

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:	Q1982	OrderDate:	5/7/2025 3:20:42 PM
Client:	CDM Smith	Project:	South River WM Replacement
Contact:	Marcie Ann Encinas	Location:	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1982-01	TP-1	SOIL			05/06/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/12/25	
Q1982-02	TP-2B	SOIL			05/06/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
Q1982-03	TP-3	SOIL			05/06/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/13/25	
Q1982-04	TP-4	SOIL			05/07/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/13/25	
Q1982-05	TP-5	SOIL			05/07/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/13/25	
Q1982-06	TP-6	SOIL			05/07/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/13/25	
Q1982-07	TP-8	SOIL			05/07/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
Q1982-08	TP-9	SOIL			05/07/25			05/07/25
			Diesel Range Organics	8015D		05/13/25	05/13/25	
			Gasoline Range Organics	8015D			05/13/25	



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: CDM Smith
Lab Code: CHEM Case No.: Q1982 SAS No.: Q1982 SDG No.: Q1982

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015834.D	82				0
PIBLK-FF015841.D	81				0
PIBLK-FF015847.D	80				0
PIBLK-FG015824.D	85				0
PIBLK-FG015834.D	96				0
PB167975BL	77				0
PB167975BS	84				0
SB2-4-5MS	58				0
SB2-4-5MSD	60				0
TP-1	67				0
TP-2B	54				0
TP-3	51				0
TP-4	105				0
TP-5	59				0
TP-6	60				0
TP-8	54				0
TP-9	63				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:** Q1982 **SAS No :** Q1982 **SDG No:** Q1982
Client SampleID : SB2-4-5MS **Datafile:** FG015828.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	7123	0	7673	108%		68-131

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q1982 **SAS No :** Q1982 **SDG No:** Q1982
Client SampleID : SB2-4-5MSD **Datafile:** FG015829.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	7121	0	7822	110%		68-131

MS/MSD % Recovery RPD : 1.9

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

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q1982 **SAS No :** Q1982 **SDG No:** Q1982
Matrix Spike - EPA Sample No : PB167975BS **Datafile:** FF015844.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6662	0	6092	91	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB167975BL

Lab Name: CHEMTECH

Contract: CAMP02

Lab Code: CHEM Case No.: Q1982

SAS No.: Q1982 SDG NO.: Q1982

Lab File ID: FF015843.D

Lab Sample ID: PB167975BL

Instrument ID: FF

Date Extracted: 05/13/2025

Matrix: (soil/water) Soil

Date Analyzed: 05/13/25

Level: (low/med) low

Time Analyzed: 21:16

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TP-4	Q1982-04	FF015836.D	05/13/25
TP-5	Q1982-05	FF015837.D	05/13/25
TP-6	Q1982-06	FF015838.D	05/13/25
TP-8	Q1982-07	FF015839.D	05/13/25
TP-9	Q1982-08	FF015840.D	05/13/25
PB167975BS	PB167975BS	FF015844.D	05/13/25
SB2-4-5MS	Q1956-03MS	FG015828.D	05/13/25
SB2-4-5MSD	Q1956-04MSD	FG015829.D	05/13/25
TP-1	Q1982-01	FG015831.D	05/13/25
TP-2B	Q1982-02	FG015832.D	05/13/25
TP-3	Q1982-03	FG015833.D	05/13/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	05/06/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-1	SDG No.:	Q1982
Lab Sample ID:	Q1982-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	80.9
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	Diesel Range Organics
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015831.D	1	05/13/25 10:05	05/13/25 19:49	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	4350		208	2060	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.3		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\FG051325\
Data File : FG015831.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 19:49
Operator : YP\AJ
Sample : Q1982-01
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-1

Integration File: autoint1.e
Quant Time: May 14 03:56:37 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...	14.995	1566989	13.309 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

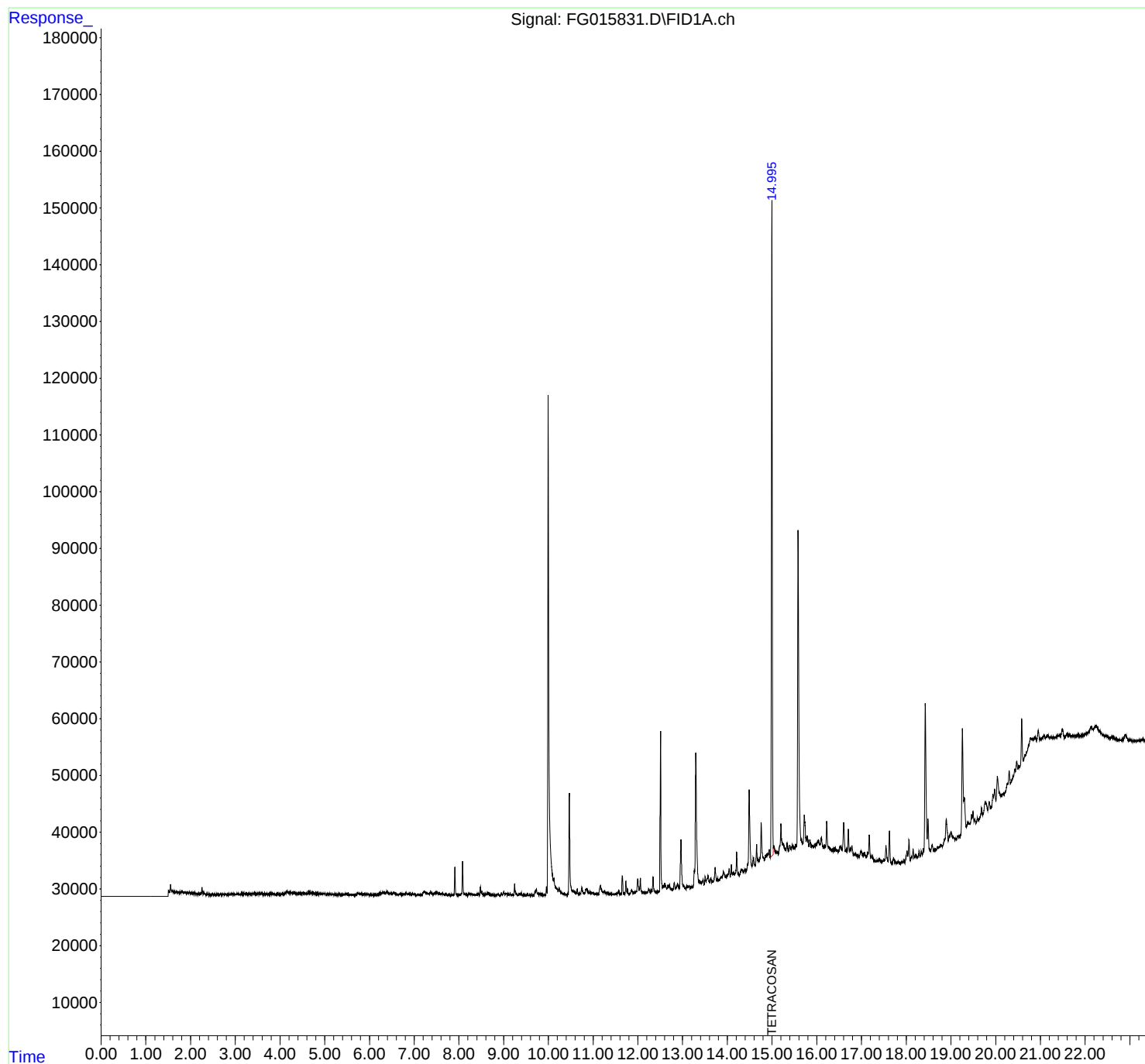
(m)=manual int.

