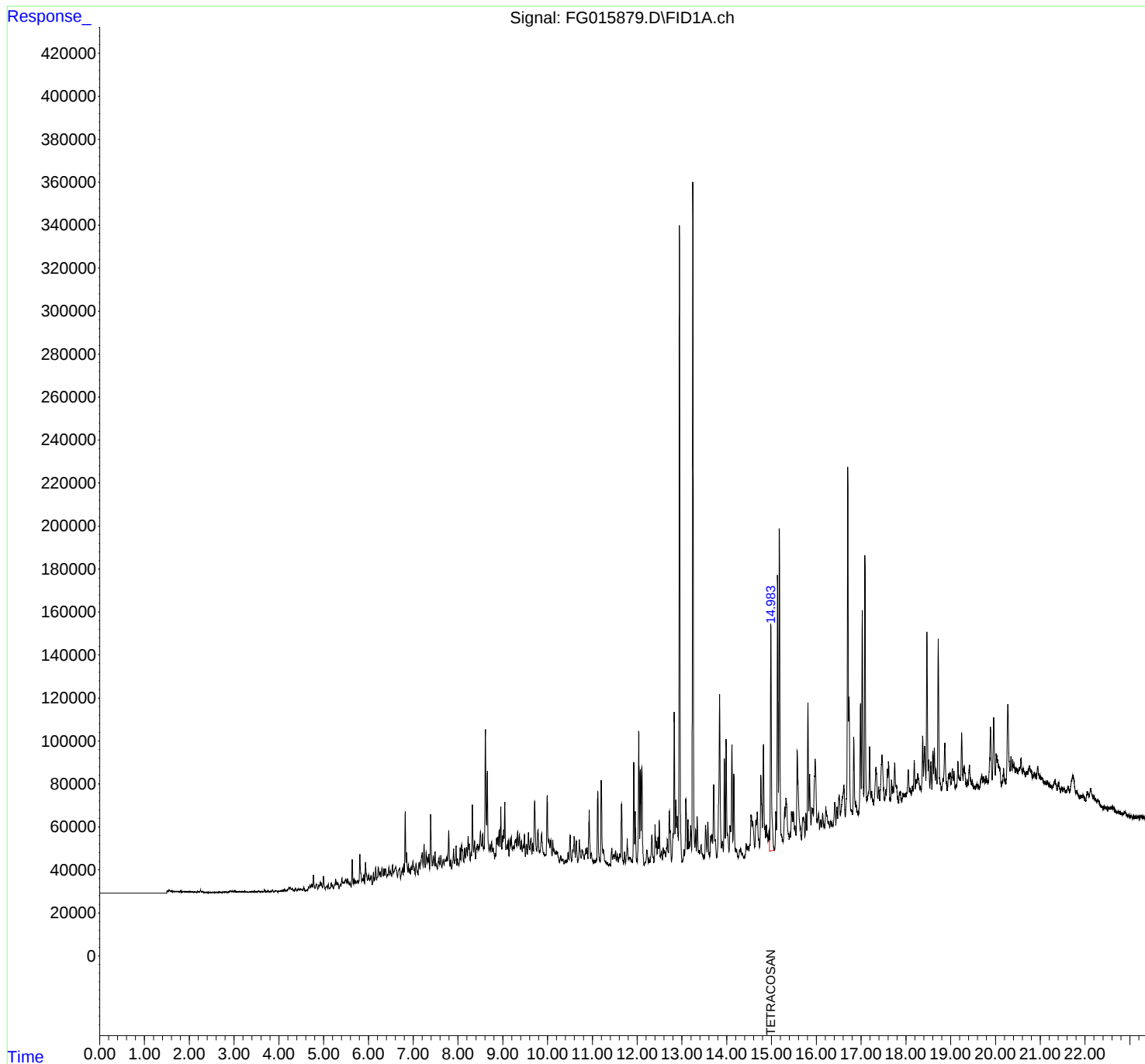
(m)=manual int.

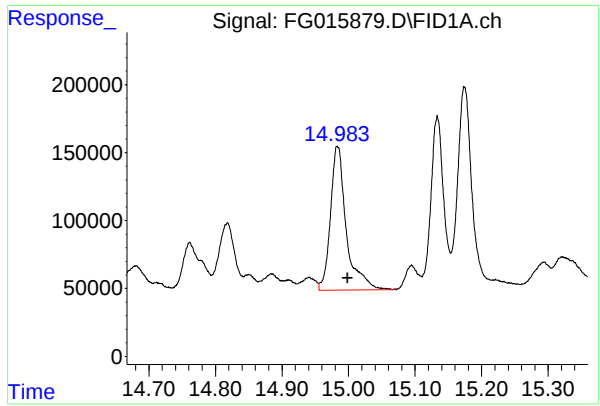
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015879.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:09
Operator : YP\AJ
Sample : Q2074-01
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-12

Integration File: autoint1.e
Quant Time: May 22 00:42:17 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min

Delta R.T.: -0.015 min

Response: 1753180

Conc: 14.89 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-12

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015879.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:09
Sample : Q2074-01
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.377	4.329	4.408	BV	1187	16025	0.42%	0.018%
2	4.435	4.408	4.453	PV	868	15228	0.40%	0.017%
3	4.466	4.453	4.473	VV	613	6059	0.16%	0.007%
4	4.498	4.473	4.534	VV	774	20373	0.53%	0.022%
5	4.556	4.534	4.604	VV	1397	23121	0.60%	0.025%
6	4.616	4.604	4.625	PV	364	3012	0.08%	0.003%
7	4.634	4.625	4.643	VV	445	3916	0.10%	0.004%
8	4.665	4.643	4.680	VV	1648	24319	0.63%	0.027%
9	4.698	4.680	4.714	VV	2776	40615	1.05%	0.045%
10	4.738	4.714	4.754	VV	2955	54717	1.42%	0.060%
11	4.773	4.754	4.810	VV	7195	107828	2.80%	0.119%
12	4.836	4.810	4.870	VV	2755	67156	1.74%	0.074%
13	4.892	4.870	4.900	VV	2251	27988	0.73%	0.031%
14	4.908	4.900	4.913	VV	2129	16082	0.42%	0.018%
15	4.926	4.913	4.942	VV	3823	50306	1.31%	0.055%
16	4.953	4.942	4.972	VV	3213	39326	1.02%	0.043%
17	4.997	4.972	5.037	VV	6304	100671	2.61%	0.111%
18	5.072	5.037	5.088	VV	1728	36112	0.94%	0.040%
19	5.105	5.088	5.130	VV	2495	29961	0.78%	0.033%
20	5.170	5.130	5.187	VV	3025	47215	1.23%	0.052%
21	5.200	5.187	5.222	VV	1908	23088	0.60%	0.025%
22	5.244	5.222	5.253	VV	2115	24547	0.64%	0.027%
23	5.269	5.253	5.282	VV	4676	55549	1.44%	0.061%
24	5.290	5.282	5.302	VV	2942	30134	0.78%	0.033%
25	5.315	5.302	5.344	VV	2604	47667	1.24%	0.052%
26	5.376	5.344	5.389	PV	2134	34880	0.91%	0.038%
27	5.409	5.389	5.424	VV	4825	67042	1.74%	0.074%
28	5.434	5.424	5.442	VV	2916	29852	0.77%	0.033%
29	5.455	5.442	5.459	VV	2592	25113	0.65%	0.028%
30	5.471	5.459	5.480	VV	3351	37089	0.96%	0.041%
31	5.491	5.480	5.520	VV	4401	84078	2.18%	0.092%
32	5.535	5.520	5.560	VV	4249	77755	2.02%	0.086%
33	5.569	5.560	5.583	VV	2559	30145	0.78%	0.033%
34	5.595	5.583	5.614	VV	2062	25253	0.66%	0.028%
35	5.640	5.614	5.661	VV	13126	161271	4.19%	0.177%
36	5.674	5.661	5.694	VV	4102	56645	1.47%	0.062%

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37	5.707	5.694	5.738	VV	3324	65218	1.69%	0.072%
38	5.757	5.738	5.772	VV	3330	54353	1.41%	0.060%
39	5.785	5.772	5.790	VV	2911	27213	0.71%	0.030%
40	5.809	5.790	5.851	VV	15230	279877	7.26%	0.308%
41	5.863	5.851	5.880	VV	3733	56690	1.47%	0.062%
42	5.897	5.880	5.915	VV	5641	77960	2.02%	0.086%
43	5.936	5.915	5.979	VV	11313	227375	5.90%	0.250%
44	6.003	5.979	6.032	VV	5394	119972	3.11%	0.132%
45	6.044	6.032	6.054	VV	4272	50714	1.32%	0.056%
46	6.065	6.054	6.087	VV	4917	61799	1.60%	0.068%
47	6.114	6.087	6.130	VV	6687	87016	2.26%	0.096%
48	6.137	6.130	6.146	VV	3417	30227	0.78%	0.033%
49	6.162	6.146	6.184	VV	8612	129386	3.36%	0.142%
50	6.197	6.184	6.203	VV	3878	39797	1.03%	0.044%
51	6.222	6.203	6.244	VV	8669	162935	4.23%	0.179%
52	6.264	6.244	6.281	VV	6472	123720	3.21%	0.136%
53	6.304	6.281	6.332	VV	8141	183285	4.76%	0.202%
54	6.349	6.332	6.364	VV	7879	118055	3.06%	0.130%
55	6.384	6.364	6.409	VV	7547	164449	4.27%	0.181%
56	6.457	6.409	6.478	VV	8249	228941	5.94%	0.252%
57	6.492	6.478	6.519	VV	6374	131076	3.40%	0.144%
58	6.539	6.519	6.563	VV	9185	176133	4.57%	0.194%
59	6.611	6.563	6.651	VV	8001	339501	8.81%	0.373%
60	6.683	6.651	6.691	VV	6860	137735	3.57%	0.152%
61	6.700	6.691	6.719	VV	7528	94490	2.45%	0.104%
62	6.764	6.719	6.777	VV	7274	182657	4.74%	0.201%
63	6.792	6.777	6.803	VV	9362	109328	2.84%	0.120%
64	6.823	6.803	6.842	VV	33704	438656	11.38%	0.483%
65	6.854	6.842	6.881	VV	14379	233422	6.06%	0.257%
66	6.895	6.881	6.909	VV	8860	114966	2.98%	0.126%
67	6.924	6.909	6.939	VV	6799	106836	2.77%	0.118%
68	6.956	6.939	6.969	VV	7718	115391	2.99%	0.127%
69	6.994	6.969	7.023	VV	10115	246350	6.39%	0.271%
70	7.029	7.023	7.045	VV	6378	71851	1.86%	0.079%
71	7.064	7.045	7.108	VV	8955	238788	6.20%	0.263%
72	7.131	7.108	7.153	VV	9425	193720	5.03%	0.213%
73	7.168	7.153	7.173	VV	9715	105838	2.75%	0.116%
74	7.202	7.173	7.222	VV	13979	324349	8.42%	0.357%
75	7.244	7.222	7.271	VV	17700	329146	8.54%	0.362%
76	7.292	7.271	7.312	VV	13928	261994	6.80%	0.288%
77	7.326	7.312	7.338	VV	11213	156798	4.07%	0.172%
78	7.350	7.338	7.367	VV	12846	179043	4.65%	0.197%
79	7.391	7.367	7.428	VV	31124	554324	14.38%	0.610%
80	7.451	7.428	7.473	VV	12059	254805	6.61%	0.280%
81	7.490	7.473	7.508	VV	13925	218003	5.66%	0.240%
82	7.518	7.508	7.542	VV	8102	143739	3.73%	0.158%
83	7.575	7.542	7.596	VV	10922	279257	7.25%	0.307%
84	7.619	7.596	7.642	VV	12047	245647	6.37%	0.270%
85	7.670	7.642	7.693	VV	9915	248424	6.45%	0.273%
86	7.708	7.693	7.722	VV	9953	158241	4.11%	0.174%
87	7.726	7.722	7.734	VV	9430	69213	1.80%	0.076%
88	7.749	7.734	7.769	VV	11098	206076	5.35%	0.227%
89	7.795	7.769	7.823	VV	23281	446628	11.59%	0.491%

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90	7.839	7.823	7.858	VV	9289	157600	4.09%	0.173%
91	7.903	7.858	7.923	VV	14511	357039	9.27%	0.393%
92	7.958	7.923	7.976	VV	15828	333894	8.66%	0.367%
93	7.990	7.976	8.020	VV	9812	211932	5.50%	0.233%
94	8.050	8.020	8.064	VV	14844	269153	6.98%	0.296%
95	8.083	8.064	8.096	VV	16243	255476	6.63%	0.281%
96	8.103	8.096	8.125	VV	13977	200767	5.21%	0.221%
97	8.151	8.125	8.167	VV	14522	282299	7.33%	0.311%
98	8.194	8.167	8.213	VV	14830	341896	8.87%	0.376%
99	8.229	8.213	8.243	VV	19871	294399	7.64%	0.324%
100	8.253	8.243	8.274	VV	16378	234420	6.08%	0.258%
101	8.293	8.274	8.303	VV	12179	188330	4.89%	0.207%
102	8.322	8.303	8.349	VV	34429	572751	14.86%	0.630%
103	8.370	8.349	8.394	VV	17332	370483	9.61%	0.408%
104	8.412	8.394	8.419	VV	14255	181124	4.70%	0.199%
105	8.434	8.419	8.450	VV	15746	270653	7.02%	0.298%
106	8.464	8.450	8.477	VV	14845	223763	5.81%	0.246%
107	8.502	8.477	8.529	VV	21663	544059	14.12%	0.598%
108	8.551	8.529	8.568	VV	20456	396955	10.30%	0.437%
109	8.577	8.568	8.586	VV	14674	148064	3.84%	0.163%
110	8.613	8.586	8.638	VV	68921	1178621	30.59%	1.297%
111	8.657	8.638	8.700	VV	49616	940554	24.41%	1.035%
112	8.717	8.700	8.735	VV	15425	290062	7.53%	0.319%
113	8.751	8.735	8.773	VV	16403	326396	8.47%	0.359%
114	8.788	8.773	8.820	VV	13502	324961	8.43%	0.357%
115	8.836	8.820	8.846	VV	10883	153227	3.98%	0.169%
116	8.863	8.846	8.873	VV	18258	242116	6.28%	0.266%
117	8.888	8.873	8.905	VV	18338	321289	8.34%	0.353%
118	8.921	8.905	8.939	VV	21621	377960	9.81%	0.416%
119	8.956	8.939	8.979	VV	32456	513637	13.33%	0.565%
120	8.997	8.979	9.008	VV	18934	276738	7.18%	0.304%
121	9.021	9.008	9.031	VV	21742	265744	6.90%	0.292%
122	9.046	9.031	9.070	VV	34417	536375	13.92%	0.590%
123	9.095	9.070	9.108	VV	14467	306993	7.97%	0.338%
124	9.122	9.108	9.140	VV	16638	256785	6.66%	0.282%
125	9.162	9.140	9.178	VV	16882	315568	8.19%	0.347%
126	9.194	9.178	9.214	VV	18201	324458	8.42%	0.357%
127	9.226	9.214	9.234	VV	13120	152261	3.95%	0.167%
128	9.247	9.234	9.257	VV	14114	186275	4.83%	0.205%
129	9.277	9.257	9.287	VV	16371	269393	6.99%	0.296%
130	9.296	9.287	9.312	VV	16675	225955	5.86%	0.249%
131	9.333	9.312	9.352	VV	20362	398048	10.33%	0.438%
132	9.371	9.352	9.395	VV	18962	395527	10.26%	0.435%
133	9.416	9.395	9.434	VV	15939	316244	8.21%	0.348%
134	9.455	9.434	9.468	VV	13730	255557	6.63%	0.281%
135	9.484	9.468	9.506	VV	18594	323161	8.39%	0.355%
136	9.531	9.506	9.551	VV	14185	314312	8.16%	0.346%
137	9.575	9.551	9.604	VV	19472	449572	11.67%	0.495%
138	9.629	9.604	9.651	VV	16559	397840	10.32%	0.438%
139	9.668	9.651	9.683	VV	14430	233697	6.06%	0.257%
140	9.712	9.683	9.759	VV	33918	890029	23.10%	0.979%
141	9.786	9.759	9.822	VV	20294	532118	13.81%	0.585%

rteres								
142	9.830	9.822	9.838	VV	10774	104277	2.71%	0.115%
143	9.870	9.838	9.908	VV	18260	572204	14.85%	0.629%
144	9.914	9.908	9.939	VV	9623	165944	4.31%	0.183%
145	9.950	9.939	9.959	VV	8735	102427	2.66%	0.113%
146	9.992	9.959	10.020	VV	36064	699606	18.16%	0.770%
147	10.031	10.020	10.051	VV	15708	266971	6.93%	0.294%
148	10.070	10.051	10.100	VV	15148	362155	9.40%	0.398%
149	10.118	10.100	10.137	VV	15300	257627	6.69%	0.283%
150	10.144	10.137	10.180	VV	10636	246478	6.40%	0.271%
151	10.196	10.180	10.213	VV	9955	182748	4.74%	0.201%
152	10.222	10.213	10.268	VV	9345	228976	5.94%	0.252%
153	10.290	10.268	10.319	VV	7449	189908	4.93%	0.209%
154	10.330	10.319	10.337	VV	5766	59100	1.53%	0.065%
155	10.343	10.337	10.372	VV	5773	103793	2.69%	0.114%
156	10.397	10.372	10.408	VV	5127	97474	2.53%	0.107%
157	10.424	10.408	10.436	VV	5065	81880	2.12%	0.090%
158	10.459	10.436	10.480	VV	8858	175545	4.56%	0.193%
159	10.505	10.480	10.533	VV	16838	325662	8.45%	0.358%
160	10.562	10.533	10.569	VV	9903	157806	4.10%	0.174%
161	10.595	10.569	10.619	VV	16120	349430	9.07%	0.384%
162	10.643	10.619	10.673	VV	13823	302382	7.85%	0.333%
163	10.711	10.673	10.753	VV	14253	381554	9.90%	0.420%
164	10.772	10.753	10.820	VV	9724	307986	7.99%	0.339%
165	10.855	10.820	10.870	VV	9748	237158	6.15%	0.261%
166	10.882	10.870	10.901	VV	10308	152618	3.96%	0.168%
167	10.929	10.901	10.958	VV	27776	505927	13.13%	0.557%
168	10.974	10.958	11.013	VV	7794	190002	4.93%	0.209%
169	11.019	11.013	11.033	VV	4072	40761	1.06%	0.045%
170	11.055	11.033	11.070	VV	3973	78484	2.04%	0.086%
171	11.091	11.070	11.098	VV	5058	70973	1.84%	0.078%
172	11.120	11.098	11.173	VV	36370	598345	15.53%	0.658%
173	11.198	11.173	11.241	VV	41055	702528	18.23%	0.773%
174	11.249	11.241	11.324	VV	8854	227012	5.89%	0.250%
175	11.334	11.324	11.355	VV	2699	37827	0.98%	0.042%
176	11.371	11.355	11.377	VV	1744	20186	0.52%	0.022%
177	11.383	11.377	11.404	VV	2061	25501	0.66%	0.028%
178	11.433	11.404	11.454	VV	9025	169928	4.41%	0.187%
179	11.466	11.454	11.476	VV	6010	71724	1.86%	0.079%
180	11.486	11.476	11.500	VV	6129	77739	2.02%	0.086%
181	11.516	11.500	11.538	VV	8063	135070	3.51%	0.149%
182	11.559	11.538	11.578	VV	6147	112052	2.91%	0.123%
183	11.609	11.578	11.627	VV	6352	146479	3.80%	0.161%
184	11.650	11.627	11.698	VV	29450	507804	13.18%	0.559%
185	11.719	11.698	11.740	VV	6990	109310	2.84%	0.120%
186	11.779	11.740	11.804	VV	13351	251213	6.52%	0.276%
187	11.815	11.804	11.825	VV	4116	48732	1.26%	0.054%
188	11.830	11.825	11.842	VV	4187	41960	1.09%	0.046%
189	11.847	11.842	11.868	VV	4158	52862	1.37%	0.058%
190	11.879	11.868	11.895	VV	2990	41898	1.09%	0.046%
191	11.923	11.895	11.943	VV	48619	638534	16.57%	0.702%
192	11.957	11.943	12.005	VV	25531	379275	9.84%	0.417%
193	12.035	12.005	12.055	VV	62700	870889	22.60%	0.958%
194	12.071	12.055	12.088	VV	44711	563256	14.62%	0.620%

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195	12.104	12.088	12.158	VV	45650	715123	18.56%	0.787%
196	12.177	12.158	12.184	VV	1920	20287	0.53%	0.022%
197	12.214	12.184	12.251	VV	6986	165764	4.30%	0.182%
198	12.264	12.251	12.283	VV	3458	42950	1.11%	0.047%
199	12.327	12.283	12.377	VV	13616	320751	8.32%	0.353%
200	12.400	12.377	12.418	VV	18762	256318	6.65%	0.282%
201	12.429	12.418	12.445	VV	11056	140507	3.65%	0.155%
202	12.463	12.445	12.477	VV	12424	186874	4.85%	0.206%
203	12.492	12.477	12.520	VV	20303	276245	7.17%	0.304%
204	12.543	12.520	12.563	VV	6095	115975	3.01%	0.128%
205	12.581	12.563	12.595	VV	7584	107121	2.78%	0.118%
206	12.606	12.595	12.618	VV	6552	83673	2.17%	0.092%
207	12.622	12.618	12.638	VV	5355	56466	1.47%	0.062%
208	12.655	12.638	12.660	VV	7704	80316	2.08%	0.088%
209	12.672	12.660	12.698	VV	11475	186138	4.83%	0.205%
210	12.719	12.698	12.733	VV	24672	322543	8.37%	0.355%
211	12.738	12.733	12.766	VV	15720	156684	4.07%	0.172%
212	12.798	12.766	12.806	VV	14064	185519	4.81%	0.204%
213	12.826	12.806	12.845	VV	70382	914287	23.73%	1.006%
214	12.862	12.845	12.880	VV	29468	453946	11.78%	0.499%
215	12.891	12.880	12.919	VV	21892	389833	10.12%	0.429%
216	12.944	12.919	13.008	VV	295963	3731369	96.83%	4.105%
217	13.042	13.008	13.056	VV	6266	87522	2.27%	0.096%
218	13.086	13.056	13.118	VV	29647	575289	14.93%	0.633%
219	13.134	13.118	13.151	VV	19997	251174	6.52%	0.276%
220	13.163	13.151	13.175	VV	9521	116913	3.03%	0.129%
221	13.192	13.175	13.216	VV	17087	287827	7.47%	0.317%
222	13.243	13.216	13.287	VV	316793	3853492	100.00%	4.239%
223	13.303	13.287	13.320	VV	15139	212554	5.52%	0.234%
224	13.339	13.320	13.367	VV	20907	327136	8.49%	0.360%
225	13.379	13.367	13.395	VV	5255	77778	2.02%	0.086%
226	13.427	13.395	13.475	VV	7669	216248	5.61%	0.238%
227	13.489	13.475	13.504	VV	3016	34441	0.89%	0.038%
228	13.527	13.504	13.559	VV	16502	307210	7.97%	0.338%
229	13.577	13.559	13.601	VV	17911	260347	6.76%	0.286%
230	13.608	13.601	13.619	VV	3704	29808	0.77%	0.033%
231	13.640	13.619	13.653	VV	11642	156089	4.05%	0.172%
232	13.668	13.653	13.685	VV	12253	202289	5.25%	0.223%
233	13.707	13.685	13.733	VV	35267	608636	15.79%	0.670%
234	13.739	13.733	13.773	VV	9817	146302	3.80%	0.161%
235	13.839	13.773	13.885	VV	77002	1595875	41.41%	1.755%
236	13.901	13.885	13.922	VV	8643	147270	3.82%	0.162%
237	13.946	13.922	13.966	VV	46847	639436	16.59%	0.703%
238	13.985	13.966	14.010	VV	56018	772637	20.05%	0.850%
239	14.018	14.010	14.051	VV	12147	210881	5.47%	0.232%
240	14.072	14.051	14.089	VV	15340	260139	6.75%	0.286%
241	14.114	14.089	14.137	VV	53141	811647	21.06%	0.893%
242	14.157	14.137	14.210	VV	39486	651194	16.90%	0.716%
243	14.221	14.210	14.252	VV	4363	64718	1.68%	0.071%
244	14.260	14.252	14.263	VV	862	4841	0.13%	0.005%
245	14.287	14.263	14.301	VV	4076	66580	1.73%	0.073%
246	14.310	14.301	14.334	VV	4741	70793	1.84%	0.078%

					rteres			
247	14.346	14.334	14.382	VV	2380	40411	1.05%	0.044%
248	14.402	14.382	14.409	PV	914	9166	0.24%	0.010%
249	14.431	14.409	14.464	VV	6579	141624	3.68%	0.156%
250	14.480	14.464	14.495	VV	4973	78295	2.03%	0.086%
251	14.513	14.495	14.520	VV	5737	71878	1.87%	0.079%
252	14.547	14.520	14.565	VV	19064	406679	10.55%	0.447%
253	14.577	14.565	14.620	VV	16255	369268	9.58%	0.406%
254	14.650	14.620	14.665	VV	16089	295938	7.68%	0.326%
255	14.680	14.665	14.707	VV	19568	358846	9.31%	0.395%
256	14.711	14.707	14.735	VV	7284	89022	2.31%	0.098%
257	14.761	14.735	14.794	VV	36601	718414	18.64%	0.790%
258	14.818	14.794	14.842	VV	50582	845475	21.94%	0.930%
259	14.851	14.842	14.864	VV	12092	136767	3.55%	0.150%
260	14.885	14.864	14.905	VV	12180	228623	5.93%	0.251%
261	14.910	14.905	14.923	VV	7883	71793	1.86%	0.079%
262	14.941	14.923	14.956	VV	9763	146749	3.81%	0.161%
263	14.983	14.956	15.071	VV	105678	1753668	45.51%	1.929%
264	15.095	15.071	15.111	PV	17734	229158	5.95%	0.252%
265	15.134	15.111	15.154	VV	127158	1669538	43.33%	1.837%
266	15.174	15.154	15.218	VV	148031	2214067	57.46%	2.436%
267	15.221	15.218	15.258	VV	6127	95799	2.49%	0.105%
268	15.294	15.258	15.305	VV	18516	309425	8.03%	0.340%
269	15.321	15.305	15.393	VV	22060	645449	16.75%	0.710%
270	15.409	15.393	15.423	VV	5154	68377	1.77%	0.075%
271	15.450	15.423	15.474	VV	15031	342507	8.89%	0.377%
272	15.488	15.474	15.512	VV	14666	251424	6.52%	0.277%
273	15.522	15.512	15.545	VV	7634	111656	2.90%	0.123%
274	15.573	15.545	15.670	VV	42348	1146763	29.76%	1.261%
275	15.705	15.670	15.743	PV	10311	305504	7.93%	0.336%
276	15.767	15.743	15.787	VV	11553	158659	4.12%	0.175%
277	15.811	15.787	15.833	VV	62562	858245	22.27%	0.944%
278	15.848	15.833	15.881	VV	29112	470528	12.21%	0.518%
279	15.897	15.881	15.916	VV	13073	219744	5.70%	0.242%
280	15.923	15.916	15.933	VV	12424	115314	2.99%	0.127%
281	15.972	15.933	16.024	VV	35200	1064495	27.62%	1.171%
282	16.050	16.024	16.075	VV	9182	190506	4.94%	0.210%
283	16.096	16.075	16.123	VV	5906	113195	2.94%	0.125%
284	16.140	16.123	16.183	VV	8569	161058	4.18%	0.177%
285	16.212	16.183	16.274	VV	11021	298673	7.75%	0.329%
286	16.281	16.274	16.297	VV	3456	29635	0.77%	0.033%
287	16.318	16.297	16.335	VV	3312	43607	1.13%	0.048%
288	16.351	16.335	16.366	VV	2436	25150	0.65%	0.028%
289	16.416	16.366	16.436	PV	10872	218396	5.67%	0.240%
290	16.460	16.436	16.477	VV	8265	126879	3.29%	0.140%
291	16.500	16.477	16.504	VV	12487	137399	3.57%	0.151%
292	16.512	16.504	16.540	VV	13173	188163	4.88%	0.207%
293	16.585	16.540	16.591	VV	12381	261765	6.79%	0.288%
294	16.611	16.591	16.643	VV	17291	362058	9.40%	0.398%
295	16.702	16.643	16.721	VV	164062	2369089	61.48%	2.606%
296	16.731	16.721	16.772	VV	56932	826705	21.45%	0.909%
297	16.779	16.772	16.809	VV	3900	67648	1.76%	0.074%
298	16.835	16.809	16.866	VV	36974	570558	14.81%	0.628%
299	16.873	16.866	16.885	VV	7206	66505	1.73%	0.073%

						rteres		
300	16.889	16.885	16.922	VV	5200	71357	1.85%	0.078%
301	16.926	16.922	16.931	VV	832	3212	0.08%	0.004%
302	16.936	16.931	16.941	PV	761	3472	0.09%	0.004%
303	16.985	16.941	17.003	VV	50000	716900	18.60%	0.789%
304	17.025	17.003	17.059	VV	93981	1344663	34.89%	1.479%
305	17.085	17.059	17.128	VV	117689	1669441	43.32%	1.836%
306	17.161	17.128	17.166	VV	7441	132603	3.44%	0.146%
307	17.190	17.166	17.223	VV	28507	453137	11.76%	0.498%
308	17.236	17.223	17.252	VV	6969	88584	2.30%	0.097%
309	17.260	17.252	17.280	VV	3083	35346	0.92%	0.039%
310	17.331	17.280	17.374	PV	16145	405826	10.53%	0.446%
311	17.391	17.374	17.400	PBA	3553	34968	0.91%	0.038%
					Sum of corrected areas:	90907574		

FG042425.M Thu May 22 01:29:12 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-7	SDG No.:	Q2074
Lab Sample ID:	Q2074-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	88.7
Sample Wt/Vol:	30.06	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
FG015880.D	1	05/20/25 10:15	05/21/25 17:38	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1650	J	190	1880	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	20.0		37 - 130	100%	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_G\Data\FG052125\
Data File : FG015880.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:38
Operator : YP\AJ
Sample : Q2074-02
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-7

Integration File: autoint1.e
Quant Time: May 22 00:42:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.984	2359313	20.039 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

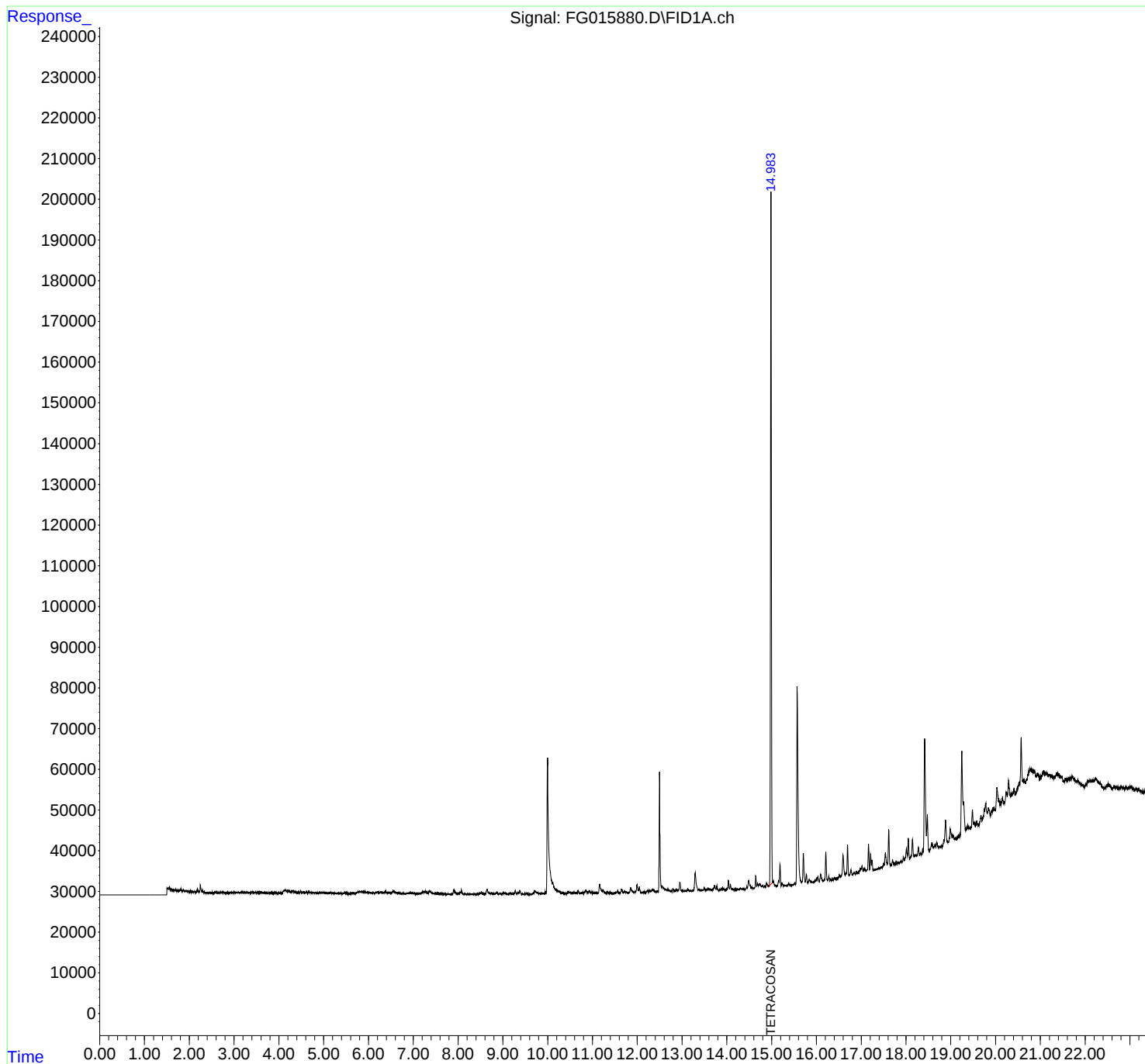
(m)=manual int.

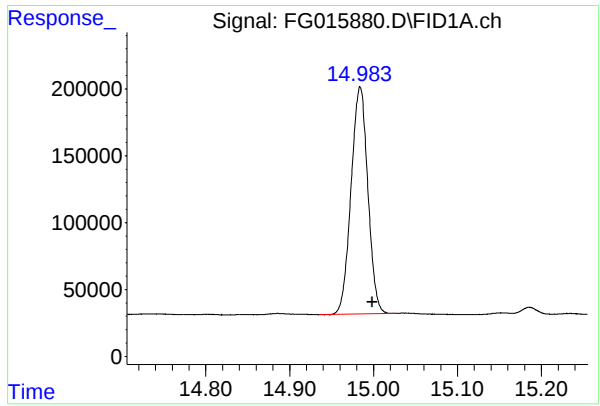
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015880.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:38
Operator : YP\AJ
Sample : Q2074-02
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-7

Integration File: autoint1.e
Quant Time: May 22 00:42:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min
Delta R.T.: -0.014 min
Response: 2359313
Conc: 20.04 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-7

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015880.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 17:38
Sample : Q2074-02
Misc :
ALS Vial : 32 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.317	4.300	4.350	BV	176	1456	0.06%	0.018%
2	4.353	4.350	4.368	PV	104	676	0.03%	0.009%
3	4.375	4.368	4.383	PV	110	758	0.03%	0.010%
4	4.392	4.383	4.408	PV	162	1477	0.06%	0.019%
5	4.411	4.408	4.415	VV	131	441	0.02%	0.006%
6	4.422	4.415	4.431	VV	177	841	0.04%	0.011%
7	4.435	4.431	4.473	VV	123	1632	0.07%	0.021%
8	4.492	4.473	4.525	VV	305	4890	0.20%	0.062%
9	4.529	4.525	4.543	VV	177	1184	0.05%	0.015%
10	4.547	4.543	4.550	VV	105	398	0.02%	0.005%
11	4.554	4.550	4.566	VV	156	742	0.03%	0.009%
12	4.569	4.566	4.587	PV	112	732	0.03%	0.009%
13	4.592	4.587	4.598	PV	38	282	0.01%	0.004%
14	4.614	4.598	4.646	VV	393	4507	0.19%	0.057%
15	4.665	4.646	4.695	VV	441	7002	0.29%	0.088%
16	4.704	4.695	4.711	VV	146	1036	0.04%	0.013%
17	4.720	4.711	4.741	VV	124	1533	0.06%	0.019%
18	4.745	4.741	4.754	VV	161	703	0.03%	0.009%
19	4.762	4.754	4.788	VV	130	1518	0.06%	0.019%
20	4.792	4.788	4.798	VV	65	411	0.02%	0.005%
21	4.801	4.798	4.809	VV	142	624	0.03%	0.008%
22	4.813	4.809	4.824	VV	166	824	0.03%	0.010%
23	4.828	4.824	4.840	VV	160	914	0.04%	0.012%
24	4.841	4.840	4.861	VV	133	1108	0.05%	0.014%
25	4.866	4.861	4.873	VV	156	678	0.03%	0.009%
26	4.881	4.873	4.895	VV	127	1047	0.04%	0.013%
27	4.902	4.895	4.907	VV	184	982	0.04%	0.012%
28	4.917	4.907	4.952	VV	214	4320	0.18%	0.054%
29	4.956	4.952	4.974	VV	225	2311	0.10%	0.029%
30	4.986	4.974	4.998	VV	224	2529	0.11%	0.032%
31	5.001	4.998	5.021	VV	160	2117	0.09%	0.027%
32	5.029	5.021	5.054	VV	168	2520	0.11%	0.032%
33	5.058	5.054	5.083	VV	144	2097	0.09%	0.026%
34	5.096	5.083	5.118	VV	166	2239	0.09%	0.028%
35	5.124	5.118	5.130	VV	112	726	0.03%	0.009%
36	5.157	5.130	5.184	VV	351	6346	0.26%	0.080%

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37	5.196	5.184	5.203	VV	173	1594	0.07%	0.020%
38	5.206	5.203	5.216	VV	162	935	0.04%	0.012%
39	5.235	5.216	5.253	VV	151	1918	0.08%	0.024%
40	5.260	5.253	5.276	VV	124	936	0.04%	0.012%
41	5.306	5.276	5.357	VV	147	4204	0.18%	0.053%
42	5.364	5.357	5.369	VV	129	762	0.03%	0.010%
43	5.374	5.369	5.411	VV	137	2573	0.11%	0.032%
44	5.417	5.411	5.429	VV	152	878	0.04%	0.011%
45	5.435	5.429	5.447	PV	103	729	0.03%	0.009%
46	5.475	5.447	5.497	VV	331	6260	0.26%	0.079%
47	5.502	5.497	5.509	VV	481	1450	0.06%	0.018%
48	5.517	5.509	5.544	VV	127	2336	0.10%	0.029%
49	5.563	5.544	5.570	VV	212	1948	0.08%	0.025%
50	5.574	5.570	5.579	VV	170	593	0.02%	0.007%
51	5.587	5.579	5.602	VV	158	1303	0.05%	0.016%
52	5.643	5.602	5.652	VV	206	3604	0.15%	0.045%
53	5.662	5.652	5.668	VV	169	1207	0.05%	0.015%
54	5.672	5.668	5.681	VV	135	761	0.03%	0.010%
55	5.702	5.681	5.712	VV	177	2311	0.10%	0.029%
56	5.717	5.712	5.721	VV	165	765	0.03%	0.010%
57	5.789	5.721	5.809	VV	559	22282	0.93%	0.281%
58	5.827	5.809	5.847	VV	588	11660	0.49%	0.147%
59	5.851	5.847	5.867	VV	459	5311	0.22%	0.067%
60	5.874	5.867	5.879	VV	491	3188	0.13%	0.040%
61	5.884	5.879	5.904	VV	520	6839	0.29%	0.086%
62	5.912	5.904	5.925	VV	561	6440	0.27%	0.081%
63	5.931	5.925	5.950	VV	506	6434	0.27%	0.081%
64	5.955	5.950	5.964	VV	403	3043	0.13%	0.038%
65	5.969	5.964	6.010	VV	425	10069	0.42%	0.127%
66	6.024	6.010	6.073	VV	376	10995	0.46%	0.139%
67	6.079	6.073	6.083	VV	277	1370	0.06%	0.017%
68	6.086	6.083	6.097	VV	292	2088	0.09%	0.026%
69	6.102	6.097	6.122	VV	325	4109	0.17%	0.052%
70	6.131	6.122	6.139	VV	301	2343	0.10%	0.030%
71	6.162	6.139	6.175	VV	390	7280	0.30%	0.092%
72	6.182	6.175	6.192	VV	333	3434	0.14%	0.043%
73	6.206	6.192	6.230	VV	606	10038	0.42%	0.126%
74	6.234	6.230	6.238	VV	418	1543	0.06%	0.019%
75	6.245	6.238	6.249	VV	453	2845	0.12%	0.036%
76	6.272	6.249	6.304	VV	451	13177	0.55%	0.166%
77	6.312	6.304	6.317	VV	382	2831	0.12%	0.036%
78	6.322	6.317	6.331	VV	418	3048	0.13%	0.038%
79	6.349	6.331	6.354	VV	412	4833	0.20%	0.061%
80	6.383	6.354	6.410	VV	939	18835	0.79%	0.237%
81	6.415	6.410	6.424	VV	328	2323	0.10%	0.029%
82	6.438	6.424	6.453	VV	377	5427	0.23%	0.068%
83	6.470	6.453	6.497	VV	382	7957	0.33%	0.100%
84	6.507	6.497	6.513	VV	259	2038	0.09%	0.026%
85	6.553	6.513	6.596	VV	828	27825	1.16%	0.351%
86	6.602	6.596	6.635	VV	410	8244	0.34%	0.104%
87	6.640	6.635	6.663	VV	302	4845	0.20%	0.061%
88	6.668	6.663	6.679	VV	402	3103	0.13%	0.039%
89	6.683	6.679	6.732	VV	340	6344	0.26%	0.080%

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90	6.739	6.732	6.746	VV	219	1494	0.06%	0.019%
91	6.752	6.746	6.762	VV	182	1254	0.05%	0.016%
92	6.770	6.762	6.795	VV	207	2556	0.11%	0.032%
93	6.797	6.795	6.814	VV	147	1255	0.05%	0.016%
94	6.859	6.814	6.872	VV	284	6770	0.28%	0.085%
95	6.878	6.872	6.887	VV	324	2343	0.10%	0.030%
96	6.894	6.887	6.910	VV	324	4113	0.17%	0.052%
97	6.926	6.910	6.952	VV	364	7626	0.32%	0.096%
98	6.962	6.952	6.972	VV	354	3704	0.15%	0.047%
99	6.977	6.972	6.984	VV	367	2128	0.09%	0.027%
100	6.985	6.984	6.989	VV	317	867	0.04%	0.011%
101	6.992	6.989	7.006	VV	308	2387	0.10%	0.030%
102	7.015	7.006	7.057	VV	289	6005	0.25%	0.076%
103	7.089	7.057	7.130	VV	229	6709	0.28%	0.085%
104	7.154	7.130	7.158	VV	215	2746	0.11%	0.035%
105	7.233	7.158	7.243	VV	620	21662	0.90%	0.273%
106	7.264	7.243	7.289	VV	667	15967	0.67%	0.201%
107	7.296	7.289	7.326	VV	559	9738	0.41%	0.123%
108	7.352	7.326	7.377	VV	880	16914	0.71%	0.213%
109	7.389	7.377	7.450	VV	620	18475	0.77%	0.233%
110	7.456	7.450	7.494	VV	342	6435	0.27%	0.081%
111	7.497	7.494	7.536	VV	225	4521	0.19%	0.057%
112	7.540	7.536	7.547	VV	228	1141	0.05%	0.014%
113	7.567	7.547	7.581	VV	284	4135	0.17%	0.052%
114	7.589	7.581	7.619	VV	163	3253	0.14%	0.041%
115	7.627	7.619	7.661	VV	286	4097	0.17%	0.052%
116	7.663	7.661	7.674	VV	125	834	0.03%	0.011%
117	7.679	7.674	7.706	VV	107	1747	0.07%	0.022%
118	7.710	7.706	7.729	VV	151	1190	0.05%	0.015%
119	7.737	7.729	7.765	VV	145	1516	0.06%	0.019%
120	7.770	7.765	7.777	VV	133	598	0.02%	0.008%
121	7.781	7.777	7.790	VV	111	696	0.03%	0.009%
122	7.797	7.790	7.819	VV	131	1362	0.06%	0.017%
123	7.822	7.819	7.832	VV	114	600	0.03%	0.008%
124	7.842	7.832	7.851	VV	102	579	0.02%	0.007%
125	7.903	7.851	8.011	PV	1198	37955	1.58%	0.478%
126	8.048	8.011	8.062	VV	599	11155	0.47%	0.141%
127	8.077	8.062	8.125	VV	1077	16379	0.68%	0.206%
128	8.149	8.125	8.153	VV	184	2092	0.09%	0.026%
129	8.159	8.153	8.179	VV	165	1997	0.08%	0.025%
130	8.186	8.179	8.227	VV	147	2343	0.10%	0.030%
131	8.234	8.227	8.246	VV	100	763	0.03%	0.010%
132	8.254	8.246	8.267	VV	173	1382	0.06%	0.017%
133	8.295	8.267	8.306	VV	126	1720	0.07%	0.022%
134	8.312	8.306	8.318	VV	75	378	0.02%	0.005%
135	8.328	8.318	8.347	VV	99	1185	0.05%	0.015%
136	8.360	8.347	8.377	VV	117	880	0.04%	0.011%
137	8.390	8.377	8.411	PV	173	1409	0.06%	0.018%
138	8.442	8.411	8.458	VV	306	4484	0.19%	0.056%
139	8.474	8.458	8.494	VV	337	5245	0.22%	0.066%
140	8.510	8.494	8.573	VV	520	15656	0.65%	0.197%
141	8.647	8.573	8.733	VV	1297	42868	1.79%	0.540%

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142	8.748	8.733	8.754	VV	328	3406	0.14%	0.043%
143	8.769	8.754	8.822	VV	334	7679	0.32%	0.097%
144	8.835	8.822	8.851	VV	330	3999	0.17%	0.050%
145	8.866	8.851	8.906	VV	629	9406	0.39%	0.119%
146	8.936	8.906	8.953	VV	328	5059	0.21%	0.064%
147	8.959	8.953	8.966	VV	171	953	0.04%	0.012%
148	8.970	8.966	8.981	VV	87	558	0.02%	0.007%
149	9.014	8.981	9.035	VV	527	10705	0.45%	0.135%
150	9.048	9.035	9.071	VV	423	6451	0.27%	0.081%
151	9.075	9.071	9.115	VV	206	3371	0.14%	0.042%
152	9.145	9.115	9.150	VV	337	3355	0.14%	0.042%
153	9.156	9.150	9.182	VV	290	4499	0.19%	0.057%
154	9.196	9.182	9.225	VV	272	4358	0.18%	0.055%
155	9.247	9.225	9.257	VV	290	4027	0.17%	0.051%
156	9.278	9.257	9.315	VV	1072	16653	0.69%	0.210%
157	9.339	9.315	9.357	VV	658	9953	0.42%	0.125%
158	9.383	9.357	9.413	VV	1027	18497	0.77%	0.233%
159	9.426	9.413	9.452	VV	190	2349	0.10%	0.030%
160	9.453	9.452	9.459	VV	114	193	0.01%	0.002%
161	9.463	9.459	9.469	VV	88	419	0.02%	0.005%
162	9.473	9.469	9.489	VV	124	644	0.03%	0.008%
163	9.493	9.489	9.499	PV	120	464	0.02%	0.006%
164	9.522	9.499	9.552	VV	366	5639	0.24%	0.071%
165	9.561	9.552	9.569	VV	97	704	0.03%	0.009%
166	9.577	9.569	9.593	VV	135	1228	0.05%	0.015%
167	9.599	9.593	9.603	VV	44	162	0.01%	0.002%
168	9.609	9.603	9.624	PV	63	663	0.03%	0.008%
169	9.627	9.624	9.650	VV	123	1075	0.04%	0.014%
170	9.675	9.650	9.685	VV	307	3878	0.16%	0.049%
171	9.710	9.685	9.750	VV	806	23978	1.00%	0.302%
172	9.756	9.750	9.787	VV	551	9013	0.38%	0.114%
173	9.792	9.787	9.799	VV	289	1848	0.08%	0.023%
174	9.804	9.799	9.829	VV	327	4102	0.17%	0.052%
175	9.842	9.829	9.854	VV	244	2978	0.12%	0.038%
176	9.872	9.854	9.887	VV	382	5498	0.23%	0.069%
177	9.890	9.887	9.895	VV	284	1106	0.05%	0.014%
178	9.897	9.895	9.916	VV	233	2439	0.10%	0.031%
179	9.951	9.916	9.965	VV	711	9749	0.41%	0.123%
180	9.998	9.965	10.106	VV	33402	842024	35.14%	10.609%
181	10.116	10.106	10.227	VV	2873	110395	4.61%	1.391%
182	10.232	10.227	10.256	VV	805	11871	0.50%	0.150%
183	10.260	10.256	10.277	VV	585	6925	0.29%	0.087%
184	10.353	10.345	10.381	VV	247	4433	0.19%	0.056%
185	10.388	10.381	10.427	VV	241	3923	0.16%	0.049%
186	10.452	10.427	10.487	VV	583	14723	0.61%	0.186%
187	10.496	10.487	10.526	VV	459	8731	0.36%	0.110%
188	10.587	10.526	10.619	VV	384	14176	0.59%	0.179%
189	10.639	10.619	10.662	VV	307	5872	0.25%	0.074%
190	10.681	10.662	10.727	VV	889	15684	0.65%	0.198%
191	10.735	10.727	10.741	VV	203	1500	0.06%	0.019%
192	10.756	10.741	10.770	VV	310	4485	0.19%	0.057%
193	10.786	10.770	10.807	VV	385	6407	0.27%	0.081%
194	10.860	10.807	10.894	VV	933	27496	1.15%	0.346%