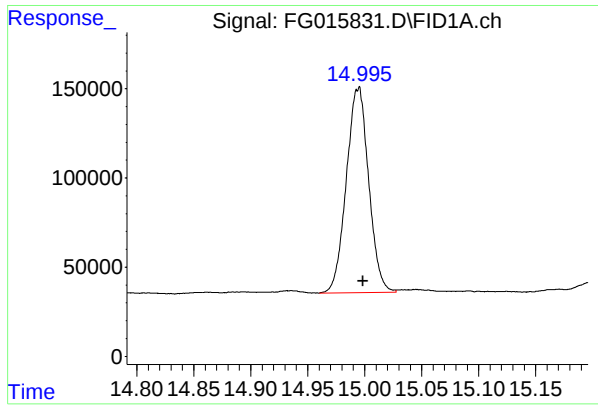
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015831.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 19:49
Operator : YP\AJ
Sample : Q1982-01
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-1

Integration File: autoint1.e
Quant Time: May 14 03:56:37 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.: 14.995 min
Delta R.T.: -0.004 min
Response: 1566989
Conc: 13.31 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-1

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015831.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 19:49
Sample : Q1982-01
Misc :
ALS Vial : 30 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	4.320	4.300	4.359	BV	107	1702	0.10%	0.011%
2	4.369	4.359	4.377	PV	87	461	0.03%	0.003%
3	4.406	4.377	4.412	PV	155	1736	0.10%	0.012%
4	4.420	4.412	4.431	VV	137	1220	0.07%	0.008%
5	4.438	4.431	4.444	VV	173	956	0.06%	0.006%
6	4.450	4.444	4.483	VV	176	2482	0.14%	0.017%
7	4.496	4.483	4.507	VV	334	3470	0.20%	0.023%
8	4.511	4.507	4.528	VV	191	2592	0.15%	0.017%
9	4.534	4.528	4.537	VV	232	1049	0.06%	0.007%
10	4.541	4.537	4.568	VV	250	3308	0.19%	0.022%
11	4.572	4.568	4.577	VV	230	886	0.05%	0.006%
12	4.583	4.577	4.607	VV	203	2499	0.15%	0.017%
13	4.624	4.607	4.638	VV	329	3739	0.22%	0.025%
14	4.642	4.638	4.654	VV	571	1637	0.10%	0.011%
15	4.669	4.654	4.683	VV	441	5174	0.30%	0.034%
16	4.687	4.683	4.694	VV	363	1853	0.11%	0.012%
17	4.697	4.694	4.722	VV	300	3614	0.21%	0.024%
18	4.728	4.722	4.735	VV	260	1557	0.09%	0.010%
19	4.749	4.735	4.754	VV	248	2306	0.13%	0.015%
20	4.759	4.754	4.764	VV	239	1182	0.07%	0.008%
21	4.770	4.764	4.776	VV	223	1375	0.08%	0.009%
22	4.778	4.776	4.810	VV	229	3925	0.23%	0.026%
23	4.813	4.810	4.823	VV	214	1441	0.08%	0.010%
24	4.830	4.823	4.837	VV	254	1431	0.08%	0.010%
25	4.843	4.837	4.850	VV	218	1525	0.09%	0.010%
26	4.854	4.850	4.860	VV	218	1161	0.07%	0.008%
27	4.864	4.860	4.869	VV	204	834	0.05%	0.006%
28	4.873	4.869	4.887	VV	177	1750	0.10%	0.012%
29	4.891	4.887	4.897	VV	187	1069	0.06%	0.007%
30	4.899	4.897	4.905	VV	186	763	0.04%	0.005%
31	4.908	4.905	4.914	VV	208	1005	0.06%	0.007%
32	4.924	4.914	4.936	VV	219	2468	0.14%	0.016%
33	4.947	4.936	4.966	VV	260	3282	0.19%	0.022%
34	4.973	4.966	4.988	VV	226	2290	0.13%	0.015%
35	5.005	4.988	5.027	VV	250	3960	0.23%	0.026%
36	5.033	5.027	5.046	VV	160	1460	0.09%	0.010%

					rteres			
37	5.050	5.046	5.053	VV	159	472	0.03%	0.003%
38	5.062	5.053	5.083	VV	190	2672	0.16%	0.018%
39	5.087	5.083	5.092	VV	234	978	0.06%	0.007%
40	5.098	5.092	5.107	VV	179	1411	0.08%	0.009%
41	5.111	5.107	5.133	VV	172	1963	0.11%	0.013%
42	5.159	5.133	5.180	VV	252	4155	0.24%	0.028%
43	5.184	5.180	5.213	VV	132	1941	0.11%	0.013%
44	5.217	5.213	5.223	VV	95	505	0.03%	0.003%
45	5.226	5.223	5.242	VV	92	1067	0.06%	0.007%
46	5.245	5.242	5.258	VV	170	824	0.05%	0.005%
47	5.275	5.258	5.293	PV	172	2343	0.14%	0.016%
48	5.324	5.293	5.379	VV	241	6740	0.39%	0.045%
49	5.384	5.379	5.407	VV	149	1688	0.10%	0.011%
50	5.415	5.407	5.436	VV	130	1756	0.10%	0.012%
51	5.458	5.436	5.465	VV	300	3544	0.21%	0.024%
52	5.473	5.465	5.495	VV	294	3993	0.23%	0.027%
53	5.508	5.495	5.520	VV	191	2200	0.13%	0.015%
54	5.525	5.520	5.539	VV	377	1525	0.09%	0.010%
55	5.545	5.539	5.557	VV	98	993	0.06%	0.007%
56	5.573	5.557	5.579	VV	160	1457	0.09%	0.010%
57	5.592	5.579	5.601	VV	121	1199	0.07%	0.008%
58	5.607	5.601	5.626	VV	87	780	0.05%	0.005%
59	5.640	5.626	5.654	VV	159	1939	0.11%	0.013%
60	5.659	5.654	5.664	VV	147	595	0.03%	0.004%
61	5.670	5.664	5.689	VV	120	1211	0.07%	0.008%
62	5.695	5.689	5.700	PV	99	404	0.02%	0.003%
63	5.732	5.700	5.757	VV	417	8879	0.52%	0.059%
64	5.766	5.757	5.774	VV	302	2769	0.16%	0.018%
65	5.790	5.774	5.814	VV	343	6231	0.36%	0.042%
66	5.829	5.814	5.864	VV	296	6311	0.37%	0.042%
67	5.871	5.864	5.900	VV	284	5122	0.30%	0.034%
68	5.907	5.900	5.969	VV	252	6959	0.41%	0.046%
69	5.972	5.969	5.980	VV	208	1011	0.06%	0.007%
70	5.990	5.980	6.005	VV	170	1722	0.10%	0.011%
71	6.014	6.005	6.025	VV	159	1236	0.07%	0.008%
72	6.028	6.025	6.031	VV	155	408	0.02%	0.003%
73	6.039	6.031	6.043	VV	160	785	0.05%	0.005%
74	6.046	6.043	6.058	VV	177	903	0.05%	0.006%
75	6.065	6.058	6.072	VV	136	721	0.04%	0.005%
76	6.083	6.072	6.100	VV	139	1591	0.09%	0.011%
77	6.109	6.100	6.134	VV	158	2576	0.15%	0.017%
78	6.148	6.134	6.159	VV	143	1571	0.09%	0.010%
79	6.182	6.159	6.192	VV	234	2712	0.16%	0.018%
80	6.195	6.192	6.202	VV	227	1041	0.06%	0.007%
81	6.243	6.202	6.260	VV	484	10370	0.61%	0.069%
82	6.278	6.260	6.288	VV	499	6911	0.40%	0.046%
83	6.293	6.288	6.327	VV	473	10095	0.59%	0.067%
84	6.331	6.327	6.335	VV	466	2264	0.13%	0.015%
85	6.388	6.335	6.414	VV	756	24459	1.43%	0.163%
86	6.420	6.414	6.444	VV	416	6169	0.36%	0.041%
87	6.449	6.444	6.454	VV	376	2143	0.13%	0.014%
88	6.470	6.454	6.509	VV	395	10471	0.61%	0.070%
89	6.525	6.509	6.545	VV	529	8882	0.52%	0.059%

					rteres			
90	6.562	6.545	6.585	VV	454	8330	0.49%	0.056%
91	6.598	6.585	6.605	VV	251	2491	0.15%	0.017%
92	6.610	6.605	6.620	VV	238	1743	0.10%	0.012%
93	6.625	6.620	6.649	VV	221	3027	0.18%	0.020%
94	6.677	6.649	6.697	VV	350	6577	0.38%	0.044%
95	6.702	6.697	6.732	VV	289	4391	0.26%	0.029%
96	6.752	6.732	6.764	VV	268	3889	0.23%	0.026%
97	6.776	6.764	6.780	VV	200	1902	0.11%	0.013%
98	6.805	6.780	6.814	VV	360	5530	0.32%	0.037%
99	6.817	6.814	6.827	VV	360	2542	0.15%	0.017%
100	6.831	6.827	6.857	VV	410	5416	0.32%	0.036%
101	6.862	6.857	6.885	VV	315	4211	0.25%	0.028%
102	6.891	6.885	6.899	VV	312	2098	0.12%	0.014%
103	6.903	6.899	6.914	VV	304	2318	0.14%	0.015%
104	6.919	6.914	6.935	VV	251	2662	0.16%	0.018%
105	6.943	6.935	6.946	VV	221	1316	0.08%	0.009%
106	6.962	6.946	7.000	VV	363	7421	0.43%	0.049%
107	7.007	7.000	7.047	VV	203	3415	0.20%	0.023%
108	7.050	7.047	7.058	VV	136	699	0.04%	0.005%
109	7.065	7.058	7.096	VV	162	2720	0.16%	0.018%
110	7.100	7.096	7.124	VV	138	1457	0.09%	0.010%
111	7.127	7.124	7.131	VV	108	299	0.02%	0.002%
112	7.145	7.131	7.149	VV	137	1062	0.06%	0.007%
113	7.154	7.149	7.162	VV	159	950	0.06%	0.006%
114	7.167	7.162	7.172	VV	136	722	0.04%	0.005%
115	7.216	7.172	7.219	VV	712	11538	0.67%	0.077%
116	7.222	7.219	7.235	VV	678	6770	0.40%	0.045%
117	7.239	7.235	7.305	VV	640	19571	1.14%	0.130%
118	7.313	7.305	7.329	VV	353	4305	0.25%	0.029%
119	7.332	7.329	7.345	VV	349	2840	0.17%	0.019%
120	7.365	7.345	7.422	VV	636	18593	1.09%	0.124%
121	7.461	7.422	7.477	VV	525	12375	0.72%	0.082%
122	7.496	7.477	7.570	VV	641	25176	1.47%	0.168%
123	7.575	7.570	7.594	VV	320	3702	0.22%	0.025%
124	7.598	7.594	7.609	VV	258	2242	0.13%	0.015%
125	7.627	7.609	7.644	VV	471	7235	0.42%	0.048%
126	7.649	7.644	7.669	VV	298	3112	0.18%	0.021%
127	7.674	7.669	7.682	VV	183	1024	0.06%	0.007%
128	7.699	7.682	7.735	VV	393	6767	0.39%	0.045%
129	7.762	7.735	7.796	VV	203	4865	0.28%	0.032%
130	7.800	7.796	7.827	VV	137	2113	0.12%	0.014%
131	7.830	7.827	7.839	VV	105	588	0.03%	0.004%
132	7.846	7.839	7.854	VV	116	713	0.04%	0.005%
133	7.859	7.854	7.871	VV	96	617	0.04%	0.004%
134	7.910	7.871	7.980	VV	5047	60919	3.56%	0.406%
135	7.988	7.980	7.997	VV	142	1155	0.07%	0.008%
136	8.001	7.997	8.004	VV	119	440	0.03%	0.003%
137	8.008	8.004	8.018	VV	144	971	0.06%	0.006%
138	8.023	8.018	8.032	VV	152	981	0.06%	0.007%
139	8.055	8.032	8.062	VV	438	4785	0.28%	0.032%
140	8.084	8.062	8.170	VV	6078	77707	4.53%	0.518%
141	8.177	8.170	8.189	VV	175	1361	0.08%	0.009%

					rteres			
142	8.222	8.189	8.237	VV	288	5619	0.33%	0.037%
143	8.248	8.237	8.279	VV	311	5828	0.34%	0.039%
144	8.284	8.279	8.306	VV	212	3145	0.18%	0.021%
145	8.310	8.306	8.316	VV	190	953	0.06%	0.006%
146	8.338	8.316	8.364	VV	252	5227	0.31%	0.035%
147	8.368	8.364	8.392	VV	159	2270	0.13%	0.015%
148	8.415	8.392	8.431	VV	267	4603	0.27%	0.031%
149	8.435	8.431	8.455	VV	225	2619	0.15%	0.017%
150	8.481	8.455	8.500	VV	1549	20908	1.22%	0.139%
151	8.513	8.500	8.542	VV	716	10581	0.62%	0.070%
152	8.550	8.542	8.581	VV	196	2984	0.17%	0.020%
153	8.596	8.581	8.609	VV	303	3777	0.22%	0.025%
154	8.614	8.609	8.618	VV	284	1441	0.08%	0.010%
155	8.653	8.618	8.691	VV	501	13796	0.81%	0.092%
156	8.700	8.691	8.740	VV	203	3652	0.21%	0.024%
157	8.757	8.740	8.791	VV	195	3436	0.20%	0.023%
158	8.796	8.791	8.801	VV	99	433	0.03%	0.003%
159	8.807	8.801	8.812	VV	56	281	0.02%	0.002%
160	8.819	8.812	8.824	VV	79	476	0.03%	0.003%
161	8.842	8.824	8.859	VV	174	2713	0.16%	0.018%
162	8.874	8.859	8.894	VV	281	3573	0.21%	0.024%
163	8.897	8.894	8.912	VV	73	729	0.04%	0.005%
164	8.948	8.912	8.974	VV	490	7976	0.47%	0.053%
165	8.998	8.974	9.038	VV	636	13806	0.81%	0.092%
166	9.043	9.038	9.047	VV	277	1479	0.09%	0.010%
167	9.054	9.047	9.064	VV	291	2832	0.17%	0.019%
168	9.069	9.064	9.100	VV	277	4508	0.26%	0.030%
169	9.105	9.100	9.115	VV	278	1679	0.10%	0.011%
170	9.138	9.115	9.162	VV	398	6572	0.38%	0.044%
171	9.167	9.162	9.194	VV	222	2865	0.17%	0.019%
172	9.199	9.194	9.220	VV	167	1512	0.09%	0.010%
173	9.246	9.220	9.311	VV	2072	32211	1.88%	0.215%
174	9.319	9.311	9.326	VV	140	1086	0.06%	0.007%
175	9.344	9.326	9.370	VV	421	6837	0.40%	0.046%
176	9.394	9.370	9.440	VV	510	10280	0.60%	0.068%
177	9.444	9.440	9.452	VV	110	587	0.03%	0.004%
178	9.455	9.452	9.469	VV	122	675	0.04%	0.004%
179	9.486	9.469	9.492	VV	98	795	0.05%	0.005%
180	9.495	9.492	9.508	VV	115	837	0.05%	0.006%
181	9.533	9.508	9.561	VV	347	5560	0.32%	0.037%
182	9.585	9.561	9.594	VV	110	1280	0.07%	0.009%
183	9.621	9.594	9.635	VV	191	2929	0.17%	0.020%
184	9.639	9.635	9.661	VV	189	1420	0.08%	0.009%
185	9.702	9.661	9.714	PV	749	11999	0.70%	0.080%
186	9.732	9.714	9.762	VV	1098	20268	1.18%	0.135%
187	9.766	9.762	9.785	VV	375	3960	0.23%	0.026%
188	9.809	9.785	9.828	VV	444	8380	0.49%	0.056%
189	9.833	9.828	9.842	VV	273	1784	0.10%	0.012%
190	9.850	9.842	9.857	VV	253	1971	0.12%	0.013%
191	9.859	9.857	9.870	VV	229	1073	0.06%	0.007%
192	9.882	9.870	9.891	VV	209	1701	0.10%	0.011%
193	9.897	9.891	9.928	VV	141	1971	0.12%	0.013%
194	9.958	9.928	9.972	PV	1543	17688	1.03%	0.118%