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195	10.930	10.894	10.966	VV	768	21113	0.88%	0.266%
196	10.971	10.966	10.975	VV	363	1843	0.08%	0.023%
197	10.982	10.975	11.004	VV	395	4973	0.21%	0.063%
198	11.006	11.004	11.019	VV	247	1733	0.07%	0.022%
199	11.039	11.019	11.067	VV	315	7055	0.29%	0.089%
200	11.083	11.067	11.124	VV	346	8168	0.34%	0.103%
201	11.159	11.124	11.222	VV	2325	63220	2.64%	0.797%
202	11.237	11.222	11.267	VV	962	19151	0.80%	0.241%
203	11.274	11.267	11.329	VV	417	10970	0.46%	0.138%
204	11.342	11.329	11.347	VV	289	2772	0.12%	0.035%
205	11.381	11.347	11.389	VV	278	5803	0.24%	0.073%
206	11.394	11.389	11.443	VV	249	4215	0.18%	0.053%
207	11.449	11.443	11.475	VV	140	1074	0.04%	0.014%
208	11.501	11.475	11.509	PV	237	3156	0.13%	0.040%
209	11.512	11.509	11.520	VV	217	1078	0.04%	0.014%
210	11.565	11.520	11.587	VV	845	16472	0.69%	0.208%
211	11.590	11.587	11.602	VV	226	1581	0.07%	0.020%
212	11.650	11.602	11.695	VV	1151	25756	1.07%	0.325%
213	11.724	11.695	11.745	VV	648	10620	0.44%	0.134%
214	11.759	11.745	11.779	VV	398	5353	0.22%	0.067%
215	11.782	11.779	11.805	VV	135	1400	0.06%	0.018%
216	11.851	11.805	11.908	VV	1341	37059	1.55%	0.467%
217	11.917	11.908	11.929	VV	384	3699	0.15%	0.047%
218	11.959	11.929	11.965	VV	413	5977	0.25%	0.075%
219	11.993	11.965	12.028	VV	2045	42588	1.78%	0.537%
220	12.047	12.028	12.090	VV	1557	24472	1.02%	0.308%
221	12.092	12.090	12.109	VV	232	1117	0.05%	0.014%
222	12.115	12.109	12.119	VV	142	653	0.03%	0.008%
223	12.126	12.119	12.150	VV	102	2105	0.09%	0.027%
224	12.155	12.150	12.163	VV	146	796	0.03%	0.010%
225	12.167	12.163	12.171	VV	156	385	0.02%	0.005%
226	12.182	12.171	12.189	PV	134	724	0.03%	0.009%
227	12.235	12.189	12.262	VV	654	14319	0.60%	0.180%
228	12.272	12.262	12.280	VV	381	3601	0.15%	0.045%
229	12.297	12.280	12.311	VV	442	7165	0.30%	0.090%
230	12.337	12.311	12.345	VV	814	12086	0.50%	0.152%
231	12.349	12.345	12.405	VV	762	16967	0.71%	0.214%
232	12.410	12.405	12.419	VV	161	1240	0.05%	0.016%
233	12.440	12.419	12.462	VV	325	5816	0.24%	0.073%
234	12.497	12.462	12.542	VV	29633	374290	15.62%	4.716%
235	12.558	12.542	12.575	VV	1685	26917	1.12%	0.339%
236	12.586	12.575	12.625	VV	1293	27878	1.16%	0.351%
237	12.630	12.625	12.671	VV	710	15569	0.65%	0.196%
238	12.681	12.671	12.685	VV	575	4318	0.18%	0.054%
239	12.703	12.685	12.752	VV	600	16079	0.67%	0.203%
240	12.770	12.752	12.776	VV	267	3022	0.13%	0.038%
241	12.802	12.776	12.821	VV	731	12813	0.53%	0.161%
242	12.825	12.821	12.844	VV	453	4424	0.18%	0.056%
243	12.858	12.844	12.862	VV	331	2935	0.12%	0.037%
244	12.880	12.862	12.909	VV	742	13031	0.54%	0.164%
245	12.915	12.909	12.924	VV	413	3047	0.13%	0.038%
246	12.949	12.924	12.990	VV	2392	44876	1.87%	0.565%

					rteres			
247	12.993	12.990	13.039	VV	300	6251	0.26%	0.079%
248	13.056	13.039	13.070	VV	164	2172	0.09%	0.027%
249	13.091	13.070	13.095	VV	193	2262	0.09%	0.029%
250	13.136	13.095	13.167	VV	521	12486	0.52%	0.157%
251	13.173	13.167	13.179	VV	193	1212	0.05%	0.015%
252	13.182	13.179	13.185	VV	166	515	0.02%	0.006%
253	13.202	13.185	13.208	VV	226	2042	0.09%	0.026%
254	13.212	13.208	13.219	VV	119	560	0.02%	0.007%
255	13.223	13.219	13.225	VV	89	241	0.01%	0.003%
256	13.292	13.225	13.379	VV	4557	116940	4.88%	1.473%
257	13.384	13.379	13.399	VV	394	3837	0.16%	0.048%
258	13.403	13.399	13.408	VV	312	1347	0.06%	0.017%
259	13.410	13.408	13.430	VV	237	2626	0.11%	0.033%
260	13.453	13.430	13.475	VV	279	5476	0.23%	0.069%
261	13.492	13.475	13.534	VV	759	15058	0.63%	0.190%
262	13.555	13.534	13.560	VV	357	4468	0.19%	0.056%
263	13.591	13.560	13.603	VV	597	10426	0.44%	0.131%
264	13.608	13.603	13.651	VV	458	9261	0.39%	0.117%
265	13.671	13.651	13.692	VV	365	6430	0.27%	0.081%
266	13.730	13.692	13.753	VV	1279	26216	1.09%	0.330%
267	13.776	13.753	13.807	VV	1173	18062	0.75%	0.228%
268	13.811	13.807	13.817	VV	164	756	0.03%	0.010%
269	13.879	13.817	13.927	VV	423	16200	0.68%	0.204%
270	13.931	13.927	13.969	VV	292	4551	0.19%	0.057%
271	13.997	13.969	14.006	VV	219	3185	0.13%	0.040%
272	14.035	14.006	14.059	VV	2401	33785	1.41%	0.426%
273	14.079	14.059	14.120	VV	1356	21759	0.91%	0.274%
274	14.133	14.120	14.154	VV	237	3558	0.15%	0.045%
275	14.156	14.154	14.170	VV	140	1136	0.05%	0.014%
276	14.174	14.170	14.229	VV	186	4851	0.20%	0.061%
277	14.258	14.247	14.270	PV	96	801	0.03%	0.010%
278	14.303	14.270	14.364	VV	281	9161	0.38%	0.115%
279	14.379	14.364	14.417	VV	146	2168	0.09%	0.027%
280	14.443	14.417	14.457	PV	640	8059	0.34%	0.102%
281	14.484	14.457	14.585	VV	2112	61471	2.57%	0.775%
282	14.596	14.585	14.615	VV	176	2637	0.11%	0.033%
283	14.644	14.615	14.665	VV	3098	41612	1.74%	0.524%
284	14.682	14.665	14.708	VV	1074	21880	0.91%	0.276%
285	14.730	14.708	14.784	VV	1014	32070	1.34%	0.404%
286	14.802	14.784	14.827	VV	626	10720	0.45%	0.135%
287	14.851	14.827	14.862	VV	331	6016	0.25%	0.076%
288	14.886	14.862	14.942	VV	1217	29229	1.22%	0.368%
289	14.984	14.942	15.027	VV	170780	2396230	100.00%	30.192%
290	15.037	15.027	15.124	VV	1257	32273	1.35%	0.407%
291	15.153	15.124	15.167	VV	1376	22103	0.92%	0.278%
292	15.186	15.167	15.214	VV	5465	73178	3.05%	0.922%
293	15.234	15.214	15.269	VV	846	13952	0.58%	0.176%
294	15.309	15.269	15.352	VV	179	5123	0.21%	0.065%
295	15.382	15.352	15.422	VV	489	8766	0.37%	0.110%
296	15.434	15.422	15.444	VV	109	782	0.03%	0.010%
297	15.516	15.444	15.537	PV	418	9479	0.40%	0.119%
298	15.570	15.537	15.675	VV	48258	936586	39.09%	11.801%
299	15.707	15.675	15.750	VV	7357	120875	5.04%	1.523%

					rteres			
300	15.774	15.750	15.805	VV	2171	35963	1.50%	0.453%
301	15.843	15.805	15.869	VV	831	18829	0.79%	0.237%
302	15.881	15.869	15.920	VV	426	7088	0.30%	0.089%
303	16.030	15.920	16.060	VV	1196	38381	1.60%	0.484%
304	16.095	16.060	16.155	VV	1836	41387	1.73%	0.521%
305	16.209	16.155	16.252	VV	7156	102581	4.28%	1.292%
306	16.275	16.252	16.312	VV	1132	15837	0.66%	0.200%
307	16.345	16.312	16.369	PV	217	3684	0.15%	0.046%
308	16.405	16.369	16.437	PV	484	9504	0.40%	0.120%
309	16.441	16.437	16.448	VV	182	934	0.04%	0.012%
310	16.457	16.448	16.473	VV	74	1141	0.05%	0.014%
311	16.508	16.473	16.545	PV	629	17344	0.72%	0.219%
312	16.594	16.545	16.642	VV	5586	124366	5.19%	1.567%
313	16.694	16.642	16.730	VV	7778	123584	5.16%	1.557%
314	16.770	16.730	16.809	VV	1351	29802	1.24%	0.375%
315	16.843	16.809	16.869	VV	694	15431	0.64%	0.194%
316	16.893	16.869	16.909	VV	702	10392	0.43%	0.131%
317	17.017	16.909	17.040	VV	1882	66180	2.76%	0.834%
318	17.077	17.040	17.114	VV	904	31417	1.31%	0.396%
319	17.162	17.114	17.188	VV	6724	100630	4.20%	1.268%
320	17.209	17.188	17.227	VV	4158	54905	2.29%	0.692%
321	17.241	17.227	17.272	VV	2656	35695	1.49%	0.450%
322	17.291	17.272	17.320	PV	204	3479	0.15%	0.044%
				Sum of corrected areas:			7936688	

FG042425.M Thu May 22 01:29:58 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-15	SDG No.:	Q2074
Lab Sample ID:	Q2074-03	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	87
Sample Wt/Vol:	30.04	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
FG015881.D	1	05/20/25 10:15	05/21/25 18:07	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	4050		194	1910	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	12.8		37 - 130	64%	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_G\Data\FG052125\
Data File : FG015881.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:07
Operator : YP\AJ
Sample : Q2074-03
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-15

Integration File: autoint1.e
Quant Time: May 22 00:42:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.984	1502986	12.766 ug/mlm

Target Compounds

(f)=RT Delta > 1/2 Window

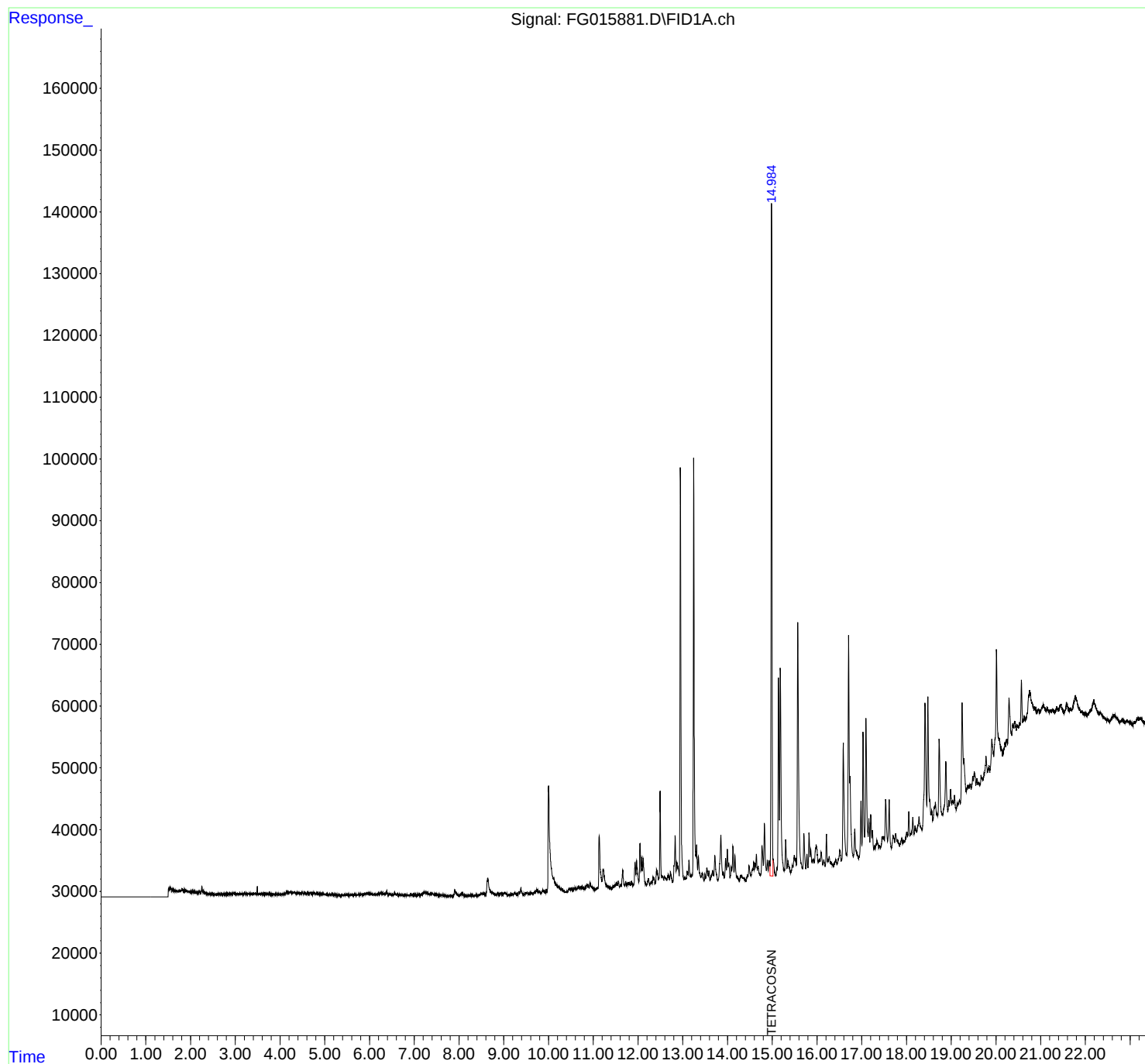
(m)=manual int.

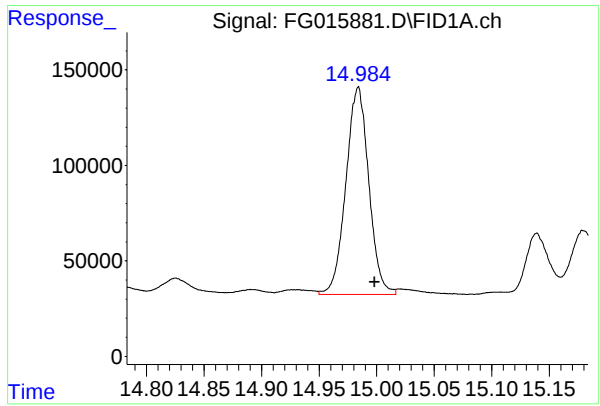
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015881.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:07
Operator : YP\AJ
Sample : Q2074-03
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-15

Integration File: autoint1.e
Quant Time: May 22 00:42:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min
Delta R.T.: -0.014 min
Response: 1502986
Conc: 12.77 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-15

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015881.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:07
Sample : Q2074-03
Misc :
ALS Vial : 33 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.313	4.300	4.335	BV	124	1859	0.12%	0.012%
2	4.339	4.335	4.348	VV	148	772	0.05%	0.005%
3	4.351	4.348	4.364	VV	124	723	0.05%	0.005%
4	4.375	4.364	4.409	PV	132	2254	0.14%	0.015%
5	4.419	4.409	4.435	VV	141	1351	0.09%	0.009%
6	4.452	4.435	4.458	VV	207	1323	0.09%	0.009%
7	4.462	4.458	4.473	VV	117	940	0.06%	0.006%
8	4.495	4.473	4.538	VV	210	5368	0.35%	0.036%
9	4.551	4.538	4.561	VV	200	2074	0.13%	0.014%
10	4.569	4.561	4.579	VV	221	1351	0.09%	0.009%
11	4.582	4.579	4.592	VV	119	747	0.05%	0.005%
12	4.616	4.592	4.631	VV	396	3845	0.25%	0.026%
13	4.670	4.631	4.694	VV	339	6241	0.40%	0.042%
14	4.699	4.694	4.721	VV	167	1681	0.11%	0.011%
15	4.746	4.721	4.753	PV	295	3577	0.23%	0.024%
16	4.757	4.753	4.763	VV	310	1744	0.11%	0.012%
17	4.767	4.763	4.792	VV	298	3863	0.25%	0.026%
18	4.800	4.792	4.807	VV	236	1825	0.12%	0.012%
19	4.816	4.807	4.825	VV	245	2363	0.15%	0.016%
20	4.829	4.825	4.842	VV	187	1942	0.12%	0.013%
21	4.844	4.842	4.879	VV	191	3617	0.23%	0.024%
22	4.891	4.879	4.908	VV	218	2628	0.17%	0.018%
23	4.920	4.908	4.929	VV	200	2128	0.14%	0.014%
24	4.931	4.929	4.938	VV	183	842	0.05%	0.006%
25	4.955	4.938	4.960	VV	225	2056	0.13%	0.014%
26	4.964	4.960	4.980	VV	175	1824	0.12%	0.012%
27	4.981	4.980	5.002	VV	207	1320	0.08%	0.009%
28	5.015	5.002	5.026	VV	153	1414	0.09%	0.009%
29	5.031	5.026	5.043	VV	139	1005	0.06%	0.007%
30	5.060	5.043	5.069	VV	148	1497	0.10%	0.010%
31	5.073	5.069	5.084	VV	115	927	0.06%	0.006%
32	5.090	5.084	5.135	VV	240	2750	0.18%	0.018%
33	5.137	5.135	5.143	VV	134	433	0.03%	0.003%
34	5.154	5.143	5.175	VV	202	2571	0.17%	0.017%
35	5.178	5.175	5.185	VV	117	658	0.04%	0.004%
36	5.189	5.185	5.202	VV	177	945	0.06%	0.006%

					rt	er		
37	5.207	5.202	5.232	VV	120	1512	0.10%	0.010%
38	5.241	5.232	5.245	VV	93	483	0.03%	0.003%
39	5.252	5.245	5.274	VV	106	1105	0.07%	0.007%
40	5.279	5.274	5.283	PV	104	315	0.02%	0.002%
41	5.305	5.283	5.315	PV	146	1188	0.08%	0.008%
42	5.319	5.315	5.325	VV	84	405	0.03%	0.003%
43	5.335	5.325	5.340	VV	131	622	0.04%	0.004%
44	5.344	5.340	5.368	VV	90	849	0.05%	0.006%
45	5.373	5.368	5.395	VV	137	1219	0.08%	0.008%
46	5.407	5.395	5.410	VV	135	691	0.04%	0.005%
47	5.415	5.410	5.423	VV	80	535	0.03%	0.004%
48	5.428	5.423	5.436	VV	122	620	0.04%	0.004%
49	5.442	5.436	5.453	VV	111	757	0.05%	0.005%
50	5.474	5.453	5.484	VV	209	2697	0.17%	0.018%
51	5.487	5.484	5.508	VV	173	1652	0.11%	0.011%
52	5.537	5.508	5.551	VV	167	2511	0.16%	0.017%
53	5.557	5.551	5.573	VV	132	1294	0.08%	0.009%
54	5.577	5.573	5.592	VV	128	992	0.06%	0.007%
55	5.597	5.592	5.603	VV	93	582	0.04%	0.004%
56	5.605	5.603	5.609	VV	124	359	0.02%	0.002%
57	5.613	5.609	5.629	VV	161	1021	0.07%	0.007%
58	5.641	5.629	5.651	VV	177	1741	0.11%	0.012%
59	5.656	5.651	5.670	VV	177	1203	0.08%	0.008%
60	5.674	5.670	5.683	VV	142	653	0.04%	0.004%
61	5.691	5.683	5.702	VV	201	1128	0.07%	0.008%
62	5.709	5.702	5.714	VV	188	940	0.06%	0.006%
63	5.719	5.714	5.728	VV	158	1026	0.07%	0.007%
64	5.742	5.728	5.747	VV	206	1813	0.12%	0.012%
65	5.757	5.747	5.768	VV	242	2128	0.14%	0.014%
66	5.772	5.768	5.780	VV	232	1164	0.07%	0.008%
67	5.829	5.780	5.854	VV	295	9141	0.59%	0.061%
68	5.863	5.854	5.870	VV	286	2233	0.14%	0.015%
69	5.891	5.870	5.902	VV	326	5218	0.34%	0.035%
70	5.929	5.902	5.935	VV	392	6887	0.44%	0.046%
71	5.940	5.935	5.964	VV	387	5661	0.36%	0.038%
72	5.977	5.964	6.030	VV	398	12291	0.79%	0.082%
73	6.032	6.030	6.076	VV	303	6397	0.41%	0.043%
74	6.098	6.076	6.105	VV	279	4010	0.26%	0.027%
75	6.119	6.105	6.127	VV	294	3083	0.20%	0.021%
76	6.136	6.127	6.152	VV	278	3338	0.21%	0.022%
77	6.165	6.152	6.189	VV	306	5625	0.36%	0.038%
78	6.203	6.189	6.234	VV	421	9383	0.60%	0.063%
79	6.261	6.234	6.295	VV	491	14461	0.93%	0.097%
80	6.298	6.295	6.335	VV	414	8245	0.53%	0.055%
81	6.339	6.335	6.343	VV	355	1733	0.11%	0.012%
82	6.348	6.343	6.353	VV	366	2089	0.13%	0.014%
83	6.361	6.353	6.367	VV	449	3128	0.20%	0.021%
84	6.384	6.367	6.425	VV	719	14644	0.94%	0.098%
85	6.438	6.425	6.466	VV	369	6531	0.42%	0.044%
86	6.474	6.466	6.489	VV	296	3258	0.21%	0.022%
87	6.491	6.489	6.495	VV	273	777	0.05%	0.005%
88	6.498	6.495	6.509	VV	238	1733	0.11%	0.012%
89	6.515	6.509	6.522	VV	210	1356	0.09%	0.009%

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90	6.559	6.522	6.574	VV	432	9103	0.59%	0.061%
91	6.579	6.574	6.594	VV	332	3351	0.22%	0.022%
92	6.599	6.594	6.606	VV	284	1652	0.11%	0.011%
93	6.610	6.606	6.620	VV	251	1913	0.12%	0.013%
94	6.625	6.620	6.646	VV	214	3032	0.19%	0.020%
95	6.660	6.646	6.677	VV	249	3514	0.23%	0.024%
96	6.686	6.677	6.782	VV	231	9247	0.59%	0.062%
97	6.790	6.782	6.842	VV	163	4157	0.27%	0.028%
98	6.855	6.842	6.880	VV	158	2878	0.19%	0.019%
99	6.891	6.880	6.903	VV	184	1814	0.12%	0.012%
100	6.922	6.903	6.932	VV	224	3105	0.20%	0.021%
101	6.940	6.932	6.951	VV	210	2063	0.13%	0.014%
102	6.972	6.951	7.017	VV	268	7941	0.51%	0.053%
103	7.029	7.017	7.063	VV	229	5006	0.32%	0.034%
104	7.071	7.063	7.114	VV	208	5219	0.34%	0.035%
105	7.223	7.114	7.247	VV	587	29023	1.87%	0.194%
106	7.268	7.247	7.341	VV	635	25639	1.65%	0.172%
107	7.388	7.341	7.446	VV	605	24950	1.60%	0.167%
108	7.454	7.446	7.525	VV	346	11159	0.72%	0.075%
109	7.531	7.525	7.549	VV	220	2719	0.17%	0.018%
110	7.560	7.549	7.595	VV	249	5185	0.33%	0.035%
111	7.641	7.595	7.680	VV	211	7141	0.46%	0.048%
112	7.687	7.680	7.696	VV	120	864	0.06%	0.006%
113	7.731	7.696	7.748	VV	155	2709	0.17%	0.018%
114	7.757	7.748	7.772	VV	82	1078	0.07%	0.007%
115	7.796	7.772	7.816	VV	108	2086	0.13%	0.014%
116	7.825	7.816	7.839	PV	84	590	0.04%	0.004%
117	7.851	7.839	7.870	VV	143	1239	0.08%	0.008%
118	7.904	7.870	7.985	VV	1079	29270	1.88%	0.196%
119	8.050	7.985	8.062	VV	412	9997	0.64%	0.067%
120	8.077	8.062	8.186	VV	673	12619	0.81%	0.084%
121	8.199	8.186	8.212	VV	87	769	0.05%	0.005%
122	8.224	8.212	8.235	PV	54	522	0.03%	0.003%
123	8.263	8.235	8.344	VV	186	5508	0.35%	0.037%
124	8.369	8.344	8.382	VV	173	1798	0.12%	0.012%
125	8.390	8.382	8.408	VV	119	1353	0.09%	0.009%
126	8.511	8.408	8.530	VV	426	17136	1.10%	0.115%
127	8.537	8.530	8.584	VV	419	9978	0.64%	0.067%
128	8.641	8.584	8.812	VV	2861	120485	7.75%	0.807%
129	8.838	8.812	8.850	VV	274	4472	0.29%	0.030%
130	8.866	8.850	8.901	VV	494	7750	0.50%	0.052%
131	8.938	8.901	8.980	PV	439	11693	0.75%	0.078%
132	9.014	8.980	9.031	VV	455	9524	0.61%	0.064%
133	9.045	9.031	9.112	VV	351	8445	0.54%	0.057%
134	9.119	9.112	9.129	VV	94	757	0.05%	0.005%
135	9.166	9.129	9.184	PV	207	3331	0.21%	0.022%
136	9.196	9.184	9.208	VV	184	1988	0.13%	0.013%
137	9.236	9.208	9.258	VV	408	7001	0.45%	0.047%
138	9.273	9.258	9.305	VV	261	4792	0.31%	0.032%
139	9.340	9.305	9.362	VV	589	9773	0.63%	0.065%
140	9.383	9.362	9.455	VV	1129	23428	1.51%	0.157%
141	9.497	9.455	9.509	PV	339	5914	0.38%	0.040%

					rteres			
142	9.527	9.509	9.567	VV	318	6636	0.43%	0.044%
143	9.621	9.567	9.652	VV	286	9433	0.61%	0.063%
144	9.736	9.652	9.772	VV	811	28054	1.80%	0.188%
145	9.793	9.772	9.824	VV	482	10276	0.66%	0.069%
146	9.873	9.824	9.934	VV	605	21174	1.36%	0.142%
147	9.950	9.934	9.966	VV	694	8406	0.54%	0.056%
148	10.001	9.966	10.105	VV	17288	518637	33.35%	3.473%
149	10.114	10.105	10.179	VV	2483	79832	5.13%	0.535%
150	10.182	10.179	10.215	VV	1318	24072	1.55%	0.161%
151	10.225	10.215	10.275	VV	978	27872	1.79%	0.187%
152	10.288	10.275	10.365	VV	518	19246	1.24%	0.129%
153	10.384	10.365	10.403	VV	155	1947	0.13%	0.013%
154	10.460	10.403	10.480	VV	596	13141	0.84%	0.088%
155	10.515	10.480	10.550	VV	635	16974	1.09%	0.114%
156	10.574	10.550	10.582	VV	590	8665	0.56%	0.058%
157	10.592	10.582	10.627	VV	625	14382	0.92%	0.096%
158	10.654	10.627	10.662	VV	746	11356	0.73%	0.076%
159	10.680	10.662	10.700	VV	870	15226	0.98%	0.102%
160	10.718	10.700	10.740	VV	719	15187	0.98%	0.102%
161	10.745	10.740	10.762	VV	671	7656	0.49%	0.051%
162	10.784	10.762	10.802	VV	614	12800	0.82%	0.086%
163	10.858	10.802	10.875	VV	1181	32040	2.06%	0.215%
164	10.888	10.875	10.908	VV	910	14701	0.95%	0.098%
165	10.930	10.908	11.024	VV	1361	44987	2.89%	0.301%
166	11.045	11.024	11.058	VV	288	4421	0.28%	0.030%
167	11.083	11.058	11.090	VV	371	5433	0.35%	0.036%
168	11.133	11.090	11.195	VV	8734	204161	13.13%	1.367%
169	11.220	11.195	11.360	VV	3348	137154	8.82%	0.918%
170	11.371	11.360	11.415	VV	375	9362	0.60%	0.063%
171	11.444	11.415	11.459	VV	576	9893	0.64%	0.066%
172	11.495	11.459	11.504	VV	807	16648	1.07%	0.111%
173	11.525	11.504	11.547	VV	978	20991	1.35%	0.141%
174	11.563	11.547	11.586	VV	1272	19374	1.25%	0.130%
175	11.609	11.586	11.624	VV	728	12421	0.80%	0.083%
176	11.659	11.624	11.704	VV	3044	67074	4.31%	0.449%
177	11.725	11.704	11.744	VV	1132	18366	1.18%	0.123%
178	11.763	11.744	11.779	VV	938	14953	0.96%	0.100%
179	11.796	11.779	11.835	VV	945	25586	1.65%	0.171%
180	11.854	11.835	11.899	VV	1042	27003	1.74%	0.181%
181	11.934	11.899	11.951	VV	4135	67265	4.32%	0.450%
182	11.969	11.951	12.020	VV	4422	108037	6.95%	0.723%
183	12.045	12.020	12.065	VV	6994	112899	7.26%	0.756%
184	12.081	12.065	12.100	VV	4901	77965	5.01%	0.522%
185	12.115	12.100	12.197	VV	4740	106301	6.83%	0.712%
186	12.233	12.197	12.260	VV	1372	32215	2.07%	0.216%
187	12.292	12.260	12.304	VV	882	16443	1.06%	0.110%
188	12.346	12.304	12.389	VV	1539	54631	3.51%	0.366%
189	12.416	12.389	12.455	VV	2796	72676	4.67%	0.487%
190	12.494	12.455	12.534	VV	15414	224082	14.41%	1.500%
191	12.548	12.534	12.572	VV	1685	33233	2.14%	0.223%
192	12.589	12.572	12.644	VV	1635	55828	3.59%	0.374%
193	12.678	12.644	12.705	VV	1736	52256	3.36%	0.350%
194	12.724	12.705	12.779	VV	2278	59711	3.84%	0.400%

					rteres			
195	12.829	12.779	12.850	VV	8112	162083	10.42%	1.085%
196	12.871	12.850	12.920	VV	3707	119560	7.69%	0.801%
197	12.946	12.920	13.032	VV	67439	1034027	66.49%	6.924%
198	13.049	13.032	13.077	VV	1349	30574	1.97%	0.205%
199	13.102	13.077	13.122	VV	2146	46669	3.00%	0.312%
200	13.138	13.122	13.182	VV	3872	79433	5.11%	0.532%
201	13.203	13.182	13.215	VV	1554	29191	1.88%	0.195%
202	13.244	13.215	13.292	VV	68856	989622	63.63%	6.626%
203	13.308	13.292	13.330	VV	6416	108129	6.95%	0.724%
204	13.348	13.330	13.407	VV	4476	113231	7.28%	0.758%
205	13.435	13.407	13.475	VV	1771	51278	3.30%	0.343%
206	13.493	13.475	13.509	VV	1566	22108	1.42%	0.148%
207	13.539	13.509	13.566	VV	2563	60244	3.87%	0.403%
208	13.584	13.566	13.615	VV	2027	40042	2.57%	0.268%
209	13.669	13.615	13.692	VV	2086	61813	3.97%	0.414%
210	13.718	13.692	13.785	VV	4455	114063	7.33%	0.764%
211	13.850	13.785	13.894	VV	7730	205836	13.23%	1.378%
212	13.907	13.894	13.930	VV	1589	28215	1.81%	0.189%
213	13.957	13.930	13.975	VV	3931	64831	4.17%	0.434%
214	13.995	13.975	14.017	VV	5234	94178	6.06%	0.631%
215	14.029	14.017	14.060	VV	3067	54443	3.50%	0.365%
216	14.082	14.060	14.097	VV	2404	40772	2.62%	0.273%
217	14.121	14.097	14.147	VV	5813	101346	6.52%	0.679%
218	14.165	14.147	14.268	VV	4369	101685	6.54%	0.681%
219	14.295	14.268	14.412	VV	1025	47011	3.02%	0.315%
220	14.443	14.412	14.455	PV	992	14008	0.90%	0.094%
221	14.482	14.455	14.529	VV	2487	60345	3.88%	0.404%
222	14.585	14.529	14.600	VV	2948	76835	4.94%	0.514%
223	14.616	14.600	14.627	VV	2614	36120	2.32%	0.242%
224	14.645	14.627	14.665	VV	4100	65873	4.24%	0.441%
225	14.683	14.665	14.735	VV	2137	54577	3.51%	0.365%
226	14.772	14.735	14.800	VV	5248	110321	7.09%	0.739%
227	14.825	14.800	14.870	VV	8866	174121	11.20%	1.166%
228	14.892	14.870	14.910	VV	2800	47321	3.04%	0.317%
229	14.929	14.910	14.950	VV	2618	50535	3.25%	0.338%
230	14.984	14.950	15.079	VV	108828	1555278	100.00%	10.414%
231	15.139	15.079	15.160	VV	31877	453199	29.14%	3.035%
232	15.180	15.160	15.274	VV	33080	653594	42.02%	4.376%
233	15.300	15.274	15.330	VV	5589	93299	6.00%	0.625%
234	15.351	15.330	15.415	VV	2108	54907	3.53%	0.368%
235	15.451	15.415	15.469	VV	1274	25561	1.64%	0.171%
236	15.494	15.469	15.514	VV	2829	58036	3.73%	0.389%
237	15.525	15.514	15.541	VV	2262	30279	1.95%	0.203%
238	15.570	15.541	15.675	VV	39941	812272	52.23%	5.439%
239	15.708	15.675	15.750	VV	6060	111910	7.20%	0.749%
240	15.775	15.750	15.799	VV	2624	38389	2.47%	0.257%
241	15.823	15.799	15.847	VV	5993	96384	6.20%	0.645%
242	15.860	15.847	15.892	VV	3303	61872	3.98%	0.414%
243	15.919	15.892	15.939	VV	1636	39397	2.53%	0.264%
244	15.984	15.939	16.034	VV	3811	139650	8.98%	0.935%
245	16.050	16.034	16.065	VV	1329	23011	1.48%	0.154%
246	16.094	16.065	16.130	VV	2612	61374	3.95%	0.411%

					rteres				
247	16.151	16.130	16.184	VV	1294	23833	1.53%	0.160%	
248	16.211	16.184	16.234	VV	5277	71614	4.60%	0.480%	
249	16.273	16.234	16.319	VV	1556	47997	3.09%	0.321%	
250	16.324	16.319	16.367	VV	470	7025	0.45%	0.047%	
251	16.419	16.367	16.447	PV	892	18881	1.21%	0.126%	
252	16.511	16.447	16.544	PV	2184	63438	4.08%	0.425%	
253	16.587	16.544	16.658	VV	19272	418561	26.91%	2.803%	
254	16.706	16.658	16.813	VV	36411	859809	55.28%	5.757%	
255	16.844	16.813	16.929	VV	4868	103848	6.68%	0.695%	
256	16.982	16.929	17.007	PV	8933	137377	8.83%	0.920%	
257	17.030	17.007	17.064	VV	20009	311096	20.00%	2.083%	
258	17.094	17.064	17.142	VV	21771	443642	28.52%	2.971%	
259	17.160	17.142	17.181	VV	5343	86494	5.56%	0.579%	
260	17.203	17.181	17.225	VV	5810	103736	6.67%	0.695%	
261	17.240	17.225	17.266	VV	3252	46829	3.01%	0.314%	
262	17.283	17.266	17.292	VV	374	4473	0.29%	0.030%	
263	17.339	17.292	17.387	VV	1339	34185	2.20%	0.229%	
					Sum of corrected areas:	14934341			

FG042425.M Thu May 22 01:31:29 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-20	SDG No.:	Q2074
Lab Sample ID:	Q2074-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	84.3
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
FF015883.D	1	05/20/25 10:15	05/21/25 14:43	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2000		200	1970	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.0		37 - 130	55%	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\FF052125\
Data File : FF015883.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 14:43
Operator : YP\AJ
Sample : Q2074-04
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-20

Integration File: autoint1.e
Quant Time: May 21 23:37:07 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.019	1348791	11.043 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

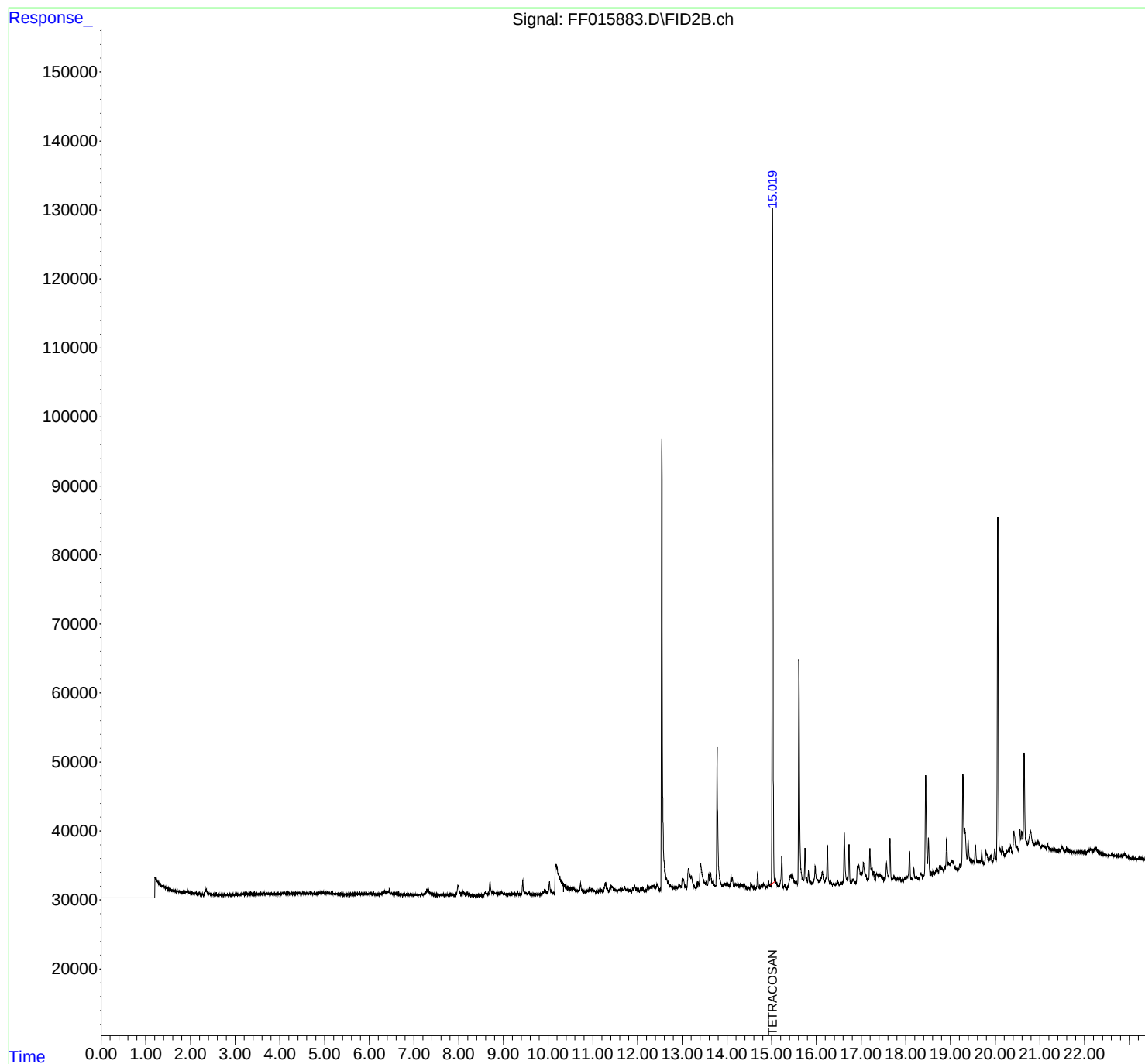
(m)=manual int.

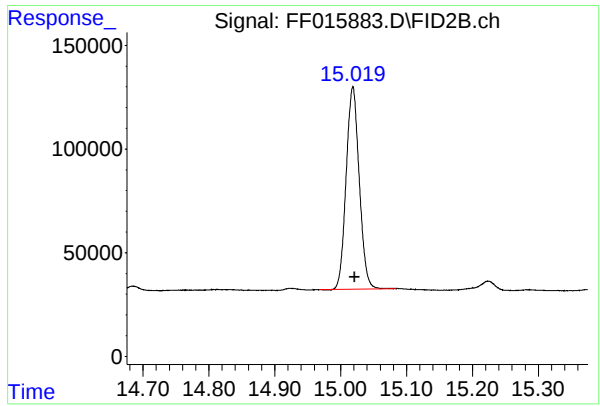
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015883.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 14:43
Operator : YP\AJ
Sample : Q2074-04
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-20

Integration File: autoint1.e
Quant Time: May 21 23:37:07 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.019 min
Delta R.T.: -0.002 min
Response: 1348791
Conc: 11.04 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-20

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015883.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 14:43
Sample : Q2074-04
Misc :
ALS Vial : 34 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.050	4.018	4.064	BV	133	909	0.06%	0.011%
2	4.078	4.064	4.085	PV	121	1107	0.08%	0.014%
3	4.107	4.085	4.120	VV	172	1718	0.12%	0.021%
4	4.125	4.120	4.149	VV	142	1397	0.10%	0.017%
5	4.164	4.149	4.176	PV	103	1120	0.08%	0.014%
6	4.180	4.176	4.197	VV	133	1402	0.10%	0.017%
7	4.200	4.197	4.247	VV	178	3516	0.25%	0.043%
8	4.259	4.247	4.265	VV	183	1086	0.08%	0.013%
9	4.269	4.265	4.280	VV	136	923	0.06%	0.011%
10	4.287	4.280	4.293	VV	156	776	0.05%	0.010%
11	4.296	4.293	4.326	VV	164	2433	0.17%	0.030%
12	4.331	4.326	4.339	VV	128	749	0.05%	0.009%
13	4.343	4.339	4.349	VV	170	734	0.05%	0.009%
14	4.357	4.349	4.368	VV	232	1836	0.13%	0.023%
15	4.382	4.368	4.408	VV	295	5055	0.35%	0.062%
16	4.430	4.408	4.447	VV	210	3492	0.24%	0.043%
17	4.457	4.447	4.473	VV	237	2221	0.15%	0.027%
18	4.477	4.473	4.492	VV	180	1625	0.11%	0.020%
19	4.501	4.492	4.514	VV	181	1897	0.13%	0.023%
20	4.518	4.514	4.551	VV	199	2500	0.17%	0.031%
21	4.566	4.551	4.582	VV	153	2053	0.14%	0.025%
22	4.590	4.582	4.598	VV	164	1224	0.09%	0.015%
23	4.606	4.598	4.611	VV	204	1062	0.07%	0.013%
24	4.615	4.611	4.619	VV	199	746	0.05%	0.009%
25	4.624	4.619	4.640	VV	223	1563	0.11%	0.019%
26	4.646	4.640	4.657	VV	164	1076	0.08%	0.013%
27	4.691	4.657	4.744	VV	412	9695	0.68%	0.119%
28	4.749	4.744	4.753	VV	166	664	0.05%	0.008%
29	4.777	4.753	4.789	VV	184	2230	0.16%	0.027%
30	4.807	4.789	4.829	VV	177	3282	0.23%	0.040%
31	4.836	4.829	4.845	VV	282	1716	0.12%	0.021%
32	4.852	4.845	4.868	VV	201	2593	0.18%	0.032%
33	4.903	4.868	4.908	VV	336	6040	0.42%	0.074%
34	4.921	4.908	4.926	VV	298	2933	0.20%	0.036%
35	4.936	4.926	4.948	VV	334	3766	0.26%	0.046%
36	4.957	4.948	4.961	VV	339	2206	0.15%	0.027%

					rteres			
37	4.966	4.961	4.971	VV	314	1773	0.12%	0.022%
38	4.975	4.971	5.017	VV	334	8039	0.56%	0.099%
39	5.026	5.017	5.082	VV	374	10242	0.71%	0.126%
40	5.089	5.082	5.106	VV	251	3082	0.22%	0.038%
41	5.114	5.106	5.132	VV	222	2857	0.20%	0.035%
42	5.146	5.132	5.169	VV	463	4286	0.30%	0.053%
43	5.178	5.169	5.185	VV	228	1840	0.13%	0.023%
44	5.191	5.185	5.196	VV	162	988	0.07%	0.012%
45	5.201	5.196	5.206	VV	143	834	0.06%	0.010%
46	5.210	5.206	5.216	VV	165	910	0.06%	0.011%
47	5.224	5.216	5.256	VV	160	2918	0.20%	0.036%
48	5.261	5.256	5.267	VV	179	722	0.05%	0.009%
49	5.273	5.267	5.322	VV	143	2739	0.19%	0.034%
50	5.350	5.322	5.376	VV	202	2854	0.20%	0.035%
51	5.379	5.376	5.396	VV	117	868	0.06%	0.011%
52	5.402	5.396	5.431	VV	105	998	0.07%	0.012%
53	5.437	5.431	5.454	VV	106	769	0.05%	0.009%
54	5.457	5.454	5.465	VV	94	372	0.03%	0.005%
55	5.501	5.465	5.509	VV	141	1658	0.12%	0.020%
56	5.513	5.509	5.518	VV	98	286	0.02%	0.004%
57	5.524	5.518	5.529	VV	118	411	0.03%	0.005%
58	5.542	5.529	5.551	VV	131	1269	0.09%	0.016%
59	5.555	5.551	5.570	VV	130	1015	0.07%	0.013%
60	5.578	5.570	5.582	VV	120	595	0.04%	0.007%
61	5.588	5.582	5.594	VV	120	683	0.05%	0.008%
62	5.599	5.594	5.606	VV	180	832	0.06%	0.010%
63	5.619	5.606	5.634	VV	169	1668	0.12%	0.021%
64	5.638	5.634	5.645	VV	102	513	0.04%	0.006%
65	5.671	5.645	5.706	VV	265	4374	0.31%	0.054%
66	5.710	5.706	5.757	VV	155	4162	0.29%	0.051%
67	5.761	5.757	5.764	VV	176	552	0.04%	0.007%
68	5.779	5.764	5.812	VV	224	4812	0.34%	0.059%
69	5.819	5.812	5.847	VV	175	3161	0.22%	0.039%
70	5.850	5.847	5.857	VV	142	1042	0.07%	0.013%
71	5.862	5.857	5.879	VV	225	2065	0.14%	0.025%
72	5.892	5.879	5.923	VV	235	5056	0.35%	0.062%
73	5.928	5.923	5.935	VV	159	923	0.06%	0.011%
74	5.947	5.935	5.958	VV	212	1961	0.14%	0.024%
75	5.975	5.958	5.980	VV	238	2173	0.15%	0.027%
76	5.993	5.980	5.997	VV	237	2148	0.15%	0.026%
77	6.001	5.997	6.009	VV	257	1685	0.12%	0.021%
78	6.013	6.009	6.033	VV	282	3039	0.21%	0.037%
79	6.049	6.033	6.059	VV	217	2753	0.19%	0.034%
80	6.063	6.059	6.075	VV	211	1750	0.12%	0.022%
81	6.097	6.075	6.117	VV	242	4367	0.30%	0.054%
82	6.127	6.117	6.154	VV	237	3362	0.23%	0.041%
83	6.158	6.154	6.205	VV	157	5147	0.36%	0.063%
84	6.333	6.205	6.370	VV	580	29076	2.03%	0.358%
85	6.375	6.370	6.407	VV	489	9559	0.67%	0.118%
86	6.442	6.407	6.556	VV	782	30829	2.15%	0.380%
87	6.608	6.556	6.636	VV	239	8855	0.62%	0.109%
88	6.648	6.636	6.704	VV	509	5595	0.39%	0.069%
89	6.712	6.704	6.760	VV	147	3520	0.25%	0.043%

					rteres			
90	6.765	6.760	6.778	VV	166	898	0.06%	0.011%
91	6.796	6.778	6.815	VV	62	1268	0.09%	0.016%
92	6.830	6.815	6.847	VV	188	1620	0.11%	0.020%
93	6.873	6.847	6.930	VV	211	6090	0.42%	0.075%
94	6.938	6.930	6.950	VV	187	1564	0.11%	0.019%
95	6.968	6.950	7.015	VV	162	4295	0.30%	0.053%
96	7.022	7.015	7.035	VV	128	1448	0.10%	0.018%
97	7.043	7.035	7.091	VV	184	3291	0.23%	0.041%
98	7.112	7.091	7.121	VV	123	1861	0.13%	0.023%
99	7.128	7.121	7.154	VV	115	1985	0.14%	0.024%
100	7.176	7.154	7.183	VV	186	2192	0.15%	0.027%
101	7.191	7.183	7.208	VV	187	2341	0.16%	0.029%
102	7.292	7.208	7.304	VV	738	24335	1.70%	0.300%
103	7.317	7.304	7.392	VV	742	23680	1.65%	0.292%
104	7.401	7.392	7.442	VV	277	5922	0.41%	0.073%
105	7.456	7.442	7.551	VV	221	8104	0.57%	0.100%
106	7.567	7.551	7.576	VV	119	1425	0.10%	0.018%
107	7.590	7.576	7.607	PV	113	1680	0.12%	0.021%
108	7.614	7.607	7.629	VV	164	1268	0.09%	0.016%
109	7.657	7.629	7.676	VV	142	3344	0.23%	0.041%
110	7.739	7.676	7.754	VV	225	6960	0.49%	0.086%
111	7.775	7.754	7.793	VV	195	3234	0.23%	0.040%
112	7.813	7.793	7.834	VV	149	3019	0.21%	0.037%
113	7.847	7.834	7.856	VV	170	1743	0.12%	0.021%
114	7.883	7.856	7.901	VV	187	3984	0.28%	0.049%
115	7.984	7.901	8.069	VV	1483	53317	3.72%	0.657%
116	8.097	8.069	8.164	VV	550	18212	1.27%	0.224%
117	8.190	8.164	8.297	VV	433	13609	0.95%	0.168%
118	8.326	8.297	8.357	VV	158	2837	0.20%	0.035%
119	8.365	8.357	8.381	VV	67	514	0.04%	0.006%
120	8.399	8.381	8.429	VV	89	1169	0.08%	0.014%
121	8.453	8.429	8.497	PV	113	2750	0.19%	0.034%
122	8.590	8.497	8.659	VV	525	22326	1.56%	0.275%
123	8.700	8.659	8.769	VV	2060	53212	3.71%	0.656%
124	8.794	8.769	8.844	VV	453	15404	1.07%	0.190%
125	8.850	8.844	8.865	VV	321	3606	0.25%	0.044%
126	8.887	8.865	8.935	VV	365	12150	0.85%	0.150%
127	8.954	8.935	8.992	VV	546	12676	0.88%	0.156%
128	9.015	8.992	9.050	VV	375	8924	0.62%	0.110%
129	9.083	9.050	9.105	VV	327	6897	0.48%	0.085%
130	9.140	9.105	9.180	VV	231	7776	0.54%	0.096%
131	9.205	9.180	9.218	VV	249	4476	0.31%	0.055%
132	9.252	9.218	9.295	VV	263	7398	0.52%	0.091%
133	9.318	9.295	9.366	VV	488	10449	0.73%	0.129%
134	9.382	9.366	9.396	VV	194	2510	0.18%	0.031%
135	9.432	9.396	9.536	VV	2109	48279	3.37%	0.595%
136	9.568	9.536	9.668	VV	426	14689	1.02%	0.181%
137	9.699	9.668	9.707	VV	134	2596	0.18%	0.032%
138	9.721	9.707	9.735	VV	162	2150	0.15%	0.026%
139	9.742	9.735	9.753	VV	134	1112	0.08%	0.014%
140	9.762	9.753	9.784	VV	129	1833	0.13%	0.023%
141	9.800	9.784	9.817	VV	120	1297	0.09%	0.016%