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195	9.997	9.972	10.115	VV	87811	1549164	90.41%	10.321%
196	10.125	10.115	10.185	VV	3044	79133	4.62%	0.527%
197	10.192	10.185	10.218	VV	1237	20120	1.17%	0.134%
198	10.236	10.218	10.306	VV	1364	40705	2.38%	0.271%
199	10.310	10.306	10.328	VV	367	4278	0.25%	0.029%
200	10.335	10.328	10.385	VV	320	7942	0.46%	0.053%
201	10.387	10.385	10.391	VV	195	562	0.03%	0.004%
202	10.400	10.391	10.410	VV	211	1708	0.10%	0.011%
203	10.469	10.410	10.533	VV	18014	263743	15.39%	1.757%
204	10.544	10.533	10.562	VV	862	12997	0.76%	0.087%
205	10.573	10.562	10.628	VV	801	21004	1.23%	0.140%
206	10.646	10.628	10.670	VV	1146	15567	0.91%	0.104%
207	10.684	10.670	10.709	VV	428	7257	0.42%	0.048%
208	10.750	10.709	10.810	VV	1267	35261	2.06%	0.235%
209	10.852	10.810	10.859	VV	1112	24926	1.45%	0.166%
210	10.866	10.859	10.918	VV	1068	22111	1.29%	0.147%
211	10.931	10.918	10.964	VV	515	11719	0.68%	0.078%
212	10.968	10.964	10.987	VV	418	5116	0.30%	0.034%
213	10.992	10.987	10.995	VV	380	1729	0.10%	0.012%
214	11.000	10.995	11.038	VV	406	6788	0.40%	0.045%
215	11.052	11.038	11.060	VV	291	2866	0.17%	0.019%
216	11.063	11.060	11.075	VV	234	1563	0.09%	0.010%
217	11.093	11.075	11.125	VV	313	5741	0.34%	0.038%
218	11.163	11.125	11.226	VV	1648	54399	3.17%	0.362%
219	11.245	11.226	11.281	VV	669	15678	0.91%	0.104%
220	11.305	11.281	11.371	VV	510	15696	0.92%	0.105%
221	11.378	11.371	11.382	VV	197	968	0.06%	0.006%
222	11.404	11.382	11.429	VV	260	4521	0.26%	0.030%
223	11.451	11.429	11.456	VV	146	1486	0.09%	0.010%
224	11.460	11.456	11.476	VV	149	1014	0.06%	0.007%
225	11.482	11.476	11.491	VV	124	726	0.04%	0.005%
226	11.518	11.491	11.529	VV	211	3603	0.21%	0.024%
227	11.575	11.529	11.611	VV	834	15090	0.88%	0.101%
228	11.624	11.611	11.628	VV	178	1503	0.09%	0.010%
229	11.652	11.628	11.706	VV	3327	46466	2.71%	0.310%
230	11.733	11.706	11.755	VV	2371	32362	1.89%	0.216%
231	11.769	11.755	11.798	VV	1041	14029	0.82%	0.093%
232	11.854	11.798	11.914	PV	750	25535	1.49%	0.170%
233	11.921	11.914	11.938	VV	326	3817	0.22%	0.025%
234	11.964	11.938	11.968	VV	525	6629	0.39%	0.044%
235	11.997	11.968	12.036	VV	2700	56094	3.27%	0.374%
236	12.058	12.036	12.095	VV	2731	41264	2.41%	0.275%
237	12.098	12.095	12.118	VV	339	3601	0.21%	0.024%
238	12.130	12.118	12.144	VV	387	4249	0.25%	0.028%
239	12.149	12.144	12.157	VV	205	1112	0.06%	0.007%
240	12.185	12.157	12.199	VV	304	4272	0.25%	0.028%
241	12.203	12.199	12.207	VV	133	572	0.03%	0.004%
242	12.244	12.207	12.285	VV	753	18949	1.11%	0.126%
243	12.299	12.285	12.317	VV	643	7819	0.46%	0.052%
244	12.340	12.317	12.399	VV	2877	45115	2.63%	0.301%
245	12.404	12.399	12.417	VV	175	1112	0.06%	0.007%
246	12.454	12.417	12.475	PV	359	6536	0.38%	0.044%

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247	12.506	12.475	12.554	VV	28565	353744	20.64%	2.357%
248	12.569	12.554	12.583	VV	1178	17318	1.01%	0.115%
249	12.599	12.583	12.616	VV	1588	23770	1.39%	0.158%
250	12.622	12.616	12.644	VV	953	13419	0.78%	0.089%
251	12.649	12.644	12.653	VV	528	2838	0.17%	0.019%
252	12.673	12.653	12.691	VV	1112	18794	1.10%	0.125%
253	12.710	12.691	12.747	VV	1036	21485	1.25%	0.143%
254	12.752	12.747	12.782	VV	313	4769	0.28%	0.032%
255	12.814	12.782	12.848	VV	1423	26431	1.54%	0.176%
256	12.889	12.848	12.931	VV	1148	32823	1.92%	0.219%
257	12.965	12.931	13.059	VV	8835	178943	10.44%	1.192%
258	13.098	13.059	13.120	VV	559	9355	0.55%	0.062%
259	13.141	13.120	13.175	VV	484	8711	0.51%	0.058%
260	13.209	13.175	13.228	PV	329	5473	0.32%	0.036%
261	13.294	13.228	13.359	VV	23662	495901	28.94%	3.304%
262	13.376	13.359	13.401	VV	1225	24396	1.42%	0.163%
263	13.415	13.401	13.431	VV	883	13480	0.79%	0.090%
264	13.459	13.431	13.482	VV	1271	25215	1.47%	0.168%
265	13.503	13.482	13.524	VV	1682	26698	1.56%	0.178%
266	13.569	13.524	13.600	VV	1829	53951	3.15%	0.359%
267	13.632	13.600	13.660	VV	1361	30300	1.77%	0.202%
268	13.665	13.660	13.680	VV	759	7946	0.46%	0.053%
269	13.684	13.680	13.690	VV	730	3913	0.23%	0.026%
270	13.726	13.690	13.760	VV	3098	68524	4.00%	0.457%
271	13.783	13.760	13.798	VV	1167	19926	1.16%	0.133%
272	13.812	13.798	13.827	VV	955	13815	0.81%	0.092%
273	13.860	13.827	13.876	VV	1292	31378	1.83%	0.209%
274	13.913	13.876	13.957	VV	2092	73985	4.32%	0.493%
275	14.042	13.957	14.068	VV	2459	99431	5.80%	0.662%
276	14.091	14.068	14.111	VV	3133	52572	3.07%	0.350%
277	14.137	14.111	14.166	VV	1763	50423	2.94%	0.336%
278	14.208	14.166	14.236	VV	5266	105335	6.15%	0.702%
279	14.244	14.236	14.267	VV	1532	24845	1.45%	0.166%
280	14.273	14.267	14.278	VV	1254	7677	0.45%	0.051%
281	14.319	14.278	14.369	VV	2152	95944	5.60%	0.639%
282	14.390	14.369	14.413	VV	1984	48085	2.81%	0.320%
283	14.454	14.413	14.461	VV	2979	61296	3.58%	0.408%
284	14.487	14.461	14.555	VV	15874	373156	21.78%	2.486%
285	14.586	14.555	14.620	VV	3892	116660	6.81%	0.777%
286	14.655	14.620	14.685	VV	6112	151318	8.83%	1.008%
287	14.690	14.685	14.697	VV	3406	21925	1.28%	0.146%
288	14.703	14.697	14.708	VV	3343	22090	1.29%	0.147%
289	14.757	14.708	14.802	VV	9853	287083	16.75%	1.913%
290	14.810	14.802	14.833	VV	3683	64959	3.79%	0.433%
291	14.862	14.833	14.874	VV	3981	90407	5.28%	0.602%
292	14.893	14.874	14.915	VV	4141	97087	5.67%	0.647%
293	14.935	14.915	14.960	VV	4875	114145	6.66%	0.760%
294	14.995	14.960	15.027	VV	117690	1713526	100.00%	11.416%
295	15.046	15.027	15.080	VV	5383	153246	8.94%	1.021%
296	15.091	15.080	15.115	VV	4502	89866	5.24%	0.599%
297	15.124	15.115	15.139	VV	4189	56862	3.32%	0.379%
298	15.171	15.139	15.176	VV	5351	104405	6.09%	0.696%
299	15.198	15.176	15.235	VV	9126	237690	13.87%	1.584%