					rteres			
142	9.866	9.817	9.887	PV	313	8256	0.58%	0.102%
143	9.920	9.887	9.989	VV	826	27609	1.93%	0.340%
144	10.030	9.989	10.119	VV	1854	51418	3.59%	0.633%
145	10.127	10.119	10.141	VV	273	2944	0.21%	0.036%
146	10.184	10.141	10.317	VV	4236	289106	20.17%	3.562%
147	10.325	10.317	10.482	VV	1618	112989	7.88%	1.392%
148	10.520	10.482	10.543	VV	954	29278	2.04%	0.361%
149	10.564	10.543	10.642	VV	896	39081	2.73%	0.481%
150	10.654	10.642	10.682	VV	584	12425	0.87%	0.153%
151	10.725	10.682	10.794	VV	1575	48276	3.37%	0.595%
152	10.802	10.794	10.859	VV	419	12581	0.88%	0.155%
153	10.882	10.859	10.899	VV	560	10034	0.70%	0.124%
154	10.926	10.899	10.963	VV	777	22162	1.55%	0.273%
155	10.982	10.963	11.009	VV	761	15022	1.05%	0.185%
156	11.033	11.009	11.070	VV	436	12062	0.84%	0.149%
157	11.098	11.070	11.110	VV	349	6439	0.45%	0.079%
158	11.141	11.110	11.167	VV	416	11326	0.79%	0.140%
159	11.185	11.167	11.230	VV	602	15009	1.05%	0.185%
160	11.278	11.230	11.358	VV	1510	56561	3.95%	0.697%
161	11.394	11.358	11.407	VV	943	20243	1.41%	0.249%
162	11.429	11.407	11.520	VV	985	46374	3.24%	0.571%
163	11.531	11.520	11.553	VV	458	8172	0.57%	0.101%
164	11.580	11.553	11.602	VV	529	12461	0.87%	0.154%
165	11.624	11.602	11.681	VV	790	25227	1.76%	0.311%
166	11.708	11.681	11.759	VV	925	26108	1.82%	0.322%
167	11.781	11.759	11.809	VV	527	11520	0.80%	0.142%
168	11.828	11.809	11.860	VV	433	9397	0.66%	0.116%
169	11.890	11.860	11.915	VV	716	14673	1.02%	0.181%
170	11.934	11.915	12.000	VV	929	30471	2.13%	0.375%
171	12.016	12.000	12.039	VV	498	7978	0.56%	0.098%
172	12.069	12.039	12.095	VV	614	13697	0.96%	0.169%
173	12.113	12.095	12.155	VV	805	14934	1.04%	0.184%
174	12.226	12.155	12.269	VV	895	33162	2.31%	0.409%
175	12.291	12.269	12.314	VV	879	19839	1.38%	0.244%
176	12.351	12.314	12.414	VV	975	47314	3.30%	0.583%
177	12.436	12.414	12.514	VV	1152	40069	2.80%	0.494%
178	12.543	12.514	12.834	VV	65398	1143224	79.76%	14.084%
179	12.862	12.834	12.885	VV	753	18757	1.31%	0.231%
180	12.925	12.885	12.944	VV	1045	25591	1.79%	0.315%
181	12.951	12.944	12.974	VV	880	13262	0.93%	0.163%
182	12.998	12.974	13.012	VV	1913	31226	2.18%	0.385%
183	13.025	13.012	13.094	VV	1793	50979	3.56%	0.628%
184	13.137	13.094	13.187	VV	3321	118016	8.23%	1.454%
185	13.203	13.187	13.305	VV	2210	80835	5.64%	0.996%
186	13.351	13.305	13.385	VV	1294	44005	3.07%	0.542%
187	13.407	13.385	13.524	VV	3958	173996	12.14%	2.144%
188	13.538	13.524	13.563	VV	1345	25678	1.79%	0.316%
189	13.590	13.563	13.614	VV	2467	50661	3.53%	0.624%
190	13.632	13.614	13.674	VV	2579	65084	4.54%	0.802%
191	13.689	13.674	13.735	VV	1295	35614	2.48%	0.439%
192	13.778	13.735	13.900	VV	20837	411057	28.68%	5.064%
193	13.931	13.900	13.942	VV	870	19231	1.34%	0.237%
194	13.965	13.942	14.000	VV	954	30287	2.11%	0.373%

					rteres			
195	14.025	14.000	14.055	VV	934	25729	1.80%	0.317%
196	14.089	14.055	14.106	VV	2016	39921	2.79%	0.492%
197	14.120	14.106	14.154	VV	1804	33719	2.35%	0.415%
198	14.182	14.154	14.190	VV	796	15784	1.10%	0.194%
199	14.214	14.190	14.258	VV	854	29464	2.06%	0.363%
200	14.276	14.258	14.290	VV	641	11931	0.83%	0.147%
201	14.316	14.290	14.338	VV	808	20066	1.40%	0.247%
202	14.347	14.338	14.370	VV	722	12527	0.87%	0.154%
203	14.383	14.370	14.460	VV	646	22175	1.55%	0.273%
204	14.482	14.460	14.505	VV	422	7194	0.50%	0.089%
205	14.534	14.505	14.629	VV	1026	33482	2.34%	0.412%
206	14.685	14.629	14.726	VV	2332	41160	2.87%	0.507%
207	14.754	14.726	14.776	VV	459	11626	0.81%	0.143%
208	14.812	14.776	14.882	VV	787	32568	2.27%	0.401%
209	14.893	14.882	14.902	VV	337	3841	0.27%	0.047%
210	14.925	14.902	14.952	VV	1282	23491	1.64%	0.289%
211	14.967	14.952	14.984	VV	604	10913	0.76%	0.134%
212	15.018	14.984	15.151	VV	98615	1433283	100.00%	17.657%
213	15.224	15.151	15.262	VV	4662	95787	6.68%	1.180%
214	15.285	15.262	15.320	VV	528	11200	0.78%	0.138%
215	15.328	15.320	15.340	VV	166	1223	0.09%	0.015%
216	15.423	15.340	15.450	PV	1898	72325	5.05%	0.891%
217	15.465	15.450	15.538	VV	1918	65148	4.55%	0.803%
218	15.554	15.538	15.579	VV	783	16407	1.14%	0.202%
219	15.608	15.579	15.713	VV	33029	597491	41.69%	7.361%
220	15.743	15.713	15.770	VV	5662	97696	6.82%	1.204%
221	15.777	15.770	15.799	VV	1446	20196	1.41%	0.249%
222	15.821	15.799	15.869	VV	2372	50552	3.53%	0.623%
223	15.882	15.869	15.906	VV	643	13022	0.91%	0.160%
224	15.927	15.906	15.935	VV	833	11595	0.81%	0.143%
225	15.972	15.935	16.054	VV	2965	98895	6.90%	1.218%
226	16.066	16.054	16.077	VV	749	10078	0.70%	0.124%
227	16.130	16.077	16.190	VV	2045	83497	5.83%	1.029%
228	16.245	16.190	16.303	VV	5812	120932	8.44%	1.490%
229	16.320	16.303	16.362	VV	582	11033	0.77%	0.136%
230	16.378	16.362	16.409	VV	240	3448	0.24%	0.042%
231	16.428	16.409	16.435	VV	124	888	0.06%	0.011%
232	16.477	16.435	16.515	VV	428	8895	0.62%	0.110%
233	16.554	16.515	16.574	PV	347	6659	0.46%	0.082%
234	16.623	16.574	16.702	VV	7501	152280	10.62%	1.876%
235	16.728	16.702	16.780	VV	5648	81470	5.68%	1.004%
236	16.826	16.780	16.884	VV	599	15817	1.10%	0.195%
237	16.917	16.884	16.935	VV	2307	43749	3.05%	0.539%
238	16.949	16.935	17.004	VV	2536	69914	4.88%	0.861%
239	17.051	17.004	17.099	VV	2828	91097	6.36%	1.122%
240	17.105	17.099	17.145	VV	963	15921	1.11%	0.196%
241	17.195	17.145	17.229	VV	4774	92869	6.48%	1.144%
242	17.243	17.229	17.265	VV	2066	34385	2.40%	0.424%
243	17.281	17.265	17.319	VV	1301	21945	1.53%	0.270%
244	17.343	17.319	17.395	PV	1003	31587	2.20%	0.389%
245	17.416	17.395	17.500	VBA	785	31606	2.21%	0.389%

Sum of corrected areas: 8117258
Page 5

rteres

FF052125.M Thu May 22 00:02:58 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-38	SDG No.:	Q2074
Lab Sample ID:	Q2074-05	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	81.9
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
FF015884.D	1	05/20/25 10:15	05/21/25 15:12	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	8140		206	2030	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.6		37 - 130	68%	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\FF052125\
Data File : FF015884.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 15:12
Operator : YP\AJ
Sample : Q2074-05
Misc :
ALS Vial : 35 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-38

Integration File: autoint1.e
Quant Time: May 21 23:37:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.018	1664982	13.632 ug/mlm
Target Compounds			

(f)=RT Delta > 1/2 Window

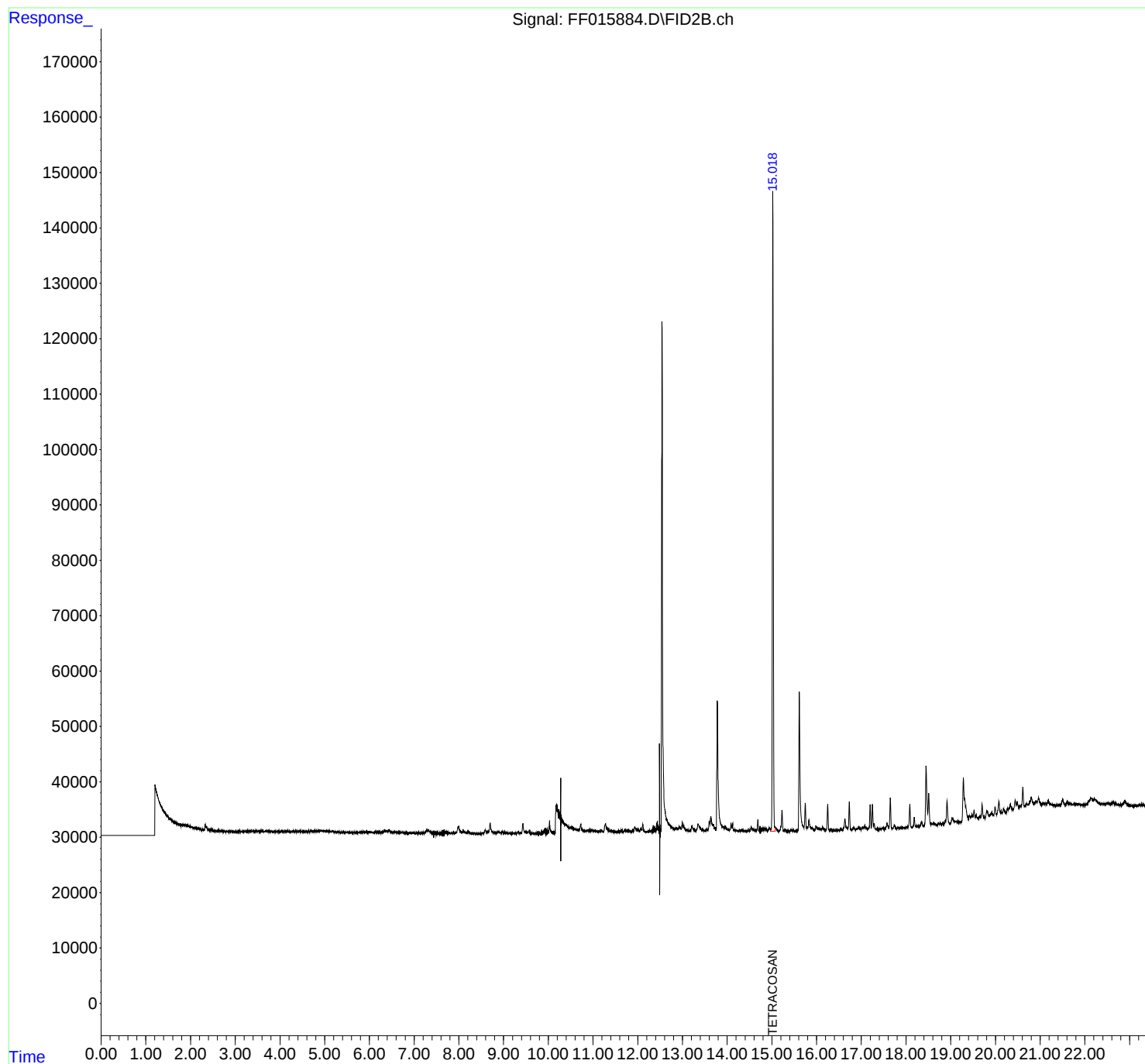
(m)=manual int.

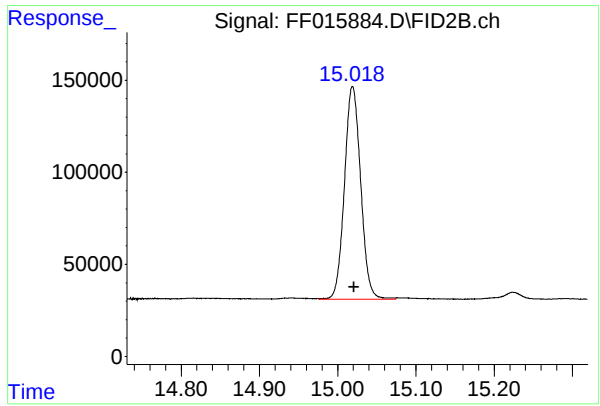
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015884.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 15:12
Operator : YP\AJ
Sample : Q2074-05
Misc :
ALS Vial : 35 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-38

Integration File: autoint1.e
Quant Time: May 21 23:37:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.018 min
Delta R.T.: -0.003 min
Response: 1664982
Conc: 13.63 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-38

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015884.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 15:12
Sample : Q2074-05
Misc :
ALS Vial : 35 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.008	4.000	4.014	BV	63	156	0.01%	0.001%
2	4.018	4.014	4.037	PV	104	559	0.02%	0.002%
3	4.043	4.037	4.067	VV	130	1045	0.04%	0.004%
4	4.076	4.067	4.093	PV	136	762	0.03%	0.003%
5	4.096	4.093	4.103	VV	101	360	0.01%	0.001%
6	4.109	4.103	4.128	VV	154	1156	0.04%	0.004%
7	4.131	4.128	4.138	VV	80	401	0.02%	0.001%
8	4.153	4.138	4.158	VV	163	959	0.04%	0.003%
9	4.164	4.158	4.182	VV	156	1426	0.05%	0.005%
10	4.188	4.182	4.192	VV	98	478	0.02%	0.002%
11	4.210	4.192	4.225	PV	147	1702	0.06%	0.006%
12	4.236	4.225	4.242	VV	165	1039	0.04%	0.004%
13	4.247	4.242	4.258	VV	155	1030	0.04%	0.004%
14	4.263	4.258	4.277	VV	130	1108	0.04%	0.004%
15	4.280	4.277	4.291	VV	173	845	0.03%	0.003%
16	4.299	4.291	4.303	VV	143	671	0.03%	0.002%
17	4.306	4.303	4.319	VV	123	815	0.03%	0.003%
18	4.326	4.319	4.341	VV	104	1079	0.04%	0.004%
19	4.384	4.341	4.398	VV	277	4213	0.16%	0.015%
20	4.403	4.398	4.422	VV	156	1631	0.06%	0.006%
21	4.426	4.422	4.433	VV	153	718	0.03%	0.003%
22	4.439	4.433	4.453	VV	167	1505	0.06%	0.005%
23	4.464	4.453	4.476	VV	155	1504	0.06%	0.005%
24	4.488	4.476	4.527	VV	145	2627	0.10%	0.009%
25	4.532	4.527	4.544	VV	154	671	0.03%	0.002%
26	4.549	4.544	4.556	PV	108	446	0.02%	0.002%
27	4.569	4.556	4.578	VV	134	1051	0.04%	0.004%
28	4.585	4.578	4.597	VV	104	697	0.03%	0.002%
29	4.603	4.597	4.611	VV	81	410	0.02%	0.001%
30	4.615	4.611	4.630	PV	99	642	0.02%	0.002%
31	4.683	4.630	4.696	VV	361	4931	0.19%	0.017%
32	4.698	4.696	4.703	VV	240	906	0.03%	0.003%
33	4.710	4.703	4.726	VV	248	2474	0.09%	0.009%
34	4.730	4.726	4.737	VV	215	1113	0.04%	0.004%
35	4.742	4.737	4.748	VV	193	915	0.03%	0.003%
36	4.761	4.748	4.769	VV	214	1981	0.07%	0.007%

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37	4.773	4.769	4.797	VV	230	2228	0.08%	0.008%
38	4.801	4.797	4.804	VV	116	420	0.02%	0.001%
39	4.844	4.804	4.855	VV	196	3323	0.13%	0.012%
40	4.879	4.855	4.883	VV	241	2855	0.11%	0.010%
41	4.887	4.883	4.893	VV	219	1019	0.04%	0.004%
42	4.897	4.893	4.917	VV	190	2346	0.09%	0.008%
43	4.925	4.917	4.944	VV	201	2405	0.09%	0.008%
44	4.961	4.944	4.966	VV	196	1924	0.07%	0.007%
45	4.972	4.966	4.985	VV	166	1383	0.05%	0.005%
46	4.995	4.985	5.011	VV	159	1717	0.07%	0.006%
47	5.015	5.011	5.042	VB	119	1518	0.06%	0.005%
48	5.055	5.047	5.062	BV	75	431	0.02%	0.002%
49	5.064	5.062	5.101	VV	129	1396	0.05%	0.005%
50	5.110	5.101	5.118	PV	99	495	0.02%	0.002%
51	5.126	5.118	5.132	VV	124	643	0.02%	0.002%
52	5.153	5.132	5.169	VV	173	2083	0.08%	0.007%
53	5.173	5.169	5.189	VV	151	1158	0.04%	0.004%
54	5.196	5.189	5.203	VV	126	791	0.03%	0.003%
55	5.206	5.203	5.226	VV	112	1051	0.04%	0.004%
56	5.233	5.226	5.248	VV	104	988	0.04%	0.003%
57	5.255	5.248	5.267	VV	149	1058	0.04%	0.004%
58	5.268	5.267	5.273	VV	123	360	0.01%	0.001%
59	5.283	5.273	5.290	VV	153	968	0.04%	0.003%
60	5.298	5.290	5.316	VV	156	1873	0.07%	0.007%
61	5.320	5.316	5.326	VV	162	594	0.02%	0.002%
62	5.330	5.326	5.349	VV	176	1621	0.06%	0.006%
63	5.355	5.349	5.364	VV	194	1250	0.05%	0.004%
64	5.367	5.364	5.388	VV	183	2234	0.08%	0.008%
65	5.390	5.388	5.412	VV	208	2162	0.08%	0.008%
66	5.419	5.412	5.433	VV	247	2183	0.08%	0.008%
67	5.445	5.433	5.473	VV	216	3839	0.15%	0.014%
68	5.475	5.473	5.487	VV	196	1477	0.06%	0.005%
69	5.494	5.487	5.498	VV	244	1061	0.04%	0.004%
70	5.503	5.498	5.507	VV	265	1155	0.04%	0.004%
71	5.514	5.507	5.528	VV	251	2386	0.09%	0.008%
72	5.532	5.528	5.543	VV	237	1976	0.07%	0.007%
73	5.554	5.543	5.576	VV	289	4574	0.17%	0.016%
74	5.582	5.576	5.590	VV	300	2082	0.08%	0.007%
75	5.594	5.590	5.609	VV	354	3178	0.12%	0.011%
76	5.613	5.609	5.619	VV	327	1761	0.07%	0.006%
77	5.622	5.619	5.629	VV	344	1696	0.06%	0.006%
78	5.634	5.629	5.640	VV	331	2000	0.08%	0.007%
79	5.652	5.640	5.663	VV	369	4169	0.16%	0.015%
80	5.666	5.663	5.676	VV	359	2666	0.10%	0.009%
81	5.688	5.676	5.691	VV	388	3150	0.12%	0.011%
82	5.697	5.691	5.704	VV	415	2737	0.10%	0.010%
83	5.708	5.704	5.713	VV	394	1813	0.07%	0.006%
84	5.732	5.713	5.738	VV	423	5414	0.20%	0.019%
85	5.753	5.738	5.770	VV	460	8190	0.31%	0.029%
86	5.775	5.770	5.798	VV	521	7712	0.29%	0.027%
87	5.803	5.798	5.808	VV	571	3093	0.12%	0.011%
88	5.816	5.808	5.836	VV	577	8773	0.33%	0.031%
89	5.837	5.836	5.843	VV	618	2155	0.08%	0.008%

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90	5.850	5.843	5.854	VV	567	3823	0.14%	0.013%
91	5.859	5.854	5.881	VV	599	8790	0.33%	0.031%
92	5.894	5.881	5.914	VV	718	11987	0.45%	0.042%
93	5.920	5.914	5.936	VV	673	8267	0.31%	0.029%
94	5.957	5.936	5.962	VV	713	9600	0.36%	0.034%
95	5.970	5.962	5.986	VV	697	9679	0.37%	0.034%
96	5.993	5.986	6.048	VV	772	25740	0.97%	0.091%
97	6.052	6.048	6.081	VV	740	14093	0.53%	0.050%
98	6.084	6.081	6.097	VV	699	6674	0.25%	0.024%
99	6.113	6.097	6.124	VV	765	11770	0.45%	0.041%
100	6.129	6.124	6.169	VV	795	20047	0.76%	0.071%
101	6.179	6.169	6.197	VV	813	12852	0.49%	0.045%
102	6.201	6.197	6.212	VV	867	6813	0.26%	0.024%
103	6.225	6.212	6.246	VV	868	16374	0.62%	0.058%
104	6.275	6.246	6.293	VV	962	24974	0.95%	0.088%
105	6.298	6.293	6.304	VV	972	6210	0.24%	0.022%
106	6.335	6.304	6.365	VV	1227	40685	1.54%	0.143%
107	6.385	6.365	6.423	VV	1213	40474	1.53%	0.143%
108	6.442	6.423	6.488	VV	1417	46803	1.77%	0.165%
109	6.492	6.488	6.495	VV	1117	5203	0.20%	0.018%
110	6.500	6.495	6.522	VV	1111	17983	0.68%	0.063%
111	6.527	6.522	6.549	VV	1137	17245	0.65%	0.061%
112	6.564	6.549	6.570	VV	1161	14332	0.54%	0.050%
113	6.573	6.570	6.590	VV	1151	13396	0.51%	0.047%
114	6.593	6.590	6.620	VV	1146	19903	0.75%	0.070%
115	6.622	6.620	6.632	VV	1147	7534	0.29%	0.027%
116	6.642	6.632	6.690	VV	1191	39775	1.51%	0.140%
117	6.695	6.690	6.710	VV	1242	14624	0.55%	0.051%
118	6.718	6.710	6.723	VV	1191	9107	0.34%	0.032%
119	6.729	6.723	6.744	VV	1232	14733	0.56%	0.052%
120	6.751	6.744	6.756	VV	1229	8802	0.33%	0.031%
121	6.760	6.756	6.792	VV	1238	25905	0.98%	0.091%
122	6.796	6.792	6.845	VV	1257	39408	1.49%	0.139%
123	6.851	6.845	6.865	VV	1255	14211	0.54%	0.050%
124	6.882	6.865	6.887	VV	1269	16457	0.62%	0.058%
125	6.897	6.887	6.910	VV	1309	17665	0.67%	0.062%
126	6.914	6.910	6.924	VV	1288	10243	0.39%	0.036%
127	6.936	6.924	6.977	VV	1353	42372	1.60%	0.149%
128	6.988	6.977	6.995	VV	1376	14542	0.55%	0.051%
129	6.998	6.995	7.008	VV	1376	10433	0.39%	0.037%
130	7.016	7.008	7.047	VV	1368	31181	1.18%	0.110%
131	7.050	7.047	7.056	VV	1380	7266	0.28%	0.026%
132	7.066	7.056	7.078	VV	1415	18461	0.70%	0.065%
133	7.084	7.078	7.094	VV	1442	13859	0.52%	0.049%
134	7.101	7.094	7.134	VV	1476	33396	1.26%	0.118%
135	7.140	7.134	7.167	VV	1520	28711	1.09%	0.101%
136	7.189	7.167	7.207	VV	1545	35367	1.34%	0.125%
137	7.233	7.207	7.241	VV	1647	32834	1.24%	0.116%
138	7.291	7.241	7.302	VV	2143	70547	2.67%	0.248%
139	7.316	7.302	7.379	VV	2162	88946	3.37%	0.313%
140	7.387	7.379	7.419	VV	1793	41506	1.57%	0.146%
141	7.429	7.419	7.437	VV	1871	18454	0.70%	0.065%

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142	7.441	7.437	7.449	VV	1638	12332	0.47%	0.043%
143	7.461	7.449	7.467	VV	1783	18027	0.68%	0.063%
144	7.477	7.467	7.481	VV	1795	14279	0.54%	0.050%
145	7.487	7.481	7.547	VV	1919	67323	2.55%	0.237%
146	7.561	7.547	7.567	VV	1864	20979	0.79%	0.074%
147	7.624	7.567	7.659	VV	2053	99500	3.77%	0.350%
148	7.666	7.659	7.745	VV	2379	100253	3.79%	0.353%
149	7.756	7.745	7.777	VV	2039	38695	1.46%	0.136%
150	7.784	7.777	7.794	VV	2069	20306	0.77%	0.072%
151	7.801	7.794	7.876	VV	2074	101432	3.84%	0.357%
152	7.882	7.876	7.899	VV	2078	27851	1.05%	0.098%
153	7.989	7.899	8.070	VV	3327	260317	9.85%	0.917%
154	8.098	8.070	8.174	VV	2655	150193	5.68%	0.529%
155	8.204	8.174	8.320	VV	2582	210928	7.98%	0.743%
156	8.327	8.320	8.378	VV	2360	81255	3.08%	0.286%
157	8.392	8.378	8.423	VV	2414	64384	2.44%	0.227%
158	8.475	8.423	8.483	VV	2516	87472	3.31%	0.308%
159	8.589	8.483	8.644	VV	3193	262953	9.95%	0.926%
160	8.701	8.644	8.790	VV	4534	288351	10.91%	1.015%
161	8.799	8.790	8.835	VV	2980	79533	3.01%	0.280%
162	8.845	8.835	8.858	VV	2997	40824	1.55%	0.144%
163	8.884	8.858	8.939	VV	3150	146266	5.54%	0.515%
164	8.967	8.939	9.001	VV	3248	114978	4.35%	0.405%
165	9.016	9.001	9.062	VV	3211	112938	4.27%	0.398%
166	9.073	9.062	9.119	VV	3143	103588	3.92%	0.365%
167	9.144	9.119	9.187	VV	3109	123308	4.67%	0.434%
168	9.221	9.187	9.230	VV	3140	81062	3.07%	0.285%
169	9.247	9.230	9.255	VV	3221	46661	1.77%	0.164%
170	9.264	9.255	9.303	VV	3220	91623	3.47%	0.323%
171	9.324	9.303	9.379	VV	3501	151214	5.72%	0.532%
172	9.433	9.379	9.529	VV	5009	335848	12.71%	1.183%
173	9.571	9.529	9.707	VV	3852	378609	14.33%	1.333%
174	9.724	9.707	9.749	VV	3627	88431	3.35%	0.311%
175	9.762	9.749	9.812	VV	3671	135147	5.12%	0.476%
176	9.921	9.812	10.004	VV	4429	448543	16.98%	1.580%
177	10.029	10.004	10.124	VV	5648	310333	11.75%	1.093%
178	10.129	10.124	10.149	VV	4016	60268	2.28%	0.212%
179	10.178	10.149	10.384	VV	9004	963699	36.48%	3.394%
180	10.390	10.384	10.504	VV	5730	384909	14.57%	1.355%
181	10.523	10.504	10.554	VV	5418	156267	5.91%	0.550%
182	10.566	10.554	10.654	VV	5220	300912	11.39%	1.060%
183	10.664	10.654	10.694	VV	4962	118901	4.50%	0.419%
184	10.726	10.694	10.844	VV	5996	460116	17.42%	1.620%
185	10.881	10.844	10.905	VV	5120	182587	6.91%	0.643%
186	10.984	10.905	11.005	VV	5234	305791	11.57%	1.077%
187	11.036	11.005	11.092	VV	5146	262232	9.93%	0.923%
188	11.099	11.092	11.106	VV	5037	42539	1.61%	0.150%
189	11.123	11.106	11.140	VV	5146	103860	3.93%	0.366%
190	11.184	11.140	11.230	VV	5341	279212	10.57%	0.983%
191	11.279	11.230	11.370	VV	6541	479011	18.13%	1.687%
192	11.381	11.370	11.415	VV	5425	144342	5.46%	0.508%
193	11.433	11.415	11.475	VV	5477	191029	7.23%	0.673%
194	11.489	11.475	11.512	VV	5269	116570	4.41%	0.410%

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195	11.541	11.512	11.552	VV	5399	127223	4.82%	0.448%
196	11.574	11.552	11.603	VV	5498	166148	6.29%	0.585%
197	11.627	11.603	11.683	VV	5664	262703	9.94%	0.925%
198	11.712	11.683	11.740	VV	5940	193424	7.32%	0.681%
199	11.781	11.740	11.812	VV	5872	246394	9.33%	0.868%
200	11.829	11.812	11.869	VV	5722	190452	7.21%	0.671%
201	11.890	11.869	11.912	VV	6091	150917	5.71%	0.531%
202	11.934	11.912	11.970	VV	6609	217583	8.24%	0.766%
203	11.981	11.970	12.004	VV	6145	124054	4.70%	0.437%
204	12.016	12.004	12.044	VV	6170	142202	5.38%	0.501%
205	12.069	12.044	12.089	VV	6410	165721	6.27%	0.584%
206	12.115	12.089	12.199	VV	7067	403447	15.27%	1.421%
207	12.226	12.199	12.246	VV	5971	169173	6.40%	0.596%
208	12.255	12.246	12.276	VV	6011	107621	4.07%	0.379%
209	12.288	12.276	12.309	VV	6097	117474	4.45%	0.414%
210	12.347	12.309	12.407	VV	6856	371971	14.08%	1.310%
211	12.435	12.407	12.489	VV	7533	332424	12.58%	1.171%
212	12.499	12.489	12.515	PV	6526	96769	3.66%	0.341%
213	12.544	12.515	12.834	VV	97036	2642006	100.00%	9.304%
214	12.864	12.834	12.903	VV	6285	256005	9.69%	0.901%
215	12.928	12.903	12.941	VV	6451	142875	5.41%	0.503%
216	12.952	12.941	12.973	VV	6282	116640	4.41%	0.411%
217	12.996	12.973	13.012	VV	7133	154144	5.83%	0.543%
218	13.028	13.012	13.150	VV	6513	481730	18.23%	1.696%
219	13.210	13.150	13.307	VV	6229	521011	19.72%	1.835%
220	13.350	13.307	13.515	VV	6385	682426	25.83%	2.403%
221	13.537	13.515	13.559	VV	5274	133580	5.06%	0.470%
222	13.599	13.559	13.615	VV	6517	192218	7.28%	0.677%
223	13.635	13.615	13.679	VV	7301	243297	9.21%	0.857%
224	13.691	13.679	13.747	VV	5854	216643	8.20%	0.763%
225	13.779	13.747	13.907	VV	28001	900962	34.10%	3.173%
226	13.919	13.907	13.962	VV	5134	163451	6.19%	0.576%
227	13.971	13.962	14.049	VV	4873	241214	9.13%	0.849%
228	14.086	14.049	14.105	VV	5527	161863	6.13%	0.570%
229	14.121	14.105	14.170	VV	5240	179854	6.81%	0.633%
230	14.176	14.170	14.238	VV	4220	166090	6.29%	0.585%
231	14.247	14.238	14.267	VV	4051	69838	2.64%	0.246%
232	14.325	14.267	14.337	VV	4038	166558	6.30%	0.587%
233	14.352	14.337	14.384	VV	3927	108336	4.10%	0.381%
234	14.397	14.384	14.442	VV	3797	130714	4.95%	0.460%
235	14.450	14.442	14.464	VV	3687	47192	1.79%	0.166%
236	14.484	14.464	14.506	VV	3838	94377	3.57%	0.332%
237	14.536	14.506	14.572	VV	4331	155939	5.90%	0.549%
238	14.582	14.572	14.630	VV	3884	129419	4.90%	0.456%
239	14.644	14.630	14.653	VV	3511	48017	1.82%	0.169%
240	14.685	14.653	14.719	VV	5373	159664	6.04%	0.562%
241	14.767	14.719	14.791	VV	3759	151182	5.72%	0.532%
242	14.815	14.791	14.824	VV	3692	69964	2.65%	0.246%
243	14.830	14.824	14.915	VV	3664	185655	7.03%	0.654%
244	14.940	14.915	14.977	VV	3668	125485	4.75%	0.442%
245	15.019	14.977	15.069	VV	118475	1821856	68.96%	6.416%
246	15.075	15.069	15.160	VV	3577	171201	6.48%	0.603%

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247	15.224	15.160	15.266	VV	6423	231282	8.75%	0.814%
248	15.291	15.266	15.342	VV	2871	119711	4.53%	0.422%
249	15.388	15.342	15.402	VV	2486	87991	3.33%	0.310%
250	15.432	15.402	15.454	VV	2584	77300	2.93%	0.272%
251	15.475	15.454	15.522	VV	2475	95500	3.61%	0.336%
252	15.558	15.522	15.578	VV	2327	75546	2.86%	0.266%
253	15.611	15.578	15.715	VV	27231	635061	24.04%	2.236%
254	15.745	15.715	15.772	VV	7013	145692	5.51%	0.513%
255	15.784	15.772	15.800	VV	2717	44897	1.70%	0.158%
256	15.828	15.800	15.957	VV	3847	234404	8.87%	0.825%
257	15.985	15.957	16.024	VV	2572	88540	3.35%	0.312%
258	16.038	16.024	16.080	VV	2091	68021	2.57%	0.240%
259	16.136	16.080	16.202	VV	2224	134112	5.08%	0.472%
260	16.246	16.202	16.298	VV	6178	149810	5.67%	0.528%
261	16.325	16.298	16.360	VV	1673	53494	2.02%	0.188%
262	16.383	16.360	16.412	VV	1364	39758	1.50%	0.140%
263	16.425	16.412	16.435	VV	1271	16088	0.61%	0.057%
264	16.490	16.435	16.519	VV	1242	59411	2.25%	0.209%
265	16.554	16.519	16.575	VV	1317	41339	1.56%	0.146%
266	16.632	16.575	16.699	VV	3082	124709	4.72%	0.439%
267	16.730	16.699	16.787	VV	6015	118281	4.48%	0.417%
268	16.815	16.787	16.827	VV	1181	24839	0.94%	0.087%
269	16.836	16.827	16.877	VV	1131	28472	1.08%	0.100%
270	16.895	16.877	16.909	VV	853	15117	0.57%	0.053%
271	16.943	16.909	16.965	VV	1033	31502	1.19%	0.111%
272	16.969	16.965	16.992	VV	960	12892	0.49%	0.045%
273	17.032	16.992	17.054	VV	1019	31452	1.19%	0.111%
274	17.078	17.054	17.102	VV	1229	27517	1.04%	0.097%
275	17.113	17.102	17.136	VV	729	13249	0.50%	0.047%
276	17.196	17.136	17.224	VV	4880	85886	3.25%	0.302%
277	17.247	17.224	17.272	VV	4802	73696	2.79%	0.260%
278	17.286	17.272	17.347	VV	1294	26917	1.02%	0.095%
279	17.361	17.347	17.397	VV	207	4138	0.16%	0.015%
280	17.481	17.397	17.500	VBA	276	10384	0.39%	0.037%

Sum of corrected areas: 28397715

FF052125.M Thu May 22 00:03:42 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-19	SDG No.:	Q2074
Lab Sample ID:	Q2074-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.9
Sample Wt/Vol:	30.01	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
FF015885.D	1	05/20/25 10:15	05/21/25 15:41	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	6820		197	1940	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.4		37 - 130	57%	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\FF052125\
Data File : FF015885.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 15:41
Operator : YP\AJ
Sample : Q2074-06
Misc :
ALS Vial : 36 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-19

Integration File: autoint1.e
Quant Time: May 21 23:37:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.018	1388981	11.372 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

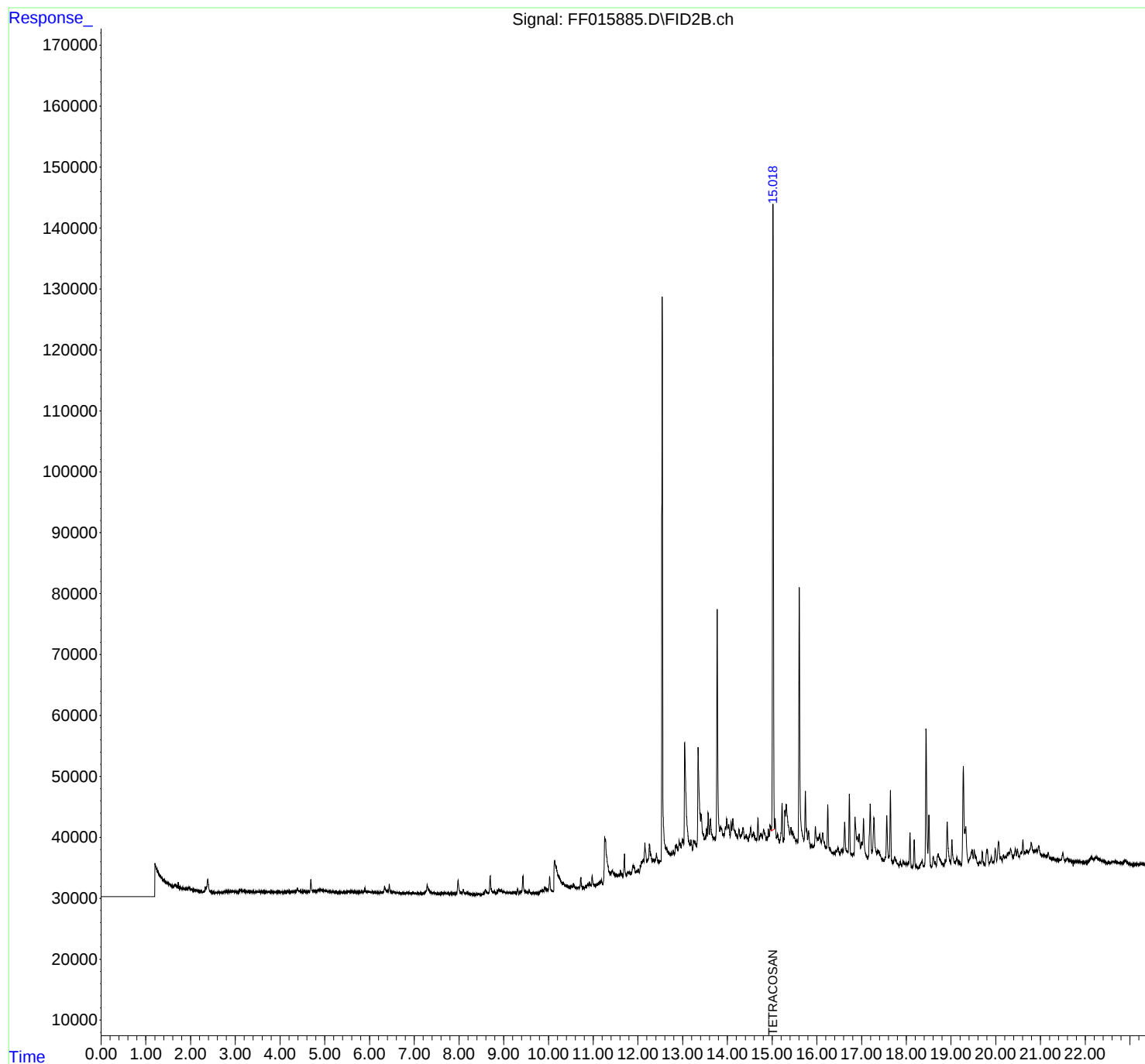
(m)=manual int.

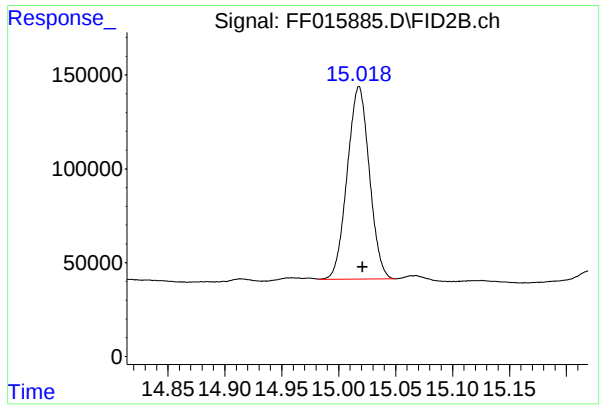
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015885.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 15:41
Operator : YP\AJ
Sample : Q2074-06
Misc :
ALS Vial : 36 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-19

Integration File: autoint1.e
Quant Time: May 21 23:37:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.018 min
Delta R.T.: -0.003 min
Response: 1388981
Conc: 11.37 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-19

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
 Data File : FF015885.D
 Signal(s) : FID2B.ch
 Acq On : 21 May 2025 15:41
 Sample : Q2074-06
 Misc :
 ALS Vial : 36 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.017	4.000	4.025	BV	56	296	0.02%	0.001%
2	4.033	4.025	4.042	PV	84	550	0.03%	0.002%
3	4.046	4.042	4.060	VV	137	728	0.04%	0.003%
4	4.065	4.060	4.091	PV	82	1196	0.07%	0.005%
5	4.096	4.091	4.108	VV	96	837	0.05%	0.003%
6	4.115	4.108	4.123	VV	98	680	0.04%	0.003%
7	4.147	4.123	4.157	VV	185	2370	0.14%	0.010%
8	4.167	4.157	4.173	VV	199	1300	0.08%	0.005%
9	4.186	4.173	4.205	VV	161	2574	0.15%	0.010%
10	4.208	4.205	4.218	VV	212	1197	0.07%	0.005%
11	4.234	4.218	4.253	VV	236	3295	0.20%	0.013%
12	4.264	4.253	4.273	VV	207	1915	0.11%	0.008%
13	4.286	4.273	4.310	VV	241	3810	0.23%	0.015%
14	4.313	4.310	4.322	VV	181	1129	0.07%	0.005%
15	4.326	4.322	4.342	VV	188	1887	0.11%	0.008%
16	4.388	4.342	4.430	VV	756	18510	1.11%	0.074%
17	4.437	4.430	4.465	VV	333	5117	0.31%	0.021%
18	4.466	4.465	4.477	VV	236	1345	0.08%	0.005%
19	4.480	4.477	4.495	VV	253	2013	0.12%	0.008%
20	4.506	4.495	4.510	VV	208	1649	0.10%	0.007%
21	4.514	4.510	4.523	VV	254	1579	0.09%	0.006%
22	4.527	4.523	4.570	VV	253	5188	0.31%	0.021%
23	4.581	4.570	4.598	VV	236	2843	0.17%	0.011%
24	4.635	4.598	4.641	VV	250	4584	0.27%	0.018%
25	4.645	4.641	4.665	VV	238	2652	0.16%	0.011%
26	4.690	4.665	4.739	VV	2215	36801	2.21%	0.148%
27	4.756	4.739	4.768	VV	396	5365	0.32%	0.022%
28	4.771	4.768	4.779	VV	350	1964	0.12%	0.008%
29	4.783	4.779	4.795	VV	327	2802	0.17%	0.011%
30	4.799	4.795	4.823	VV	297	4739	0.28%	0.019%
31	4.828	4.823	4.839	VV	348	3132	0.19%	0.013%
32	4.842	4.839	4.862	VV	415	5314	0.32%	0.021%
33	4.879	4.862	4.894	VV	530	8743	0.52%	0.035%
34	4.895	4.894	4.906	VV	556	3396	0.20%	0.014%
35	4.913	4.906	4.925	VV	473	5203	0.31%	0.021%
36	4.932	4.925	4.936	VV	446	2982	0.18%	0.012%

					rteres			
37	4.938	4.936	4.955	VV	456	4888	0.29%	0.020%
38	4.961	4.955	4.964	VV	458	2222	0.13%	0.009%
39	4.976	4.964	4.985	VV	435	4697	0.28%	0.019%
40	4.990	4.985	5.004	VV	387	4021	0.24%	0.016%
41	5.009	5.004	5.036	VV	387	6354	0.38%	0.026%
42	5.042	5.036	5.072	VV	354	6170	0.37%	0.025%
43	5.092	5.072	5.117	VV	294	6250	0.37%	0.025%
44	5.127	5.117	5.150	VV	269	3974	0.24%	0.016%
45	5.156	5.150	5.159	VV	203	938	0.06%	0.004%
46	5.163	5.159	5.168	VV	236	930	0.06%	0.004%
47	5.175	5.168	5.185	VV	223	2022	0.12%	0.008%
48	5.190	5.185	5.199	VV	255	1594	0.10%	0.006%
49	5.201	5.199	5.222	VV	219	2056	0.12%	0.008%
50	5.239	5.222	5.243	VV	208	1987	0.12%	0.008%
51	5.249	5.243	5.257	VV	214	1337	0.08%	0.005%
52	5.261	5.257	5.268	VV	168	983	0.06%	0.004%
53	5.274	5.268	5.289	VV	180	1657	0.10%	0.007%
54	5.293	5.289	5.309	VV	192	1499	0.09%	0.006%
55	5.314	5.309	5.320	VV	210	1069	0.06%	0.004%
56	5.330	5.320	5.338	VV	200	1635	0.10%	0.007%
57	5.343	5.338	5.350	VV	163	992	0.06%	0.004%
58	5.358	5.350	5.366	VV	174	1402	0.08%	0.006%
59	5.376	5.366	5.420	VV	210	4715	0.28%	0.019%
60	5.426	5.420	5.442	VV	179	1839	0.11%	0.007%
61	5.446	5.442	5.455	VV	196	1229	0.07%	0.005%
62	5.462	5.455	5.469	VV	188	1399	0.08%	0.006%
63	5.504	5.469	5.511	VV	251	5279	0.32%	0.021%
64	5.524	5.511	5.533	VV	336	3594	0.22%	0.014%
65	5.538	5.533	5.558	VV	299	4309	0.26%	0.017%
66	5.564	5.558	5.571	VV	298	1959	0.12%	0.008%
67	5.588	5.571	5.615	VV	334	6963	0.42%	0.028%
68	5.632	5.615	5.647	VV	320	4594	0.28%	0.018%
69	5.651	5.647	5.674	VV	256	3648	0.22%	0.015%
70	5.679	5.674	5.683	VV	265	1191	0.07%	0.005%
71	5.692	5.683	5.696	VV	287	1910	0.11%	0.008%
72	5.701	5.696	5.705	VV	263	1116	0.07%	0.004%
73	5.713	5.705	5.721	VV	232	1879	0.11%	0.008%
74	5.726	5.721	5.730	VV	248	1078	0.06%	0.004%
75	5.748	5.730	5.753	VV	247	2668	0.16%	0.011%
76	5.758	5.753	5.761	VV	267	886	0.05%	0.004%
77	5.768	5.761	5.784	VV	269	3239	0.19%	0.013%
78	5.786	5.784	5.797	VV	273	1900	0.11%	0.008%
79	5.806	5.797	5.810	VV	278	1874	0.11%	0.008%
80	5.823	5.810	5.875	VV	313	9191	0.55%	0.037%
81	5.895	5.875	5.930	VV	916	15665	0.94%	0.063%
82	5.939	5.930	5.947	VV	299	2684	0.16%	0.011%
83	5.962	5.947	5.966	VV	269	2921	0.18%	0.012%
84	5.973	5.966	5.982	VV	342	2757	0.17%	0.011%
85	5.987	5.982	6.004	VV	331	3490	0.21%	0.014%
86	6.010	6.004	6.022	VV	306	2802	0.17%	0.011%
87	6.029	6.022	6.050	VV	292	4170	0.25%	0.017%
88	6.056	6.050	6.065	VV	240	2084	0.12%	0.008%
89	6.069	6.065	6.109	VV	232	5333	0.32%	0.021%

					rteres			
90	6.115	6.109	6.129	VV	196	1852	0.11%	0.007%
91	6.132	6.129	6.149	VV	217	1959	0.12%	0.008%
92	6.152	6.149	6.157	VV	178	670	0.04%	0.003%
93	6.161	6.157	6.167	VV	149	812	0.05%	0.003%
94	6.194	6.167	6.207	VV	203	3514	0.21%	0.014%
95	6.214	6.207	6.221	VV	214	1331	0.08%	0.005%
96	6.225	6.221	6.230	VV	193	867	0.05%	0.003%
97	6.243	6.230	6.260	VV	235	3322	0.20%	0.013%
98	6.270	6.260	6.278	VV	309	2832	0.17%	0.011%
99	6.295	6.278	6.301	VV	311	3467	0.21%	0.014%
100	6.338	6.301	6.422	VV	1277	41228	2.47%	0.166%
101	6.443	6.422	6.495	VV	1579	29082	1.74%	0.117%
102	6.502	6.495	6.515	VV	341	3621	0.22%	0.015%
103	6.518	6.515	6.524	VV	254	1499	0.09%	0.006%
104	6.534	6.524	6.552	VV	342	4578	0.27%	0.018%
105	6.558	6.552	6.570	VV	340	2916	0.17%	0.012%
106	6.573	6.570	6.605	VV	271	4558	0.27%	0.018%
107	6.611	6.605	6.621	VV	223	1830	0.11%	0.007%
108	6.625	6.621	6.636	VV	242	1529	0.09%	0.006%
109	6.639	6.636	6.650	VV	164	1290	0.08%	0.005%
110	6.654	6.650	6.659	VV	196	848	0.05%	0.003%
111	6.660	6.659	6.689	VV	201	2281	0.14%	0.009%
112	6.693	6.689	6.724	VV	184	2849	0.17%	0.011%
113	6.726	6.724	6.745	VV	167	1542	0.09%	0.006%
114	6.749	6.745	6.753	VV	154	646	0.04%	0.003%
115	6.758	6.753	6.767	VV	157	833	0.05%	0.003%
116	6.823	6.767	6.827	VV	190	4231	0.25%	0.017%
117	6.832	6.827	6.837	VV	196	1066	0.06%	0.004%
118	6.843	6.837	6.848	VV	178	1132	0.07%	0.005%
119	6.856	6.848	6.862	VV	238	1495	0.09%	0.006%
120	6.884	6.862	6.899	VV	219	3812	0.23%	0.015%
121	6.901	6.899	6.904	VV	194	510	0.03%	0.002%
122	6.909	6.904	6.914	VV	187	1000	0.06%	0.004%
123	6.921	6.914	6.934	VV	194	1971	0.12%	0.008%
124	6.938	6.934	6.958	VV	208	1956	0.12%	0.008%
125	6.964	6.958	6.982	VV	338	1907	0.11%	0.008%
126	6.991	6.982	7.004	VV	158	1434	0.09%	0.006%
127	7.011	7.004	7.020	VV	176	1332	0.08%	0.005%
128	7.026	7.020	7.035	VV	159	1072	0.06%	0.004%
129	7.039	7.035	7.055	VV	151	1589	0.10%	0.006%
130	7.068	7.055	7.107	VV	176	4094	0.25%	0.016%
131	7.113	7.107	7.145	VV	202	2776	0.17%	0.011%
132	7.149	7.145	7.176	VV	170	2291	0.14%	0.009%
133	7.199	7.176	7.213	VV	217	3429	0.21%	0.014%
134	7.217	7.213	7.221	VV	232	931	0.06%	0.004%
135	7.224	7.221	7.230	VV	228	1052	0.06%	0.004%
136	7.289	7.230	7.358	VV	1569	52595	3.15%	0.212%
137	7.363	7.358	7.406	VV	446	8146	0.49%	0.033%
138	7.420	7.406	7.428	VV	294	3061	0.18%	0.012%
139	7.437	7.428	7.463	VV	331	5249	0.31%	0.021%
140	7.469	7.463	7.484	VV	237	2044	0.12%	0.008%
141	7.487	7.484	7.521	VV	144	2314	0.14%	0.009%

					rteres			
142	7.525	7.521	7.529	VV	71	248	0.01%	0.001%
143	7.533	7.529	7.535	PV	109	273	0.02%	0.001%
144	7.540	7.535	7.547	VV	124	643	0.04%	0.003%
145	7.551	7.547	7.560	VV	163	676	0.04%	0.003%
146	7.566	7.560	7.572	VV	108	567	0.03%	0.002%
147	7.606	7.572	7.614	VV	195	2896	0.17%	0.012%
148	7.636	7.614	7.651	VV	285	4609	0.28%	0.019%
149	7.656	7.651	7.662	VV	233	1385	0.08%	0.006%
150	7.671	7.662	7.676	VV	254	1769	0.11%	0.007%
151	7.686	7.676	7.694	VV	285	2555	0.15%	0.010%
152	7.697	7.694	7.704	VV	234	1093	0.07%	0.004%
153	7.708	7.704	7.716	VV	228	1460	0.09%	0.006%
154	7.723	7.716	7.740	VV	197	2462	0.15%	0.010%
155	7.760	7.740	7.764	VV	252	3056	0.18%	0.012%
156	7.769	7.764	7.776	VV	207	1266	0.08%	0.005%
157	7.781	7.776	7.786	VV	195	1029	0.06%	0.004%
158	7.797	7.786	7.809	VV	167	2071	0.12%	0.008%
159	7.827	7.809	7.853	VV	187	3554	0.21%	0.014%
160	7.865	7.853	7.882	VV	204	2104	0.13%	0.008%
161	7.884	7.882	7.888	VV	146	393	0.02%	0.002%
162	7.911	7.888	7.919	VV	146	2164	0.13%	0.009%
163	7.981	7.919	8.064	VV	2349	58924	3.53%	0.237%
164	8.097	8.064	8.139	VV	807	19006	1.14%	0.076%
165	8.140	8.139	8.157	VV	276	2173	0.13%	0.009%
166	8.161	8.157	8.165	VV	271	1020	0.06%	0.004%
167	8.176	8.165	8.229	VV	419	10213	0.61%	0.041%
168	8.237	8.229	8.259	VV	141	1791	0.11%	0.007%
169	8.264	8.259	8.292	VV	113	1515	0.09%	0.006%
170	8.298	8.292	8.317	VV	149	1256	0.08%	0.005%
171	8.329	8.317	8.346	VV	177	2105	0.13%	0.008%
172	8.350	8.346	8.369	VV	131	957	0.06%	0.004%
173	8.376	8.369	8.432	VV	116	4043	0.24%	0.016%
174	8.438	8.432	8.470	VV	159	2624	0.16%	0.011%
175	8.589	8.470	8.652	PV	846	30763	1.84%	0.124%
176	8.699	8.652	8.762	VV	3042	66808	4.00%	0.269%
177	8.795	8.762	8.835	VV	501	16292	0.98%	0.066%
178	8.883	8.835	8.929	VV	809	32015	1.92%	0.129%
179	8.948	8.929	8.991	VV	832	19937	1.20%	0.080%
180	9.008	8.991	9.055	VV	491	12579	0.75%	0.051%
181	9.073	9.055	9.101	VV	337	7546	0.45%	0.030%
182	9.120	9.101	9.154	VV	330	7465	0.45%	0.030%
183	9.188	9.154	9.204	VV	268	6672	0.40%	0.027%
184	9.216	9.204	9.228	VV	279	3108	0.19%	0.012%
185	9.244	9.228	9.291	VV	263	6304	0.38%	0.025%
186	9.312	9.291	9.352	VV	673	12964	0.78%	0.052%
187	9.379	9.352	9.392	VV	438	7670	0.46%	0.031%
188	9.430	9.392	9.530	VV	2901	63312	3.80%	0.255%
189	9.571	9.530	9.605	VV	561	11980	0.72%	0.048%
190	9.614	9.605	9.655	VV	112	1758	0.11%	0.007%
191	9.687	9.655	9.704	VV	111	2091	0.13%	0.008%
192	9.718	9.704	9.745	VV	100	1790	0.11%	0.007%
193	9.771	9.745	9.797	VV	127	2065	0.12%	0.008%
194	9.859	9.797	9.888	PV	532	19390	1.16%	0.078%

					rteres			
195	9.918	9.888	9.941	VV	962	19202	1.15%	0.077%
196	9.965	9.941	9.990	VV	651	16112	0.97%	0.065%
197	10.029	9.990	10.104	VV	2585	56014	3.36%	0.225%
198	10.137	10.104	10.314	VV	5084	337003	20.20%	1.355%
199	10.320	10.314	10.414	VV	1311	61519	3.69%	0.247%
200	10.421	10.414	10.437	VV	854	9251	0.55%	0.037%
201	10.442	10.437	10.473	VV	680	12174	0.73%	0.049%
202	10.515	10.473	10.534	VV	896	22946	1.38%	0.092%
203	10.560	10.534	10.642	VV	1087	36102	2.16%	0.145%
204	10.678	10.642	10.685	VV	406	9543	0.57%	0.038%
205	10.724	10.685	10.779	VV	1968	41415	2.48%	0.167%
206	10.847	10.779	10.857	VV	566	15492	0.93%	0.062%
207	10.880	10.857	10.900	VV	788	16428	0.98%	0.066%
208	10.916	10.900	10.950	VV	1149	23002	1.38%	0.093%
209	10.977	10.950	11.062	VV	2097	56530	3.39%	0.227%
210	11.129	11.062	11.149	VV	934	35387	2.12%	0.142%
211	11.184	11.149	11.215	VV	1316	36671	2.20%	0.147%
212	11.256	11.215	11.390	VV	8415	430445	25.80%	1.731%
213	11.432	11.390	11.464	VV	2603	104624	6.27%	0.421%
214	11.468	11.464	11.499	VV	2192	41671	2.50%	0.168%
215	11.521	11.499	11.547	VV	1870	51081	3.06%	0.205%
216	11.569	11.547	11.593	VV	1867	50057	3.00%	0.201%
217	11.613	11.593	11.659	VV	2399	76796	4.60%	0.309%
218	11.698	11.659	11.750	VV	5152	140879	8.45%	0.567%
219	11.776	11.750	11.797	VV	2189	56183	3.37%	0.226%
220	11.814	11.797	11.836	VV	2212	45812	2.75%	0.184%
221	11.888	11.836	11.904	VV	3138	97648	5.85%	0.393%
222	11.912	11.904	11.952	VV	3127	74313	4.45%	0.299%
223	11.972	11.952	11.994	VV	2263	53581	3.21%	0.215%
224	12.013	11.994	12.031	VV	2505	50609	3.03%	0.204%
225	12.076	12.031	12.092	VV	3614	109320	6.55%	0.440%
226	12.120	12.092	12.135	VV	3938	97731	5.86%	0.393%
227	12.155	12.135	12.200	VV	6639	192599	11.55%	0.775%
228	12.259	12.200	12.317	VV	6359	319318	19.14%	1.284%
229	12.351	12.317	12.368	VV	3874	115632	6.93%	0.465%
230	12.414	12.368	12.457	VV	4816	207917	12.46%	0.836%
231	12.478	12.457	12.490	VV	3532	68566	4.11%	0.276%
232	12.504	12.490	12.514	VV	3545	48531	2.91%	0.195%
233	12.541	12.514	12.630	VV	96340	1479744	88.70%	5.951%
234	12.641	12.630	12.735	VV	5636	306475	18.37%	1.233%
235	12.749	12.735	12.767	VV	4758	85989	5.15%	0.346%
236	12.786	12.767	12.820	VV	4942	147226	8.83%	0.592%
237	12.841	12.820	12.852	VV	5815	101372	6.08%	0.408%
238	12.863	12.852	12.897	VV	5882	148771	8.92%	0.598%
239	12.921	12.897	12.937	VV	6549	138309	8.29%	0.556%
240	12.947	12.937	12.969	VV	6063	109953	6.59%	0.442%
241	12.991	12.969	13.002	VV	6525	122662	7.35%	0.493%
242	13.012	13.002	13.025	VV	6549	89266	5.35%	0.359%
243	13.045	13.025	13.163	VV	22336	899704	53.93%	3.618%
244	13.184	13.163	13.224	VV	6506	207837	12.46%	0.836%
245	13.246	13.224	13.260	VV	6349	127987	7.67%	0.515%
246	13.271	13.260	13.304	VV	6177	153137	9.18%	0.616%

					rteres			
247	13.344	13.304	13.398	VV	21477	681767	40.87%	2.742%
248	13.412	13.398	13.492	VV	10406	454489	27.24%	1.828%
249	13.533	13.492	13.549	VV	8098	239104	14.33%	0.962%
250	13.569	13.549	13.596	VV	10609	247898	14.86%	0.997%
251	13.618	13.596	13.687	VV	9493	414261	24.83%	1.666%
252	13.696	13.687	13.730	VV	6507	162812	9.76%	0.655%
253	13.770	13.730	13.832	VV	43853	946427	56.73%	3.806%
254	13.853	13.832	13.901	VV	8180	316643	18.98%	1.723%
255	13.910	13.901	13.925	VV	7028	96293	5.77%	0.387%
256	13.985	13.925	14.014	VV	9382	427829	25.65%	1.721%
257	14.029	14.014	14.061	VV	8333	214947	12.89%	0.864%
258	14.081	14.061	14.099	VV	8890	177590	10.65%	0.714%
259	14.119	14.099	14.190	VV	9333	427924	25.65%	1.721%
260	14.202	14.190	14.224	VV	6836	129382	7.76%	0.520%
261	14.260	14.224	14.288	VV	7465	259743	15.57%	1.045%
262	14.351	14.288	14.380	VV	7694	375207	22.49%	1.509%
263	14.388	14.380	14.399	VV	6080	66592	3.99%	0.268%
264	14.420	14.399	14.466	VV	6563	243467	14.59%	0.979%
265	14.519	14.466	14.547	VV	7585	318256	19.08%	1.280%
266	14.589	14.547	14.630	VV	6766	309153	18.53%	1.243%
267	14.642	14.630	14.657	VV	5751	90973	5.45%	0.366%
268	14.682	14.657	14.709	VV	8996	215765	12.93%	0.868%
269	14.744	14.709	14.787	VV	6499	285174	17.09%	1.147%
270	14.808	14.787	14.870	VV	7047	316020	18.94%	1.271%
271	14.914	14.870	14.937	VV	7086	240268	14.40%	0.966%
272	14.959	14.937	14.983	VV	7573	194875	11.68%	0.784%
273	15.018	14.983	15.050	VV	109543	1668181	100.00%	6.709%
274	15.066	15.050	15.104	VV	8584	223575	13.40%	0.899%
275	15.122	15.104	15.160	VV	5981	189231	11.34%	0.761%
276	15.221	15.160	15.249	VV	11083	356494	21.37%	1.434%
277	15.284	15.249	15.295	VV	9846	198627	11.91%	0.799%
278	15.313	15.295	15.395	VV	10896	499911	29.97%	2.010%
279	15.419	15.395	15.444	VV	6955	187569	11.24%	0.754%
280	15.454	15.444	15.536	VV	6061	300577	18.02%	1.209%
281	15.555	15.536	15.574	VV	5046	106659	6.39%	0.429%
282	15.605	15.574	15.707	VV	46248	1031514	61.83%	4.148%
283	15.742	15.707	15.792	VV	12721	366757	21.99%	1.475%
284	15.814	15.792	15.862	VV	6132	200637	12.03%	0.807%
285	15.882	15.862	15.905	VV	3759	94935	5.69%	0.382%
286	15.914	15.905	15.922	VV	3633	35054	2.10%	0.141%
287	15.966	15.922	16.005	VV	6744	244044	14.63%	0.981%
288	16.015	16.005	16.029	VV	4623	64760	3.88%	0.260%
289	16.061	16.029	16.104	VV	5265	211779	12.70%	0.852%
290	16.127	16.104	16.197	VV	5704	242717	14.55%	0.976%
291	16.204	16.197	16.217	VV	3298	38696	2.32%	0.156%
292	16.243	16.217	16.330	VV	10155	288928	17.32%	1.162%
293	16.342	16.330	16.362	VV	2347	42495	2.55%	0.171%
294	16.373	16.362	16.407	VV	2313	57493	3.45%	0.231%
295	16.424	16.407	16.445	VV	2605	55351	3.32%	0.223%
296	16.471	16.445	16.511	VV	3057	100760	6.04%	0.405%
297	16.554	16.511	16.582	VV	2689	97481	5.84%	0.392%
298	16.620	16.582	16.695	VV	7053	229061	13.73%	0.921%
299	16.726	16.695	16.765	VV	11615	207419	12.43%	0.834%

					rteres			
300	16.772	16.765	16.792	VV	1837	26740	1.60%	0.108%
301	16.818	16.792	16.832	VV	1888	41177	2.47%	0.166%
302	16.852	16.832	16.890	VV	7709	186039	11.15%	0.748%
303	16.902	16.890	16.929	VV	4403	95830	5.74%	0.385%
304	16.944	16.929	16.975	VV	4980	108157	6.48%	0.435%
305	16.999	16.975	17.018	VV	3493	81625	4.89%	0.328%
306	17.042	17.018	17.134	VV	7415	196262	11.77%	0.789%
307	17.192	17.134	17.228	VV	9695	226343	13.57%	0.910%
308	17.276	17.228	17.342	VV	7380	229208	13.74%	0.922%
309	17.368	17.342	17.500	VBA	1867	98524	5.91%	0.396%
					Sum of corrected areas:	24865391		

FF052125.M Thu May 22 00:04:22 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/15/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-40	SDG No.:	Q2074
Lab Sample ID:	Q2074-07	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	89.2
Sample Wt/Vol:	30.08	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
FF015886.D	1	05/20/25 10:15	05/21/25 16:10	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	3190		189	1860	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.4		37 - 130	57%	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\FF052125\
Data File : FF015886.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:10
Operator : YP\AJ
Sample : Q2074-07
Misc :
ALS Vial : 37 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-40

Integration File: autoint1.e
Quant Time: May 21 23:37:59 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.017	1396428	11.433 ug/mlm
Target Compounds			

(f)=RT Delta > 1/2 Window

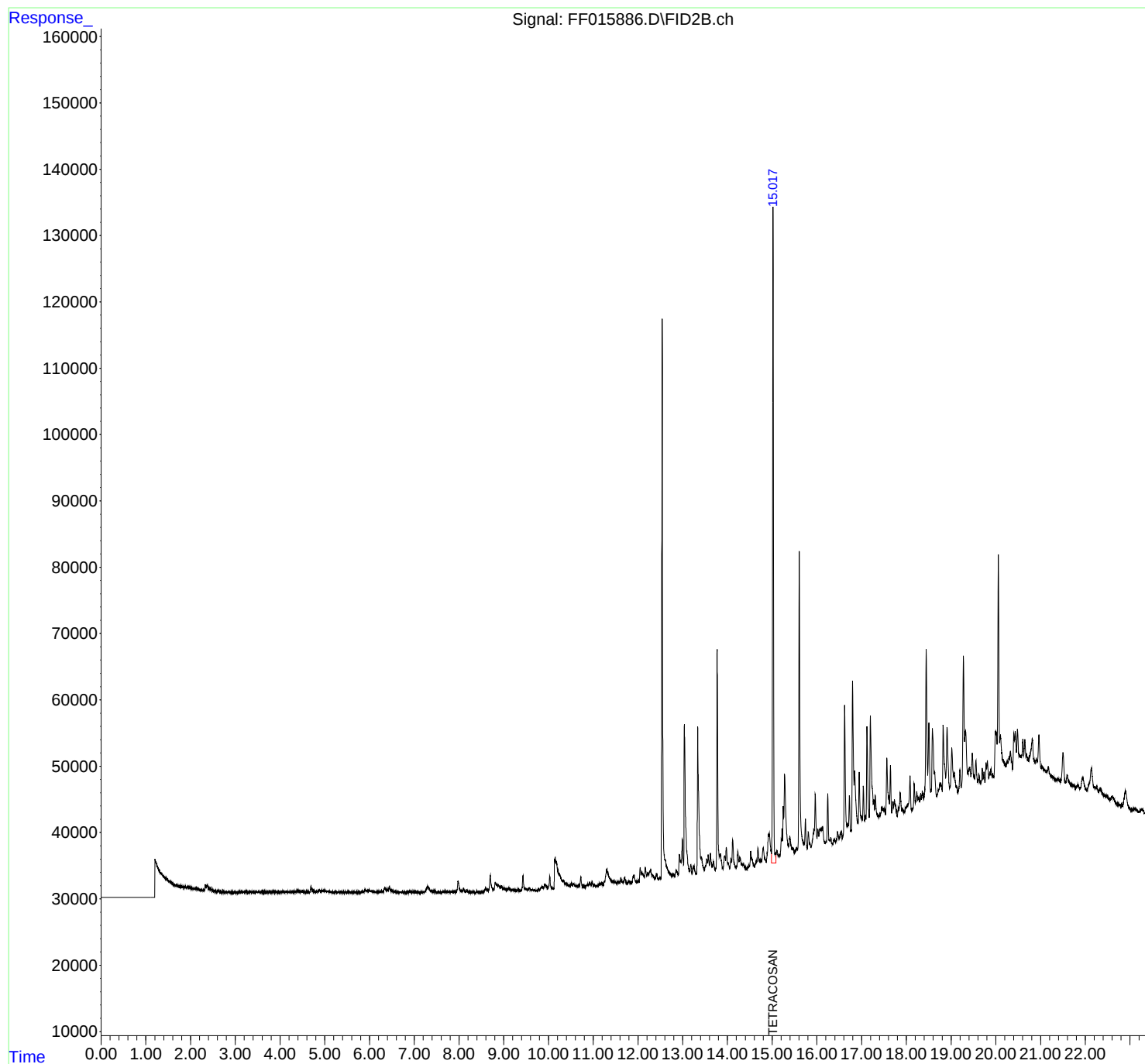
(m)=manual int.

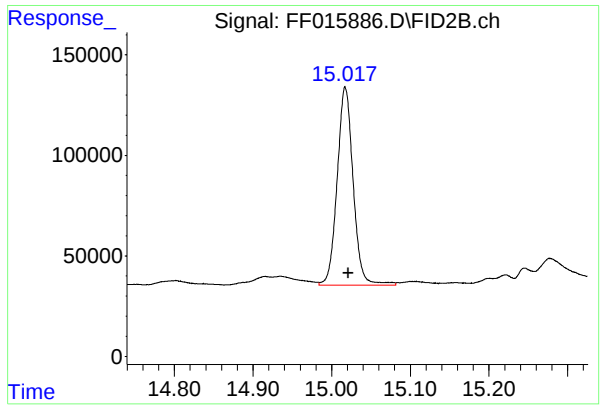
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015886.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:10
Operator : YP\AJ
Sample : Q2074-07
Misc :
ALS Vial : 37 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-40

Integration File: autoint1.e
Quant Time: May 21 23:37:59 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.017 min
Delta R.T.: -0.004 min
Response: 1396428
Conc: 11.43 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-40

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015886.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:10
Sample : Q2074-07
Misc :
ALS Vial : 37 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.006	4.000	4.014	BV	94	492	0.04%	0.004%
2	4.018	4.014	4.056	PV	152	2698	0.19%	0.021%
3	4.059	4.056	4.077	VV	175	1630	0.12%	0.013%
4	4.081	4.077	4.093	VV	144	1254	0.09%	0.010%
5	4.101	4.093	4.118	VV	184	1627	0.12%	0.013%
6	4.125	4.118	4.138	VV	125	1438	0.10%	0.011%
7	4.143	4.138	4.158	VV	226	1648	0.12%	0.013%
8	4.161	4.158	4.173	VV	125	975	0.07%	0.008%
9	4.182	4.173	4.197	VV	163	1494	0.11%	0.012%
10	4.203	4.197	4.214	VV	194	1118	0.08%	0.009%
11	4.219	4.214	4.226	VV	187	882	0.06%	0.007%
12	4.232	4.226	4.251	VV	134	1751	0.13%	0.014%
13	4.257	4.251	4.263	VV	178	1054	0.08%	0.008%
14	4.269	4.263	4.292	VV	180	1970	0.14%	0.015%
15	4.295	4.292	4.318	VV	145	1472	0.11%	0.011%
16	4.328	4.318	4.335	VV	172	1193	0.09%	0.009%
17	4.384	4.335	4.408	VV	392	10073	0.73%	0.079%
18	4.413	4.408	4.430	VV	263	2934	0.21%	0.023%
19	4.433	4.430	4.453	VV	251	2712	0.20%	0.021%
20	4.471	4.453	4.482	VV	210	2658	0.19%	0.021%
21	4.487	4.482	4.493	VV	159	908	0.07%	0.007%
22	4.501	4.493	4.507	VV	336	1422	0.10%	0.011%
23	4.520	4.507	4.537	VV	197	2374	0.17%	0.019%
24	4.540	4.537	4.553	VV	170	1125	0.08%	0.009%
25	4.568	4.553	4.606	VV	181	3596	0.26%	0.028%
26	4.609	4.606	4.652	VV	146	2347	0.17%	0.018%
27	4.656	4.652	4.664	VV	140	536	0.04%	0.004%
28	4.688	4.664	4.737	VV	961	20609	1.48%	0.161%
29	4.743	4.737	4.757	VV	308	2911	0.21%	0.023%
30	4.759	4.757	4.772	VV	298	1987	0.14%	0.016%
31	4.776	4.772	4.786	VV	213	1565	0.11%	0.012%
32	4.795	4.786	4.802	VV	253	1523	0.11%	0.012%
33	4.817	4.802	4.837	VV	220	3428	0.25%	0.027%
34	4.871	4.837	4.876	VV	375	5669	0.41%	0.044%
35	4.885	4.876	4.897	VV	354	4061	0.29%	0.032%
36	4.903	4.897	4.907	VV	346	1675	0.12%	0.013%

					rteres			
37	4.912	4.907	4.918	VV	300	1844	0.13%	0.014%
38	4.926	4.918	4.932	VV	352	2295	0.17%	0.018%
39	4.940	4.932	4.959	VV	325	4818	0.35%	0.038%
40	4.967	4.959	5.001	VV	313	6452	0.46%	0.050%
41	5.016	5.001	5.037	VV	298	4977	0.36%	0.039%
42	5.043	5.037	5.054	VV	263	1999	0.14%	0.016%
43	5.064	5.054	5.070	VV	204	1889	0.14%	0.015%
44	5.079	5.070	5.089	VV	230	2006	0.14%	0.016%
45	5.096	5.089	5.122	VV	240	3278	0.24%	0.026%
46	5.128	5.122	5.175	VV	181	3264	0.23%	0.025%
47	5.201	5.175	5.214	VV	166	2350	0.17%	0.018%
48	5.239	5.214	5.244	VV	130	1621	0.12%	0.013%
49	5.248	5.244	5.269	VV	111	1266	0.09%	0.010%
50	5.275	5.269	5.291	VV	141	1189	0.09%	0.009%
51	5.306	5.291	5.338	VV	156	3252	0.23%	0.025%
52	5.348	5.338	5.360	VV	152	1427	0.10%	0.011%
53	5.364	5.360	5.370	VV	183	780	0.06%	0.006%
54	5.373	5.370	5.397	VV	140	1466	0.11%	0.011%
55	5.405	5.397	5.412	VV	170	1097	0.08%	0.009%
56	5.414	5.412	5.435	VV	161	1368	0.10%	0.011%
57	5.440	5.435	5.446	VV	151	565	0.04%	0.004%
58	5.453	5.446	5.481	VV	115	1715	0.12%	0.013%
59	5.489	5.481	5.494	VV	164	757	0.05%	0.006%
60	5.503	5.494	5.507	VV	148	827	0.06%	0.006%
61	5.513	5.507	5.525	VV	121	1091	0.08%	0.009%
62	5.531	5.525	5.535	VV	150	646	0.05%	0.005%
63	5.540	5.535	5.547	VV	121	681	0.05%	0.005%
64	5.550	5.547	5.557	VV	150	570	0.04%	0.004%
65	5.566	5.557	5.581	VV	146	1308	0.09%	0.010%
66	5.585	5.581	5.609	VV	156	1530	0.11%	0.012%
67	5.613	5.609	5.623	VV	166	1036	0.07%	0.008%
68	5.639	5.623	5.647	VV	163	1497	0.11%	0.012%
69	5.665	5.647	5.697	VV	140	2570	0.18%	0.020%
70	5.699	5.697	5.707	VV	120	487	0.04%	0.004%
71	5.713	5.707	5.727	VV	171	1155	0.08%	0.009%
72	5.731	5.727	5.739	VV	129	632	0.05%	0.005%
73	5.746	5.739	5.754	VV	109	735	0.05%	0.006%
74	5.759	5.754	5.770	VV	107	691	0.05%	0.005%
75	5.780	5.770	5.804	VV	152	1912	0.14%	0.015%
76	5.806	5.804	5.812	VV	149	505	0.04%	0.004%
77	5.826	5.812	5.847	VV	184	3020	0.22%	0.024%
78	5.855	5.847	5.870	VV	197	2150	0.15%	0.017%
79	5.896	5.870	5.927	VV	480	11418	0.82%	0.089%
80	5.934	5.927	5.951	VV	345	4506	0.32%	0.035%
81	5.972	5.951	5.987	VV	414	7167	0.52%	0.056%
82	5.993	5.987	6.009	VV	340	4076	0.29%	0.032%
83	6.013	6.009	6.023	VV	380	2586	0.19%	0.020%
84	6.029	6.023	6.037	VV	313	2258	0.16%	0.018%
85	6.045	6.037	6.061	VV	291	3507	0.25%	0.027%
86	6.066	6.061	6.099	VV	257	5092	0.37%	0.040%
87	6.105	6.099	6.135	VV	258	3699	0.27%	0.029%
88	6.142	6.135	6.163	VV	175	2220	0.16%	0.017%
89	6.169	6.163	6.180	VV	139	1258	0.09%	0.010%

					rteres			
90	6.189	6.180	6.204	VV	168	1932	0.14%	0.015%
91	6.215	6.204	6.222	VV	164	1380	0.10%	0.011%
92	6.231	6.222	6.240	VV	159	1419	0.10%	0.011%
93	6.290	6.240	6.312	VV	290	9142	0.66%	0.071%
94	6.339	6.312	6.419	VV	782	31960	2.30%	0.250%
95	6.444	6.419	6.474	VV	1023	20182	1.45%	0.158%
96	6.480	6.474	6.509	VV	383	6744	0.49%	0.053%
97	6.513	6.509	6.540	VV	328	4625	0.33%	0.036%
98	6.547	6.540	6.554	VV	317	1721	0.12%	0.013%
99	6.558	6.554	6.582	VV	260	3188	0.23%	0.025%
100	6.587	6.582	6.597	VV	192	1234	0.09%	0.010%
101	6.605	6.597	6.614	VV	182	1292	0.09%	0.010%
102	6.617	6.614	6.621	VV	159	402	0.03%	0.003%
103	6.642	6.621	6.657	VV	151	2381	0.17%	0.019%
104	6.672	6.657	6.696	VV	103	1747	0.13%	0.014%
105	6.719	6.696	6.724	VV	135	1442	0.10%	0.011%
106	6.743	6.724	6.766	VV	146	2504	0.18%	0.020%
107	6.772	6.766	6.776	VV	146	576	0.04%	0.004%
108	6.781	6.776	6.786	VV	132	527	0.04%	0.004%
109	6.790	6.786	6.802	VV	134	831	0.06%	0.006%
110	6.808	6.802	6.816	VV	111	694	0.05%	0.005%
111	6.874	6.816	6.880	VV	273	5130	0.37%	0.040%
112	6.888	6.880	6.900	VV	231	1984	0.14%	0.015%
113	6.916	6.900	6.989	VV	233	8580	0.62%	0.067%
114	7.002	6.989	7.024	VV	175	2641	0.19%	0.021%
115	7.063	7.024	7.115	PV	178	5152	0.37%	0.040%
116	7.165	7.115	7.190	VV	174	4150	0.30%	0.032%
117	7.292	7.190	7.424	VV	1006	60522	4.36%	0.473%
118	7.434	7.424	7.454	VV	299	4089	0.29%	0.032%
119	7.459	7.454	7.520	VV	246	6035	0.43%	0.047%
120	7.531	7.520	7.572	VV	122	2450	0.18%	0.019%
121	7.644	7.572	7.660	VV	230	7712	0.56%	0.060%
122	7.681	7.660	7.730	VV	245	7559	0.54%	0.059%
123	7.751	7.730	7.798	VV	194	6504	0.47%	0.051%
124	7.807	7.798	7.851	VV	210	5261	0.38%	0.041%
125	7.858	7.851	7.900	VV	186	3994	0.29%	0.031%
126	7.982	7.900	8.072	VV	1818	55776	4.01%	0.435%
127	8.098	8.072	8.158	VV	711	17671	1.27%	0.138%
128	8.181	8.158	8.279	VV	352	10240	0.74%	0.080%
129	8.293	8.279	8.314	VV	85	1666	0.12%	0.013%
130	8.322	8.314	8.359	VV	125	1964	0.14%	0.015%
131	8.408	8.359	8.427	PV	197	3336	0.24%	0.026%
132	8.440	8.427	8.473	VV	195	2624	0.19%	0.020%
133	8.495	8.473	8.507	VV	105	1042	0.08%	0.008%
134	8.595	8.507	8.650	VV	659	26974	1.94%	0.211%
135	8.700	8.650	8.777	VV	2583	72144	5.19%	0.563%
136	8.810	8.777	8.879	VV	1496	61828	4.45%	0.483%
137	8.883	8.879	8.930	VV	1057	25921	1.87%	0.202%
138	8.952	8.930	8.989	VV	1007	23669	1.70%	0.185%
139	9.013	8.989	9.046	VV	632	15714	1.13%	0.123%
140	9.089	9.046	9.105	VV	506	14389	1.04%	0.112%
141	9.113	9.105	9.190	VV	543	18270	1.31%	0.143%

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142	9.199	9.190	9.229	VV	324	5888	0.42%	0.046%
143	9.249	9.229	9.290	VV	248	5979	0.43%	0.047%
144	9.324	9.290	9.353	VV	274	6911	0.50%	0.054%
145	9.363	9.353	9.377	VV	197	1853	0.13%	0.014%
146	9.431	9.377	9.534	VV	2419	60493	4.35%	0.472%
147	9.570	9.534	9.609	VV	562	13477	0.97%	0.105%
148	9.615	9.609	9.630	VV	227	2356	0.17%	0.018%
149	9.651	9.630	9.670	VV	239	4050	0.29%	0.032%
150	9.694	9.670	9.744	VV	207	4786	0.34%	0.037%
151	9.754	9.744	9.767	PV	118	1423	0.10%	0.011%
152	9.783	9.767	9.804	VV	261	4110	0.30%	0.032%
153	9.865	9.804	9.888	VV	618	21318	1.53%	0.166%
154	9.920	9.888	9.994	VV	927	35690	2.57%	0.279%
155	10.030	9.994	10.117	VV	2111	47312	3.41%	0.369%
156	10.143	10.117	10.314	VV	4625	314661	22.65%	2.457%
157	10.322	10.314	10.460	VV	1245	72692	5.23%	0.568%
158	10.465	10.460	10.490	VV	591	8553	0.62%	0.067%
159	10.516	10.490	10.542	VV	814	18347	1.32%	0.143%
160	10.560	10.542	10.642	VV	718	25976	1.87%	0.203%
161	10.665	10.642	10.687	VV	411	8540	0.61%	0.067%
162	10.724	10.687	10.789	VV	1663	35284	2.54%	0.275%
163	10.881	10.789	10.898	VV	490	16326	1.18%	0.127%
164	10.920	10.898	10.952	VV	789	15225	1.10%	0.119%
165	10.978	10.952	11.010	VV	823	15185	1.09%	0.119%
166	11.027	11.010	11.057	VV	266	4517	0.33%	0.035%
167	11.077	11.057	11.097	VV	126	2147	0.15%	0.017%
168	11.133	11.097	11.150	VV	535	9090	0.65%	0.071%
169	11.189	11.150	11.225	VV	631	16251	1.17%	0.127%
170	11.244	11.225	11.254	VV	711	8615	0.62%	0.067%
171	11.299	11.254	11.410	VV	2470	134230	9.66%	1.048%
172	11.416	11.410	11.518	VV	676	33254	2.39%	0.260%
173	11.565	11.518	11.599	VV	469	18685	1.34%	0.146%
174	11.618	11.599	11.660	VV	1050	22124	1.59%	0.173%
175	11.703	11.660	11.760	VV	1089	30486	2.19%	0.238%
176	11.783	11.760	11.800	PV	494	7089	0.51%	0.055%
177	11.816	11.800	11.844	VV	458	7344	0.53%	0.057%
178	11.891	11.844	11.899	VV	1107	16006	1.15%	0.125%
179	11.912	11.899	11.950	VV	1269	24264	1.75%	0.189%
180	11.969	11.950	11.990	VV	340	5289	0.38%	0.041%
181	12.014	11.990	12.029	VV	361	5274	0.38%	0.041%
182	12.050	12.029	12.069	VV	2296	32898	2.37%	0.257%
183	12.084	12.069	12.147	VV	1489	56051	4.03%	0.438%
184	12.165	12.147	12.199	VV	2192	45795	3.30%	0.358%
185	12.218	12.199	12.244	VV	1372	31798	2.29%	0.248%
186	12.284	12.244	12.315	VV	1807	58687	4.22%	0.458%
187	12.328	12.315	12.382	VV	1003	26006	1.87%	0.203%
188	12.413	12.382	12.459	VV	1144	27706	1.99%	0.216%
189	12.493	12.459	12.512	VV	420	9607	0.69%	0.075%
190	12.541	12.512	12.707	VV	84480	1257995	90.54%	9.821%
191	12.720	12.707	12.769	VV	920	24768	1.78%	0.193%
192	12.797	12.769	12.829	VV	722	19014	1.37%	0.148%
193	12.852	12.829	12.902	VV	1302	38959	2.80%	0.304%
194	12.929	12.902	12.951	VV	3511	66549	4.79%	0.520%

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195	12.991	12.951	13.020	VV	5801	139689	10.05%	1.091%
196	13.039	13.020	13.159	VV	22942	542814	39.07%	4.238%
197	13.181	13.159	13.212	VV	1825	37000	2.66%	0.289%
198	13.254	13.212	13.299	VV	1564	48712	3.51%	0.380%
199	13.336	13.299	13.405	VV	22422	498593	35.89%	3.893%
200	13.418	13.405	13.489	VV	2810	86350	6.22%	0.674%
201	13.537	13.489	13.554	VV	2306	62568	4.50%	0.488%
202	13.570	13.554	13.597	VV	2979	55202	3.97%	0.431%
203	13.619	13.597	13.661	VV	3175	74849	5.39%	0.584%
204	13.690	13.661	13.727	VV	1832	46583	3.35%	0.364%
205	13.770	13.727	13.817	VV	33704	502405	36.16%	3.922%
206	13.840	13.817	13.897	VV	2915	92103	6.63%	0.719%
207	13.938	13.897	13.957	VV	2502	62036	4.47%	0.484%
208	13.975	13.957	14.050	VV	3714	102775	7.40%	0.802%
209	14.078	14.050	14.094	VV	1882	35918	2.59%	0.280%
210	14.116	14.094	14.193	VV	4696	119985	8.64%	0.937%
211	14.231	14.193	14.264	VV	2931	67914	4.89%	0.530%
212	14.283	14.264	14.349	VV	2013	64357	4.63%	0.502%
213	14.356	14.349	14.420	VV	934	21068	1.52%	0.164%
214	14.481	14.420	14.495	PV	508	12969	0.93%	0.101%
215	14.519	14.495	14.609	VV	2648	73044	5.26%	0.570%
216	14.683	14.609	14.735	PV	2741	80733	5.81%	0.630%
217	14.752	14.735	14.762	VV	864	11623	0.84%	0.091%
218	14.801	14.762	14.867	VV	2561	82409	5.93%	0.643%
219	14.916	14.867	14.925	VV	4458	82074	5.91%	0.641%
220	14.935	14.925	14.985	VV	4549	104863	7.55%	0.819%
221	15.017	14.985	15.087	VV	98486	1389361	100.00%	10.847%
222	15.105	15.087	15.135	VV	1542	33357	2.40%	0.260%
223	15.158	15.135	15.174	VV	896	16145	1.16%	0.126%
224	15.221	15.174	15.231	VV	4592	89363	6.43%	0.698%
225	15.246	15.231	15.257	VV	7903	92955	6.69%	0.726%
226	15.278	15.257	15.364	VV	12576	388153	27.94%	3.030%
227	15.394	15.364	15.440	VV	3064	96358	6.94%	0.752%
228	15.458	15.440	15.502	VV	1278	35370	2.55%	0.276%
229	15.545	15.502	15.560	VV	1080	27101	1.95%	0.212%
230	15.604	15.560	15.711	VV	45690	802906	57.79%	6.268%
231	15.742	15.711	15.783	VV	5023	96854	6.97%	0.756%
232	15.807	15.783	15.868	VV	2964	76010	5.47%	0.593%
233	15.962	15.868	16.004	VV	8401	245134	17.64%	1.914%
234	16.022	16.004	16.044	VV	2909	55523	4.00%	0.433%
235	16.071	16.044	16.112	VV	2821	108038	7.78%	0.843%
236	16.124	16.112	16.175	VV	3127	70423	5.07%	0.550%
237	16.241	16.175	16.297	VV	7878	146224	10.52%	1.142%
238	16.311	16.297	16.357	VV	1042	16519	1.19%	0.129%
239	16.387	16.357	16.414	PV	624	13261	0.95%	0.104%
240	16.462	16.414	16.502	VV	1471	32702	2.35%	0.255%
241	16.538	16.502	16.570	VV	1247	27996	2.02%	0.219%
242	16.619	16.570	16.679	PV	19938	362609	26.10%	2.831%
243	16.686	16.679	16.704	VV	1686	23362	1.68%	0.182%
244	16.725	16.704	16.757	VV	5811	90600	6.52%	0.707%
245	16.796	16.757	16.829	VV	22806	420513	30.27%	3.283%
246	16.842	16.829	16.917	VV	9077	237975	17.13%	1.858%

						rteres		
247	16.944	16.917	16.985	VV	8481	154722	11.14%	1.208%
248	16.993	16.985	17.015	VV	1722	27748	2.00%	0.217%
249	17.037	17.015	17.067	VV	6081	94935	6.83%	0.741%
250	17.085	17.067	17.097	VV	1389	19729	1.42%	0.154%
251	17.118	17.097	17.168	VV	14749	267059	19.22%	2.085%
252	17.194	17.168	17.262	VV	16040	408368	29.39%	3.188%
253	17.273	17.262	17.288	VV	2967	38595	2.78%	0.301%
254	17.304	17.288	17.364	VV	3610	72368	5.21%	0.565%
255	17.374	17.364	17.385	VV	321	2867	0.21%	0.022%
256	17.412	17.385	17.420	PV	430	4542	0.33%	0.035%
257	17.447	17.420	17.459	PV	944	12853	0.93%	0.100%
258	17.490	17.459	17.500	VBA	356	14403	1.04%	0.112%
						Sum of corrected areas:		12808804

FF052125.M Thu May 22 00:05:00 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/16/25
Project:	South River WM Replacement	Date Received:	05/16/25
Client Sample ID:	TP-18	SDG No.:	Q2074
Lab Sample ID:	Q2074-08	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	78
Sample Wt/Vol:	30.07	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
FF015887.D	1	05/20/25 10:15	05/21/25 16:40	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1760	J	216	2130	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.7		37 - 130	54%	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\FF052125\
Data File : FF015887.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:40
Operator : YP\AJ
Sample : Q2074-08
Misc :
ALS Vial : 38 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-18

Integration File: autoint1.e
Quant Time: May 21 23:38:19 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.016	1308635	10.715 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

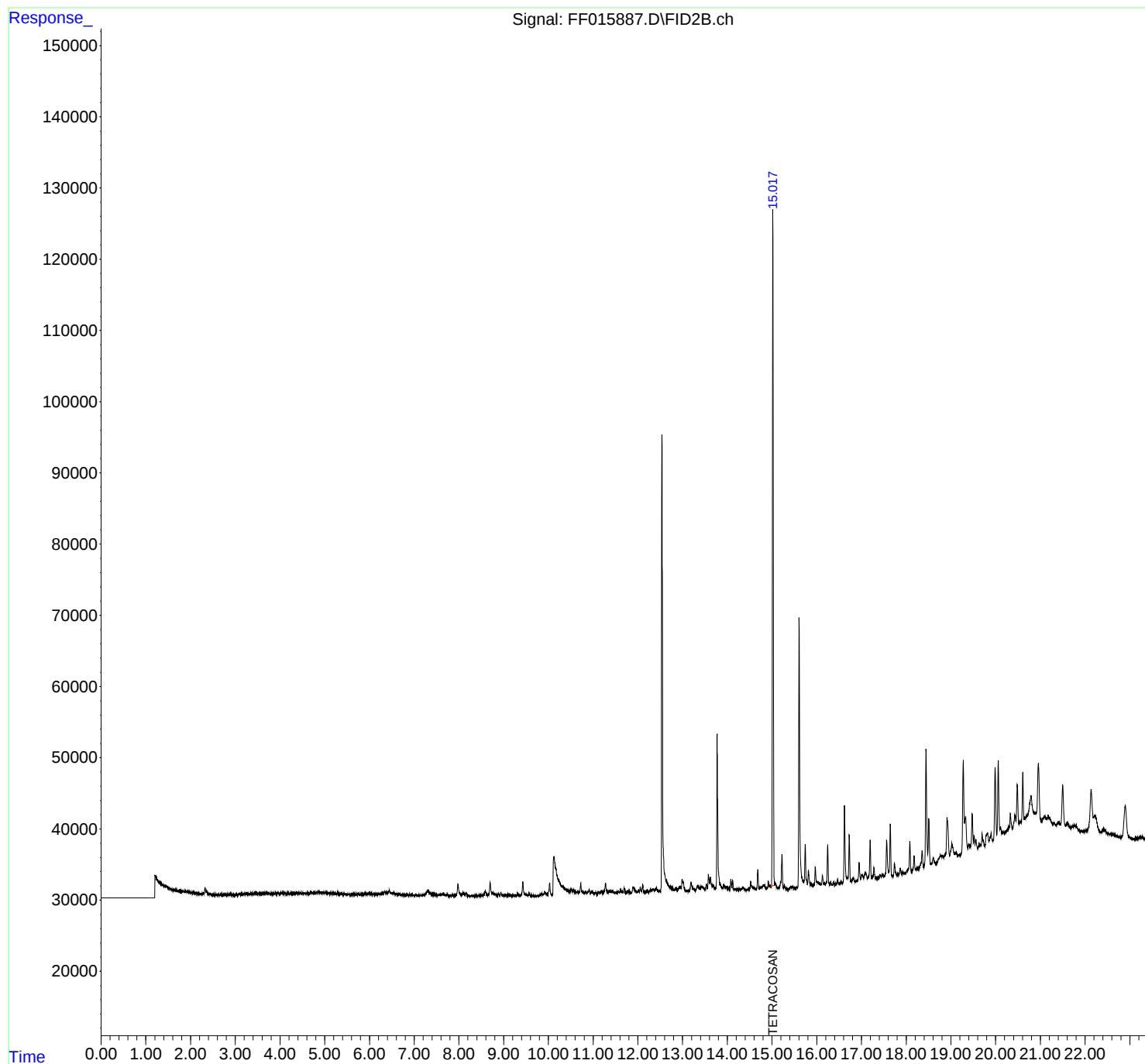
(m)=manual int.