					rteres			
300	15.238	15.235	15.240	VV	5616	16568	0.97%	0.110%
301	15.246	15.240	15.270	VV	5663	95067	5.55%	0.633%
302	15.275	15.270	15.312	VV	4950	113148	6.60%	0.754%
303	15.337	15.312	15.367	VV	5597	160475	9.37%	1.069%
304	15.392	15.367	15.424	VV	5163	156708	9.15%	1.044%
305	15.426	15.424	15.430	VV	4591	17950	1.05%	0.120%
306	15.453	15.430	15.485	VV	5161	156374	9.13%	1.042%
307	15.490	15.485	15.510	VV	4807	68200	3.98%	0.454%
308	15.533	15.510	15.549	VV	5055	110948	6.47%	0.739%
309	15.580	15.549	15.656	VV	59881	1318055	76.92%	8.781%
310	15.662	15.656	15.687	VV	5820	100942	5.89%	0.673%
311	15.718	15.687	15.759	VV	10031	321858	18.78%	2.144%
312	15.783	15.759	15.829	VV	6394	225877	13.18%	1.505%
313	15.849	15.829	15.879	VV	5564	146338	8.54%	0.975%
314	15.889	15.879	15.917	VV	4559	101177	5.90%	0.674%
315	15.922	15.917	15.932	VV	4370	38110	2.22%	0.254%
316	15.938	15.932	15.966	VV	4453	88472	5.16%	0.589%
317	15.978	15.966	15.994	VV	4836	73820	4.31%	0.492%
318	16.031	15.994	16.036	VV	5202	126328	7.37%	0.842%
319	16.043	16.036	16.075	VV	5312	112499	6.57%	0.750%
320	16.107	16.075	16.154	VV	5715	216894	12.66%	1.445%
321	16.157	16.154	16.166	VV	4071	29764	1.74%	0.198%
322	16.184	16.166	16.194	VV	4233	67000	3.91%	0.446%
323	16.221	16.194	16.329	VV	8233	356299	20.79%	2.374%
324	16.344	16.329	16.350	VV	3262	41622	2.43%	0.277%
325	16.354	16.350	16.384	VV	3406	63846	3.73%	0.425%
326	16.408	16.384	16.438	VV	3401	104657	6.11%	0.697%
327	16.447	16.438	16.454	VV	3120	27512	1.61%	0.183%
328	16.460	16.454	16.466	VV	3171	22059	1.29%	0.147%
329	16.470	16.466	16.486	VV	2968	35185	2.05%	0.234%
330	16.514	16.486	16.527	VV	3653	77580	4.53%	0.517%
331	16.535	16.527	16.554	VV	3626	55802	3.26%	0.372%
332	16.557	16.554	16.566	VV	3243	21923	1.28%	0.146%
333	16.601	16.566	16.647	VV	7819	226916	13.24%	1.512%
334	16.660	16.647	16.680	VV	3064	55449	3.24%	0.369%
335	16.704	16.680	16.727	VV	6453	118143	6.89%	0.787%
336	16.744	16.727	16.767	VV	3031	67968	3.97%	0.453%
337	16.782	16.767	16.829	VV	3394	98116	5.73%	0.654%
338	16.834	16.829	16.838	VV	1844	9188	0.54%	0.061%
339	16.844	16.838	16.853	VV	2027	17446	1.02%	0.116%
340	16.865	16.853	16.899	VV	1962	48575	2.83%	0.324%
341	16.904	16.899	16.948	VV	1784	44324	2.59%	0.295%
342	16.988	16.948	17.035	VV	2404	96845	5.65%	0.645%
343	17.060	17.035	17.107	VV	1984	66573	3.89%	0.444%
344	17.136	17.107	17.150	VV	1850	37816	2.21%	0.252%
345	17.173	17.150	17.203	VV	4848	86359	5.04%	0.575%
346	17.220	17.203	17.240	VV	1296	22830	1.33%	0.152%
347	17.249	17.240	17.284	VV	1043	17517	1.02%	0.117%
348	17.290	17.284	17.307	VV	406	4614	0.27%	0.031%
349	17.314	17.307	17.322	VV	203	1445	0.08%	0.010%
350	17.326	17.322	17.347	VV	225	2400	0.14%	0.016%
351	17.351	17.347	17.364	VV	283	1356	0.08%	0.009%

rters
Sum of corrected areas: 15009533

FG042425.M Wed May 14 05:38:10 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/06/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-2B	SDG No.:	Q1982
Lab Sample ID:	Q1982-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	Diesel Range Organics
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015832.D	1	05/13/25 10:05	05/13/25 20:18	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	4340		199	1960	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.8		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_G\Data\FG051325\
Data File : FG015832.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:18
Operator : YP\AJ
Sample : Q1982-02
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-2B

Integration File: autoint1.e
Quant Time: May 14 03:56:47 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...	14.993	1272783	10.810 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

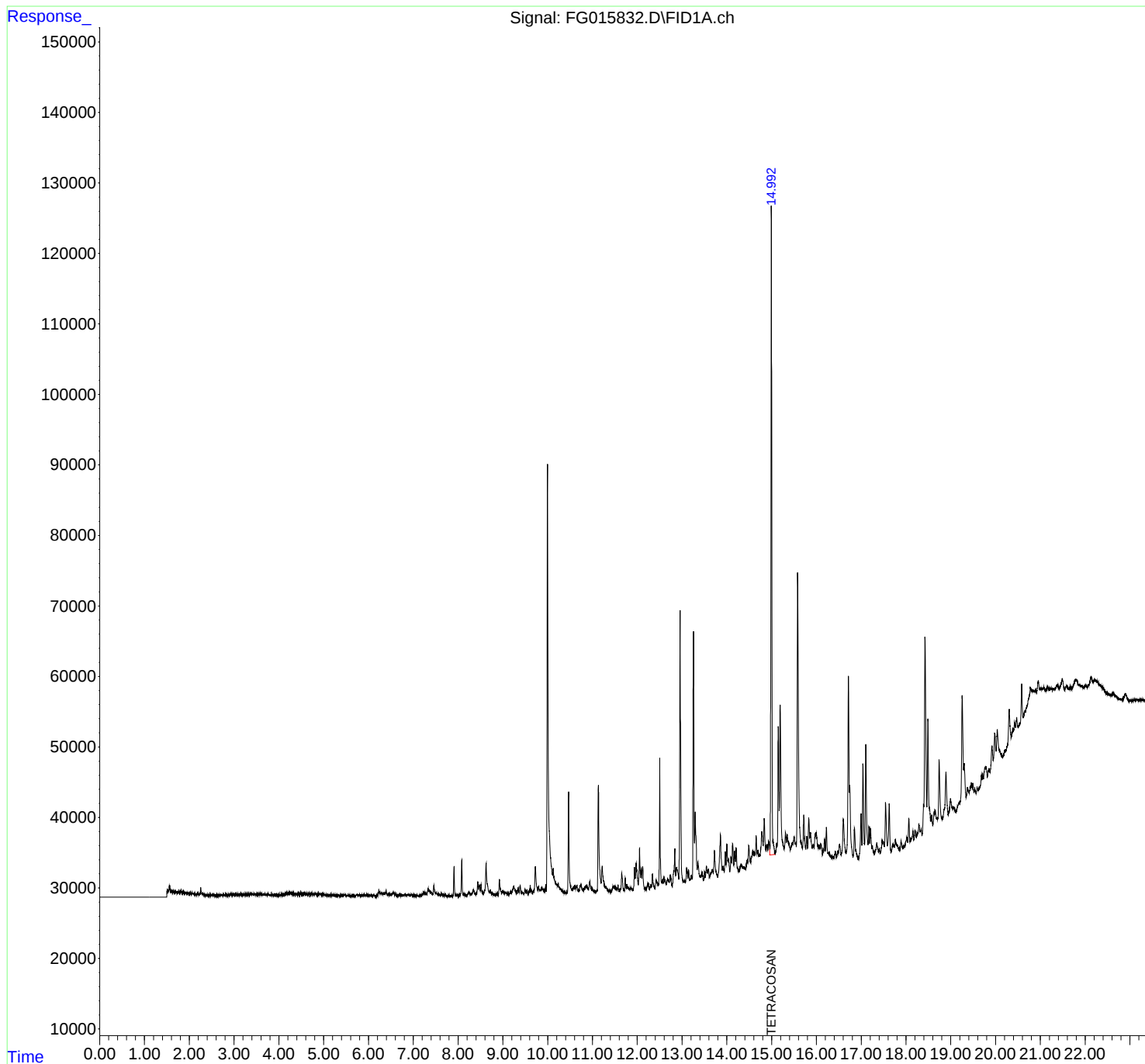
(m)=manual int.

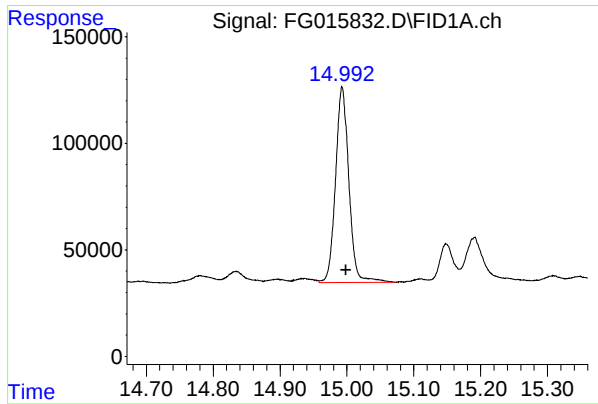
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015832.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:18
Operator : YP\AJ
Sample : Q1982-02
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-2B

Integration File: autoint1.e
Quant Time: May 14 03:56:47 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.: 14.993 min
Delta R.T.: -0.006 min
Response: 1272783
Conc: 10.81 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-2B

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015832.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:18
Sample : Q1982-02
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	4.326	4.300	4.353	BV	162	1526	0.10%	0.010%
2	4.356	4.353	4.360	PV	84	134	0.01%	0.001%
3	4.367	4.360	4.374	PV	139	483	0.03%	0.003%
4	4.379	4.374	4.400	VV	102	828	0.06%	0.005%
5	4.405	4.400	4.443	VV	69	1091	0.07%	0.007%
6	4.471	4.443	4.485	PV	151	2205	0.15%	0.014%
7	4.496	4.485	4.514	VV	271	2951	0.20%	0.019%
8	4.532	4.514	4.537	VV	162	1672	0.11%	0.011%
9	4.541	4.537	4.551	VV	168	1124	0.08%	0.007%
10	4.573	4.551	4.597	VV	224	3736	0.26%	0.024%
11	4.622	4.597	4.648	PV	294	5015	0.34%	0.033%
12	4.672	4.648	4.704	VV	313	6100	0.42%	0.040%
13	4.743	4.704	4.760	VV	322	7284	0.50%	0.048%
14	4.763	4.760	4.771	VV	174	1235	0.08%	0.008%
15	4.777	4.771	4.782	VV	238	1162	0.08%	0.008%
16	4.803	4.782	4.807	VV	241	2787	0.19%	0.018%
17	4.811	4.807	4.816	VV	184	993	0.07%	0.006%
18	4.826	4.816	4.834	VV	227	2151	0.15%	0.014%
19	4.838	4.834	4.844	VV	199	1144	0.08%	0.007%
20	4.848	4.844	4.860	VV	188	1752	0.12%	0.011%
21	4.862	4.860	4.873	VV	201	1376	0.09%	0.009%
22	4.884	4.873	4.906	VV	249	3331	0.23%	0.022%
23	4.910	4.906	4.914	VV	218	859	0.06%	0.006%
24	4.926	4.914	4.951	VV	263	4076	0.28%	0.027%
25	4.955	4.951	4.983	VV	238	3106	0.21%	0.020%
26	5.001	4.983	5.057	VV	219	5710	0.39%	0.037%
27	5.065	5.057	5.101	VV	147	2422	0.17%	0.016%
28	5.110	5.101	5.117	VV	119	798	0.05%	0.005%
29	5.123	5.117	5.130	VV	111	735	0.05%	0.005%
30	5.137	5.130	5.150	VV	135	1302	0.09%	0.009%
31	5.159	5.150	5.185	VV	212	2464	0.17%	0.016%
32	5.191	5.185	5.197	VV	94	444	0.03%	0.003%
33	5.201	5.197	5.214	VV	93	605	0.04%	0.004%
34	5.218	5.214	5.232	VV	117	673	0.05%	0.004%
35	5.244	5.232	5.274	VV	120	1842	0.13%	0.012%
36	5.285	5.274	5.370	VV	152	5528	0.38%	0.036%