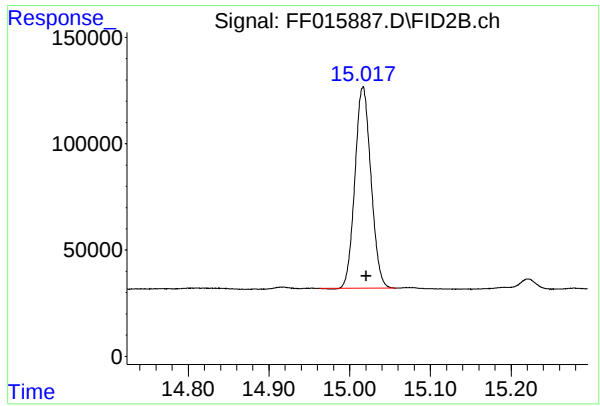
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015887.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:40
Operator : YP\AJ
Sample : Q2074-08
Misc :
ALS Vial : 38 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-18

Integration File: autoint1.e
Quant Time: May 21 23:38:19 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.016 min
Delta R.T.: -0.004 min
Response: 1308635
Conc: 10.71 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-18

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015887.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 16:40
Sample : Q2074-08
Misc :
ALS Vial : 38 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.023	4.006	4.029	BV	57	293	0.02%	0.004%
2	4.033	4.029	4.041	PV	115	382	0.03%	0.006%
3	4.043	4.041	4.058	VV	109	694	0.05%	0.010%
4	4.066	4.058	4.072	VV	105	688	0.05%	0.010%
5	4.076	4.072	4.079	VV	114	386	0.03%	0.006%
6	4.083	4.079	4.090	VV	192	665	0.05%	0.010%
7	4.105	4.090	4.118	PV	161	1787	0.13%	0.026%
8	4.122	4.118	4.132	VV	126	892	0.07%	0.013%
9	4.138	4.132	4.143	VV	141	673	0.05%	0.010%
10	4.157	4.143	4.163	VV	191	1139	0.09%	0.017%
11	4.174	4.163	4.185	VV	186	1413	0.11%	0.021%
12	4.189	4.185	4.200	VV	160	867	0.06%	0.013%
13	4.209	4.200	4.221	VV	136	1337	0.10%	0.020%
14	4.240	4.221	4.301	VV	177	6131	0.46%	0.090%
15	4.313	4.301	4.324	VV	155	1873	0.14%	0.027%
16	4.335	4.324	4.354	VV	206	2525	0.19%	0.037%
17	4.383	4.354	4.394	VV	237	4194	0.31%	0.061%
18	4.400	4.394	4.413	VV	222	1967	0.15%	0.029%
19	4.417	4.413	4.423	VV	229	1236	0.09%	0.018%
20	4.424	4.423	4.433	VV	251	1201	0.09%	0.018%
21	4.437	4.433	4.442	VV	223	990	0.07%	0.015%
22	4.445	4.442	4.457	VV	215	1533	0.11%	0.022%
23	4.461	4.457	4.478	VV	248	2023	0.15%	0.030%
24	4.488	4.478	4.501	VV	212	2038	0.15%	0.030%
25	4.506	4.501	4.522	VV	223	1772	0.13%	0.026%
26	4.537	4.522	4.564	VV	208	3676	0.27%	0.054%
27	4.568	4.564	4.581	VV	217	1358	0.10%	0.020%
28	4.585	4.581	4.610	VV	153	2539	0.19%	0.037%
29	4.618	4.610	4.626	VV	216	1339	0.10%	0.020%
30	4.633	4.626	4.667	VV	172	3518	0.26%	0.052%
31	4.687	4.667	4.712	VV	458	8084	0.60%	0.118%
32	4.722	4.712	4.726	VV	288	2282	0.17%	0.033%
33	4.730	4.726	4.763	VV	294	5192	0.39%	0.076%
34	4.769	4.763	4.783	VV	300	2480	0.19%	0.036%
35	4.789	4.783	4.806	VV	281	3237	0.24%	0.047%
36	4.829	4.806	4.839	VV	353	5593	0.42%	0.082%

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37	4.844	4.839	4.867	VV	406	5489	0.41%	0.080%
38	4.871	4.867	4.893	VV	378	5282	0.40%	0.077%
39	4.896	4.893	4.908	VV	386	3068	0.23%	0.045%
40	4.911	4.908	4.924	VV	373	3125	0.23%	0.046%
41	4.927	4.924	4.937	VV	312	2346	0.18%	0.034%
42	4.944	4.937	4.952	VV	355	2846	0.21%	0.042%
43	4.957	4.952	4.968	VV	301	2502	0.19%	0.037%
44	4.974	4.968	4.983	VV	305	2632	0.20%	0.039%
45	4.985	4.983	5.001	VV	336	2904	0.22%	0.043%
46	5.008	5.001	5.016	VV	290	2524	0.19%	0.037%
47	5.019	5.016	5.044	VV	305	4629	0.35%	0.068%
48	5.051	5.044	5.071	VV	299	3806	0.28%	0.056%
49	5.073	5.071	5.086	VV	216	2056	0.15%	0.030%
50	5.090	5.086	5.110	VV	271	3196	0.24%	0.047%
51	5.113	5.110	5.119	VV	198	1051	0.08%	0.015%
52	5.127	5.119	5.131	VV	281	1398	0.10%	0.020%
53	5.135	5.131	5.147	VV	265	2009	0.15%	0.029%
54	5.151	5.147	5.156	VV	231	1040	0.08%	0.015%
55	5.164	5.156	5.191	VV	244	3767	0.28%	0.055%
56	5.206	5.191	5.240	VV	247	4945	0.37%	0.072%
57	5.244	5.240	5.254	VV	203	1247	0.09%	0.018%
58	5.261	5.254	5.275	VV	191	1830	0.14%	0.027%
59	5.286	5.275	5.299	VV	350	2288	0.17%	0.034%
60	5.308	5.299	5.315	VV	218	1289	0.10%	0.019%
61	5.320	5.315	5.332	VV	162	1313	0.10%	0.019%
62	5.337	5.332	5.341	VV	181	740	0.06%	0.011%
63	5.350	5.341	5.372	VV	160	2391	0.18%	0.035%
64	5.378	5.372	5.388	VV	167	1267	0.09%	0.019%
65	5.395	5.388	5.399	VV	190	775	0.06%	0.011%
66	5.405	5.399	5.416	VV	144	1039	0.08%	0.015%
67	5.419	5.416	5.432	VV	165	988	0.07%	0.014%
68	5.451	5.432	5.456	VV	150	1538	0.12%	0.023%
69	5.464	5.456	5.483	VV	164	1544	0.12%	0.023%
70	5.487	5.483	5.508	VV	172	1371	0.10%	0.020%
71	5.518	5.508	5.522	VV	159	879	0.07%	0.013%
72	5.527	5.522	5.536	VV	125	619	0.05%	0.009%
73	5.541	5.536	5.555	VV	132	977	0.07%	0.014%
74	5.563	5.555	5.567	VV	123	675	0.05%	0.010%
75	5.570	5.567	5.601	VV	162	1987	0.15%	0.029%
76	5.606	5.601	5.637	VV	164	2220	0.17%	0.033%
77	5.660	5.637	5.667	VV	182	2216	0.17%	0.032%
78	5.672	5.667	5.686	VV	218	1150	0.09%	0.017%
79	5.689	5.686	5.693	VV	162	432	0.03%	0.006%
80	5.698	5.693	5.709	VV	118	960	0.07%	0.014%
81	5.717	5.709	5.729	VV	143	1154	0.09%	0.017%
82	5.743	5.729	5.757	VV	147	1626	0.12%	0.024%
83	5.759	5.757	5.785	VV	155	1519	0.11%	0.022%
84	5.795	5.785	5.803	VV	146	1250	0.09%	0.018%
85	5.812	5.803	5.825	VV	165	1596	0.12%	0.023%
86	5.830	5.825	5.843	VV	161	1166	0.09%	0.017%
87	5.852	5.843	5.869	VV	216	2131	0.16%	0.031%
88	5.873	5.869	5.877	VV	198	737	0.06%	0.011%
89	5.891	5.877	5.920	VV	232	5010	0.37%	0.073%

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90	5.935	5.920	5.961	VV	263	4800	0.36%	0.070%
91	5.983	5.961	5.988	VV	242	3443	0.26%	0.050%
92	5.992	5.988	6.003	VV	337	2198	0.16%	0.032%
93	6.010	6.003	6.025	VV	312	3348	0.25%	0.049%
94	6.034	6.025	6.067	VV	263	5058	0.38%	0.074%
95	6.081	6.067	6.093	VV	204	2241	0.17%	0.033%
96	6.097	6.093	6.112	VV	185	1443	0.11%	0.021%
97	6.115	6.112	6.125	VV	160	1046	0.08%	0.015%
98	6.143	6.125	6.152	VV	175	2199	0.16%	0.032%
99	6.164	6.152	6.174	VV	209	2006	0.15%	0.029%
100	6.178	6.174	6.211	VV	220	3629	0.27%	0.053%
101	6.219	6.211	6.225	VV	200	1343	0.10%	0.020%
102	6.231	6.225	6.246	VV	239	2267	0.17%	0.033%
103	6.248	6.246	6.253	VV	271	888	0.07%	0.013%
104	6.260	6.253	6.270	VV	229	2239	0.17%	0.033%
105	6.280	6.270	6.287	VV	265	2492	0.19%	0.037%
106	6.308	6.287	6.314	VV	388	5063	0.38%	0.074%
107	6.318	6.314	6.322	VV	404	1732	0.13%	0.025%
108	6.334	6.322	6.373	VV	531	12900	0.96%	0.189%
109	6.377	6.373	6.387	VV	424	2936	0.22%	0.043%
110	6.395	6.387	6.405	VV	405	4166	0.31%	0.061%
111	6.413	6.405	6.425	VV	434	4939	0.37%	0.072%
112	6.442	6.425	6.470	VV	777	14419	1.08%	0.211%
113	6.476	6.470	6.495	VV	359	4936	0.37%	0.072%
114	6.512	6.495	6.525	VV	389	5844	0.44%	0.086%
115	6.529	6.525	6.537	VV	337	2214	0.17%	0.032%
116	6.542	6.537	6.569	VV	315	5141	0.38%	0.075%
117	6.573	6.569	6.587	VV	236	2069	0.15%	0.030%
118	6.595	6.587	6.620	VV	280	3968	0.30%	0.058%
119	6.623	6.620	6.637	VV	207	1615	0.12%	0.024%
120	6.653	6.637	6.661	VV	232	2316	0.17%	0.034%
121	6.672	6.661	6.692	VV	183	3026	0.23%	0.044%
122	6.696	6.692	6.709	VV	188	1379	0.10%	0.020%
123	6.714	6.709	6.738	VV	176	2309	0.17%	0.034%
124	6.744	6.738	6.754	VV	166	1111	0.08%	0.016%
125	6.757	6.754	6.771	VV	137	903	0.07%	0.013%
126	6.779	6.771	6.789	VV	172	1341	0.10%	0.020%
127	6.812	6.789	6.845	VV	245	4913	0.37%	0.072%
128	6.852	6.845	6.869	VV	188	1757	0.13%	0.026%
129	6.874	6.869	6.882	VV	117	792	0.06%	0.012%
130	6.894	6.882	6.905	VV	149	1700	0.13%	0.025%
131	6.908	6.905	6.913	VV	121	514	0.04%	0.008%
132	6.923	6.913	6.939	VV	147	1680	0.13%	0.025%
133	6.944	6.939	6.957	VV	140	897	0.07%	0.013%
134	6.964	6.957	6.971	VV	153	817	0.06%	0.012%
135	6.979	6.971	6.989	VV	132	928	0.07%	0.014%
136	6.993	6.989	6.998	VV	147	517	0.04%	0.008%
137	7.004	6.998	7.008	VV	126	583	0.04%	0.009%
138	7.021	7.008	7.031	VV	137	1271	0.10%	0.019%
139	7.041	7.031	7.054	VV	158	1322	0.10%	0.019%
140	7.073	7.054	7.082	VV	164	1896	0.14%	0.028%
141	7.088	7.082	7.096	VV	132	779	0.06%	0.011%

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142	7.102	7.096	7.119	VV	184	1544	0.12%	0.023%
143	7.123	7.119	7.128	VV	141	536	0.04%	0.008%
144	7.133	7.128	7.150	VV	114	864	0.06%	0.013%
145	7.157	7.150	7.165	VV	114	502	0.04%	0.007%
146	7.171	7.165	7.194	VV	140	1331	0.10%	0.020%
147	7.203	7.194	7.212	VV	170	993	0.07%	0.015%
148	7.290	7.212	7.294	VV	676	16544	1.24%	0.242%
149	7.298	7.294	7.307	VV	643	4881	0.37%	0.072%
150	7.316	7.307	7.412	VV	701	23888	1.79%	0.350%
151	7.417	7.412	7.431	VV	514	2659	0.20%	0.039%
152	7.462	7.431	7.487	VV	310	7382	0.55%	0.108%
153	7.492	7.487	7.511	VV	195	1741	0.13%	0.026%
154	7.514	7.511	7.519	VV	125	538	0.04%	0.008%
155	7.530	7.519	7.534	VV	151	1160	0.09%	0.017%
156	7.538	7.534	7.556	VV	197	2218	0.17%	0.033%
157	7.583	7.556	7.588	VV	335	4576	0.34%	0.067%
158	7.601	7.588	7.613	VV	297	3771	0.28%	0.055%
159	7.619	7.613	7.628	VV	254	2024	0.15%	0.030%
160	7.637	7.628	7.650	VV	255	2938	0.22%	0.043%
161	7.660	7.650	7.670	VV	495	3254	0.24%	0.048%
162	7.674	7.670	7.684	VV	241	1798	0.13%	0.026%
163	7.689	7.684	7.702	VV	216	1913	0.14%	0.028%
164	7.707	7.702	7.734	VV	240	2852	0.21%	0.042%
165	7.740	7.734	7.772	VV	219	3058	0.23%	0.045%
166	7.775	7.772	7.780	VV	161	532	0.04%	0.008%
167	7.786	7.780	7.791	VV	126	506	0.04%	0.007%
168	7.803	7.791	7.815	VV	191	1612	0.12%	0.024%
169	7.822	7.815	7.836	VV	187	1428	0.11%	0.021%
170	7.852	7.836	7.870	VV	147	2563	0.19%	0.038%
171	7.877	7.870	7.886	VV	151	858	0.06%	0.013%
172	7.890	7.886	7.902	VV	206	1144	0.09%	0.017%
173	7.921	7.902	7.927	VV	195	2288	0.17%	0.034%
174	7.929	7.927	7.941	VV	193	1385	0.10%	0.020%
175	7.979	7.941	8.042	VV	1618	43353	3.24%	0.635%
176	8.047	8.042	8.052	VV	338	1381	0.10%	0.020%
177	8.055	8.052	8.067	VV	282	2175	0.16%	0.032%
178	8.096	8.067	8.142	VV	563	15625	1.17%	0.229%
179	8.158	8.142	8.195	VV	604	9858	0.74%	0.144%
180	8.206	8.195	8.225	VV	147	1770	0.13%	0.026%
181	8.230	8.225	8.256	VV	128	1283	0.10%	0.019%
182	8.267	8.256	8.276	VV	100	848	0.06%	0.012%
183	8.279	8.276	8.291	VV	103	630	0.05%	0.009%
184	8.319	8.291	8.327	PV	157	1971	0.15%	0.029%
185	8.327	8.327	8.356	VV	139	1654	0.12%	0.024%
186	8.381	8.356	8.387	VV	157	1929	0.14%	0.028%
187	8.392	8.387	8.424	VV	139	1863	0.14%	0.027%
188	8.450	8.424	8.481	VV	190	3430	0.26%	0.050%
189	8.493	8.481	8.498	VV	189	995	0.07%	0.015%
190	8.505	8.498	8.510	VV	145	842	0.06%	0.012%
191	8.554	8.510	8.564	VV	285	5572	0.42%	0.082%
192	8.590	8.564	8.621	VV	776	16025	1.20%	0.235%
193	8.627	8.621	8.660	VV	294	5532	0.41%	0.081%
194	8.700	8.660	8.734	VV	1939	41509	3.10%	0.608%

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195	8.739	8.734	8.743	VV	502	2403	0.18%	0.035%
196	8.745	8.743	8.758	VV	491	3833	0.29%	0.056%
197	8.767	8.758	8.787	VV	449	6140	0.46%	0.090%
198	8.797	8.787	8.823	VV	396	6635	0.50%	0.097%
199	8.829	8.823	8.869	VV	274	5334	0.40%	0.078%
200	8.884	8.869	8.906	VV	334	5652	0.42%	0.083%
201	8.912	8.906	8.918	VV	190	1375	0.10%	0.020%
202	8.937	8.918	8.984	VV	559	9578	0.72%	0.140%
203	8.998	8.984	9.028	VV	267	4428	0.33%	0.065%
204	9.077	9.028	9.096	VV	275	5968	0.45%	0.087%
205	9.105	9.096	9.150	VV	284	5950	0.45%	0.087%
206	9.156	9.150	9.179	VV	175	2230	0.17%	0.033%
207	9.184	9.179	9.215	VV	154	1806	0.14%	0.026%
208	9.242	9.215	9.247	VV	182	2178	0.16%	0.032%
209	9.251	9.247	9.269	VV	176	1201	0.09%	0.018%
210	9.274	9.269	9.285	VV	76	506	0.04%	0.007%
211	9.306	9.285	9.337	VV	364	6194	0.46%	0.091%
212	9.341	9.337	9.358	VV	153	1508	0.11%	0.022%
213	9.362	9.358	9.369	VV	157	848	0.06%	0.012%
214	9.376	9.369	9.380	VV	192	810	0.06%	0.012%
215	9.431	9.380	9.489	VV	2034	44979	3.36%	0.659%
216	9.493	9.489	9.503	VV	240	1664	0.12%	0.024%
217	9.508	9.503	9.515	VV	218	1297	0.10%	0.019%
218	9.519	9.515	9.529	VV	204	1257	0.09%	0.018%
219	9.531	9.529	9.540	VV	207	982	0.07%	0.014%
220	9.569	9.540	9.602	VV	441	8837	0.66%	0.130%
221	9.613	9.602	9.628	VV	138	1647	0.12%	0.024%
222	9.633	9.628	9.649	VV	111	907	0.07%	0.013%
223	9.690	9.649	9.709	VV	130	1797	0.13%	0.026%
224	9.719	9.709	9.736	PV	69	545	0.04%	0.008%
225	9.756	9.736	9.760	VV	84	716	0.05%	0.010%
226	9.767	9.760	9.794	VV	152	1334	0.10%	0.020%
227	9.818	9.794	9.822	VV	260	2561	0.19%	0.038%
228	9.835	9.822	9.841	VV	284	2736	0.20%	0.040%
229	9.849	9.841	9.874	VV	333	5122	0.38%	0.075%
230	9.879	9.874	9.884	VV	196	1036	0.08%	0.015%
231	9.918	9.884	9.951	VV	648	15341	1.15%	0.225%
232	9.957	9.951	9.989	VV	379	5575	0.42%	0.082%
233	10.030	9.989	10.069	VV	1781	34899	2.61%	0.512%
234	10.071	10.069	10.097	VV	215	2817	0.21%	0.041%
235	10.124	10.097	10.310	VV	5476	355821	26.61%	5.215%
236	10.319	10.310	10.330	VV	1276	14582	1.09%	0.214%
237	10.332	10.330	10.380	VV	1208	30467	2.28%	0.447%
238	10.385	10.380	10.424	VV	901	20853	1.56%	0.306%
239	10.428	10.424	10.480	VV	748	20260	1.52%	0.297%
240	10.511	10.480	10.537	VV	955	22345	1.67%	0.328%
241	10.556	10.537	10.589	VV	861	19274	1.44%	0.282%
242	10.605	10.589	10.619	VV	479	7402	0.55%	0.108%
243	10.621	10.619	10.640	VV	401	4832	0.36%	0.071%
244	10.659	10.640	10.679	VV	463	10008	0.75%	0.147%
245	10.725	10.679	10.768	VV	1726	37646	2.82%	0.552%
246	10.773	10.768	10.782	VV	400	2832	0.21%	0.042%

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247	10.784	10.782	10.807	VV	362	4249	0.32%	0.062%
248	10.837	10.807	10.864	VV	415	10932	0.82%	0.160%
249	10.883	10.864	10.892	VV	467	6224	0.47%	0.091%
250	10.914	10.892	10.955	VV	720	15798	1.18%	0.232%
251	10.982	10.955	11.014	VV	518	11037	0.83%	0.162%
252	11.019	11.014	11.024	VV	183	932	0.07%	0.014%
253	11.032	11.024	11.037	VV	252	1753	0.13%	0.026%
254	11.041	11.037	11.056	VV	235	2296	0.17%	0.034%
255	11.061	11.056	11.086	VV	208	2804	0.21%	0.041%
256	11.124	11.086	11.144	VV	361	6994	0.52%	0.103%
257	11.155	11.144	11.169	VV	348	4645	0.35%	0.068%
258	11.186	11.169	11.224	VV	533	10549	0.79%	0.155%
259	11.278	11.224	11.324	VV	1448	38719	2.90%	0.568%
260	11.332	11.324	11.337	VV	328	2437	0.18%	0.036%
261	11.387	11.337	11.394	VV	446	12197	0.91%	0.179%
262	11.395	11.394	11.412	VV	441	3764	0.28%	0.055%
263	11.421	11.412	11.429	VV	472	4452	0.33%	0.065%
264	11.432	11.429	11.495	VV	489	9681	0.72%	0.142%
265	11.529	11.495	11.550	VV	307	7222	0.54%	0.106%
266	11.576	11.550	11.592	VV	361	6765	0.51%	0.099%
267	11.614	11.592	11.648	VV	765	13353	1.00%	0.196%
268	11.697	11.648	11.748	VV	807	19944	1.49%	0.292%
269	11.778	11.748	11.799	VV	401	7345	0.55%	0.108%
270	11.813	11.799	11.837	VV	394	4215	0.32%	0.062%
271	11.853	11.837	11.862	PV	145	1521	0.11%	0.022%
272	11.894	11.862	11.953	VV	944	30517	2.28%	0.447%
273	11.966	11.953	11.980	VV	378	4807	0.36%	0.070%
274	11.986	11.980	11.991	VV	218	1156	0.09%	0.017%
275	12.014	11.991	12.032	VV	424	7431	0.56%	0.109%
276	12.053	12.032	12.083	VV	876	15382	1.15%	0.225%
277	12.107	12.083	12.162	VV	1289	21669	1.62%	0.318%
278	12.187	12.162	12.192	VV	327	3325	0.25%	0.049%
279	12.197	12.192	12.216	VV	267	3450	0.26%	0.051%
280	12.226	12.216	12.247	VV	308	4486	0.34%	0.066%
281	12.285	12.247	12.314	VV	541	14514	1.09%	0.213%
282	12.338	12.314	12.354	VV	601	11194	0.84%	0.164%
283	12.358	12.354	12.377	VV	521	5700	0.43%	0.084%
284	12.406	12.377	12.412	VV	701	11205	0.84%	0.164%
285	12.415	12.412	12.482	VV	674	14898	1.11%	0.218%
286	12.486	12.482	12.510	VV	278	3567	0.27%	0.052%
287	12.540	12.510	12.629	VV	64080	934131	69.87%	13.692%
288	12.642	12.629	12.754	VV	1731	77578	5.80%	1.137%
289	12.759	12.754	12.804	VV	648	14576	1.09%	0.214%
290	12.810	12.804	12.816	VV	374	2315	0.17%	0.034%
291	12.820	12.816	12.829	VV	335	2522	0.19%	0.037%
292	12.858	12.829	12.888	VV	678	16211	1.21%	0.238%
293	12.890	12.888	12.895	VV	335	1311	0.10%	0.019%
294	12.921	12.895	12.934	VV	825	13103	0.98%	0.192%
295	12.953	12.934	12.970	VV	898	14783	1.11%	0.217%
296	12.991	12.970	13.004	VV	1800	25418	1.90%	0.373%
297	13.011	13.004	13.084	VV	1398	29801	2.23%	0.437%
298	13.085	13.084	13.089	VV	176	442	0.03%	0.006%
299	13.092	13.089	13.097	VV	122	590	0.04%	0.009%

					rteres			
300	13.110	13.097	13.134	VV	216	2707	0.20%	0.040%
301	13.143	13.134	13.150	VV	159	1178	0.09%	0.017%
302	13.190	13.150	13.234	VV	1348	36251	2.71%	0.531%
303	13.237	13.234	13.288	VV	508	10765	0.81%	0.158%
304	13.339	13.288	13.367	VV	891	26910	2.01%	0.394%
305	13.374	13.367	13.397	VV	623	8567	0.64%	0.126%
306	13.421	13.397	13.505	VV	736	34458	2.58%	0.505%
307	13.535	13.505	13.553	VV	1059	17846	1.33%	0.262%
308	13.577	13.553	13.605	VV	2397	45467	3.40%	0.666%
309	13.621	13.605	13.671	VV	1991	50398	3.77%	0.739%
310	13.683	13.671	13.725	VV	933	20811	1.56%	0.305%
311	13.735	13.725	13.747	VV	481	5847	0.44%	0.086%
312	13.773	13.747	13.894	VV	22097	374332	28.00%	5.487%
313	13.920	13.894	13.965	VV	818	25601	1.91%	0.375%
314	13.977	13.965	14.019	VV	620	12643	0.95%	0.185%
315	14.031	14.019	14.062	VV	280	6191	0.46%	0.091%
316	14.081	14.062	14.101	VV	1575	22701	1.70%	0.333%
317	14.119	14.101	14.146	VV	1472	20918	1.56%	0.307%
318	14.155	14.146	14.161	VV	218	1688	0.13%	0.025%
319	14.183	14.161	14.238	VV	273	8595	0.64%	0.126%
320	14.265	14.238	14.292	VV	292	5328	0.40%	0.078%
321	14.354	14.292	14.440	VV	462	17545	1.31%	0.257%
322	14.483	14.440	14.495	PV	241	3841	0.29%	0.056%
323	14.522	14.495	14.585	VV	1271	30385	2.27%	0.445%
324	14.597	14.585	14.631	VV	372	6324	0.47%	0.093%
325	14.643	14.631	14.651	VV	168	1817	0.14%	0.027%
326	14.681	14.651	14.718	VV	2910	41989	3.14%	0.615%
327	14.743	14.718	14.752	VV	365	6409	0.48%	0.094%
328	14.766	14.752	14.781	VV	412	6654	0.50%	0.098%
329	14.806	14.781	14.869	VV	676	27343	2.05%	0.401%
330	14.917	14.869	14.938	VV	1166	21400	1.60%	0.314%
331	14.952	14.938	14.978	VV	636	11944	0.89%	0.175%
332	15.016	14.978	15.059	VV	95294	1337025	100.00%	19.597%
333	15.074	15.059	15.138	VV	894	22530	1.69%	0.330%
334	15.221	15.138	15.255	VV	4930	89347	6.68%	1.310%
335	15.278	15.255	15.374	VV	606	12652	0.95%	0.185%
336	15.422	15.374	15.438	PV	382	6853	0.51%	0.100%
337	15.456	15.438	15.515	VV	354	7486	0.56%	0.110%
338	15.556	15.515	15.571	VV	268	4301	0.32%	0.063%
339	15.605	15.571	15.705	VV	38018	611779	45.76%	8.967%
340	15.741	15.705	15.789	VV	6043	111184	8.32%	1.630%
341	15.814	15.789	15.861	VV	2315	47846	3.58%	0.701%
342	15.874	15.861	15.911	VV	454	10230	0.77%	0.150%
343	15.928	15.911	15.939	VV	307	4016	0.30%	0.059%
344	15.966	15.939	16.001	VV	2758	46640	3.49%	0.684%
345	16.020	16.001	16.052	VV	671	17289	1.29%	0.253%
346	16.066	16.052	16.096	VV	479	9336	0.70%	0.137%
347	16.126	16.096	16.193	VV	1516	33835	2.53%	0.496%
348	16.243	16.193	16.291	VV	5792	89576	6.70%	1.313%
349	16.314	16.291	16.348	VV	428	6242	0.47%	0.091%
350	16.380	16.348	16.404	VV	386	6470	0.48%	0.095%
351	16.420	16.404	16.433	VV	159	1830	0.14%	0.027%

					rteres			
352	16.468	16.433	16.515	VV	665	11187	0.84%	0.164%
353	16.551	16.515	16.577	PV	311	7151	0.53%	0.105%
354	16.619	16.577	16.671	VV	10979	187920	14.06%	2.754%
355	16.679	16.671	16.697	VV	823	11762	0.88%	0.172%
356	16.726	16.697	16.768	VV	6752	100619	7.53%	1.475%
357	16.811	16.768	16.866	VV	605	17776	1.33%	0.261%
358	16.888	16.866	16.901	VV	175	2244	0.17%	0.033%
359	16.946	16.901	16.984	VV	2659	46685	3.49%	0.684%
360	17.022	16.984	17.044	VV	838	23595	1.76%	0.346%
361	17.083	17.044	17.131	VV	1165	37548	2.81%	0.550%
362	17.193	17.131	17.226	VV	5543	89613	6.70%	1.313%
363	17.245	17.226	17.255	VV	466	5420	0.41%	0.079%
364	17.278	17.255	17.327	VV	1602	25746	1.93%	0.377%
365	17.415	17.327	17.441	PV	403	5637	0.42%	0.083%
366	17.480	17.441	17.501	VBA	425	10214	0.76%	0.150%
				Sum of corrected areas:		6822684		

FF052125.M Thu May 22 00:05:38 2025



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074

Calibration Sequence : FF052125		Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID
1000	131501360	131501	FF015874.D
500	66823160	133646	FF015875.D
200	25639665	128198	FF015876.D
100	14440283	144403	FF015877.D
50	6491363	129827	FF015878.D
AVG RF : 133515		% RSD : 4.803	AVG RT : 15.0206

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074

Calibration Sequence : FG042425		Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID
1000	122641169	122641	FG015756.D
500	64139521	128279	FG015757.D
200	25210755	126054	FG015758.D
100	13317775	133178	FG015759.D
50	6223650	124473	FG015760.D
AVG RF : 126925		% RSD : 3.202	AVG RT : 15.0012

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074
DataFile: FF015881.D Analyst Name: YP\AJ Analyst Date: 05-21-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	62268329	124537	133515	6.724

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
 Data File : FF015881.D
 Signal(s) : FID2B.ch
 Acq On : 21 May 2025 13:44
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 76 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 21 23:36:22 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 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...	15.020	5607200	45.909 ug/ml
Target Compounds			
2) N-DECANE	4.563	5817657	49.080 ug/ml
3) N-DODECANE	6.732	5998252	47.672 ug/ml
4) N-TETRADECANE	8.559	6115624	48.741 ug/ml
5) N-HEXADECANE	10.167	6213604	47.376 ug/ml
6) N-OCTADECANE	11.610	6407073	46.628 ug/ml
7) N-EICOSANE	12.921	6529192	45.887 ug/ml
8) N-DOCOSANE	14.120	6352287	45.727 ug/ml
10) N-TETRACOSANE	15.224	6348180	45.544 ug/ml
11) N-HEXACOSANE	16.247	6297628	45.406 ug/ml
12) N-OCTACOSANE	17.196	6188832	45.018 ug/ml

(f)=RT Delta > 1/2 Window

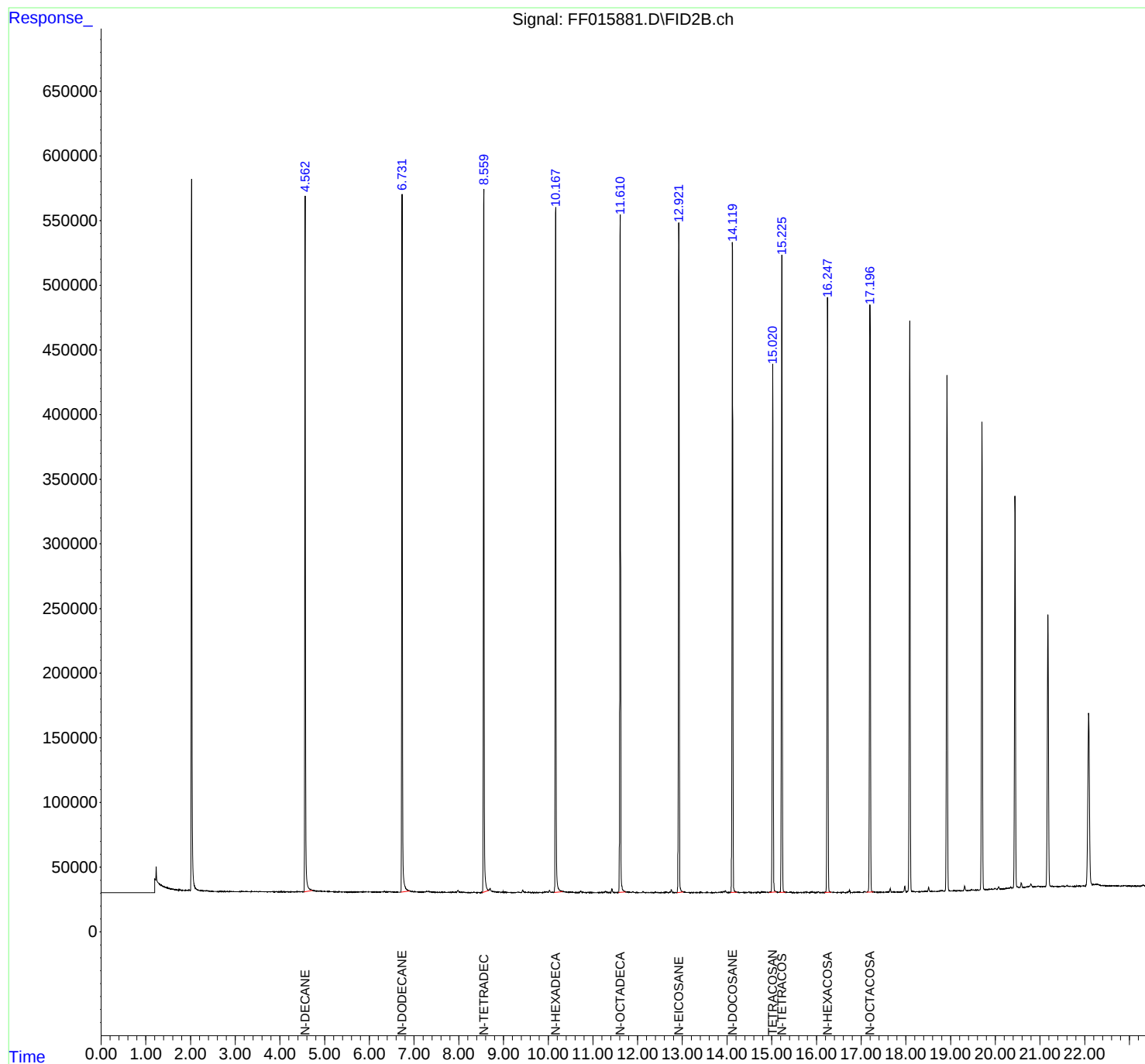
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015881.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 13:44
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 21 23:36:22 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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\FF052125\
Data File : FF015881.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 13:44
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.563	4.535	4.730	BB	536139	5817657	89.10%	8.571%
2	6.732	6.702	6.904	BB	539518	5998252	91.87%	8.837%
3	8.559	8.525	8.667	BV	542250	6115624	93.67%	9.010%
4	10.167	10.134	10.325	BB	528680	6213604	95.17%	9.154%
5	11.610	11.575	11.735	BB	523993	6407073	98.13%	9.439%
6	12.921	12.880	13.022	BB	517532	6529192	100.00%	9.619%
7	14.120	14.079	14.222	BB	501116	6352287	97.29%	9.359%
8	15.020	14.939	15.102	BB	408014	5607200	85.88%	8.261%
9	15.224	15.164	15.309	BB	491036	6348180	97.23%	9.353%
10	16.247	16.180	16.332	BB	460366	6297628	96.45%	9.278%
11	17.196	17.124	17.269	BB	453386	6188832	94.79%	9.118%
Sum of corrected areas:						67875529		

FF052125.M Wed May 21 23:59:46 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074
DataFile: FF015889.D Analyst Name: YP\AJ Analyst Date: 05-21-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	64753514	129507	133515	3.002

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
 Data File : FF015889.D
 Signal(s) : FID2B.ch
 Acq On : 21 May 2025 17:38
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 76 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 21 23:38:52 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 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...	15.020	5777712	47.306 ug/ml
Target Compounds			
2) N-DECANE	4.563	6210754	52.396 ug/ml
3) N-DODECANE	6.732	6365324	50.590 ug/ml
4) N-TETRADECANE	8.560	6411557	51.099 ug/ml
5) N-HEXADECANE	10.167	6448432	49.167 ug/ml
6) N-OCTADECANE	11.610	6600620	48.037 ug/ml
7) N-EICOSANE	12.921	6705450	47.126 ug/ml
8) N-DOCOSANE	14.120	6528659	46.997 ug/ml
10) N-TETRACOSANE	15.224	6546680	46.968 ug/ml
11) N-HEXACOSANE	16.247	6506154	46.910 ug/ml
12) N-OCTACOSANE	17.197	6429884	46.772 ug/ml

(f)=RT Delta > 1/2 Window

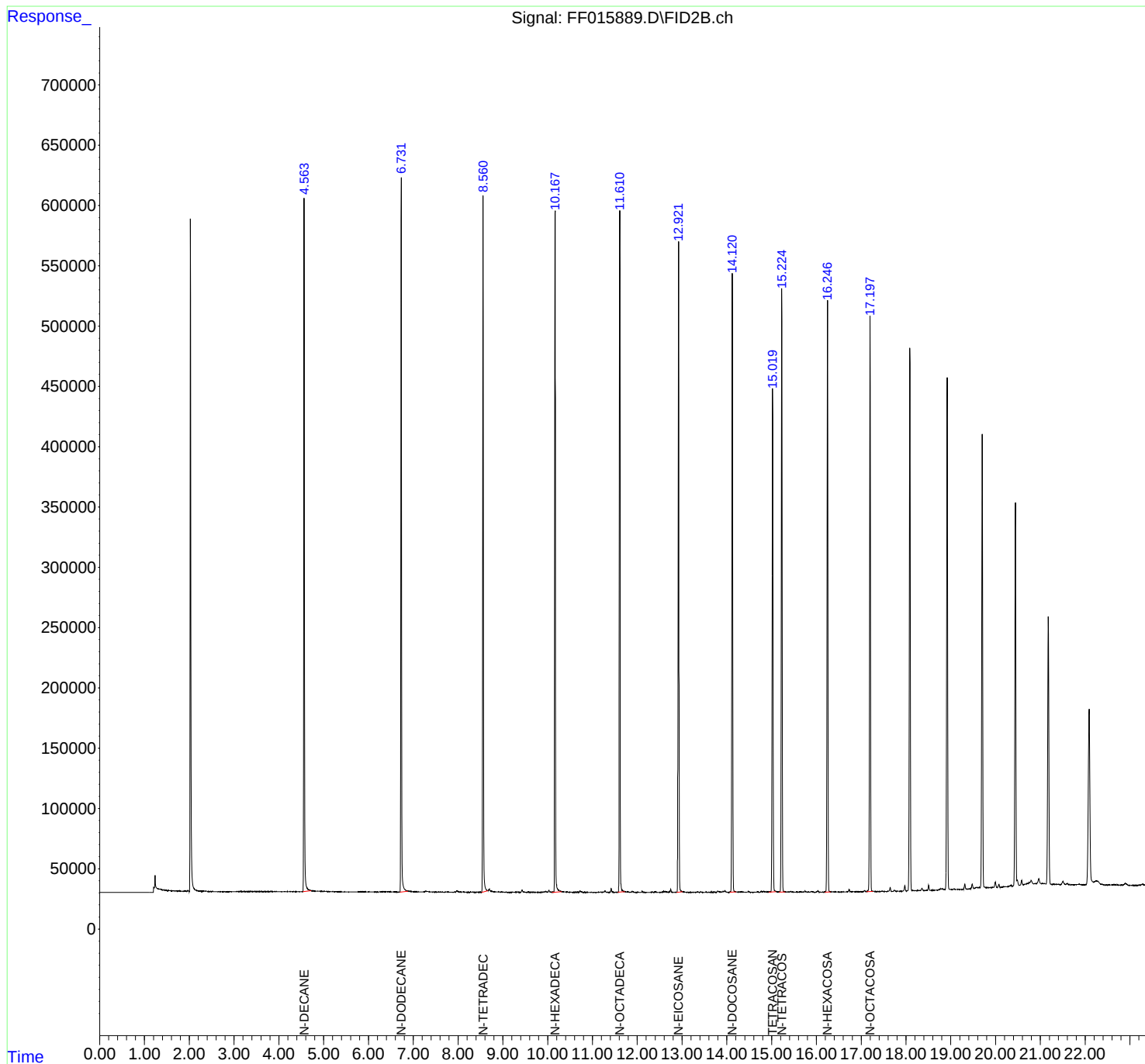
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015889.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 17:38
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 21 23:38:52 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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\FF052125\
Data File : FF015889.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 17:38
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.563	4.535	4.720	BB	574082	6210754	92.62%	8.806%
2	6.732	6.702	6.884	BB	591951	6365324	94.93%	9.025%
3	8.560	8.525	8.669	BV	580367	6411557	95.62%	9.090%
4	10.167	10.100	10.312	BB	564843	6448432	96.17%	9.143%
5	11.610	11.569	11.727	BB	565607	6600620	98.44%	9.358%
6	12.921	12.879	13.014	BB	541114	6705450	100.00%	9.507%
7	14.120	14.064	14.210	BB	512648	6528659	97.36%	9.256%
8	15.020	14.934	15.097	BB	415794	5777712	86.16%	8.192%
9	15.224	15.160	15.304	BB	501005	6546680	97.63%	9.282%
10	16.247	16.185	16.320	BB	490347	6506154	97.03%	9.225%
11	17.197	17.120	17.264	BB	477468	6429884	95.89%	9.116%
Sum of corrected areas:						70531227		

FF052125.M Thu May 22 00:01:15 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074
DataFile: FG015865.D Analyst Name: YP\AJ Analyst Date: 05-21-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	70332673	140665	126925	10.825

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
 Data File : FG015865.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 10:19
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 22 00:37:53 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.987	6384396	54.226 ug/ml
Target Compounds			
2) N-DECANE	4.489	6294158	56.534 ug/ml
3) N-DODECANE	6.672	6576007	57.381 ug/ml
4) N-TETRADECANE	8.509	6789565	56.032 ug/ml
5) N-HEXADECANE	10.122	6961884	55.454 ug/ml
6) N-OCTADECANE	11.570	7205635	54.983 ug/ml
7) N-EICOSANE	12.883	7366569	54.335 ug/ml
8) N-DOCOSANE	14.086	7225342	54.478 ug/ml
10) N-TETRACOSANE	15.193	7280213	54.785 ug/ml
11) N-HEXACOSANE	16.216	7267842	54.802 ug/ml
12) N-OCTACOSANE	17.168	7365458	55.869 ug/ml

(f)=RT Delta > 1/2 Window

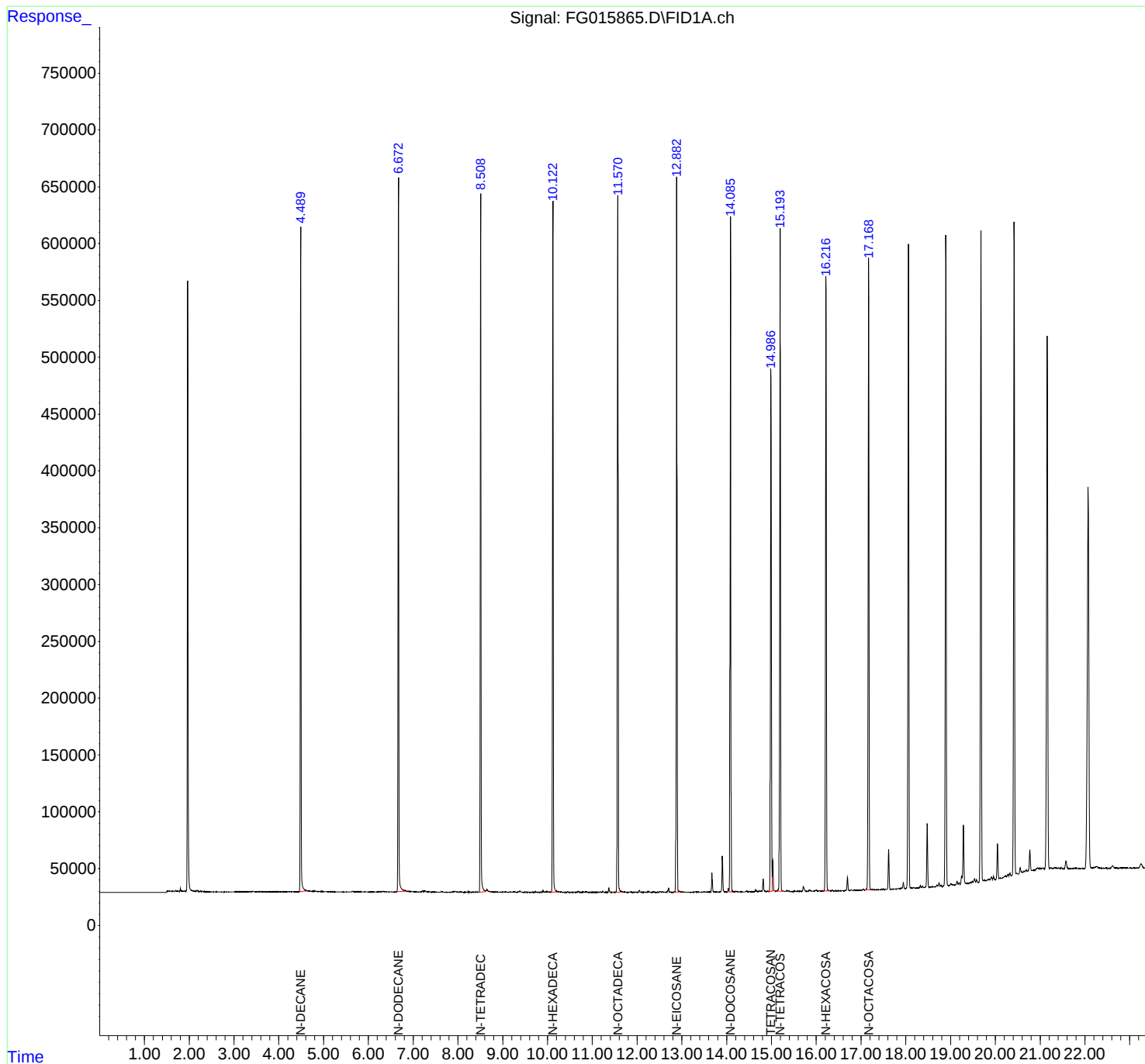
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015865.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 10:19
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 22 00:37:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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_G\Data\FG052125\
Data File : FG015865.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 10:19
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.489	4.446	4.644	BB	585147	6294158	85.44%	8.204%
2	6.672	6.629	6.853	BB	628520	6576007	89.27%	8.572%
3	8.509	8.461	8.623	BV	614704	6789565	92.17%	8.850%
4	10.122	10.075	10.243	BB	607997	6961884	94.51%	9.075%
5	11.570	11.528	11.670	BB	611424	7205635	97.82%	9.392%
6	12.883	12.831	12.970	BB	623410	7366569	100.00%	9.602%
7	14.086	14.051	14.165	VB	592611	7225342	98.08%	9.418%
8	14.987	14.940	15.014	BV	452543	6384396	86.67%	8.322%
9	15.193	15.091	15.275	BB	577910	7280213	98.83%	9.490%
10	16.216	16.146	16.300	BB	537899	7267842	98.66%	9.474%
11	17.168	17.081	17.239	BB	554833	7365458	99.98%	9.601%
Sum of corrected areas:						76717070		

FG042425.M Thu May 22 01:17:14 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074
DataFile: FG015876.D Analyst Name: YP\AJ Analyst Date: 05-21-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	56919649	113839	126925	10.31

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
 Data File : FG015876.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 15:41
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 22 00:41:23 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.986	5361335	45.537 ug/ml
Target Compounds			
2) N-DECANE	4.488	5094492	45.759 ug/ml
3) N-DODECANE	6.670	5349643	46.680 ug/ml
4) N-TETRADECANE	8.507	5385683	44.446 ug/ml
5) N-HEXADECANE	10.120	5613077	44.711 ug/ml
6) N-OCTADECANE	11.568	5852118	44.655 ug/ml
7) N-EICOSANE	12.883	5894452	43.477 ug/ml
8) N-DOCOSANE	14.084	5856597	44.158 ug/ml
10) N-TETRACOSANE	15.191	5914676	44.509 ug/ml
11) N-HEXACOSANE	16.214	5905258	44.528 ug/ml
12) N-OCTACOSANE	17.167	6053653	45.919 ug/ml

(f)=RT Delta > 1/2 Window

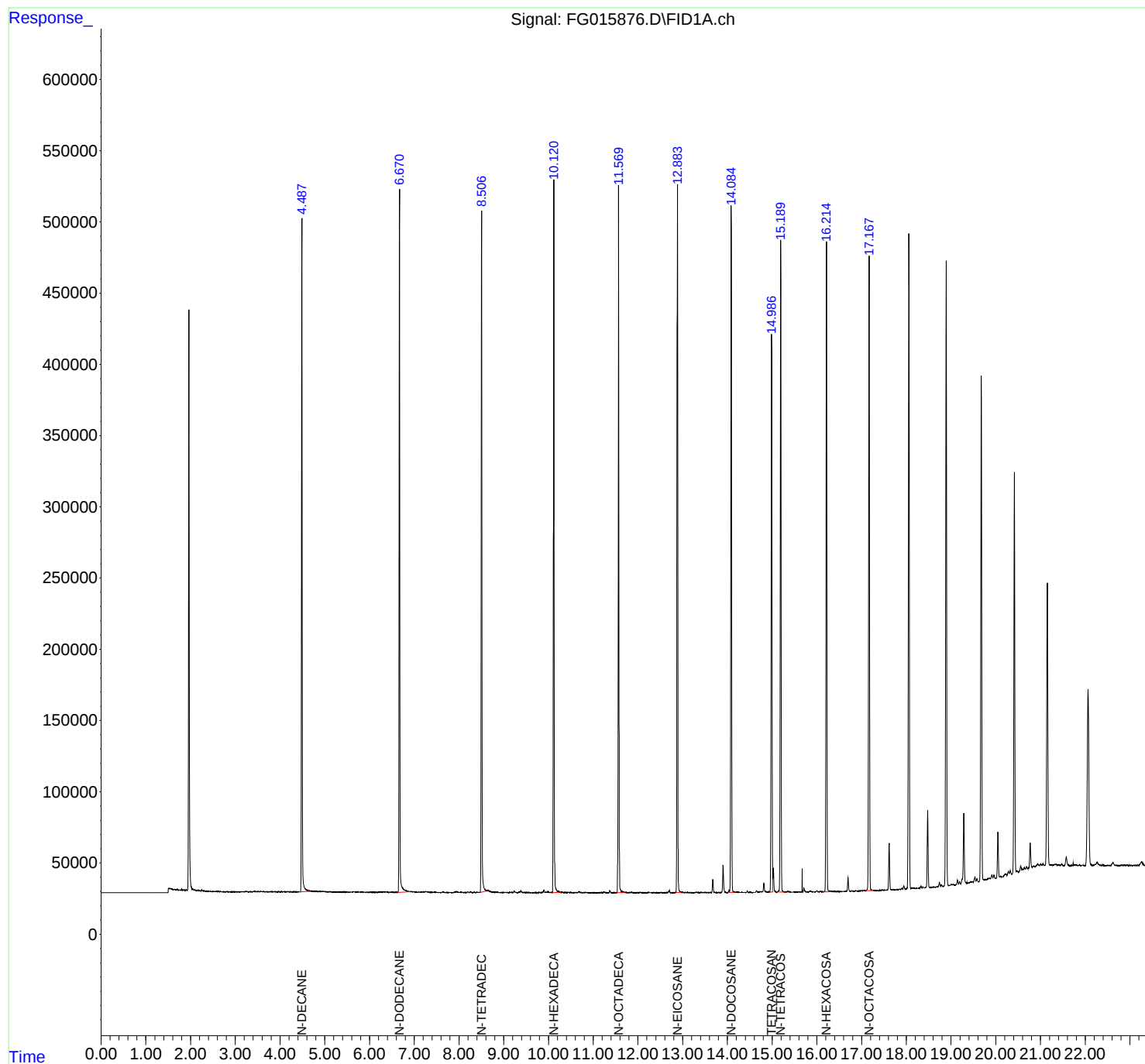
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015876.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 15:41
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 22 00:41:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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_G\Data\FG052125\
Data File : FG015876.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 15:41
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.488	4.439	4.677	BB	471324	5094492	84.16%	8.180%
2	6.670	6.637	6.909	BB	492566	5349643	88.37%	8.590%
3	8.507	8.474	8.622	BV	475304	5385683	88.97%	8.647%
4	10.120	10.084	10.287	BB	501169	5613077	92.72%	9.013%
5	11.568	11.527	11.707	BV	497458	5852118	96.67%	9.396%
6	12.883	12.845	12.984	BB	489877	5894452	97.37%	9.464%
7	14.084	14.050	14.185	VB	478567	5856597	96.74%	9.404%
8	14.986	14.945	15.014	BV	392528	5361335	88.56%	8.608%
9	15.191	15.089	15.320	BV	457486	5914676	97.70%	9.497%
10	16.214	16.132	16.324	BB	454666	5905258	97.55%	9.482%
11	17.167	17.089	17.284	BB	445806	6053653	100.00%	9.720%
Sum of corrected areas:						62280983		

FG042425.M Thu May 22 01:22:21 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: CHEM Case No.: Q2074 SAS No.: Q2074 SDG No.: Q2074
DataFile: FG015883.D Analyst Name: YP\AJ Analyst Date: 05-21-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	64219295	128439	126925	1.193

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
 Data File : FG015883.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 19:06
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 76 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 22 00:43:25 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.987	5853826	49.720 ug/ml
Target Compounds			
2) N-DECANE	4.488	5853395	52.575 ug/ml
3) N-DODECANE	6.670	6080794	53.060 ug/ml
4) N-TETRADECANE	8.507	6290779	51.916 ug/ml
5) N-HEXADECANE	10.121	6452667	51.398 ug/ml
6) N-OCTADECANE	11.569	6647325	50.723 ug/ml
7) N-EICOSANE	12.882	6767091	49.913 ug/ml
8) N-DOCOSANE	14.085	6602640	49.783 ug/ml
10) N-TETRACOSANE	15.191	6588253	49.578 ug/ml
11) N-HEXACOSANE	16.215	6530078	49.239 ug/ml
12) N-OCTACOSANE	17.168	6406273	48.593 ug/ml

(f)=RT Delta > 1/2 Window

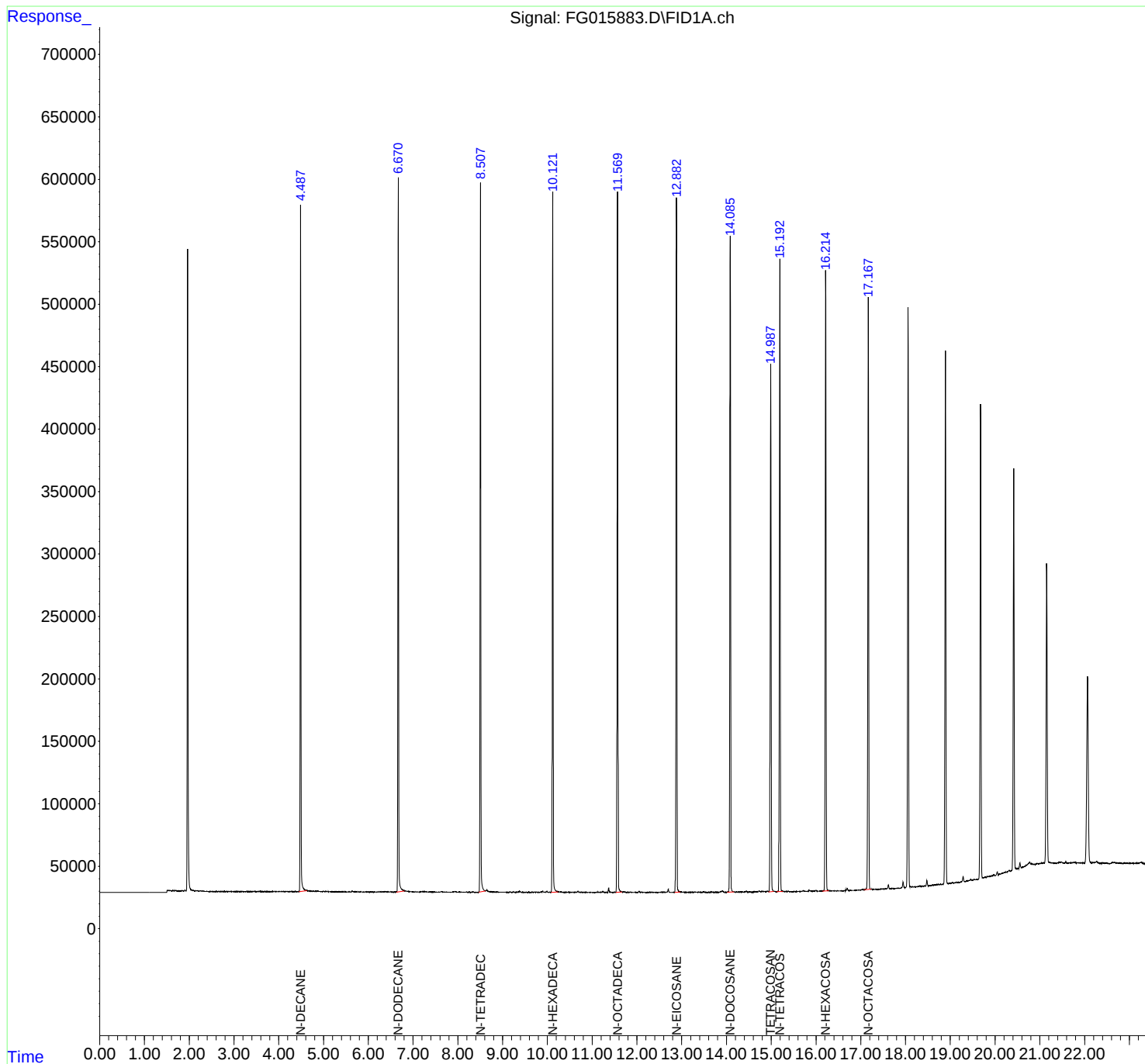
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015883.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 19:06
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 22 00:43:25 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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_G\Data\FG052125\
Data File : FG015883.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 19:06
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.488	4.447	4.632	BB	547702	5853395	86.50%	8.353%
2	6.670	6.628	6.807	BB	571668	6080794	89.86%	8.678%
3	8.507	8.468	8.619	BV	566825	6290779	92.96%	8.977%
4	10.121	10.082	10.243	BB	559324	6452667	95.35%	9.208%
5	11.569	11.529	11.669	BB	559125	6647325	98.23%	9.486%
6	12.882	12.843	12.968	BB	556155	6767091	100.00%	9.657%
7	14.085	14.016	14.166	BB	526186	6602640	97.57%	9.423%
8	14.987	14.942	15.056	BV	419710	5853826	86.50%	8.354%
9	15.191	15.116	15.259	BB	505210	6588253	97.36%	9.402%
10	16.215	16.143	16.288	BB	495626	6530078	96.50%	9.319%
11	17.168	17.080	17.237	BB	471420	6406273	94.67%	9.142%
Sum of corrected areas:						70073120		

FG042425.M Thu May 22 01:23:19 2025

Analytical Sequence

Client: CDM Smith

SDG No.: Q2074

Project: South River WM Replacement

Instrument ID: FID_G

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 15.0206					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	21 May 2025 13:15	FF015880.D	15.024	
50 PPM TRPH STD	50 PPM TRPH STD	21 May 2025 13:44	FF015881.D	15.020	
TP-20	Q2074-04	21 May 2025 14:43	FF015883.D	15.018	
TP-38	Q2074-05	21 May 2025 15:12	FF015884.D	15.019	
TP-19	Q2074-06	21 May 2025 15:41	FF015885.D	15.018	
TP-40	Q2074-07	21 May 2025 16:10	FF015886.D	15.017	
TP-18	Q2074-08	21 May 2025 16:40	FF015887.D	15.016	
PIBLK02	LBLK02	21 May 2025 17:09	FF015888.D	15.020	
50 PPM TRPH STD	50 PPM TRPH STD	21 May 2025 17:38	FF015889.D	15.020	
PIBLK03	LBLK03	21 May 2025 09:50	FG015864.D	14.985	
50 PPM TRPH STD	50 PPM TRPH STD	21 May 2025 10:19	FG015865.D	14.987	
PB168084BL	PB168084BL	21 May 2025 11:18	FG015867.D	14.985	
PB168084BS	PB168084BS	21 May 2025 11:47	FG015868.D	14.984	
TP-24MS	Q2032-05MS	21 May 2025 14:13	FG015873.D	14.930	
TP-24MSD	Q2032-06MSD	21 May 2025 14:43	FG015874.D	14.984	
PIBLK04	LBLK04	21 May 2025 15:12	FG015875.D	14.984	
50 PPM TRPH STD	50 PPM TRPH STD	21 May 2025 15:41	FG015876.D	14.986	
TP-12	Q2074-01	21 May 2025 17:09	FG015879.D	14.941	
TP-7	Q2074-02	21 May 2025 17:38	FG015880.D	14.984	
TP-15	Q2074-03	21 May 2025 18:07	FG015881.D	14.984	
PIBLK05	LBLK05	21 May 2025 18:37	FG015882.D	14.984	
50 PPM TRPH STD	50 PPM TRPH STD	21 May 2025 19:06	FG015883.D	14.987	



QC SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168084BL	SDG No.:	Q2074
Lab Sample ID:	PB168084BL	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015867.D	1	05/20/25 10:15	05/21/25 11:18	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	169	U	169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	18.0		37 - 130	90%	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_G\Data\FG052125\
Data File : FG015867.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 11:18
Operator : YP\AJ
Sample : PB168084BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168084BL

Integration File: autoint1.e
Quant Time: May 22 00:38:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.985	2121640	18.020 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

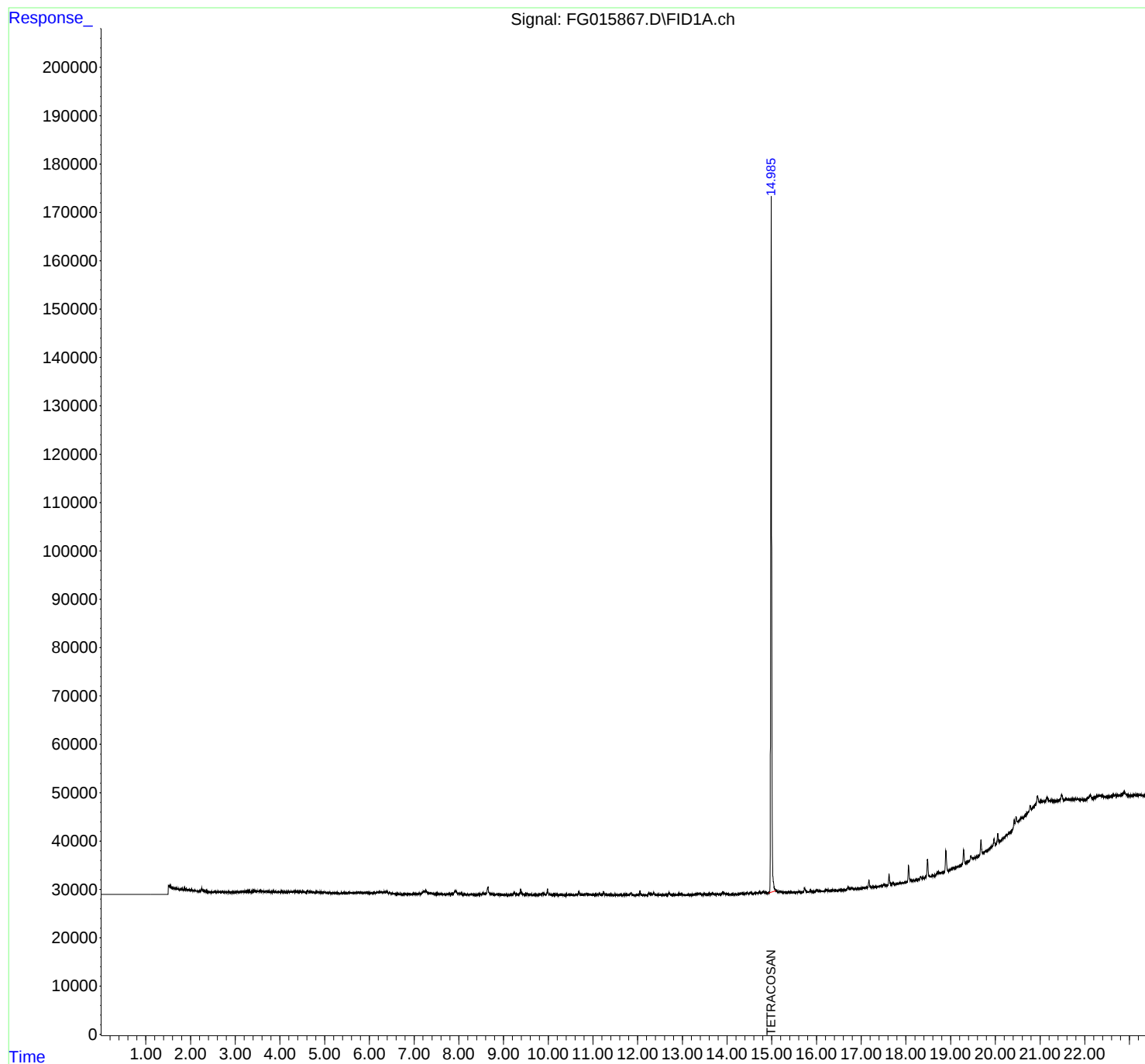
(m)=manual int.

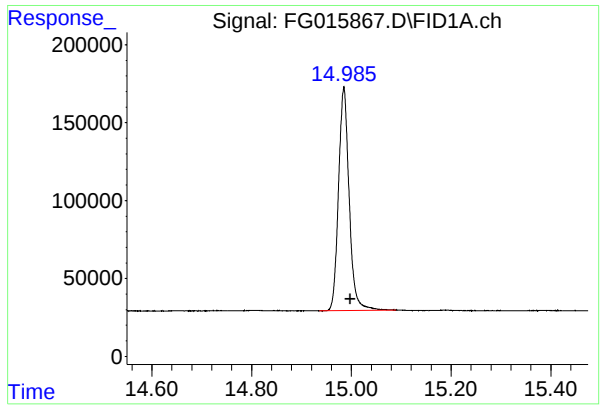
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015867.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 11:18
Operator : YP\AJ
Sample : PB168084BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168084BL

Integration File: autoint1.e
Quant Time: May 22 00:38:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.985 min
Delta R.T.: -0.013 min
Response: 2121640
Conc: 18.02 ug/ml

Instrument :
FID_G
ClientSampleId :
PB168084BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015867.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 11:18
Sample : PB168084BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.985	14.935	15.090	BB	144033	2121640	100.00%	100.000%
Sum of corrected areas:						2121640		

FG042425.M Thu May 22 01:18:05 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/21/25
Project:	South River WM Replacement	Date Received:	05/21/25
Client Sample ID:	PIBLK-FF015880.D	SDG No.:	Q2074
Lab Sample ID:	I.BLK-FF015880.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015880.D	1		05/21/25	FF052125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	17.6		29 - 130	88%	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\FF052125\
Data File : FF015880.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 13:15
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: May 21 23:36:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.024	2152891	17.627 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

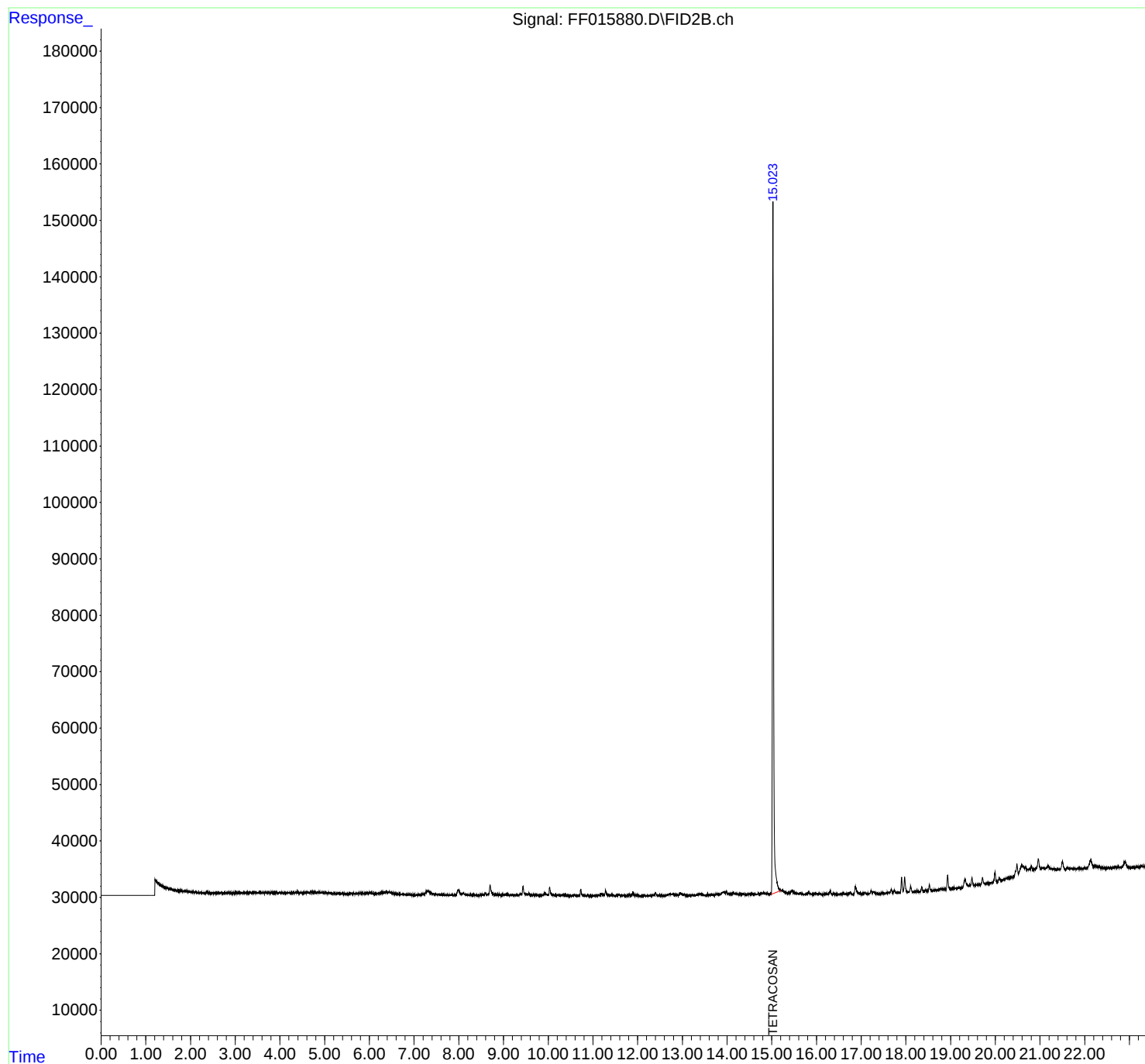
(m)=manual int.

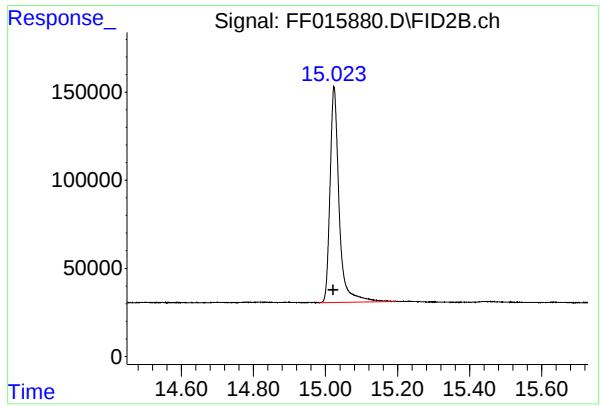
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015880.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 13:15
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 21 23:36:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.024 min
Delta R.T.: 0.003 min
Response: 2152891
Conc: 17.63 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015880.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 13:15
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.024	14.982	15.195	BB	122432	2152891	100.00%	100.000%
Sum of corrected areas:						2152891		

FF052125.M Wed May 21 23:58:19 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/21/25
Project:	South River WM Replacement	Date Received:	05/21/25
Client Sample ID:	PIBLK-FF015888.D	SDG No.:	Q2074
Lab Sample ID:	I.BLK-FF015888.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015888.D	1		05/21/25	FF052125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	16.2		29 - 130	81%	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\FF052125\
Data File : FF015888.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 17:09
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: May 21 23:38:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
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...	15.020	1978470	16.199 ug/mlm
Target Compounds			

(f)=RT Delta > 1/2 Window

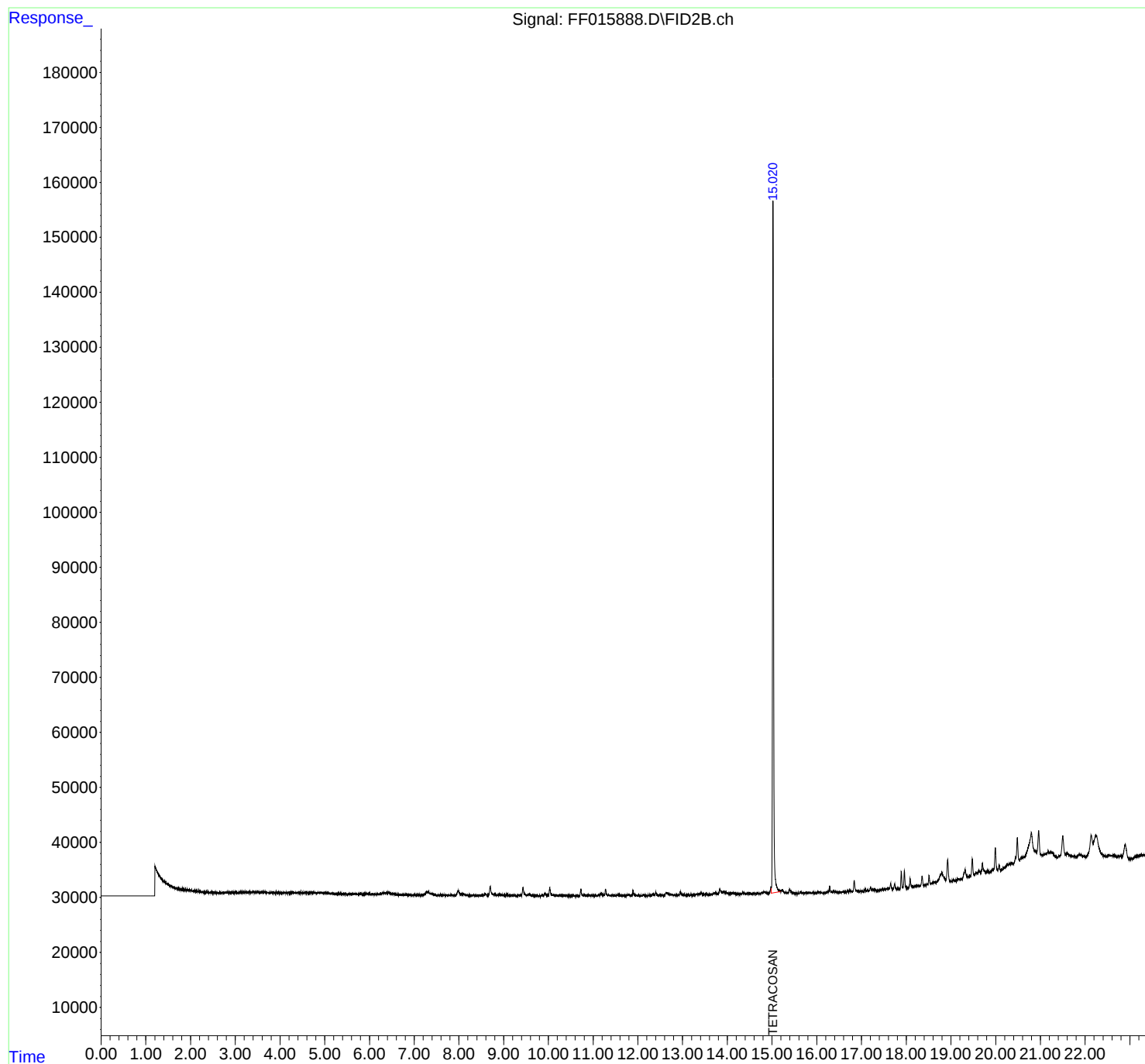
(m)=manual int.

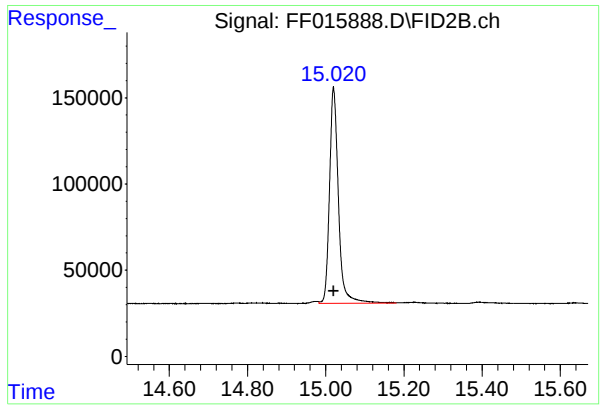
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015888.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 17:09
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 21 23:38:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.020 min
Delta R.T.: -0.001 min
Response: 1978470
Conc: 16.20 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF052125\
Data File : FF015888.D
Signal(s) : FID2B.ch
Acq On : 21 May 2025 17:09
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.020	14.939	15.155	BB	125201	1973146	100.00%	100.000%
Sum of corrected areas:						1973146		

FF052125.M Thu May 22 00:00:35 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/21/25
Project:	South River WM Replacement	Date Received:	05/21/25
Client Sample ID:	PIBLK-FG015864.D	SDG No.:	Q2074
Lab Sample ID:	I.BLK-FG015864.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015864.D	1		05/21/25	FG052125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.0		29 - 130	90%	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_G\Data\FG052125\
Data File : FG015864.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 09:50
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:37:34 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.985	2114388	17.959 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

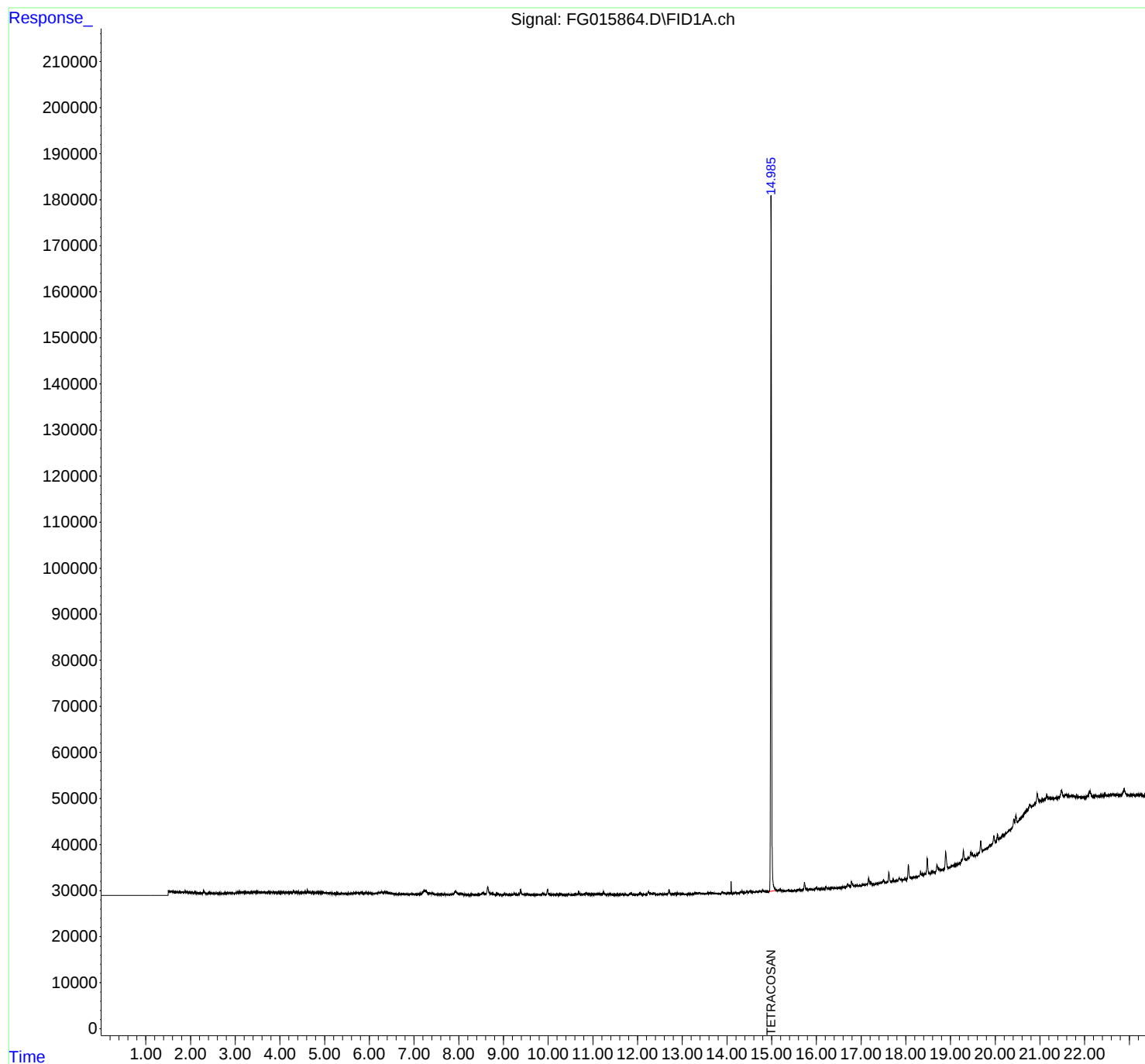
(m)=manual int.

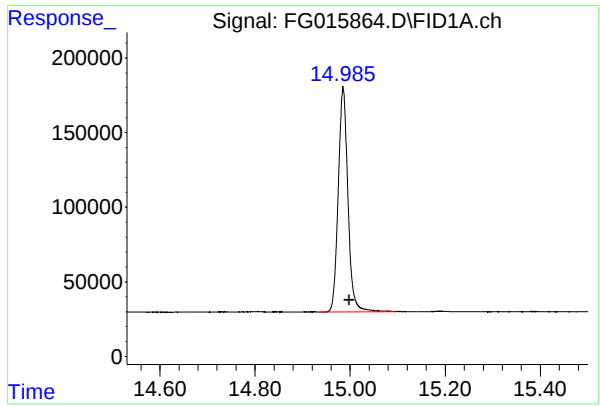
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015864.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 09:50
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:37:34 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.985 min
Delta R.T.: -0.013 min
Response: 2114388
Conc: 17.96 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015864.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 09:50
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.985	14.935	15.096	BB	150240	2114388	100.00%	100.000%
Sum of corrected areas:						2114388		

FG042425.M Thu May 22 01:15:40 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/21/25
Project:	South River WM Replacement	Date Received:	05/21/25
Client Sample ID:	PIBLK-FG015875.D	SDG No.:	Q2074
Lab Sample ID:	I.BLK-FG015875.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015875.D	1		05/21/25	FG052125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	17.5		29 - 130	88%	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_G\Data\FG052125\
Data File : FG015875.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 15:12
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:41:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.984	2064780	17.537 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

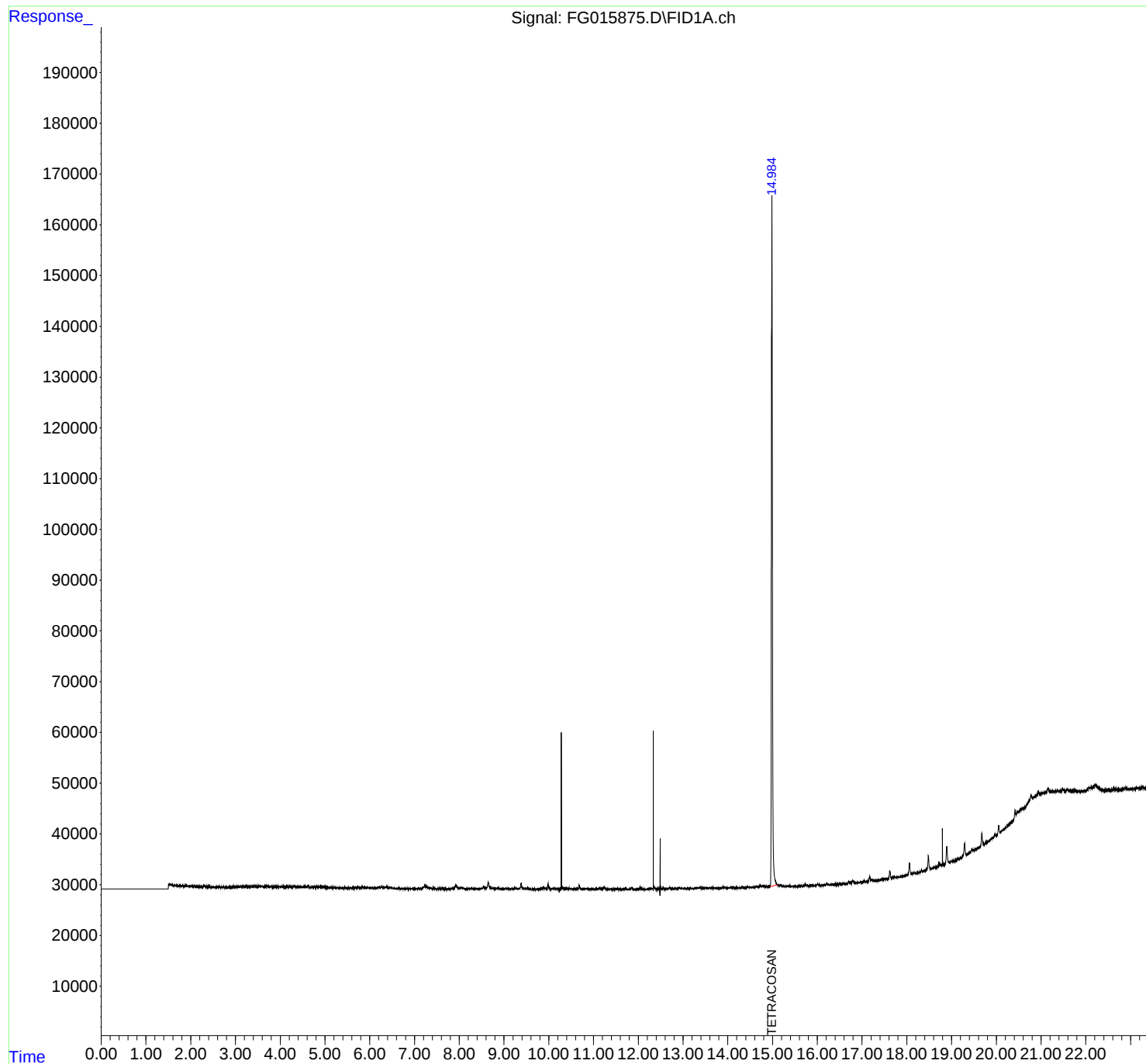
(m)=manual int.

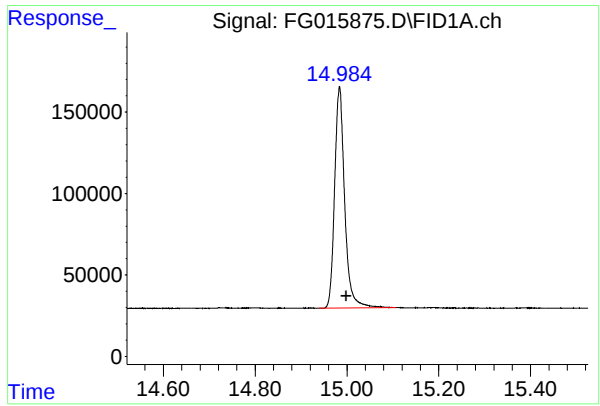
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015875.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 15:12
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:41:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min
Delta R.T.: -0.014 min
Response: 2064780
Conc: 17.54 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015875.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 15:12
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.984	14.939	15.107	BB	135993	2064780	100.00%	100.000%
Sum of corrected areas:						2064780		

FG042425.M Thu May 22 01:21:21 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/21/25
Project:	South River WM Replacement	Date Received:	05/21/25
Client Sample ID:	PIBLK-FG015882.D	SDG No.:	Q2074
Lab Sample ID:	I.BLK-FG015882.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015882.D	1		05/21/25	FG052125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.3		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_G\Data\FG052125\
Data File : FG015882.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:37
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:43:11 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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...	14.984	2150574	18.266 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

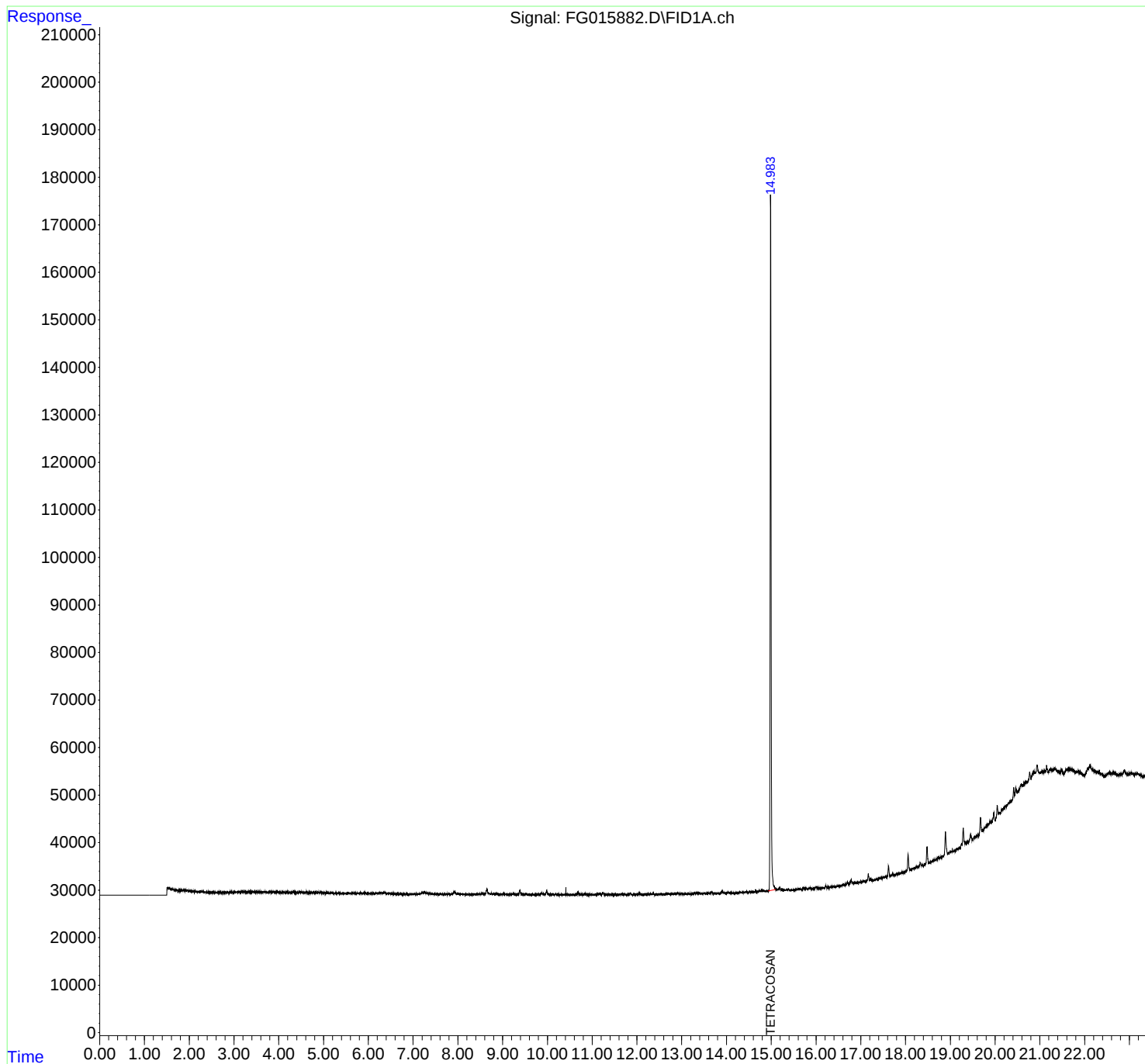
(m)=manual int.

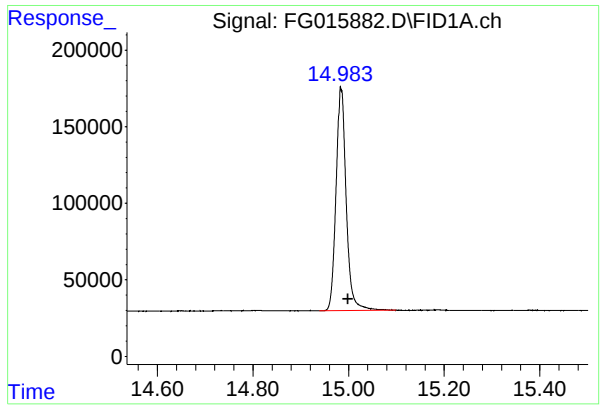
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015882.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:37
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 22 00:43:11 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min
Delta R.T.: -0.014 min
Response: 2150574
Conc: 18.27 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015882.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 18:37
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.984	14.938	15.099	BB	144046	2150574	100.00%	100.000%
Sum of corrected areas:						2150574		

FG042425.M Thu May 22 01:22:46 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168084BS	SDG No.:	Q2074
Lab Sample ID:	PB168084BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015868.D	1	05/20/25 10:15	05/21/25 11:47	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	6530		169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	20.6		37 - 130	103%	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_G\Data\FG052125\
 Data File : FG015868.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 11:47
 Operator : YP\AJ
 Sample : PB168084BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB168084BS

Integration File: autoint1.e
 Quant Time: May 22 00:38:50 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.984	2424797	20.595 ug/ml
Target Compounds			
2) N-DECANE	4.488	2013773	18.088 ug/ml
3) N-DODECANE	6.670	2178191	19.007 ug/ml
4) N-TETRADECANE	8.505	2272446	18.754 ug/ml
5) N-HEXADECANE	10.119	2441706	19.449 ug/ml
6) N-OCTADECANE	11.566	2624828	20.029 ug/ml
7) N-EICOSANE	12.880	2645165	19.510 ug/ml
8) N-DOCOSANE	14.081	2662725	20.076 ug/ml
10) N-TETRACOSANE	15.188	2692207	20.259 ug/ml
11) N-HEXACOSANE	16.213	2671169	20.141 ug/ml
12) N-OCTACOSANE	17.164	2682870	20.350 ug/ml

(f)=RT Delta > 1/2 Window

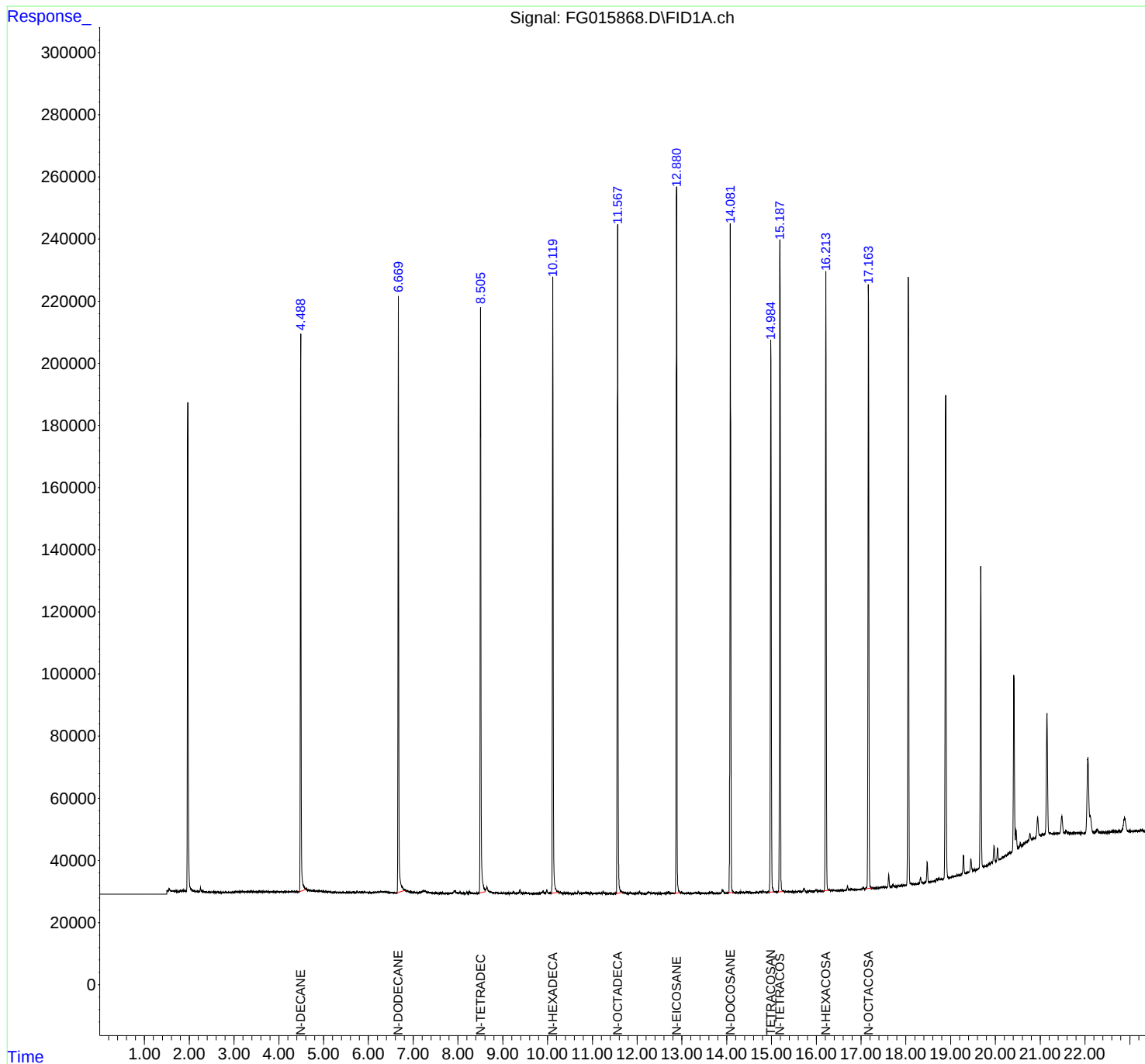
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015868.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 11:47
Operator : YP\AJ
Sample : PB168084BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168084BS

Integration File: autoint1.e
Quant Time: May 22 00:38:50 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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_G\Data\FG052125\
Data File : FG015868.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 11:47
Sample : PB168084BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.488	4.449	4.611	BB	179467	2013773	74.80%	7.374%
2	6.670	6.631	6.810	BB	191816	2178191	80.91%	7.976%
3	8.505	8.464	8.610	BV	187908	2272446	84.41%	8.321%
4	10.119	10.071	10.241	BB	197468	2441706	90.70%	8.941%
5	11.566	11.530	11.669	BB	214628	2624828	97.50%	9.611%
6	12.880	12.831	12.965	BB	226577	2645165	98.25%	9.686%
7	14.081	14.033	14.163	BB	214865	2662725	98.90%	9.750%
8	14.984	14.932	15.059	BB	177669	2424797	90.07%	8.879%
9	15.188	15.134	15.261	BB	209450	2692207	100.00%	9.858%
10	16.213	16.155	16.280	BB	198880	2671169	99.22%	9.781%
11	17.164	17.090	17.245	BB	193039	2682870	99.65%	9.824%
Sum of corrected areas:						27309875		

FG042425.M Thu May 22 01:19:47 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/13/25
Project:	South River WM Replacement	Date Received:	05/13/25
Client Sample ID:	TP-24MS	SDG No.:	Q2074
Lab Sample ID:	Q2032-05MS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	74.2
Sample Wt/Vol:	30.08	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
FG015873.D	1	05/20/25 10:15	05/21/25 14:13	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	13800		227	2240	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_G\Data\FG052125\
 Data File : FG015873.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 14:13
 Operator : YP\AJ
 Sample : Q2032-05MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 TP-24MS

Integration File: autoint1.e
 Quant Time: May 22 00:40:21 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.983	1557133	13.226 ug/ml
Target Compounds			
2) N-DECANE	4.488	2506544	22.514 ug/ml
3) N-DODECANE	6.670	2723792	23.767 ug/ml
4) N-TETRADECANE	8.505	2808470	23.177 ug/ml
5) N-HEXADECANE	10.119	2951548	23.510 ug/ml
6) N-OCTADECANE	11.566	3171510	24.200 ug/ml
7) N-EICOSANE	12.881	3168001	23.367 ug/ml
8) N-DOCOSANE	14.082	3114625	23.484 ug/ml
10) N-TETRACOSANE	15.188	3146354	23.677 ug/ml
11) N-HEXACOSANE	16.211	3148999	23.744 ug/ml
12) N-OCTACOSANE	17.164	3070005	23.287 ug/ml

(f)=RT Delta > 1/2 Window

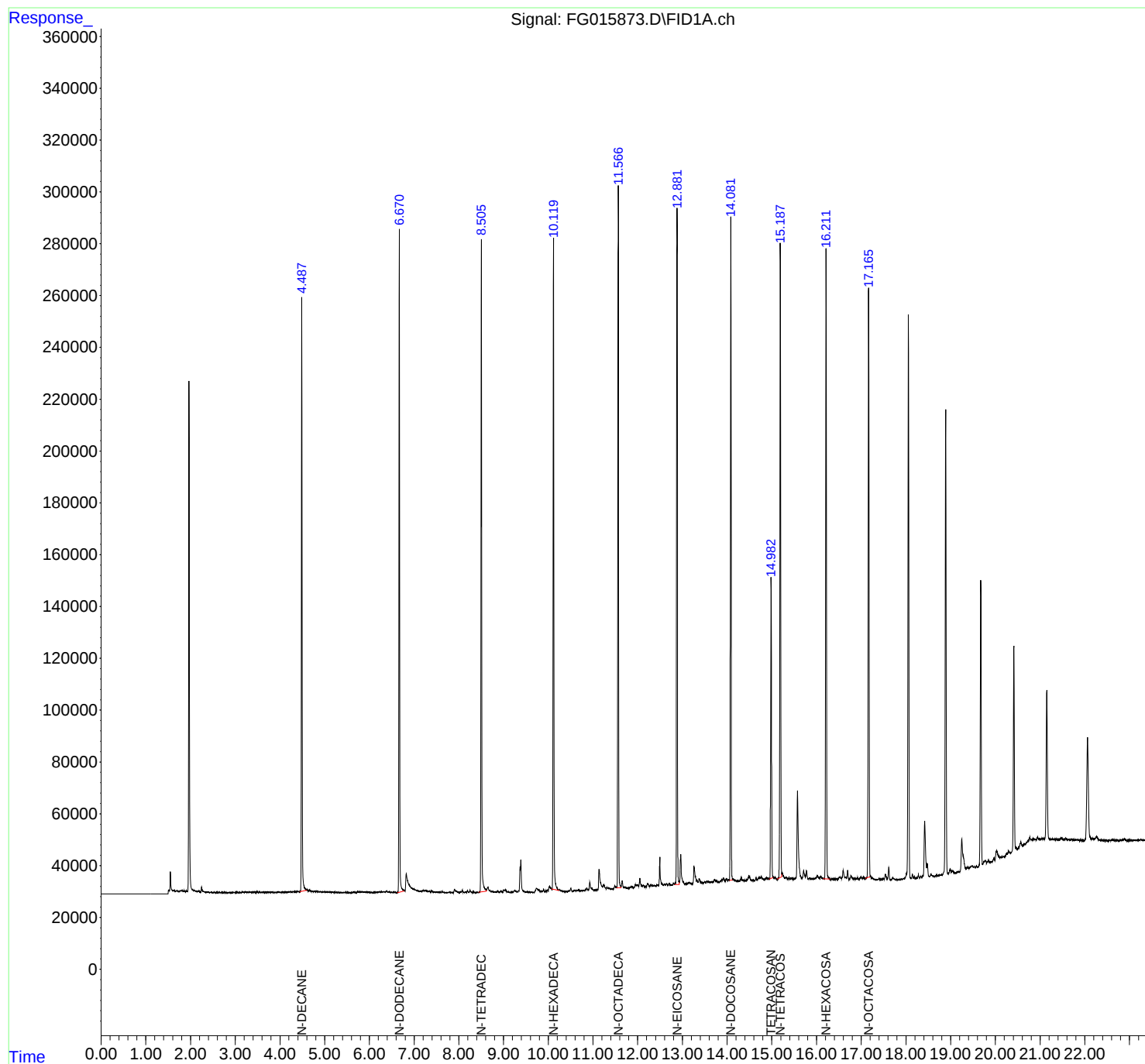
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015873.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 14:13
Operator : YP\AJ
Sample : Q2032-05MS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-24MS

Integration File: autoint1.e
Quant Time: May 22 00:40:21 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
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_G\Data\FG052125\
 Data File : FG015873.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 14:13
 Sample : Q2032-05MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.313	4.300	4.318	BV	122	593	0.02%	0.001%
2	4.322	4.318	4.342	VV	115	903	0.03%	0.002%
3	4.355	4.342	4.365	PV	161	1166	0.04%	0.003%
4	4.375	4.365	4.405	PV	205	2646	0.08%	0.007%
5	4.409	4.405	4.413	VV	139	564	0.02%	0.001%
6	4.417	4.413	4.420	VV	144	485	0.01%	0.001%
7	4.434	4.420	4.444	VV	207	1874	0.06%	0.005%
8	4.452	4.444	4.456	VV	184	1053	0.03%	0.003%
9	4.488	4.456	4.602	VV	229410	2548567	77.85%	6.265%
10	4.612	4.602	4.645	VV	954	18652	0.57%	0.046%
11	4.664	4.645	4.749	VV	917	31503	0.96%	0.077%
12	4.776	4.749	4.793	VV	444	8559	0.26%	0.021%
13	4.802	4.793	4.815	VV	391	3876	0.12%	0.010%
14	4.822	4.815	4.839	VV	353	3995	0.12%	0.010%
15	4.846	4.839	4.851	VV	271	1757	0.05%	0.004%
16	4.858	4.851	4.866	VV	277	2255	0.07%	0.006%
17	4.873	4.866	4.884	VV	271	2434	0.07%	0.006%
18	4.891	4.884	4.895	VV	280	1592	0.05%	0.004%
19	4.906	4.895	4.920	VV	256	3563	0.11%	0.009%
20	4.923	4.920	4.930	VV	282	1430	0.04%	0.004%
21	4.939	4.930	4.949	VV	299	2783	0.09%	0.007%
22	4.954	4.949	4.963	VV	230	1785	0.05%	0.004%
23	4.965	4.963	4.973	VV	277	1503	0.05%	0.004%
24	4.977	4.973	4.990	VV	285	2129	0.07%	0.005%
25	4.999	4.990	5.046	VV	295	6130	0.19%	0.015%
26	5.053	5.046	5.058	VV	179	1003	0.03%	0.002%
27	5.074	5.058	5.093	VV	189	3251	0.10%	0.008%
28	5.096	5.093	5.102	VV	188	692	0.02%	0.002%
29	5.110	5.102	5.126	VV	182	1803	0.06%	0.004%
30	5.131	5.126	5.139	VV	155	1029	0.03%	0.003%
31	5.155	5.139	5.164	VV	219	2395	0.07%	0.006%
32	5.170	5.164	5.201	VV	217	3337	0.10%	0.008%
33	5.205	5.201	5.220	VV	158	1189	0.04%	0.003%
34	5.222	5.220	5.227	VV	104	329	0.01%	0.001%
35	5.230	5.227	5.237	VV	114	425	0.01%	0.001%
36	5.242	5.237	5.259	PV	165	1250	0.04%	0.003%