					rteres			
37	5.375	5.370	5.384	PV	106	597	0.04%	0.004%
38	5.392	5.384	5.404	VV	106	940	0.06%	0.006%
39	5.410	5.404	5.427	VV	127	933	0.06%	0.006%
40	5.432	5.427	5.441	VV	197	569	0.04%	0.004%
41	5.458	5.441	5.471	VV	188	2305	0.16%	0.015%
42	5.476	5.471	5.513	VV	200	3542	0.24%	0.023%
43	5.518	5.513	5.527	VV	77	644	0.04%	0.004%
44	5.531	5.527	5.564	VV	83	1668	0.11%	0.011%
45	5.592	5.564	5.610	VV	145	1713	0.12%	0.011%
46	5.638	5.610	5.650	VV	100	1265	0.09%	0.008%
47	5.657	5.650	5.685	VV	152	1031	0.07%	0.007%
48	5.694	5.685	5.700	PV	74	339	0.02%	0.002%
49	5.706	5.700	5.715	PV	108	652	0.04%	0.004%
50	5.735	5.715	5.742	VV	269	2753	0.19%	0.018%
51	5.754	5.742	5.759	VV	245	2219	0.15%	0.014%
52	5.762	5.759	5.776	VV	257	1874	0.13%	0.012%
53	5.781	5.776	5.792	VV	192	1624	0.11%	0.011%
54	5.797	5.792	5.829	VV	204	3303	0.23%	0.022%
55	5.834	5.829	5.851	VV	197	2046	0.14%	0.013%
56	5.868	5.851	5.882	VV	183	2651	0.18%	0.017%
57	5.887	5.882	5.894	VV	184	1152	0.08%	0.008%
58	5.896	5.894	5.906	VV	216	1104	0.08%	0.007%
59	5.919	5.906	5.955	VV	206	4864	0.33%	0.032%
60	5.964	5.955	5.969	VV	258	1761	0.12%	0.011%
61	5.984	5.969	6.009	VV	245	4219	0.29%	0.028%
62	6.030	6.009	6.043	VV	172	2495	0.17%	0.016%
63	6.058	6.043	6.084	VV	247	3577	0.25%	0.023%
64	6.088	6.084	6.096	VV	109	596	0.04%	0.004%
65	6.112	6.096	6.124	VV	202	2063	0.14%	0.013%
66	6.131	6.124	6.166	VV	164	2018	0.14%	0.013%
67	6.188	6.166	6.197	VV	152	1875	0.13%	0.012%
68	6.236	6.197	6.260	VV	761	17611	1.21%	0.115%
69	6.281	6.260	6.288	VV	508	7743	0.53%	0.051%
70	6.296	6.288	6.328	VV	499	10547	0.72%	0.069%
71	6.331	6.328	6.355	VV	416	6623	0.45%	0.043%
72	6.366	6.355	6.373	VV	457	4261	0.29%	0.028%
73	6.393	6.373	6.432	VV	722	16041	1.10%	0.105%
74	6.437	6.432	6.440	VV	287	1336	0.09%	0.009%
75	6.444	6.440	6.459	VV	335	3159	0.22%	0.021%
76	6.473	6.459	6.484	VV	332	4246	0.29%	0.028%
77	6.487	6.484	6.506	VV	304	3382	0.23%	0.022%
78	6.521	6.506	6.528	VV	351	3815	0.26%	0.025%
79	6.551	6.528	6.592	VV	534	15680	1.08%	0.102%
80	6.597	6.592	6.614	VV	229	2589	0.18%	0.017%
81	6.626	6.614	6.660	VV	250	4462	0.31%	0.029%
82	6.664	6.660	6.669	VV	213	792	0.05%	0.005%
83	6.683	6.669	6.695	VV	291	3251	0.22%	0.021%
84	6.700	6.695	6.716	VV	165	1652	0.11%	0.011%
85	6.721	6.716	6.723	VV	168	626	0.04%	0.004%
86	6.727	6.723	6.735	VV	310	1195	0.08%	0.008%
87	6.740	6.735	6.764	VV	225	2845	0.20%	0.019%
88	6.769	6.764	6.785	VV	172	1789	0.12%	0.012%
89	6.798	6.785	6.825	VV	275	5053	0.35%	0.033%

					rteres			
90	6.829	6.825	6.857	VV	248	4124	0.28%	0.027%
91	6.866	6.857	6.892	VV	233	4333	0.30%	0.028%
92	6.904	6.892	6.917	VV	280	2963	0.20%	0.019%
93	6.920	6.917	6.952	VV	240	3507	0.24%	0.023%
94	6.961	6.952	7.001	VV	317	5350	0.37%	0.035%
95	7.014	7.001	7.049	VV	176	3475	0.24%	0.023%
96	7.058	7.049	7.067	VV	135	878	0.06%	0.006%
97	7.083	7.067	7.087	VV	171	1153	0.08%	0.008%
98	7.094	7.087	7.104	VV	172	1226	0.08%	0.008%
99	7.115	7.104	7.121	VV	100	649	0.04%	0.004%
100	7.151	7.121	7.156	VV	171	1644	0.11%	0.011%
101	7.160	7.156	7.162	VV	97	286	0.02%	0.002%
102	7.167	7.162	7.182	VV	117	1054	0.07%	0.007%
103	7.188	7.182	7.197	VV	187	1526	0.10%	0.010%
104	7.253	7.197	7.295	VV	576	25719	1.77%	0.168%
105	7.331	7.295	7.354	VV	1126	26277	1.80%	0.172%
106	7.362	7.354	7.437	VV	862	26933	1.85%	0.176%
107	7.460	7.437	7.534	VV	1567	41440	2.84%	0.271%
108	7.541	7.534	7.601	VV	387	11913	0.82%	0.078%
109	7.628	7.601	7.672	VV	427	10783	0.74%	0.070%
110	7.701	7.672	7.767	VV	353	8957	0.61%	0.058%
111	7.772	7.767	7.789	VV	125	1055	0.07%	0.007%
112	7.794	7.789	7.839	VV	133	2649	0.18%	0.017%
113	7.867	7.839	7.880	VV	145	1553	0.11%	0.010%
114	7.911	7.880	7.980	PV	4201	51125	3.51%	0.334%
115	7.993	7.980	8.002	VV	110	1056	0.07%	0.007%
116	8.009	8.002	8.020	VV	142	778	0.05%	0.005%
117	8.084	8.020	8.152	VV	5169	72255	4.96%	0.472%
118	8.160	8.152	8.186	VV	153	2680	0.18%	0.017%
119	8.232	8.186	8.280	VV	546	18437	1.27%	0.120%
120	8.299	8.280	8.309	VV	326	4708	0.32%	0.031%
121	8.343	8.309	8.398	VV	865	26839	1.84%	0.175%
122	8.441	8.398	8.458	VV	1943	31804	2.18%	0.208%
123	8.475	8.458	8.499	VV	1547	28787	1.98%	0.188%
124	8.513	8.499	8.571	VV	1597	31534	2.16%	0.206%
125	8.626	8.571	8.704	VV	4566	116362	7.99%	0.760%
126	8.719	8.704	8.787	VV	740	19143	1.31%	0.125%
127	8.807	8.787	8.822	VV	161	2149	0.15%	0.014%
128	8.847	8.822	8.858	VV	167	2362	0.16%	0.015%
129	8.875	8.858	8.897	VV	212	3973	0.27%	0.026%
130	8.925	8.897	8.975	VV	2180	41460	2.85%	0.271%
131	8.997	8.975	9.041	VV	653	17095	1.17%	0.112%
132	9.059	9.041	9.138	VV	402	13210	0.91%	0.086%
133	9.171	9.138	9.195	VV	508	9687	0.66%	0.063%
134	9.244	9.195	9.322	VV	1206	47602	3.27%	0.311%
135	9.343	9.322	9.369	VV	1019	15365	1.05%	0.100%
136	9.388	9.369	9.416	VV	1270	20988	1.44%	0.137%
137	9.433	9.416	9.470	VV	290	7320	0.50%	0.048%
138	9.496	9.470	9.519	VV	784	11982	0.82%	0.078%
139	9.535	9.519	9.564	VV	621	9682	0.66%	0.063%
140	9.589	9.564	9.605	VV	456	7874	0.54%	0.051%
141	9.611	9.605	9.617	VV	791	3127	0.21%	0.020%