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37	5.265	5.259	5.284	VV	157	1124	0.03%	0.003%
38	5.287	5.284	5.293	VV	84	350	0.01%	0.001%
39	5.303	5.293	5.316	PV	123	1091	0.03%	0.003%
40	5.320	5.316	5.331	VV	143	664	0.02%	0.002%
41	5.335	5.331	5.341	VV	97	442	0.01%	0.001%
42	5.344	5.341	5.353	VV	116	581	0.02%	0.001%
43	5.355	5.353	5.367	VV	94	549	0.02%	0.001%
44	5.371	5.367	5.399	VV	125	1486	0.05%	0.004%
45	5.407	5.399	5.429	VV	127	1288	0.04%	0.003%
46	5.440	5.429	5.445	VV	140	774	0.02%	0.002%
47	5.454	5.445	5.459	VV	167	870	0.03%	0.002%
48	5.464	5.459	5.492	VV	210	2668	0.08%	0.007%
49	5.495	5.492	5.515	VV	113	1261	0.04%	0.003%
50	5.517	5.515	5.521	VV	167	347	0.01%	0.001%
51	5.526	5.521	5.531	VV	117	506	0.02%	0.001%
52	5.533	5.531	5.545	VV	169	864	0.03%	0.002%
53	5.552	5.545	5.560	VV	109	541	0.02%	0.001%
54	5.563	5.560	5.571	VV	99	416	0.01%	0.001%
55	5.577	5.571	5.593	VV	87	1004	0.03%	0.002%
56	5.601	5.593	5.613	PV	154	998	0.03%	0.002%
57	5.620	5.613	5.625	VV	84	503	0.02%	0.001%
58	5.638	5.625	5.658	VV	390	4997	0.15%	0.012%
59	5.663	5.658	5.679	VV	240	1860	0.06%	0.005%
60	5.691	5.679	5.708	VV	167	1984	0.06%	0.005%
61	5.735	5.708	5.750	VV	399	6388	0.20%	0.016%
62	5.785	5.750	5.801	VV	450	10705	0.33%	0.026%
63	5.806	5.801	5.829	VV	456	7038	0.21%	0.017%
64	5.835	5.829	5.859	VV	447	6429	0.20%	0.016%
65	5.866	5.859	5.871	VV	353	2173	0.07%	0.005%
66	5.880	5.871	5.889	VV	338	3564	0.11%	0.009%
67	5.896	5.889	5.924	VV	377	6518	0.20%	0.016%
68	5.928	5.924	5.933	VV	327	1645	0.05%	0.004%
69	5.944	5.933	5.981	VV	412	7509	0.23%	0.018%
70	5.986	5.981	5.994	VV	273	1613	0.05%	0.004%
71	5.998	5.994	6.006	VV	206	1426	0.04%	0.004%
72	6.007	6.006	6.025	VV	249	1948	0.06%	0.005%
73	6.035	6.025	6.058	VV	247	3317	0.10%	0.008%
74	6.063	6.058	6.087	VV	203	2209	0.07%	0.005%
75	6.100	6.087	6.113	VV	235	2537	0.08%	0.006%
76	6.116	6.113	6.148	VV	289	3424	0.10%	0.008%
77	6.173	6.148	6.184	VV	265	4323	0.13%	0.011%
78	6.214	6.184	6.220	VV	413	6307	0.19%	0.016%
79	6.227	6.220	6.236	VV	336	2979	0.09%	0.007%
80	6.249	6.236	6.253	VV	396	3614	0.11%	0.009%
81	6.271	6.253	6.285	VV	460	7493	0.23%	0.018%
82	6.294	6.285	6.299	VV	389	2725	0.08%	0.007%
83	6.313	6.299	6.322	VV	449	5201	0.16%	0.013%
84	6.328	6.322	6.344	VV	433	4777	0.15%	0.012%
85	6.385	6.344	6.430	VV	683	20825	0.64%	0.051%
86	6.442	6.430	6.447	VV	336	3007	0.09%	0.007%
87	6.450	6.447	6.464	VV	348	2812	0.09%	0.007%
88	6.468	6.464	6.478	VV	276	1995	0.06%	0.005%
89	6.491	6.478	6.519	VV	263	4840	0.15%	0.012%

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90	6.539	6.519	6.545	VV	307	3145	0.10%	0.008%
91	6.549	6.545	6.580	VV	294	4641	0.14%	0.011%
92	6.584	6.580	6.605	VV	176	1658	0.05%	0.004%
93	6.608	6.605	6.613	VV	156	504	0.02%	0.001%
94	6.632	6.613	6.636	VV	195	1412	0.04%	0.003%
95	6.670	6.636	6.783	VV	256072	2762179	84.38%	6.790%
96	6.793	6.783	6.796	VV	773	5842	0.18%	0.014%
97	6.826	6.796	6.949	VV	7417	328876	10.05%	0.808%
98	6.953	6.949	6.979	VV	1733	28428	0.87%	0.070%
99	6.986	6.979	7.028	VV	1487	37387	1.14%	0.092%
100	7.034	7.028	7.054	VV	1114	15176	0.46%	0.037%
101	7.057	7.054	7.113	VV	913	25767	0.79%	0.063%
102	7.118	7.113	7.126	VV	650	4985	0.15%	0.012%
103	7.131	7.126	7.155	VV	652	10508	0.32%	0.026%
104	7.201	7.155	7.228	VV	920	34269	1.05%	0.084%
105	7.242	7.228	7.283	VV	981	27419	0.84%	0.067%
106	7.288	7.283	7.334	VV	836	19510	0.60%	0.048%
107	7.354	7.334	7.374	VV	629	11693	0.36%	0.029%
108	7.393	7.374	7.438	VV	915	19447	0.59%	0.048%
109	7.442	7.438	7.446	VV	340	1634	0.05%	0.004%
110	7.453	7.446	7.463	VV	326	2973	0.09%	0.007%
111	7.465	7.463	7.480	VV	292	2549	0.08%	0.006%
112	7.490	7.480	7.546	VV	276	8462	0.26%	0.021%
113	7.566	7.546	7.610	VV	270	6624	0.20%	0.016%
114	7.626	7.610	7.698	VV	555	11395	0.35%	0.028%
115	7.708	7.698	7.722	VV	177	1183	0.04%	0.003%
116	7.746	7.722	7.763	VV	164	2149	0.07%	0.005%
117	7.766	7.763	7.771	VV	97	395	0.01%	0.001%
118	7.798	7.771	7.823	VV	282	4605	0.14%	0.011%
119	7.826	7.823	7.831	VV	121	345	0.01%	0.001%
120	7.848	7.831	7.855	VV	136	1014	0.03%	0.002%
121	7.904	7.855	7.938	PV	1363	28624	0.87%	0.070%
122	7.941	7.938	7.953	VV	671	5029	0.15%	0.012%
123	7.956	7.953	7.993	VV	512	7823	0.24%	0.019%
124	7.995	7.993	8.022	VV	248	3107	0.09%	0.008%
125	8.051	8.022	8.059	VV	469	6681	0.20%	0.016%
126	8.078	8.059	8.103	VV	1148	15290	0.47%	0.038%
127	8.112	8.103	8.136	VV	279	3407	0.10%	0.008%
128	8.149	8.136	8.175	VV	341	5050	0.15%	0.012%
129	8.197	8.175	8.222	VV	1006	12257	0.37%	0.030%
130	8.253	8.222	8.306	VV	1031	19452	0.59%	0.048%
131	8.322	8.306	8.354	PV	734	9077	0.28%	0.022%
132	8.362	8.354	8.381	VV	163	1825	0.06%	0.004%
133	8.413	8.381	8.428	VV	418	5290	0.16%	0.013%
134	8.505	8.428	8.623	VV	250719	2856771	87.27%	7.023%
135	8.654	8.623	8.742	VV	2090	75273	2.30%	0.185%
136	8.745	8.742	8.783	VV	511	8844	0.27%	0.022%
137	8.786	8.783	8.807	VV	302	3576	0.11%	0.009%
138	8.818	8.807	8.850	VV	301	6728	0.21%	0.017%
139	8.866	8.850	8.912	VV	544	11131	0.34%	0.027%
140	8.937	8.912	8.947	VV	565	7754	0.24%	0.019%
141	8.956	8.947	8.976	VV	549	6412	0.20%	0.016%

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142	9.005	8.976	9.031	VV	1034	23362	0.71%	0.057%
143	9.045	9.031	9.075	VV	1352	21180	0.65%	0.052%
144	9.078	9.075	9.085	VV	303	1627	0.05%	0.004%
145	9.097	9.085	9.106	VV	365	3335	0.10%	0.008%
146	9.111	9.106	9.142	VV	356	3268	0.10%	0.008%
147	9.148	9.142	9.152	VV	141	558	0.02%	0.001%
148	9.163	9.152	9.183	VV	255	2696	0.08%	0.007%
149	9.195	9.183	9.214	VV	181	1888	0.06%	0.005%
150	9.245	9.214	9.253	VV	799	11100	0.34%	0.027%
151	9.256	9.253	9.306	VV	713	16012	0.49%	0.039%
152	9.309	9.306	9.316	VV	356	1919	0.06%	0.005%
153	9.338	9.316	9.349	VV	809	11074	0.34%	0.027%
154	9.372	9.349	9.378	VV	9923	96592	2.95%	0.237%
155	9.389	9.378	9.511	VV	12678	193430	5.91%	0.476%
156	9.520	9.511	9.553	VV	371	6086	0.19%	0.015%
157	9.572	9.553	9.582	VV	240	2922	0.09%	0.007%
158	9.584	9.582	9.607	VV	196	1297	0.04%	0.003%
159	9.634	9.607	9.656	PV	201	3011	0.09%	0.007%
160	9.661	9.656	9.668	VV	76	217	0.01%	0.001%
161	9.677	9.668	9.687	VV	71	313	0.01%	0.001%
162	9.738	9.687	9.777	VV	1613	52486	1.60%	0.129%
163	9.782	9.777	9.833	VV	980	21458	0.66%	0.053%
164	9.849	9.833	9.854	VV	452	4570	0.14%	0.011%
165	9.871	9.854	9.877	VV	545	6387	0.20%	0.016%
166	9.896	9.877	9.928	VV	1306	19356	0.59%	0.048%
167	9.950	9.928	9.968	VV	699	9210	0.28%	0.023%
168	9.985	9.968	10.000	VV	939	12599	0.38%	0.031%
169	10.024	10.000	10.087	VV	2197	78101	2.39%	0.192%
170	10.119	10.087	10.252	VV	252279	3043553	92.97%	7.482%
171	10.260	10.252	10.319	VV	767	19368	0.59%	0.048%
172	10.323	10.319	10.347	VV	247	3101	0.09%	0.008%
173	10.351	10.347	10.357	VV	140	842	0.03%	0.002%
174	10.363	10.357	10.377	VV	155	1282	0.04%	0.003%
175	10.380	10.377	10.385	VV	140	633	0.02%	0.002%
176	10.390	10.385	10.416	VV	179	1686	0.05%	0.004%
177	10.466	10.416	10.482	PV	474	10333	0.32%	0.025%
178	10.506	10.482	10.538	VV	1444	24367	0.74%	0.060%
179	10.544	10.538	10.548	VV	217	1120	0.03%	0.003%
180	10.584	10.548	10.590	VV	548	9377	0.29%	0.023%
181	10.595	10.590	10.621	VV	520	7273	0.22%	0.018%
182	10.656	10.621	10.662	VV	352	7274	0.22%	0.018%
183	10.680	10.662	10.712	VV	813	12746	0.39%	0.031%
184	10.717	10.712	10.723	VV	270	1394	0.04%	0.003%
185	10.741	10.723	10.752	VV	379	4631	0.14%	0.011%
186	10.754	10.752	10.768	VV	325	2601	0.08%	0.006%
187	10.787	10.768	10.809	VV	395	7104	0.22%	0.017%
188	10.862	10.809	10.904	VV	1222	36122	1.10%	0.089%
189	10.931	10.904	11.029	VV	3489	85299	2.61%	0.210%
190	11.084	11.029	11.095	VV	390	10094	0.31%	0.025%
191	11.104	11.095	11.109	VV	372	2705	0.08%	0.007%
192	11.137	11.109	11.217	VV	8198	219539	6.71%	0.540%
193	11.238	11.217	11.295	VV	2265	70579	2.16%	0.174%
194	11.313	11.295	11.334	VV	1162	21888	0.67%	0.054%

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195	11.338	11.334	11.358	VV	800	10328	0.32%	0.025%
196	11.367	11.358	11.408	VV	850	18659	0.57%	0.046%
197	11.414	11.408	11.419	VV	445	2921	0.09%	0.007%
198	11.427	11.419	11.444	VV	559	6760	0.21%	0.017%
199	11.493	11.444	11.520	VV	1535	44641	1.36%	0.110%
200	11.566	11.520	11.628	VV	271368	3226423	98.56%	7.932%
201	11.655	11.628	11.689	VV	3545	70486	2.15%	0.173%
202	11.705	11.689	11.746	VV	1054	28786	0.88%	0.071%
203	11.761	11.746	11.787	VV	748	13415	0.41%	0.033%
204	11.828	11.787	11.833	VV	780	17037	0.52%	0.042%
205	11.862	11.833	11.913	VV	1116	40562	1.24%	0.100%
206	11.953	11.913	11.976	VV	1859	48138	1.47%	0.118%
207	11.992	11.976	12.023	VV	1661	41257	1.26%	0.101%
208	12.050	12.023	12.082	VV	4241	81365	2.49%	0.200%
209	12.086	12.082	12.108	VV	1362	19432	0.59%	0.048%
210	12.125	12.108	12.161	VV	1453	34951	1.07%	0.086%
211	12.174	12.161	12.190	VV	855	13528	0.41%	0.033%
212	12.220	12.190	12.266	VV	2022	65050	1.99%	0.160%
213	12.294	12.266	12.319	VV	1712	40366	1.23%	0.099%
214	12.337	12.319	12.352	VV	1368	23283	0.71%	0.057%
215	12.361	12.352	12.387	VV	1267	23316	0.71%	0.057%
216	12.392	12.387	12.414	VV	1054	15064	0.46%	0.037%
217	12.437	12.414	12.448	VV	1397	25152	0.77%	0.062%
218	12.453	12.448	12.473	VV	1393	17421	0.53%	0.043%
219	12.495	12.473	12.575	VV	12085	209434	6.40%	0.515%
220	12.597	12.575	12.613	VV	1523	31555	0.96%	0.078%
221	12.617	12.613	12.628	VV	1412	12319	0.38%	0.030%
222	12.648	12.628	12.675	VV	1677	38320	1.17%	0.094%
223	12.702	12.675	12.726	VV	1818	42520	1.30%	0.105%
224	12.739	12.726	12.755	VV	1272	21031	0.64%	0.052%
225	12.760	12.755	12.778	VV	1144	15657	0.48%	0.038%
226	12.803	12.778	12.823	VV	1826	39238	1.20%	0.096%
227	12.881	12.823	12.928	VV	261671	3244599	99.11%	7.976%
228	12.960	12.928	13.048	VV	12768	316554	9.67%	0.778%
229	13.052	13.048	13.087	VV	1375	29619	0.90%	0.073%
230	13.098	13.087	13.113	VV	1359	20046	0.61%	0.049%
231	13.137	13.113	13.141	VV	1673	24880	0.76%	0.061%
232	13.153	13.141	13.186	VV	1813	41897	1.28%	0.103%
233	13.202	13.186	13.222	VV	1408	27643	0.84%	0.068%
234	13.259	13.222	13.320	VV	8162	233938	7.15%	0.575%
235	13.328	13.320	13.353	VV	2600	41535	1.27%	0.102%
236	13.376	13.353	13.413	VV	3118	83797	2.56%	0.206%
237	13.418	13.413	13.427	VV	1753	13384	0.41%	0.033%
238	13.430	13.427	13.448	VV	1692	19742	0.60%	0.049%
239	13.453	13.448	13.478	VV	1567	24848	0.76%	0.061%
240	13.494	13.478	13.515	VV	1979	36458	1.11%	0.090%
241	13.555	13.515	13.560	VV	1935	47482	1.45%	0.117%
242	13.563	13.560	13.583	VV	1930	23919	0.73%	0.059%
243	13.597	13.583	13.614	VV	1751	31421	0.96%	0.077%
244	13.626	13.614	13.645	VV	1639	27825	0.85%	0.068%
245	13.657	13.645	13.684	VV	1823	37628	1.15%	0.093%
246	13.717	13.684	13.756	VV	2612	89153	2.72%	0.219%

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247	13.766	13.756	13.794	VV	2075	41192	1.26%	0.101%
248	13.806	13.794	13.828	VV	1665	29776	0.91%	0.073%
249	13.847	13.828	13.860	VV	1866	32101	0.98%	0.079%
250	13.880	13.860	13.895	VV	2439	45168	1.38%	0.111%
251	13.915	13.895	13.958	VV	3035	90318	2.76%	0.222%
252	13.987	13.958	14.017	VV	2676	78715	2.40%	0.194%
253	14.037	14.017	14.048	VV	2478	41076	1.25%	0.101%
254	14.082	14.048	14.125	VV	257937	3209511	98.04%	7.890%
255	14.136	14.125	14.156	VV	2549	42662	1.30%	0.105%
256	14.166	14.156	14.198	VV	2141	47318	1.45%	0.116%
257	14.202	14.198	14.209	VV	1839	12074	0.37%	0.030%
258	14.225	14.209	14.252	VV	1821	43377	1.33%	0.107%
259	14.262	14.252	14.269	VV	1661	15798	0.48%	0.039%
260	14.275	14.269	14.281	VV	1619	11260	0.34%	0.028%
261	14.315	14.281	14.343	VV	2850	81238	2.48%	0.200%
262	14.346	14.343	14.352	VV	1846	10174	0.31%	0.025%
263	14.356	14.352	14.365	VV	1888	14274	0.44%	0.035%
264	14.373	14.365	14.385	VV	1893	22144	0.68%	0.054%
265	14.390	14.385	14.420	VV	1814	34730	1.06%	0.085%
266	14.444	14.420	14.450	VV	2124	32995	1.01%	0.081%
267	14.489	14.450	14.543	VV	3515	141448	4.32%	0.348%
268	14.548	14.543	14.555	VV	1795	12015	0.37%	0.030%
269	14.562	14.555	14.573	VV	1828	18260	0.56%	0.045%
270	14.578	14.573	14.612	VV	1846	39093	1.19%	0.096%
271	14.646	14.612	14.667	VV	2793	65759	2.01%	0.162%
272	14.709	14.667	14.723	VV	2641	74173	2.27%	0.182%
273	14.727	14.723	14.732	VV	2447	11929	0.36%	0.029%
274	14.738	14.732	14.742	VV	2465	15086	0.46%	0.037%
275	14.766	14.742	14.825	VV	2816	113800	3.48%	0.280%
276	14.852	14.825	14.869	VV	2281	52702	1.61%	0.130%
277	14.889	14.869	14.911	VV	2425	56115	1.71%	0.138%
278	14.916	14.911	14.924	VV	2158	16722	0.51%	0.041%
279	14.930	14.924	14.946	VV	2134	25454	0.78%	0.063%
280	14.983	14.946	15.035	VV	117112	1674910	51.16%	4.118%
281	15.038	15.035	15.056	VV	2605	30420	0.93%	0.075%
282	15.070	15.056	15.101	VV	2596	61203	1.87%	0.150%
283	15.106	15.101	15.126	VV	1925	24904	0.76%	0.061%
284	15.188	15.126	15.221	VV	245890	3273648	100.00%	8.048%
285	15.232	15.221	15.283	VV	3935	115927	3.54%	0.285%
286	15.289	15.283	15.296	VV	2086	15145	0.46%	0.037%
287	15.316	15.296	15.355	VV	2430	74367	2.27%	0.183%
288	15.387	15.355	15.407	VV	1983	54185	1.66%	0.133%
289	15.427	15.407	15.431	VV	1845	24108	0.74%	0.059%
290	15.435	15.431	15.443	VV	1896	12562	0.38%	0.031%
291	15.449	15.443	15.471	VV	1907	29134	0.89%	0.072%
292	15.473	15.471	15.491	VV	1702	18383	0.56%	0.045%
293	15.495	15.491	15.500	VV	1593	8033	0.25%	0.020%
294	15.529	15.500	15.540	VV	1840	40858	1.25%	0.100%
295	15.571	15.540	15.681	VV	35661	825351	25.21%	2.029%
296	15.709	15.681	15.749	VV	4632	129797	3.96%	0.319%
297	15.775	15.749	15.821	VV	4501	114144	3.49%	0.281%
298	15.837	15.821	15.868	VV	1642	42485	1.30%	0.104%
299	15.872	15.868	15.877	VV	1470	6701	0.20%	0.016%

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300	15.893	15.877	15.906	VV	1470	23893	0.73%	0.059%
301	15.925	15.906	15.943	VV	1469	29996	0.92%	0.074%
302	15.949	15.943	15.953	VV	1334	7549	0.23%	0.019%
303	15.969	15.953	15.973	VV	1696	16781	0.51%	0.041%
304	15.981	15.973	15.988	VV	1522	13140	0.40%	0.032%
305	16.026	15.988	16.062	VV	2394	83966	2.56%	0.206%
306	16.096	16.062	16.127	VV	2137	67066	2.05%	0.165%
307	16.132	16.127	16.153	VV	1390	20385	0.62%	0.050%
308	16.211	16.153	16.295	VV	243482	3241148	99.01%	7.968%
309	16.298	16.295	16.326	VV	1126	17856	0.55%	0.044%
310	16.348	16.326	16.369	VV	1015	22078	0.67%	0.054%
311	16.394	16.369	16.398	VV	1267	16975	0.52%	0.042%
312	16.402	16.398	16.428	VV	1160	16800	0.51%	0.041%
313	16.442	16.428	16.473	VV	991	22381	0.68%	0.055%
314	16.509	16.473	16.560	VV	1598	64558	1.97%	0.159%
315	16.594	16.560	16.634	VV	4192	104632	3.20%	0.257%
316	16.655	16.634	16.670	VV	1476	28339	0.87%	0.070%
317	16.694	16.670	16.724	VV	4104	65582	2.00%	0.161%
318	16.768	16.724	16.835	VV	1945	72383	2.21%	0.178%
319	16.851	16.835	16.873	VV	932	16728	0.51%	0.041%
320	16.880	16.873	16.886	VV	581	4282	0.13%	0.011%
321	16.923	16.886	16.950	VV	1051	26302	0.80%	0.065%
322	16.988	16.950	17.020	VV	1344	36776	1.12%	0.090%
323	17.024	17.020	17.030	VV	815	4651	0.14%	0.011%
324	17.036	17.030	17.040	VV	939	5263	0.16%	0.013%
325	17.044	17.040	17.059	VV	1022	9812	0.30%	0.024%
326	17.073	17.059	17.095	VV	905	15996	0.49%	0.039%
327	17.099	17.095	17.104	VV	670	3366	0.10%	0.008%
328	17.164	17.104	17.200	VV	226668	3129449	95.60%	7.693%
329	17.208	17.200	17.234	VV	1687	24418	0.75%	0.060%
330	17.241	17.234	17.265	VV	1021	13611	0.42%	0.033%
331	17.269	17.265	17.277	VV	378	2504	0.08%	0.006%
332	17.280	17.277	17.314	VV	338	4429	0.14%	0.011%
333	17.322	17.314	17.327	VV	156	835	0.03%	0.002%
334	17.332	17.327	17.340	VV	120	556	0.02%	0.001%
335	17.349	17.340	17.352	VV	78	369	0.01%	0.001%
336	17.395	17.352	17.400	PBA	166	1667	0.05%	0.004%
				Sum of corrected areas:		40677580		

FG042425.M Thu May 22 01:26:37 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/13/25
Project:	South River WM Replacement	Date Received:	05/13/25
Client Sample ID:	TP-24MSD	SDG No.:	Q2074
Lab Sample ID:	Q2032-06MSD	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	74.2
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
FG015874.D	1	05/20/25 10:15	05/21/25 14:43	PB168084

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	14200		228	2240	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_G\Data\FG052125\
 Data File : FG015874.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 14:43
 Operator : YP\AJ
 Sample : Q2032-06MSD
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 TP-24MSD

Integration File: autoint1.e
 Quant Time: May 22 00:40:43 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 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...	14.984	1582416	13.440 ug/ml
Target Compounds			
2) N-DECANE	4.488	2524324	22.674 ug/ml
3) N-DODECANE	6.670	2750898	24.004 ug/ml
4) N-TETRADECANE	8.505	2856872	23.577 ug/ml
5) N-HEXADECANE	10.119	3052461	24.314 ug/ml
6) N-OCTADECANE	11.566	3242042	24.739 ug/ml
7) N-EICOSANE	12.880	3237531	23.880 ug/ml
8) N-DOCOSANE	14.082	3176608	23.951 ug/ml
10) N-TETRACOSANE	15.188	3217146	24.210 ug/ml
11) N-HEXACOSANE	16.211	3209178	24.198 ug/ml
12) N-OCTACOSANE	17.163	3157587	23.951 ug/mlm

(f)=RT Delta > 1/2 Window

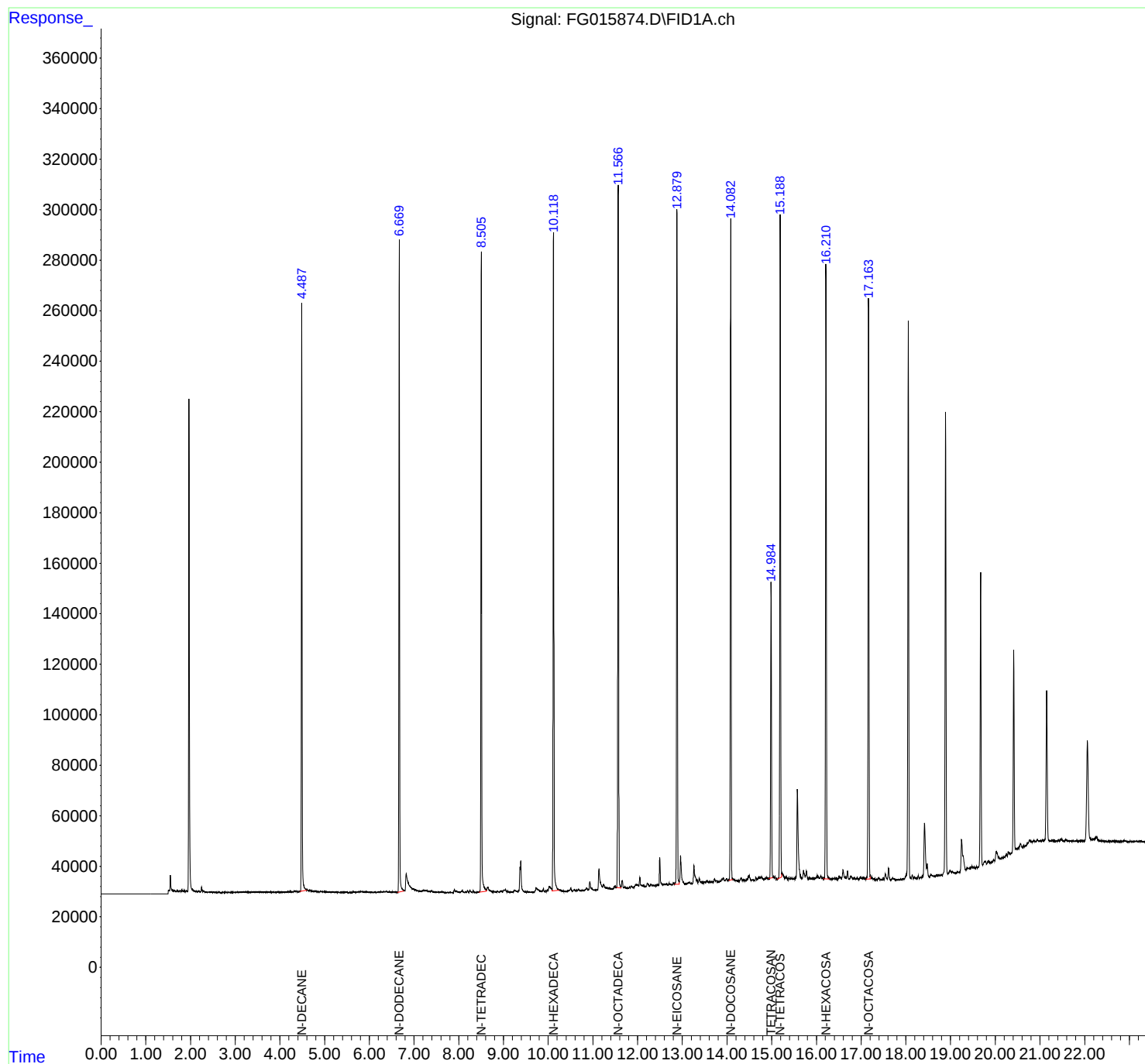
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
Data File : FG015874.D
Signal(s) : FID1A.ch
Acq On : 21 May 2025 14:43
Operator : YP\AJ
Sample : Q2032-06MSD
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-24MSD

Integration File: autoint1.e
Quant Time: May 22 00:40:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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



Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG052125\
 Data File : FG015874.D
 Signal(s) : FID1A.ch
 Acq On : 21 May 2025 14:43
 Sample : Q2032-06MSD
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.318	4.300	4.327	BV	262	1058	0.03%	0.003%
2	4.357	4.327	4.372	PV	168	2271	0.07%	0.005%
3	4.377	4.372	4.412	VV	143	2072	0.06%	0.005%
4	4.443	4.412	4.454	VV	187	2835	0.08%	0.007%
5	4.488	4.454	4.603	VV	233146	2562655	76.43%	6.160%
6	4.612	4.603	4.637	VV	930	14336	0.43%	0.034%
7	4.641	4.637	4.651	VV	544	4347	0.13%	0.010%
8	4.667	4.651	4.700	VV	883	18226	0.54%	0.044%
9	4.701	4.700	4.727	VV	497	6292	0.19%	0.015%
10	4.733	4.727	4.760	VV	402	5847	0.17%	0.014%
11	4.774	4.760	4.804	VV	431	8448	0.25%	0.020%
12	4.807	4.804	4.814	VV	338	1659	0.05%	0.004%
13	4.817	4.814	4.826	VV	308	1626	0.05%	0.004%
14	4.830	4.826	4.845	VV	254	2576	0.08%	0.006%
15	4.851	4.845	4.873	VV	291	3555	0.11%	0.009%
16	4.898	4.873	4.906	VV	246	3630	0.11%	0.009%
17	4.910	4.906	4.929	VV	225	2817	0.08%	0.007%
18	4.933	4.929	4.941	VV	249	1511	0.05%	0.004%
19	4.946	4.941	4.966	VV	301	3274	0.10%	0.008%
20	4.971	4.966	4.987	VV	229	2396	0.07%	0.006%
21	4.997	4.987	5.021	VV	239	3639	0.11%	0.009%
22	5.025	5.021	5.036	VV	184	1116	0.03%	0.003%
23	5.046	5.036	5.071	VV	135	2261	0.07%	0.005%
24	5.075	5.071	5.087	VV	170	1085	0.03%	0.003%
25	5.090	5.087	5.124	VV	175	2899	0.09%	0.007%
26	5.129	5.124	5.135	VV	123	555	0.02%	0.001%
27	5.156	5.135	5.166	VV	201	2510	0.07%	0.006%
28	5.173	5.166	5.188	VV	208	1666	0.05%	0.004%
29	5.192	5.188	5.210	VV	114	1302	0.04%	0.003%
30	5.215	5.210	5.230	VV	127	904	0.03%	0.002%
31	5.241	5.230	5.261	VV	138	1416	0.04%	0.003%
32	5.265	5.261	5.273	VV	79	325	0.01%	0.001%
33	5.295	5.273	5.299	PV	100	633	0.02%	0.002%
34	5.307	5.299	5.325	VV	92	1050	0.03%	0.003%
35	5.331	5.325	5.342	VV	110	855	0.03%	0.002%
36	5.345	5.342	5.351	VV	83	349	0.01%	0.001%

					rteres			
37	5.356	5.351	5.371	VV	90	729	0.02%	0.002%
38	5.385	5.371	5.410	VV	72	1020	0.03%	0.002%
39	5.417	5.410	5.430	VV	94	650	0.02%	0.002%
40	5.470	5.430	5.484	VV	164	2774	0.08%	0.007%
41	5.487	5.484	5.502	VV	87	852	0.03%	0.002%
42	5.510	5.502	5.520	VV	64	519	0.02%	0.001%
43	5.535	5.520	5.550	VV	125	1032	0.03%	0.002%
44	5.576	5.550	5.590	PV	102	1118	0.03%	0.003%
45	5.598	5.590	5.607	VV	102	661	0.02%	0.002%
46	5.614	5.607	5.620	VV	96	369	0.01%	0.001%
47	5.637	5.620	5.665	VV	420	5927	0.18%	0.014%
48	5.692	5.665	5.702	VV	149	2250	0.07%	0.005%
49	5.731	5.702	5.737	VV	319	3733	0.11%	0.009%
50	5.745	5.737	5.751	VV	343	2523	0.08%	0.006%
51	5.762	5.751	5.767	VV	337	2960	0.09%	0.007%
52	5.780	5.767	5.793	VV	397	5260	0.16%	0.013%
53	5.808	5.793	5.823	VV	425	6567	0.20%	0.016%
54	5.833	5.823	5.854	VV	454	6494	0.19%	0.016%
55	5.860	5.854	5.877	VV	340	3921	0.12%	0.009%
56	5.882	5.877	5.970	VV	375	15571	0.46%	0.037%
57	5.982	5.970	5.988	VV	242	2062	0.06%	0.005%
58	5.998	5.988	6.012	VV	192	2324	0.07%	0.006%
59	6.016	6.012	6.030	VV	179	1593	0.05%	0.004%
60	6.036	6.030	6.039	VV	230	727	0.02%	0.002%
61	6.043	6.039	6.049	VV	187	795	0.02%	0.002%
62	6.054	6.049	6.089	VV	144	2655	0.08%	0.006%
63	6.110	6.089	6.144	PV	215	3761	0.11%	0.009%
64	6.163	6.144	6.182	VV	239	3686	0.11%	0.009%
65	6.207	6.182	6.216	VV	337	4902	0.15%	0.012%
66	6.264	6.216	6.302	VV	398	15794	0.47%	0.038%
67	6.316	6.302	6.345	VV	479	9352	0.28%	0.022%
68	6.382	6.345	6.415	VV	673	16814	0.50%	0.040%
69	6.420	6.415	6.498	VV	341	11690	0.35%	0.028%
70	6.561	6.498	6.618	VV	323	12654	0.38%	0.030%
71	6.670	6.618	6.799	VV	257984	2800164	83.51%	6.730%
72	6.826	6.799	6.984	VV	7523	365241	10.89%	0.878%
73	6.993	6.984	7.022	VV	1473	29138	0.87%	0.070%
74	7.033	7.022	7.112	VV	1170	44945	1.34%	0.108%
75	7.134	7.112	7.153	VV	678	14986	0.45%	0.036%
76	7.202	7.153	7.235	VV	942	38204	1.14%	0.092%
77	7.243	7.235	7.285	VV	903	25159	0.75%	0.060%
78	7.290	7.285	7.334	VV	756	17600	0.52%	0.042%
79	7.350	7.334	7.370	VV	597	10833	0.32%	0.026%
80	7.393	7.370	7.442	VV	968	21786	0.65%	0.052%
81	7.455	7.442	7.480	VV	350	6324	0.19%	0.015%
82	7.495	7.480	7.552	VV	317	9275	0.28%	0.022%
83	7.565	7.552	7.605	VV	318	6505	0.19%	0.016%
84	7.624	7.605	7.692	VV	556	12105	0.36%	0.029%
85	7.727	7.692	7.769	VV	125	3627	0.11%	0.009%
86	7.800	7.769	7.820	VV	231	3746	0.11%	0.009%
87	7.846	7.820	7.859	PV	91	932	0.03%	0.002%
88	7.905	7.859	7.987	PV	1397	38205	1.14%	0.092%
89	7.995	7.987	8.022	VV	275	3621	0.11%	0.009%

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90	8.050	8.022	8.060	VV	444	6646	0.20%	0.016%
91	8.078	8.060	8.130	VV	1082	17945	0.54%	0.043%
92	8.151	8.130	8.174	VV	316	5086	0.15%	0.012%
93	8.197	8.174	8.219	VV	914	12196	0.36%	0.029%
94	8.254	8.219	8.300	VV	1084	20449	0.61%	0.049%
95	8.322	8.300	8.347	VV	722	8754	0.26%	0.021%
96	8.361	8.347	8.384	VV	178	2675	0.08%	0.006%
97	8.410	8.384	8.431	VV	409	5538	0.17%	0.013%
98	8.505	8.431	8.615	VV	254025	2896734	86.39%	6.963%
99	8.651	8.615	8.732	VV	2161	81886	2.44%	0.197%
100	8.744	8.732	8.772	VV	548	10159	0.30%	0.024%
101	8.779	8.772	8.809	VV	386	6897	0.21%	0.017%
102	8.819	8.809	8.849	VV	315	6866	0.20%	0.017%
103	8.865	8.849	8.905	VV	599	11866	0.35%	0.029%
104	8.954	8.905	8.977	VV	527	17272	0.52%	0.042%
105	9.004	8.977	9.030	VV	1042	25122	0.75%	0.060%
106	9.046	9.030	9.085	VV	1379	24548	0.73%	0.059%
107	9.099	9.085	9.145	VV	365	8839	0.26%	0.021%
108	9.165	9.145	9.184	VV	229	3663	0.11%	0.009%
109	9.193	9.184	9.210	VV	208	2254	0.07%	0.005%
110	9.248	9.210	9.315	VV	867	34085	1.02%	0.082%
111	9.337	9.315	9.346	VV	833	10551	0.31%	0.025%
112	9.388	9.346	9.509	VV	12599	298800	8.91%	0.718%
113	9.527	9.509	9.562	VV	382	8234	0.25%	0.020%
114	9.571	9.562	9.602	VV	215	3348	0.10%	0.008%
115	9.637	9.602	9.682	VV	218	4989	0.15%	0.012%
116	9.738	9.682	9.839	PV	1683	81674	2.44%	0.196%
117	9.896	9.839	9.925	VV	1415	31057	0.93%	0.075%
118	9.950	9.925	9.965	VV	671	9944	0.30%	0.024%
119	9.986	9.965	9.998	VV	921	12839	0.38%	0.031%
120	10.028	9.998	10.086	VV	2219	81604	2.43%	0.196%
121	10.118	10.086	10.374	VV	260518	3129463	93.33%	7.522%
122	10.383	10.374	10.419	VV	117	2171	0.06%	0.005%
123	10.467	10.419	10.484	PV	545	11419	0.34%	0.027%
124	10.506	10.484	10.550	VV	1457	26051	0.78%	0.063%
125	10.585	10.550	10.623	VV	521	16878	0.50%	0.041%
126	10.647	10.623	10.660	VV	397	6715	0.20%	0.016%
127	10.681	10.660	10.709	VV	828	12720	0.38%	0.031%
128	10.752	10.709	10.766	VV	341	7523	0.22%	0.018%
129	10.788	10.766	10.807	VV	419	6672	0.20%	0.016%
130	10.860	10.807	10.901	VV	1300	35232	1.05%	0.085%
131	10.932	10.901	11.034	VV	3530	84976	2.53%	0.204%
132	11.137	11.034	11.217	VV	8475	235529	7.02%	0.566%
133	11.237	11.217	11.292	VV	2249	67707	2.02%	0.163%
134	11.312	11.292	11.355	VV	1114	31713	0.95%	0.076%
135	11.368	11.355	11.409	VV	772	18792	0.56%	0.045%
136	11.420	11.409	11.442	VV	471	8084	0.24%	0.019%
137	11.494	11.442	11.522	VV	1581	46254	1.38%	0.111%
138	11.566	11.522	11.629	VV	278161	3293146	98.21%	7.915%
139	11.655	11.629	11.689	VV	3525	69923	2.09%	0.168%
140	11.710	11.689	11.745	VV	1070	27508	0.82%	0.066%
141	11.762	11.745	11.792	VV	672	14731	0.44%	0.035%

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142	11.858	11.792	11.907	VV	1179	53403	1.59%	0.128%
143	11.954	11.907	11.980	VV	1837	55204	1.65%	0.133%
144	11.992	11.980	12.027	VV	1692	42101	1.26%	0.101%
145	12.050	12.027	12.107	VV	4555	102299	3.05%	0.246%
146	12.126	12.107	12.158	VV	1523	36047	1.08%	0.087%
147	12.174	12.158	12.187	VV	854	14144	0.42%	0.034%
148	12.216	12.187	12.268	VV	2099	70505	2.10%	0.169%
149	12.295	12.268	12.321	VV	1815	41847	1.25%	0.101%
150	12.337	12.321	12.379	VV	1354	41066	1.22%	0.099%
151	12.386	12.379	12.410	VV	1152	19637	0.59%	0.047%
152	12.436	12.410	12.474	VV	1503	46759	1.39%	0.112%
153	12.494	12.474	12.579	VV	12207	217260	6.48%	0.522%
154	12.595	12.579	12.614	VV	1512	29835	0.89%	0.072%
155	12.625	12.614	12.635	VV	1454	18459	0.55%	0.044%
156	12.648	12.635	12.681	VV	1685	38690	1.15%	0.093%
157	12.703	12.681	12.725	VV	2006	39541	1.18%	0.095%
158	12.737	12.725	12.779	VV	1325	39882	1.19%	0.096%
159	12.800	12.779	12.822	VV	1976	40987	1.22%	0.099%
160	12.880	12.822	12.930	VV	268114	3321447	99.06%	7.983%
161	12.960	12.930	13.047	VV	12384	322288	9.61%	0.775%
162	13.060	13.047	13.077	VV	1399	23476	0.70%	0.056%
163	13.094	13.077	13.104	VV	1381	21613	0.64%	0.052%
164	13.154	13.104	13.200	VV	1788	90366	2.70%	0.217%
165	13.205	13.200	13.221	VV	1527	16717	0.50%	0.040%
166	13.259	13.221	13.349	VV	8399	280315	8.36%	0.674%
167	13.376	13.349	13.449	VV	3159	124493	3.71%	0.299%
168	13.456	13.449	13.475	VV	1658	23925	0.71%	0.058%
169	13.495	13.475	13.519	VV	1948	43152	1.29%	0.104%
170	13.559	13.519	13.582	VV	2005	69476	2.07%	0.167%
171	13.598	13.582	13.619	VV	1759	36955	1.10%	0.089%
172	13.628	13.619	13.640	VV	1612	20054	0.60%	0.048%
173	13.660	13.640	13.680	VV	1810	39731	1.18%	0.095%
174	13.719	13.680	13.754	VV	2777	94002	2.80%	0.226%
175	13.767	13.754	13.792	VV	2289	44217	1.32%	0.106%
176	13.803	13.792	13.824	VV	1800	31000	0.92%	0.075%
177	13.848	13.824	13.859	VV	1945	36677	1.09%	0.088%
178	13.884	13.859	13.895	VV	2487	48893	1.46%	0.118%
179	13.918	13.895	13.954	VV	3098	88133	2.63%	0.212%
180	13.986	13.954	14.019	VV	2720	90349	2.69%	0.217%
181	14.034	14.019	14.046	VV	2521	38502	1.15%	0.093%
182	14.082	14.046	14.122	VV	262474	3277056	97.73%	7.877%
183	14.134	14.122	14.150	VV	2635	42346	1.26%	0.102%
184	14.166	14.150	14.197	VV	2229	57156	1.70%	0.137%
185	14.217	14.197	14.267	VV	1953	73483	2.19%	0.177%
186	14.314	14.267	14.339	VV	2980	96218	2.87%	0.231%
187	14.347	14.339	14.364	VV	2047	29690	0.89%	0.071%
188	14.381	14.364	14.425	VV	2092	66978	2.00%	0.161%
189	14.489	14.425	14.541	VV	3439	173421	5.17%	0.417%
190	14.571	14.541	14.620	VV	1910	86439	2.58%	0.208%
191	14.644	14.620	14.668	VV	2741	63161	1.88%	0.152%
192	14.711	14.668	14.725	VV	2763	80286	2.39%	0.193%
193	14.769	14.725	14.823	VV	2966	145442	4.34%	0.350%
194	14.854	14.823	14.865	VV	2292	54027	1.61%	0.130%

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195	14.887	14.865	14.909	VV	2550	62415	1.86%	0.150%
196	14.922	14.909	14.946	VV	2418	49340	1.47%	0.119%
197	14.984	14.946	15.023	VV	119362	1693462	50.50%	4.070%
198	15.037	15.023	15.055	VV	2861	50926	1.52%	0.122%
199	15.069	15.055	15.130	VV	2755	96140	2.87%	0.231%
200	15.188	15.130	15.227	VV	263881	3353088	100.00%	8.059%
201	15.233	15.227	15.292	VV	4166	118687	3.54%	0.285%
202	15.323	15.292	15.358	VV	2523	86074	2.57%	0.207%
203	15.390	15.358	15.415	VV	2061	62102	1.85%	0.149%
204	15.433	15.415	15.466	VV	2009	56570	1.69%	0.136%
205	15.475	15.466	15.496	VV	1889	30866	0.92%	0.074%
206	15.572	15.496	15.685	VV	36988	901242	26.88%	2.166%
207	15.709	15.685	15.757	VV	4957	140888	4.20%	0.339%
208	15.776	15.757	15.820	VV	4538	104258	3.11%	0.251%
209	15.845	15.820	15.867	VV	1904	46075	1.37%	0.111%
210	15.888	15.867	15.910	VV	1672	39272	1.17%	0.094%
211	15.927	15.910	15.942	VV	1577	28065	0.84%	0.067%
212	15.967	15.942	15.980	VV	1648	34584	1.03%	0.083%
213	16.018	15.980	16.068	VV	2462	102896	3.07%	0.247%
214	16.097	16.068	16.150	VV	2498	88195	2.63%	0.212%
215	16.212	16.150	16.295	VV	240182	3312874	98.80%	7.963%
216	16.309	16.295	16.327	VV	1264	21159	0.63%	0.051%
217	16.343	16.327	16.366	VV	1106	23856	0.71%	0.057%
218	16.397	16.366	16.424	VV	1307	38237	1.14%	0.092%
219	16.454	16.424	16.475	VV	1109	31034	0.93%	0.075%
220	16.521	16.475	16.555	VV	1778	68095	2.03%	0.164%
221	16.595	16.555	16.640	VV	4450	120476	3.59%	0.290%
222	16.652	16.640	16.670	VV	1506	25531	0.76%	0.061%
223	16.695	16.670	16.727	VV	4001	70426	2.10%	0.169%
224	16.770	16.727	16.834	VV	2034	78335	2.34%	0.188%
225	16.852	16.834	16.885	VV	1044	26361	0.79%	0.063%
226	16.919	16.885	16.949	VV	1103	30788	0.92%	0.074%
227	16.990	16.949	17.028	VV	1535	47028	1.40%	0.113%
228	17.042	17.028	17.061	VV	1093	17958	0.54%	0.043%
229	17.075	17.061	17.109	VV	946	22346	0.67%	0.054%
230	17.165	17.109	17.200	VV	230237	3185580	95.00%	7.657%
231	17.209	17.200	17.230	VV	1872	24173	0.72%	0.058%
232	17.243	17.230	17.333	VV	989	28349	0.85%	0.068%
233	17.343	17.333	17.364	PV	158	1770	0.05%	0.004%
Sum of corrected areas:						41604525		

FG042425.M Thu May 22 01:27:22 2025

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2074-05		FF015884.D	FF052125	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q2074-07		FF015886.D	FF052125	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
.BLK		FF015888.D	FF052125	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2032-06MSD		FG015874.D	FG052125	N-OCTACOSANE	 	 	Peak Integrated by Software incorrectly
Q2074-03		FG015881.D	FG052125	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM
Supervise By		Supervise On	
SubDirectory	FF052125	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015872.D	21 May 2025 09:21	YP\AJ	Ok
2	I.BLK	FF015873.D	21 May 2025 09:50	YP\AJ	Ok
3	100 TRPH STD	FF015874.D	21 May 2025 10:19	YP\AJ	Ok
4	50 TRPH STD	FF015875.D	21 May 2025 10:48	YP\AJ	Ok
5	20 TRPH STD	FF015876.D	21 May 2025 11:18	YP\AJ	Ok
6	10 TRPH STD	FF015877.D	21 May 2025 11:47	YP\AJ	Ok
7	5 TRPH STD	FF015878.D	21 May 2025 12:16	YP\AJ	Ok
8	FF052125ICV	FF015879.D	21 May 2025 12:45	YP\AJ	Ok
9	I.BLK	FF015880.D	21 May 2025 13:15	YP\AJ	Ok
10	50 PPM TRPH STD	FF015881.D	21 May 2025 13:44	YP\AJ	Ok
11	RT MARKER	FF015882.D	21 May 2025 14:13	YP\AJ	Ok
12	Q2074-04	FF015883.D	21 May 2025 14:43	YP\AJ	Ok
13	Q2074-05	FF015884.D	21 May 2025 15:12	YP\AJ	Ok,NS
14	Q2074-06	FF015885.D	21 May 2025 15:41	YP\AJ	Ok
15	Q2074-07	FF015886.D	21 May 2025 16:10	YP\AJ	Ok,NS
16	Q2074-08	FF015887.D	21 May 2025 16:40	YP\AJ	Ok
17	I.BLK	FF015888.D	21 May 2025 17:09	YP\AJ	Ok,NS
18	50 PPM TRPH STD	FF015889.D	21 May 2025 17:38	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG042425

Review By	yogesh	Review On	4/24/2025 12:59:08 PM
Supervise By	mohammad	Supervise On	4/26/2025 2:19:49 AM
SubDirectory	FG042425	HP Acquire Method	HP Processing Method FG042425
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FG015754.D	24 Apr 2025 09:50	YP\AJ	Ok
2	I.BLK	FG015755.D	24 Apr 2025 10:19	YP\AJ	Ok
3	100 TRPH STD	FG015756.D	24 Apr 2025 10:48	YP\AJ	Ok
4	50 TRPH STD	FG015757.D	24 Apr 2025 11:17	YP\AJ	Ok
5	20 TRPH STD	FG015758.D	24 Apr 2025 11:46	YP\AJ	Ok
6	10 TRPH STD	FG015759.D	24 Apr 2025 12:16	YP\AJ	Ok
7	5 TRPH STD	FG015760.D	24 Apr 2025 12:45	YP\AJ	Ok
8	FG042225ICV	FG015761.D	24 Apr 2025 13:14	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG052125

Review By	yogesh	Review On	5/21/2025 10:13:35 AM
Supervise By		Supervise On	
SubDirectory	FG052125	HP Acquire Method	HP Processing Method FG042425
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24469 PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FG015863.D	21 May 2025 09:21	YP\AJ	Ok
2	I.BLK	FG015864.D	21 May 2025 09:50	YP\AJ	Ok
3	50 PPM TRPH STD	FG015865.D	21 May 2025 10:19	YP\AJ	Ok
4	RT MARKER	FG015866.D	21 May 2025 10:48	YP\AJ	Ok
5	PB168084BL	FG015867.D	21 May 2025 11:18	YP\AJ	Ok
6	PB168084BS	FG015868.D	21 May 2025 11:47	YP\AJ	Ok
7	Q2032-01	FG015869.D	21 May 2025 12:16	YP\AJ	Ok
8	Q2032-02	FG015870.D	21 May 2025 12:45	YP\AJ	Ok
9	Q2032-03	FG015871.D	21 May 2025 13:15	YP\AJ	Ok
10	Q2032-04	FG015872.D	21 May 2025 13:44	YP\AJ	Ok
11	Q2032-05MS	FG015873.D	21 May 2025 14:13	YP\AJ	Ok
12	Q2032-06MSD	FG015874.D	21 May 2025 14:43	YP\AJ	Ok,NS
13	I.BLK	FG015875.D	21 May 2025 15:12	YP\AJ	Ok
14	50 PPM TRPH STD	FG015876.D	21 May 2025 15:41	YP\AJ	Ok
15	Q2032-07	FG015877.D	21 May 2025 16:10	YP\AJ	Ok
16	Q2032-08	FG015878.D	21 May 2025 16:40	YP\AJ	Ok
17	Q2074-01	FG015879.D	21 May 2025 17:09	YP\AJ	Ok
18	Q2074-02	FG015880.D	21 May 2025 17:38	YP\AJ	Ok
19	Q2074-03	FG015881.D	21 May 2025 18:07	YP\AJ	Ok,NS
20	I.BLK	FG015882.D	21 May 2025 18:37	YP\AJ	Ok
21	50 PPM TRPH STD	FG015883.D	21 May 2025 19:06	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM
Supervise By		Supervise On	
SubDirectory	FF052125	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015872.D	21 May 2025 09:21		YPIAJ	Ok
2	I.BLK		FF015873.D	21 May 2025 09:50		YPIAJ	Ok
3	100 TRPH STD		FF015874.D	21 May 2025 10:19		YPIAJ	Ok
4	50 TRPH STD		FF015875.D	21 May 2025 10:48		YPIAJ	Ok
5	20 TRPH STD		FF015876.D	21 May 2025 11:18		YPIAJ	Ok
6	10 TRPH STD		FF015877.D	21 May 2025 11:47		YPIAJ	Ok
7	5 TRPH STD		FF015878.D	21 May 2025 12:16		YPIAJ	Ok
8	FF052125ICV		FF015879.D	21 May 2025 12:45		YPIAJ	Ok
9	I.BLK		FF015880.D	21 May 2025 13:15		YPIAJ	Ok
10	50 PPM TRPH STD		FF015881.D	21 May 2025 13:44		YPIAJ	Ok
11	RT MARKER		FF015882.D	21 May 2025 14:13		YPIAJ	Ok
12	Q2074-04		FF015883.D	21 May 2025 14:43		YPIAJ	Ok
13	Q2074-05		FF015884.D	21 May 2025 15:12		YPIAJ	Ok,NS
14	Q2074-06		FF015885.D	21 May 2025 15:41		YPIAJ	Ok
15	Q2074-07		FF015886.D	21 May 2025 16:10		YPIAJ	Ok,NS
16	Q2074-08		FF015887.D	21 May 2025 16:40		YPIAJ	Ok
17	I.BLK		FF015888.D	21 May 2025 17:09		YPIAJ	Ok,NS
18	50 PPM TRPH STD		FF015889.D	21 May 2025 17:38		YPIAJ	Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM
Supervise By		Supervise On	
SubDirectory	FF052125	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG042425

Review By	yogesh	Review On	4/24/2025 12:59:08 PM
Supervise By	mohammad	Supervise On	4/26/2025 2:19:49 AM
SubDirectory	FG042425	HP Acquire Method	HP Processing Method FG042425

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG015754.D	24 Apr 2025 09:50		YP\AJ	Ok
2	I.BLK		FG015755.D	24 Apr 2025 10:19		YP\AJ	Ok
3	100 TRPH STD		FG015756.D	24 Apr 2025 10:48		YP\AJ	Ok
4	50 TRPH STD		FG015757.D	24 Apr 2025 11:17		YP\AJ	Ok
5	20 TRPH STD		FG015758.D	24 Apr 2025 11:46		YP\AJ	Ok
6	10 TRPH STD		FG015759.D	24 Apr 2025 12:16		YP\AJ	Ok
7	5 TRPH STD		FG015760.D	24 Apr 2025 12:45		YP\AJ	Ok
8	FG042225ICV		FG015761.D	24 Apr 2025 13:14		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG052125

Review By	yogesh	Review On	5/21/2025 10:13:35 AM
Supervise By		Supervise On	
SubDirectory	FG052125	HP Acquire Method	HP Processing Method FG042425
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC	PP24469		
Internal Standard/PEM			
ICV/I.BLK	PP24468,PP24473		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG015863.D	21 May 2025 09:21		YPIAJ	Ok
2	I.BLK		FG015864.D	21 May 2025 09:50		YPIAJ	Ok
3	50 PPM TRPH STD		FG015865.D	21 May 2025 10:19		YPIAJ	Ok
4	RT MARKER		FG015866.D	21 May 2025 10:48		YPIAJ	Ok
5	PB168084BL		FG015867.D	21 May 2025 11:18		YPIAJ	Ok
6	PB168084BS		FG015868.D	21 May 2025 11:47		YPIAJ	Ok
7	Q2032-01		FG015869.D	21 May 2025 12:16		YPIAJ	Ok
8	Q2032-02		FG015870.D	21 May 2025 12:45		YPIAJ	Ok
9	Q2032-03		FG015871.D	21 May 2025 13:15		YPIAJ	Ok
10	Q2032-04		FG015872.D	21 May 2025 13:44		YPIAJ	Ok
11	Q2032-05MS		FG015873.D	21 May 2025 14:13		YPIAJ	Ok
12	Q2032-06MSD		FG015874.D	21 May 2025 14:43		YPIAJ	Ok,NS
13	I.BLK		FG015875.D	21 May 2025 15:12		YPIAJ	Ok
14	50 PPM TRPH STD		FG015876.D	21 May 2025 15:41		YPIAJ	Ok
15	Q2032-07		FG015877.D	21 May 2025 16:10		YPIAJ	Ok
16	Q2032-08		FG015878.D	21 May 2025 16:40		YPIAJ	Ok
17	Q2074-01		FG015879.D	21 May 2025 17:09		YPIAJ	Ok
18	Q2074-02		FG015880.D	21 May 2025 17:38		YPIAJ	Ok

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG052125

Review By	yogesh	Review On	5/21/2025 10:13:35 AM
Supervise By		Supervise On	
SubDirectory	FG052125	HP Acquire Method	HP Processing Method FG042425

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472
CCC Internal Standard/PEM	PP24469
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473

19	Q2074-03		FG015881.D	21 May 2025 18:07		YP\AJ	Ok,NS
20	I.BLK		FG015882.D	21 May 2025 18:37		YP\AJ	Ok
21	50 PPM TRPH STD		FG015883.D	21 May 2025 19:06		YP\AJ	Ok

M : Manual Integration

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/20/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:10
In Date: 05/19/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:22
Out Date: 05/20/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135825

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1984-19	OU4-TB01-050725	1	1.00	1.00	2.00	2.00	100.0	T.B.
Q2074-01	TP-12	2	1.18	10.28	11.46	9.76	83.5	
Q2074-02	TP-7	3	1.18	10.15	11.33	10.18	88.7	
Q2074-03	TP-15	4	1.13	10.33	11.46	10.12	87.0	
Q2074-04	TP-20	5	1.12	10.65	11.77	10.1	84.3	
Q2074-05	TP-38	6	1.18	10.19	11.37	9.53	81.9	
Q2074-06	TP-19	7	1.16	10.12	11.28	9.85	85.9	
Q2074-07	TP-40	8	1.14	9.89	11.03	9.96	89.2	
Q2074-08	TP-18	9	1.15	10.16	11.31	9.07	78.0	
Q2075-01	SS-10	10	1.16	10.56	11.72	9.59	79.8	
Q2075-02	SS-910	11	1.17	10.05	11.22	9.34	81.3	
Q2075-03	SS-11	12	1.18	10.51	11.69	10.37	87.4	
Q2075-04	Q2075-03MS	13	1.18	10.51	11.69	10.37	87.4	
Q2075-05	Q2075-03MSD	14	1.18	10.51	11.69	10.37	87.4	
Q2075-06	SS-MW1-11.5	15	1.14	10.00	11.14	10.24	91.0	
Q2076-01	OILY-DEBRIS	16	1.00	1.00	2.00	2.00	100.0	oily-debris
Q2080-01	PL-HRH-COMP-01	17	1.13	10.62	11.75	10.32	86.5	
Q2080-02	PL-HRH-VOC-01	18	1.17	10.22	11.39	9.6	82.5	
Q2080-03	PL-HRH-01	19	1.12	10.77	11.89	10.16	83.9	
Q2080-04	PL-HRH-02	20	1.16	10.40	11.56	9.82	83.3	
Q2080-05	PL-HRH-03	21	1.15	10.00	11.15	9.43	82.8	
Q2080-07	PL-HRH-COMP-02	22	1.19	10.46	11.65	9.62	80.6	
Q2080-08	PL-HRH-VOC-02	23	1.14	10.76	11.9	9.8	80.5	
Q2080-09	PL-HRH-04	24	1.16	10.70	11.86	9.55	78.4	
Q2080-10	PL-HRH-05	25	1.19	10.43	11.62	9.52	79.9	
Q2080-11	PL-HRH-06	26	1.13	10.74	11.87	10.2	84.5	
Q2081-01	CAULK	27	1.00	1.00	2.00	2.00	100.0	caluk

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

WORKLIST(Hardcopy Internal Chain)

WJ 135825

WorkList Name : %1-051925 WorkList ID : 189586 Department : Wet-Chemistry Date : 05-19-2025 08:23:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1984-19	OU4-TB01-050725	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	05/07/2025	Chemtech -SO
Q2074-01	TP-12	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-02	TP-7	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-03	TP-15	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-04	TP-20	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-05	TP-38	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-06	TP-19	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-07	TP-40	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2074-08	TP-18	Solid	Percent Solids	Cool 4 deg C	CAMP02	L31	05/16/2025	Chemtech -SO
Q2075-01	SS-10	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2075-02	SS-910	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2075-03	SS-11	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2075-04	Q2075-03MS	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2075-05	Q2075-03MSD	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2075-06	SS-MW1-11.5	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/15/2025	Chemtech -SO
Q2076-01	OILY-DEBRIS	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-01	PL-HRH-COMP-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-02	PL-HRH-VOC-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-03	PL-HRH-01	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-04	PL-HRH-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-05	PL-HRH-03	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO

Date/Time 05-19-25 15:35
 Raw Sample Received by: JOE WELCH
 Raw Sample Relinquished by: JOE WELCH

WORKLIST(Hardcopy Internal Chain)

135825

WorkList Name : %1-051925 WorkList ID : 189586 Department : Wet-Chemistry Date : 05-19-2025 08:23:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2080-07	PL-HRH-COMP-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-08	PL-HRH-VOC-02	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-09	PL-HRH-04	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-10	PL-HRH-05	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2080-11	PL-HRH-06	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/19/2025	Chemtech -SO
Q2081-01	CAULK	Solid	Percent Solids	Cool 4 deg C	ATCE02	L31	05/19/2025	Chemtech -SO

151255

Date/Time 05-19-25
Raw Sample Received by: SP
Raw Sample Relinquished by: SP

Date/Time 05-19-25
Raw Sample Received by: CP
Raw Sample Relinquished by: SP

SOP ID:	M3541-ASE Extraction-14		
Clean Up SOP #:	N/A	Extraction Start Date :	05/20/2025
Matrix :	Solid	Extraction Start Time :	10:15
Welgh By:	EH	Extraction By:	RJ
Balance check:	RJ	Extraction End Date :	05/20/2025
Balance ID:	EX-SC-2	Filter By:	RJ
pH Strlp Lot#:	N/A	Extraction End Time :	13:30
		Concentration By:	EH
		Supervisor By :	RUPESH
Extraction Method:	☐ Seperatory Funnel ☐ Continious Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet		

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	PP24162
Surrogate	1.0ML	20 PPM	PP24180
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2612
Baked Na2SO4	N/A	EP2614
Sand	N/A	E2865
Methylene Chloride	N/A	E3930
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210673.

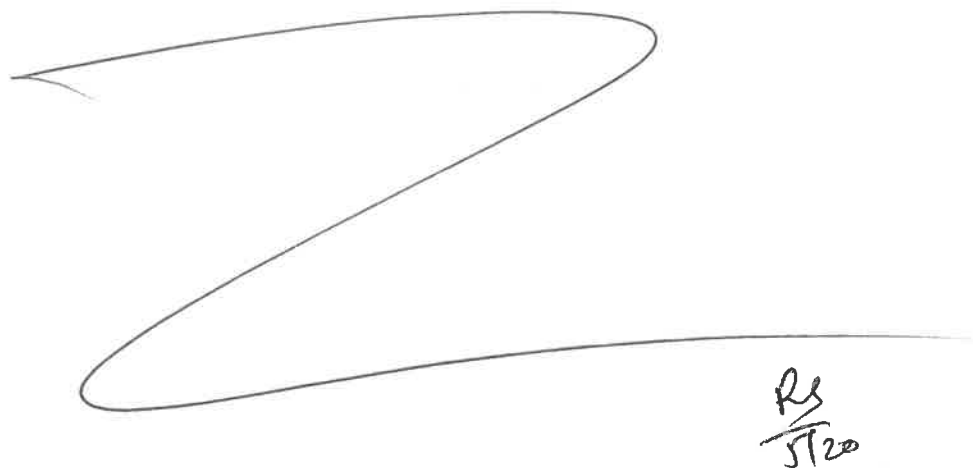
KD Bath ID:	N/A	Envap ID:	NEVAP-02
KD Bath Temperature:	N/A	Envap Temperature:	40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
5/20/25	RSC (B4 Lab)	R. Post / PeB Lab
13:35	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-14

Concentration Date: 05/20/2025

Sample ID	Client Sample ID	Test	g/mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB168084BL	PB168084BL	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1			U2-1
PB168084BS	PB168084BS	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1			2
Q2032-01	TP-11	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		3
Q2032-02	TP-29	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		4
Q2032-03	TP-29-99	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		5
Q2032-04	TP-24	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		6
Q2032-05	Q2032-04MS	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		U3-1
Q2032-06	Q2032-04MSD	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		2
Q2032-07	TP-37	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		3
Q2032-08	TP-32	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		4
Q2074-01	TP-12	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		5
Q2074-02	TP-7	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		6
Q2074-03	TP-15	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		U1-1
Q2074-04	TP-20	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		2
Q2074-05	TP-38	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		3
Q2074-06	TP-19	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		4
Q2074-07	TP-40	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		5
Q2074-08	TP-18	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		6



168094
10:17

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2032DRO WorkList ID : 189623 Department : Extraction Date : 05-20-2025 08:40:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2032-01	TP-11	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-02	TP-29	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-03	TP-29-99	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-04	TP-24	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-05	Q2032-04MS	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-06	Q2032-04MSD	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-07	TP-37	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2032-08	TP-32	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/13/2025	8015D
Q2074-01	TP-12	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-02	TP-7	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-03	TP-15	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-04	TP-20	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-05	TP-38	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-06	TP-19	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-07	TP-40	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D
Q2074-08	TP-18	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/16/2025	8015D

Date/Time 5/20/25 10:10
Raw Sample Received by: RJ (Ext-66)
Raw Sample Relinquished by: CP

Date/Time 5/20/25 10:45
Raw Sample Received by: CP
Raw Sample Relinquished by: RJ (Ext-66)

Prep Standard - Chemical Standard Summary

Order ID : Q2074

Test : Diesel Range Organics

Prepbatch ID : PB168084,

Sequence ID/Qc Batch ID: FG052125,FF052125,

Standard ID :

EP2612,EP2614,PP24162,PP24180,PP24467,PP24468,PP24469,PP24470,PP24471,PP24472,PP24473,

Chemical ID :

E2865,E3551,E3874,E3926,E3930,E3932,P11951,P11952,P11955,P11956,P13106,P13108,P13477,P13479,P13487,P13488,P13489,P13490,

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	EP2612	05/09/2025	11/05/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel
05/09/2025								

FROM 8000.00000ml of E3930 + 8000.00000ml of E3932 = 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	EP2614	05/19/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SC ALE_2	None	Riteshkumar Patel
(EX-SC-2)								

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3609	20 PPM DRO SPIKE SOLUTION (RESTEK)	PP24162	01/31/2025	07/30/2025	Yogesh Patel	None	None	Ankita Jodhani
								01/31/2025

FROM 1.00000ml of P11955 + 1.00000ml of P11956 + 48.00000ml of E3874 = 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	PP24180	02/03/2025	07/30/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 1.00000ml of P13487 + 1.00000ml of P13488 + 1.00000ml of P13489 + 1.00000ml of P13490 + 196.00000ml of E3874 = 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)	PP24467	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 1.00000ml of P11951 + 1.00000ml of P11952 + 1.00000ml of P13477 + 7.00000ml of E3926 = 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>
3979	100/100 PPM DRO ICV (RESTEK)	PP24468	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 1.00000ml of P13106 + 1.00000ml of P13108 + 1.00000ml of P13479 + 7.00000ml of E3926 = 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)	PP24469	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.50000ml of E3926 + 0.50000ml of PP24467 = 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)	PP24470	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.80000ml of E3926 + 0.20000ml of PP24467 = 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)	PP24471	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.90000ml of E3926 + 0.10000ml of PP24467 = 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)	PP24472	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.90000ml of E3926 + 0.10000ml of PP24469 = 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>
3608	50 PPM ICV DRO STD (RESTEK)	PP24473	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza 05/08/2025
<u>FROM</u>	0.50000ml of E3926 + 0.50000ml of PP24468 = 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	06/30/2025	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	07/30/2025	01/30/2025 / Rajesh	01/20/2025 / Rajesh	E3874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	10/08/2025	04/08/2025 / Rajesh	02/07/2025 / Rajesh	E3926

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	02/20/2026	05/02/2025 / RUPESH	03/09/2025 / RUPESH	E3930

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3932

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	10/22/2025	04/22/2025 / yogesh	07/11/2022 / Yogesh	P11951

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	10/22/2025	04/22/2025 / yogesh	07/11/2022 / Yogesh	P11952

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	07/31/2025	01/31/2025 / yogesh	07/11/2022 / Yogesh	P11955

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	07/31/2025	01/31/2025 / yogesh	07/11/2022 / Yogesh	P11956

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	10/22/2025	04/22/2025 / yogesh	01/12/2024 / Yogesh	P13106

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	10/22/2025	04/22/2025 / yogesh	01/12/2024 / Yogesh	P13108

CHEMICAL RECEIPT LOG BOOK

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	10/22/2025	04/22/2025 / yogesh	07/24/2024 / yogesh	P13477

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	10/22/2025	04/22/2025 / yogesh	07/24/2024 / yogesh	P13479

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	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13487

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	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13488

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	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13489

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	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13490

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

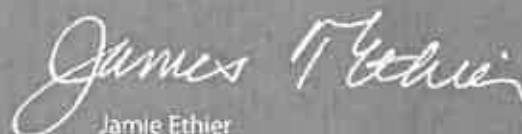
Certificate of Analysis

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

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	4
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 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 3874

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	4
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	99.9 %
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid (μeq/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 3926

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

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

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

E3930

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

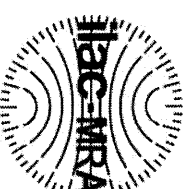
Bellefonte, PA 16823-8812

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:

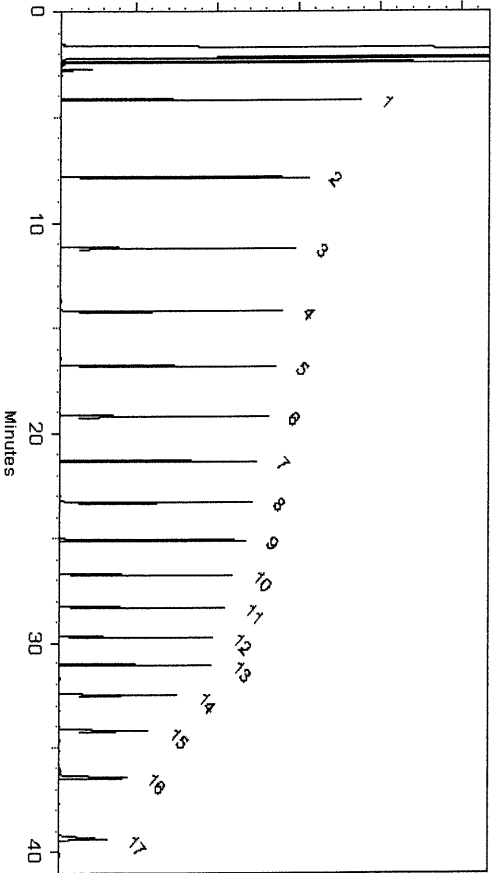
250°C

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

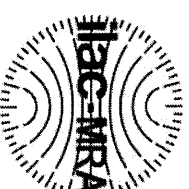
Bellefonte, PA 16823-8812

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:

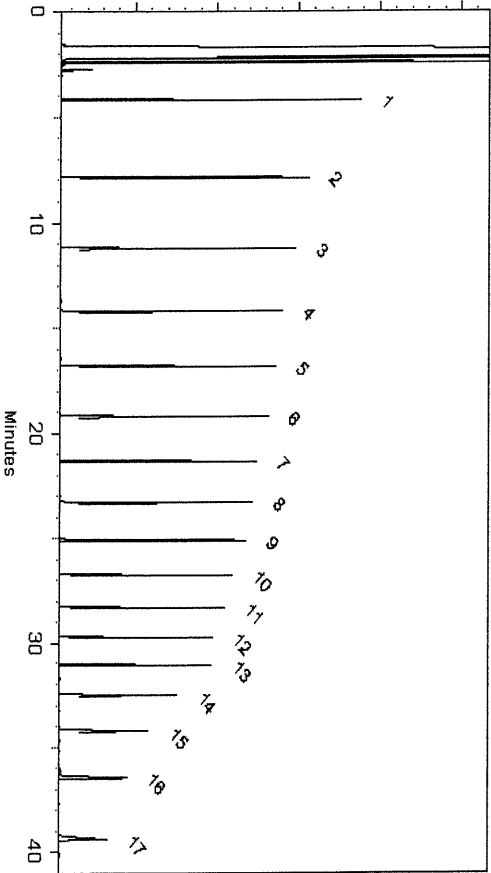
250°C

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.
- 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

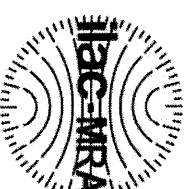
Bellefonte, PA 16823-8812

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 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 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 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 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 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 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 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:

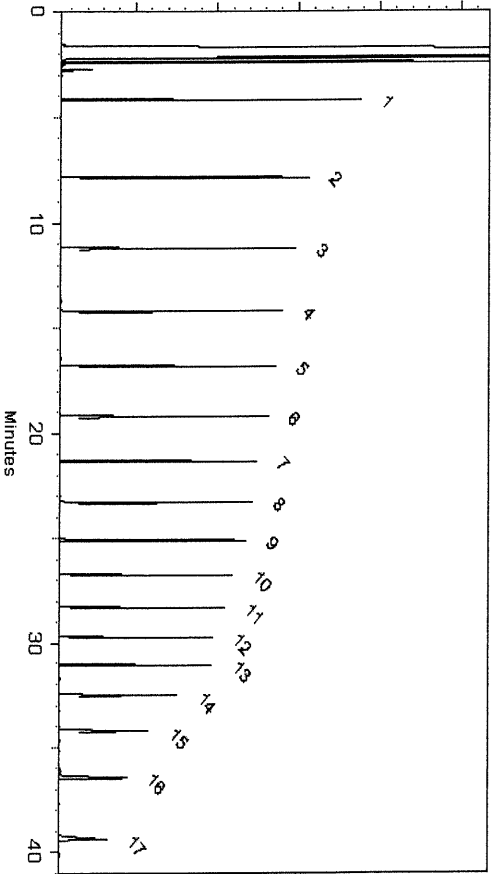
250°C

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:

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- Purity values are rounded to the nearest whole number.

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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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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 REFERENCE MATERIAL

110 Benner Circle

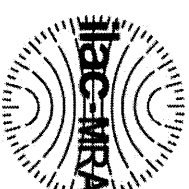
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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 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 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 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 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 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 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 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:

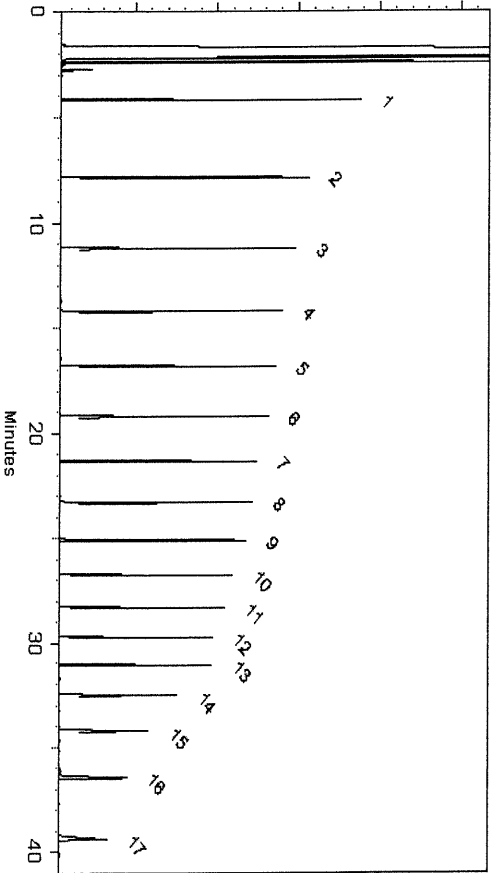
250°C

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.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266 **Lot No.:** A0204859

Description : Florida TRPH Standard

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

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

Expiration Date : December 31, 2030 **Storage:** 25°C nominal

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Octane (C8)	111-65-9	SHBP9758	99%	504.4 µg/mL	+/- 13.0305
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	503.6 µg/mL	+/- 13.0098
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	503.6 µg/mL	+/- 13.0098
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	504.0 µg/mL	+/- 13.0201
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	504.0 µg/mL	+/- 13.0201
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	504.1 µg/mL	+/- 13.0230
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	504.0 µg/mL	+/- 13.0204
8	n-Docosane (C22)	629-97-0	MKCQ3882	99%	503.6 µg/mL	+/- 13.0098
9	n-Tetracosane (C24)	646-31-1	MKCQ8345	99%	504.0 µg/mL	+/- 13.0201
10	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	504.0 µg/mL	+/- 13.0201
11	n-Octacosane (C28)	630-02-4	BCCG0084	99%	504.0 µg/mL	+/- 13.0201
12	n-Triacontane (C30)	638-68-6	MKCQ9436	97%	504.0 µg/mL	+/- 13.0204
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	504.0 µg/mL	+/- 13.0201
14	n-Tetratriacontane (C34)	14167-59-0	OML4N	99%	504.4 µg/mL	+/- 13.0305
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	504.0 µg/mL	+/- 13.0201
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	503.8 µg/mL	+/- 13.0152
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.6 µg/mL	+/- 13.0098

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

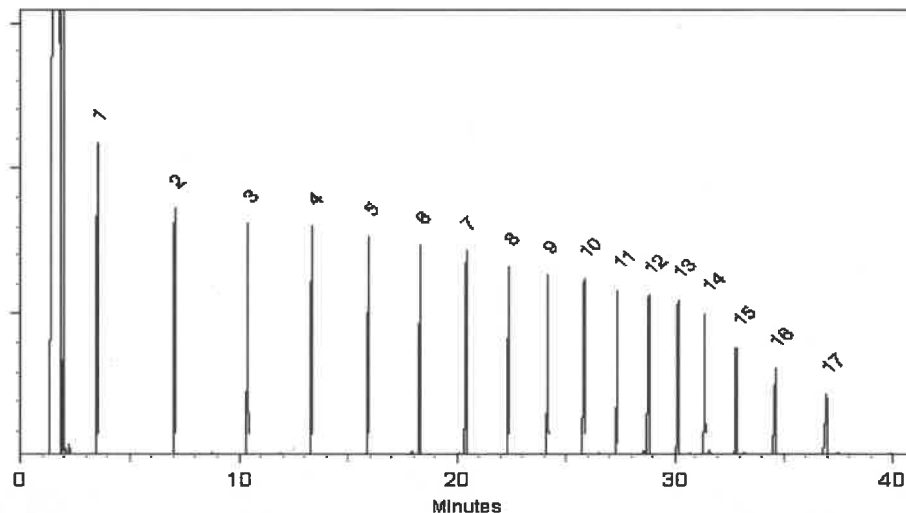
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

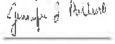


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266 **Lot No.:** A0204859

Description : Florida TRPH Standard

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

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

Expiration Date : December 31, 2030 **Storage:** 25°C nominal

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Octane (C8)	111-65-9	SHBP9758	99%	504.4 µg/mL	+/- 13.0305
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	503.6 µg/mL	+/- 13.0098
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	503.6 µg/mL	+/- 13.0098
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	504.0 µg/mL	+/- 13.0201
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	504.0 µg/mL	+/- 13.0201
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	504.1 µg/mL	+/- 13.0230
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	504.0 µg/mL	+/- 13.0204
8	n-Docosane (C22)	629-97-0	MKQC3882	99%	503.6 µg/mL	+/- 13.0098
9	n-Tetracosane (C24)	646-31-1	MKQC8345	99%	504.0 µg/mL	+/- 13.0201
10	n-Hexacosane (C26)	630-01-3	MKQC4814	99%	504.0 µg/mL	+/- 13.0201
11	n-Octacosane (C28)	630-02-4	BCCG0084	99%	504.0 µg/mL	+/- 13.0201
12	n-Triacontane (C30)	638-68-6	MKQC9436	97%	504.0 µg/mL	+/- 13.0204
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	504.0 µg/mL	+/- 13.0201
14	n-Tetratriacontane (C34)	14167-59-0	OML4N	99%	504.4 µg/mL	+/- 13.0305
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	504.0 µg/mL	+/- 13.0201
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	503.8 µg/mL	+/- 13.0152
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.6 µg/mL	+/- 13.0098

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

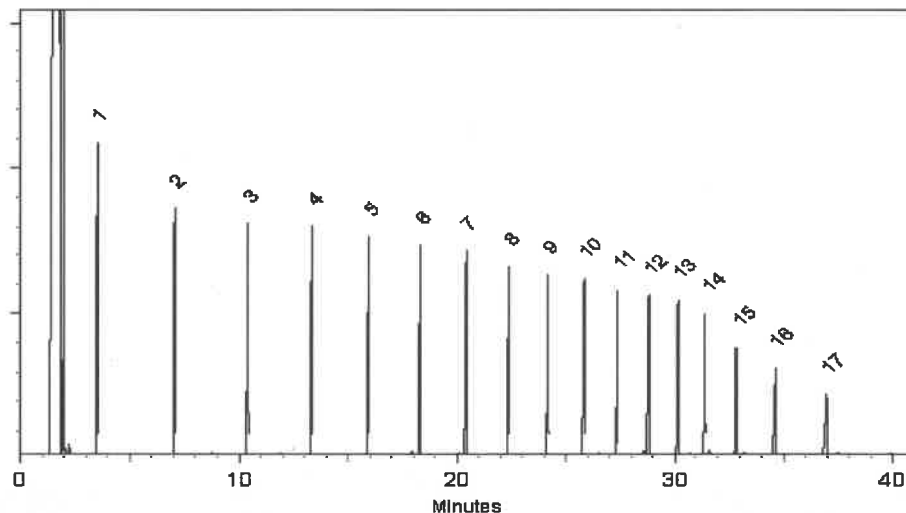
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

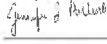


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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 070716

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
070716
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	6.34
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

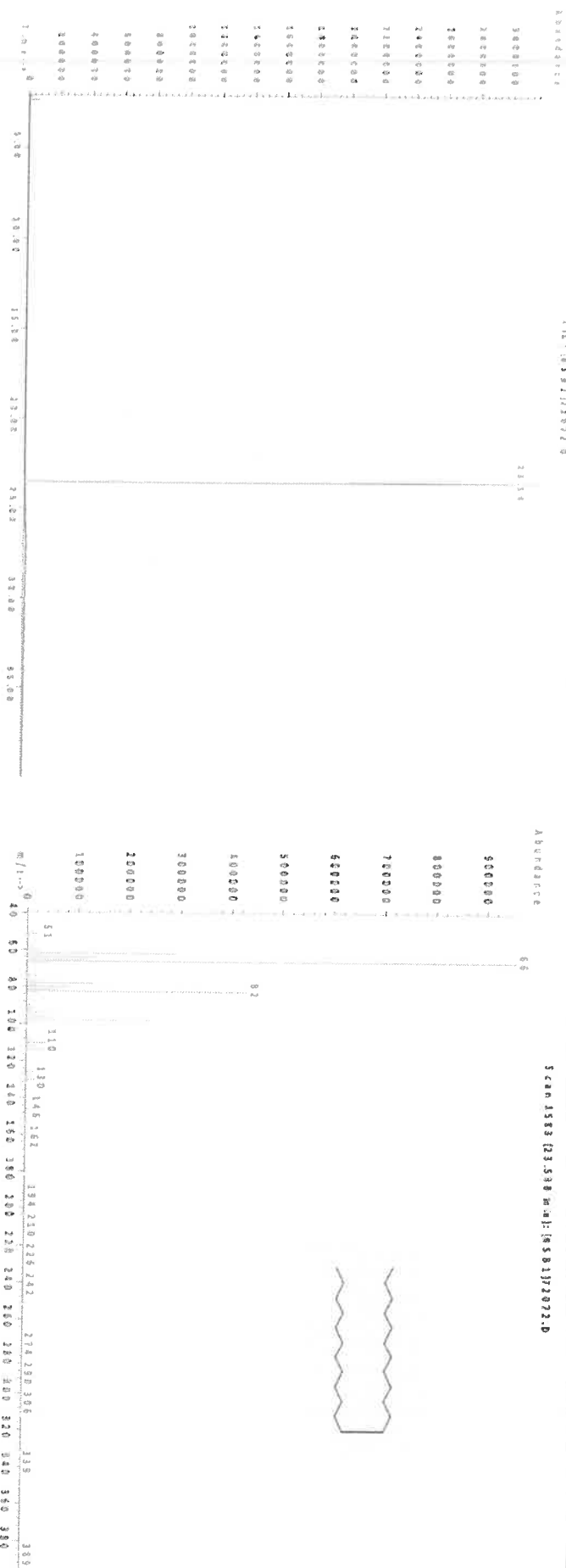
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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



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#	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	1146-85-2	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 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

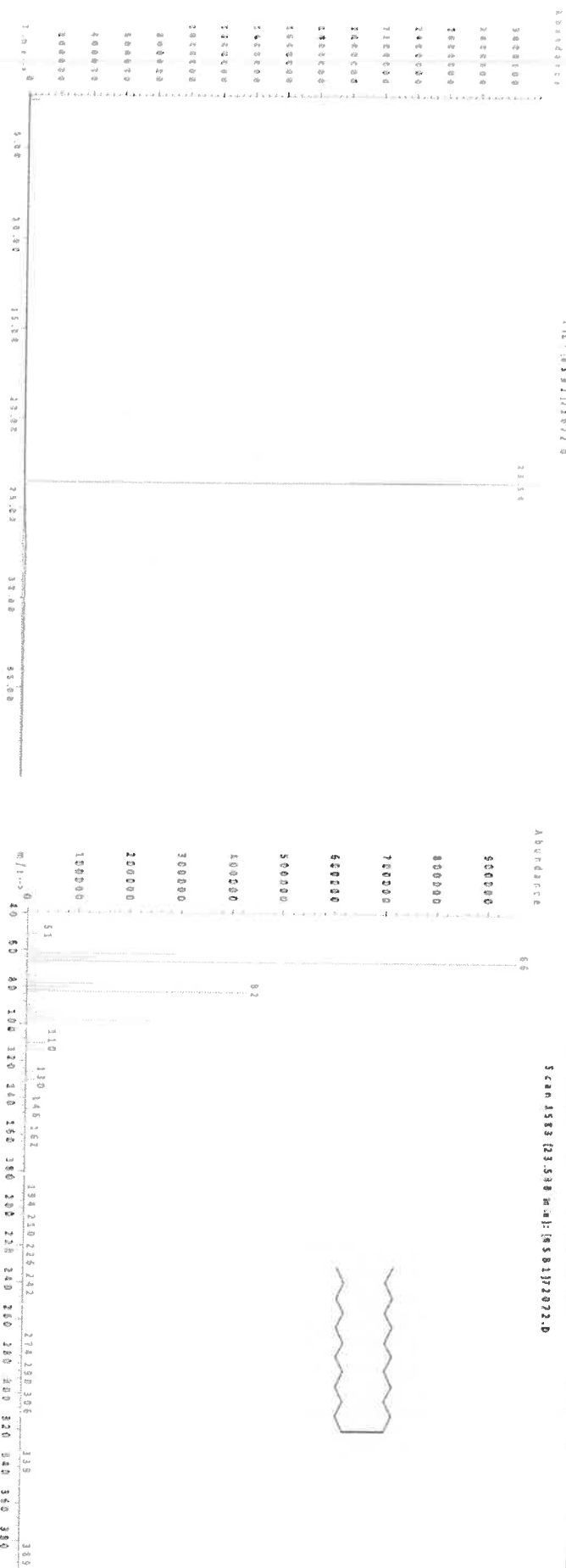
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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 (%)	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/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	6.34
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

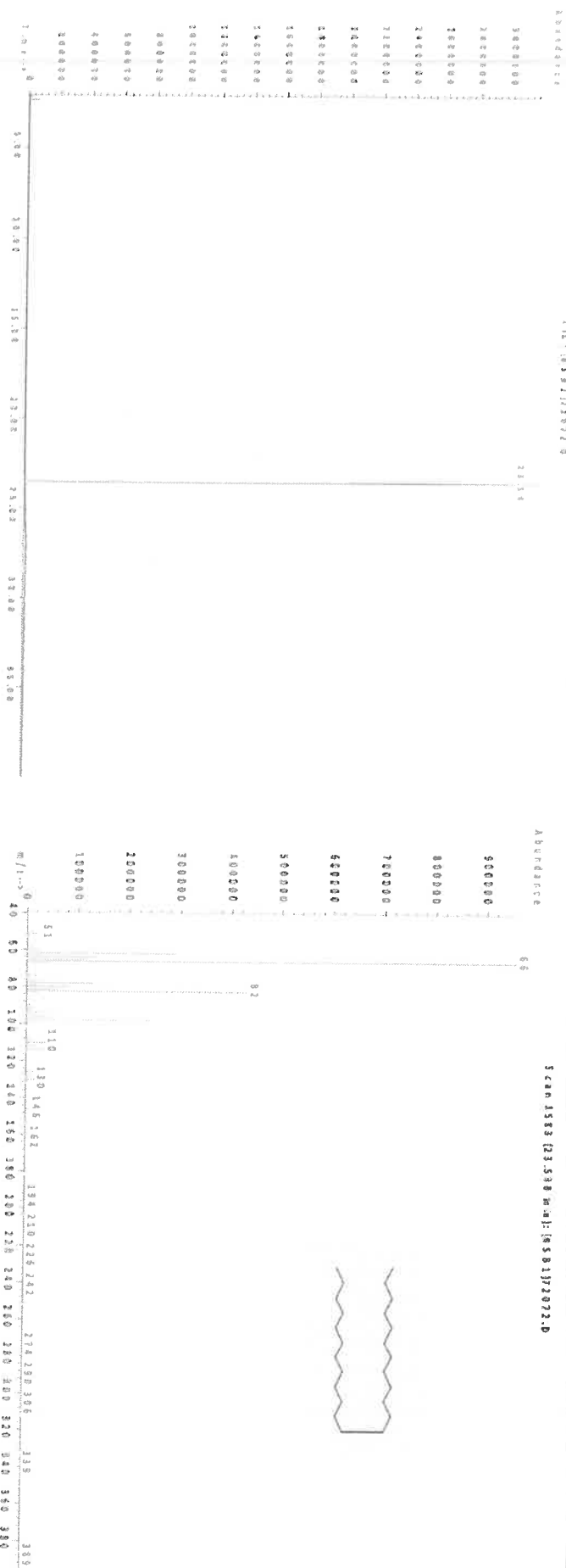
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
	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, (1996).

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/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

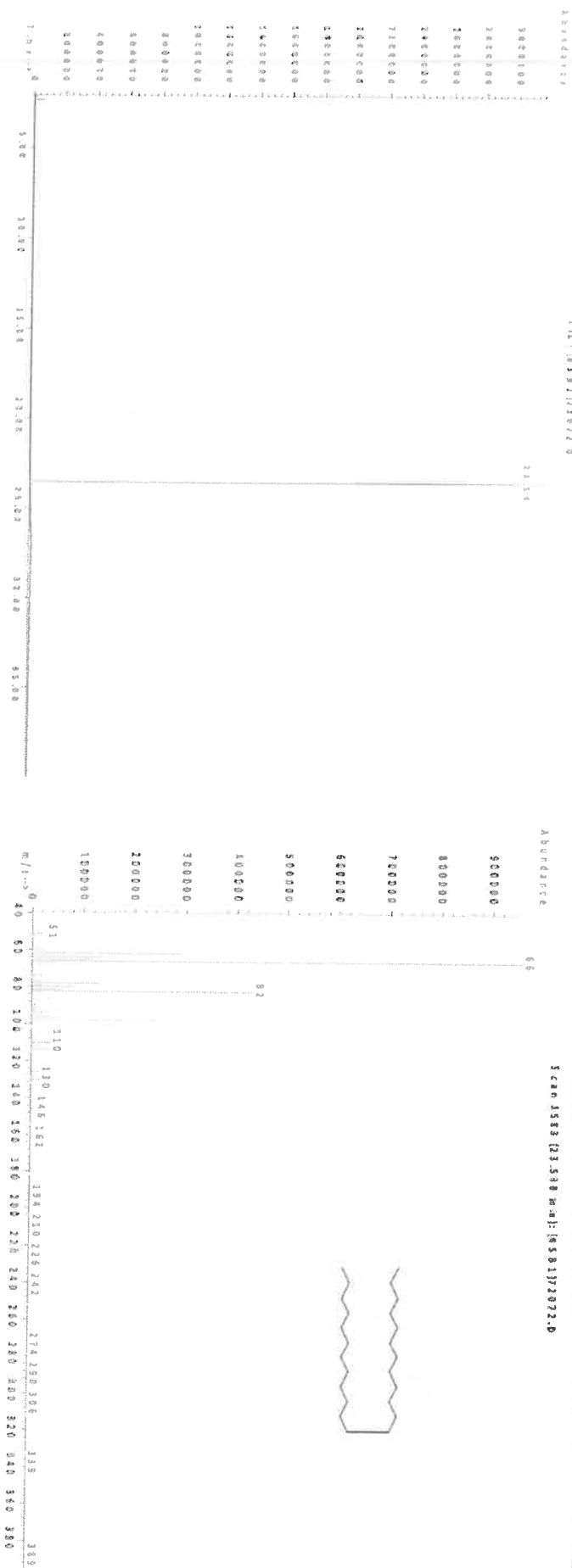
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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.

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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#	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-rat 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-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	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	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/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

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

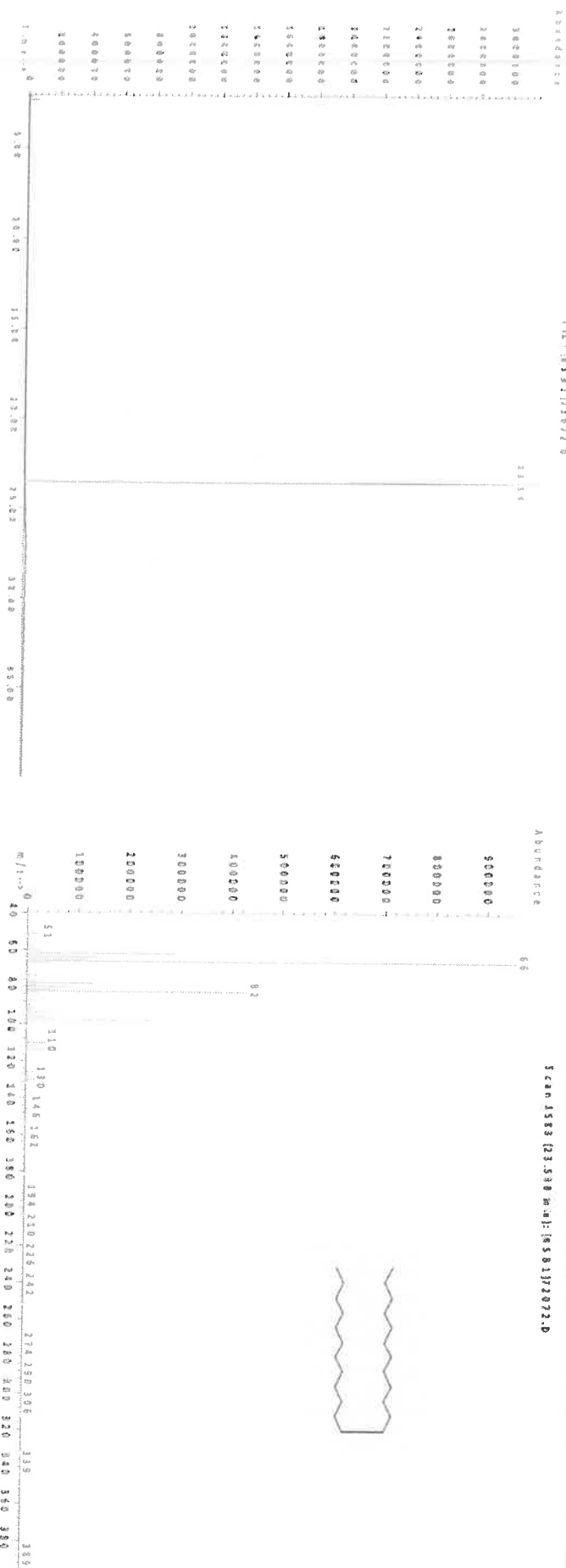
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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.

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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)	MSDS Information (Solvent Safety Info. On Attached pg.)	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	N/A	or-rat 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-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	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	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/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	6.34
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

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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

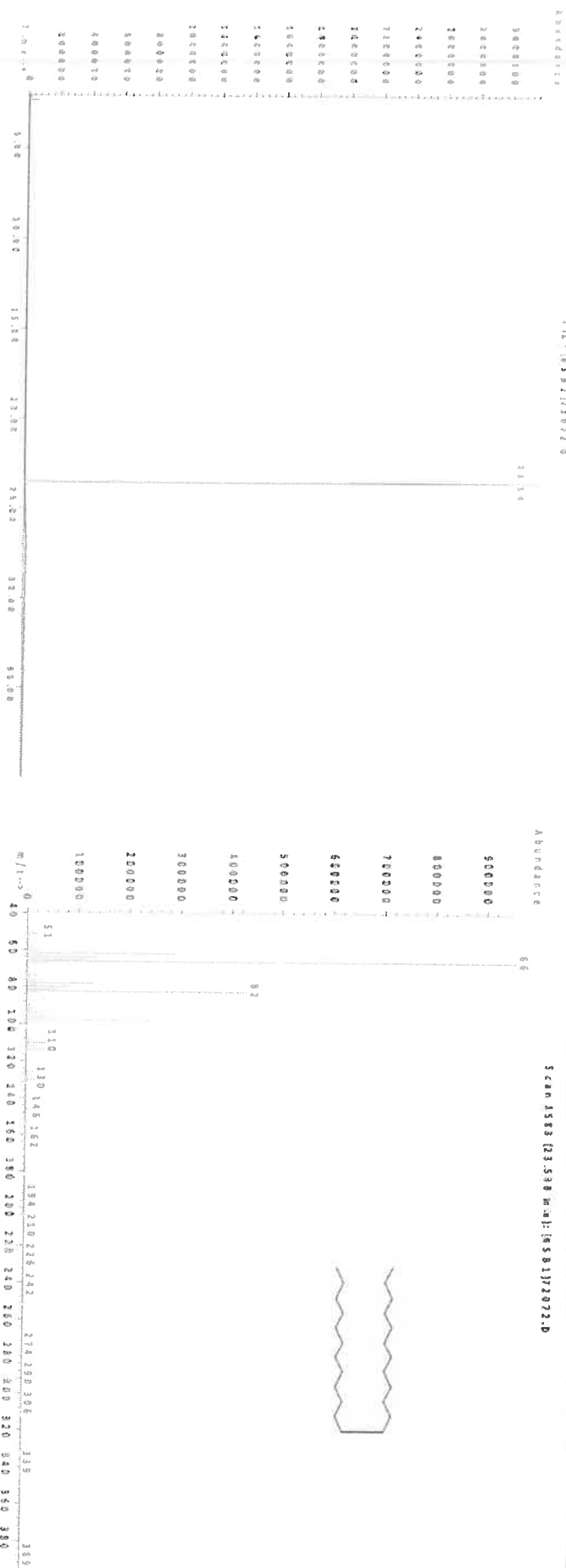
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
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).



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: CDM SMITH
ADDRESS: 110 FIELDCREST AVE #8 6TH FLOOR
CITY EDISON STATE: NJ ZIP: 08837
ATTENTION: MARCIE ENCINAS
PHONE: 7325904679 FAX: 7322257851

CLIENT PROJECT INFORMATION

PROJECT NAME: SOUTH RIVER WM REPLACEMENT
PROJECT NO.: _____ LOCATION: SOUTH RIVER, NJ
PROJECT MANAGER: MARCIE ENCINAS
e-mail: ENCINASMA@CDMSMITH.COM
PHONE: 7325904679 FAX: 7322257851

CLIENT BILLING INFORMATION

BILL TO: CDM SMITH PO#: _____
ADDRESS: 110 FIELDCREST AVE #8 6TH FLOOR
CITY EDISON STATE: NJ ZIP: 08837
ATTENTION: MARCIE ENCINAS PHONE: 7325904679

ANALYSIS

DATA TURNAROUND INFORMATION

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

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☒ Level 2 (Results + QC) ☒ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT _____

TCL VOC
TCL SVOC
TAL METALS
PCB
PESTICIDES
HERBICIDES
DRO/GRO

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	TP-12	SOIL		X	5/15/25	0800	6	X	X	X	X	X	X	X			E
2.	TP-7	SOIL		X	5/15/25	0920	6	X	X	X	X	X	X	X			E
3.	TP-15	SOIL		X	5/15/25	1035	6	X	X	X	X	X	X	X			E
4.	TP-20	SOIL		X	5/15/25	1115	6	X	X	X	X	X	X	X			E
5.	TP-38	SOIL		X	5/15/25	1200	6	X	X	X	X	X	X	X			E
6.	TP-19	SOIL		X	5/15/25	1415	6	X	X	X	X	X	X	X			E
7.	TP-40	SOIL		X	5/15/25	1450	6	X	X	X	X	X	X	X			E
8.	TP-18	SOIL		X	5/16/25	1010	6	X	X	X	X	X	X	X			E
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C
1. <u>[Signature]</u>	<u>5/16/25 1500</u>	1. <u>[Signature]</u>	Comments: _____
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2. <u>[Signature]</u>		2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
3. <u>[Signature]</u>	<u>5.16.25</u>	3. <u>[Signature]</u>	

Page _____ of _____

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete

☐ YES ☐ NO

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2074	CAMP02	Order Date : 5/16/2025 3:13:00 PM	Project Mgr :
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level 1 NJ Reduced/
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/16/2025 12:00:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 17:39	Hard Copy Date :
Invoice Contact : Marcie Ann Encinas			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2074-01	TP-12	Solid	05/16/2025	08:00					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-02	TP-7	Solid	05/16/2025	09:20					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-03	TP-15	Solid	05/16/2025	10:35					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-04	TP-20	Solid	05/16/2025	11:15					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-05	TP-38	Solid	05/16/2025	12:00					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-06	TP-19	Solid	05/16/2025	14:15					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-07	TP-40	Solid	05/16/2025	14:50					
			05/15/2025		VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2074-08	TP-18	Solid	05/16/2025	10:10					



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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2074	CAMP02	Order Date : 5/16/2025 3:13:00 PM	Project Mgr :
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level++ NJ Reduced/
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/16/2025 12:00:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 1739	Hard Copy Date :
Invoice Contact : Marcie Ann Encinas			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
					VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By :
Date / Time : 5/19/25 11:30

Received By :
Date / Time : 05/19/25 11:30 2886
222
Storage Area : VOA Refridgerator Room