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142	9.633	9.617	9.660	VV	668	11061	0.76%	0.072%
143	9.680	9.660	9.692	VV	554	6730	0.46%	0.044%
144	9.727	9.692	9.780	VV	3909	89882	6.17%	0.587%
145	9.796	9.780	9.830	VV	1025	21872	1.50%	0.143%
146	9.842	9.830	9.857	VV	608	8939	0.61%	0.058%
147	9.872	9.857	9.914	VV	1016	23460	1.61%	0.153%
148	9.927	9.914	9.940	VV	549	7755	0.53%	0.051%
149	9.959	9.940	9.972	VV	1352	16138	1.11%	0.105%
150	9.998	9.972	10.109	VV	60104	1129639	77.53%	7.375%
151	10.125	10.109	10.219	VV	3606	130493	8.96%	0.852%
152	10.236	10.219	10.287	VV	1418	39522	2.71%	0.258%
153	10.296	10.287	10.389	VV	620	19313	1.33%	0.126%
154	10.396	10.389	10.407	VV	134	961	0.07%	0.006%
155	10.423	10.407	10.440	VV	146	1565	0.11%	0.010%
156	10.470	10.440	10.556	VV	14407	214440	14.72%	1.400%
157	10.575	10.556	10.588	VV	877	14017	0.96%	0.092%
158	10.612	10.588	10.632	VV	1101	22608	1.55%	0.148%
159	10.649	10.632	10.701	VV	1066	25930	1.78%	0.169%
160	10.746	10.701	10.773	VV	1130	33984	2.33%	0.222%
161	10.787	10.773	10.810	VV	577	10603	0.73%	0.069%
162	10.867	10.810	10.910	VV	1049	45089	3.09%	0.294%
163	10.942	10.910	11.032	VV	1575	51102	3.51%	0.334%
164	11.034	11.032	11.060	VV	236	3444	0.24%	0.022%
165	11.065	11.060	11.083	VV	261	2626	0.18%	0.017%
166	11.133	11.083	11.194	VV	15147	280300	19.24%	1.830%
167	11.219	11.194	11.287	VV	3711	105935	7.27%	0.692%
168	11.300	11.287	11.369	VV	756	21839	1.50%	0.143%
169	11.384	11.369	11.422	VV	186	3764	0.26%	0.025%
170	11.460	11.422	11.515	PV	790	31139	2.14%	0.203%
171	11.529	11.515	11.550	VV	512	9786	0.67%	0.064%
172	11.572	11.550	11.599	VV	919	14143	0.97%	0.092%
173	11.655	11.599	11.710	VV	2594	55626	3.82%	0.363%
174	11.733	11.710	11.754	VV	1858	23883	1.64%	0.156%
175	11.769	11.754	11.785	VV	973	12414	0.85%	0.081%
176	11.798	11.785	11.838	VV	506	12096	0.83%	0.079%
177	11.862	11.838	11.912	VV	456	9559	0.66%	0.062%
178	11.940	11.912	11.955	VV	3252	44712	3.07%	0.292%
179	11.974	11.955	12.025	VV	3810	98657	6.77%	0.644%
180	12.052	12.025	12.074	VV	5915	93113	6.39%	0.608%
181	12.087	12.074	12.104	VV	2987	42174	2.89%	0.275%
182	12.121	12.104	12.174	VV	3254	59356	4.07%	0.388%
183	12.182	12.174	12.203	VV	214	2062	0.14%	0.013%
184	12.244	12.203	12.267	PV	930	16905	1.16%	0.110%
185	12.302	12.267	12.317	VV	606	9892	0.68%	0.065%
186	12.341	12.317	12.395	VV	2130	37692	2.59%	0.246%
187	12.421	12.395	12.465	PV	1272	31636	2.17%	0.207%
188	12.503	12.465	12.547	VV	18472	227860	15.64%	1.488%
189	12.567	12.547	12.584	VV	1100	19704	1.35%	0.129%
190	12.598	12.584	12.649	VV	1524	35790	2.46%	0.234%
191	12.685	12.649	12.713	VV	1040	32393	2.22%	0.211%
192	12.733	12.713	12.787	VV	1661	37264	2.56%	0.243%
193	12.838	12.787	12.859	VV	5275	105128	7.21%	0.686%
194	12.879	12.859	12.928	VV	2564	79701	5.47%	0.520%

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195	12.956	12.928	13.047	VV	38854	610960	41.93%	3.989%
196	13.057	13.047	13.077	VV	512	7453	0.51%	0.049%
197	13.102	13.077	13.129	VV	2327	44100	3.03%	0.288%
198	13.146	13.129	13.170	VV	1976	30528	2.10%	0.199%
199	13.209	13.170	13.229	VV	1113	27390	1.88%	0.179%
200	13.254	13.229	13.279	VV	35642	480463	32.97%	3.137%
201	13.294	13.279	13.340	VV	10072	219548	15.07%	1.433%
202	13.355	13.340	13.419	VV	2887	73956	5.08%	0.483%
203	13.448	13.419	13.482	VV	1362	32863	2.26%	0.215%
204	13.501	13.482	13.517	VV	1393	17954	1.23%	0.117%
205	13.545	13.517	13.575	VV	2203	49857	3.42%	0.326%
206	13.589	13.575	13.615	VV	1758	27024	1.85%	0.176%
207	13.677	13.615	13.700	VV	1582	56471	3.88%	0.369%
208	13.724	13.700	13.797	VV	4149	101781	6.99%	0.665%
209	13.857	13.797	13.897	VV	6369	167256	11.48%	1.092%
210	13.913	13.897	13.942	VV	1819	39609	2.72%	0.259%
211	13.965	13.942	13.984	VV	3796	60101	4.12%	0.392%
212	14.002	13.984	14.027	VV	4810	86116	5.91%	0.562%
213	14.038	14.027	14.065	VV	2709	44145	3.03%	0.288%
214	14.090	14.065	14.107	VV	2927	53326	3.66%	0.348%
215	14.129	14.107	14.153	VV	4807	90813	6.23%	0.593%
216	14.173	14.153	14.194	VV	3670	68388	4.69%	0.447%
217	14.208	14.194	14.271	VV	4111	85191	5.85%	0.556%
218	14.323	14.271	14.377	VV	1679	80003	5.49%	0.522%
219	14.385	14.377	14.425	VV	1276	31501	2.16%	0.206%
220	14.452	14.425	14.464	VV	2105	38723	2.66%	0.253%
221	14.489	14.464	14.537	VV	4182	120473	8.27%	0.787%
222	14.587	14.537	14.604	VV	3341	111974	7.68%	0.731%
223	14.620	14.604	14.632	VV	3063	47126	3.23%	0.308%
224	14.654	14.632	14.679	VV	5365	107493	7.38%	0.702%
225	14.693	14.679	14.737	VV	3260	98647	6.77%	0.644%
226	14.781	14.737	14.812	VV	5920	190071	13.04%	1.241%
227	14.834	14.812	14.875	VV	7712	194302	13.33%	1.269%
228	14.895	14.875	14.915	VV	4048	85437	5.86%	0.558%
229	14.935	14.915	14.959	VV	4321	101053	6.94%	0.660%
230	14.993	14.959	15.085	VV	94011	1457087	100.00%	9.513%
231	15.110	15.085	15.122	VV	3955	74184	5.09%	0.484%
232	15.149	15.122	15.168	VV	20258	323188	22.18%	2.110%
233	15.190	15.168	15.279	VV	23394	577846	39.66%	3.773%
234	15.309	15.279	15.329	VV	5323	125627	8.62%	0.820%
235	15.347	15.329	15.414	VV	4902	194751	13.37%	1.272%
236	15.456	15.414	15.464	VV	3677	96928	6.65%	0.633%
237	15.500	15.464	15.549	VV	4471	190999	13.11%	1.247%
238	15.579	15.549	15.692	VV	41620	966518	66.33%	6.310%
239	15.717	15.692	15.760	VV	7123	184509	12.66%	1.205%
240	15.784	15.760	15.805	VV	4312	90068	6.18%	0.588%
241	15.828	15.805	15.855	VV	6850	149811	10.28%	0.978%
242	15.867	15.855	15.900	VV	4703	101445	6.96%	0.662%
243	15.934	15.900	15.949	VV	2921	79126	5.43%	0.517%
244	15.990	15.949	16.044	VV	4576	207528	14.24%	1.355%
245	16.059	16.044	16.078	VV	2768	51710	3.55%	0.338%
246	16.104	16.078	16.140	VV	2905	85213	5.85%	0.556%

						rters		
247	16.182	16.140	16.200	VV	3554	84911	5.83%	0.554%
248	16.221	16.200	16.277	VV	5139	117706	8.08%	0.768%
249	16.282	16.277	16.350	VV	1549	46923	3.22%	0.306%
250	16.359	16.350	16.380	VV	919	14222	0.98%	0.093%
251	16.423	16.380	16.450	VV	1471	44689	3.07%	0.292%
252	16.476	16.450	16.494	VV	1596	31594	2.17%	0.206%
253	16.516	16.494	16.554	VV	2508	63172	4.34%	0.412%
254	16.600	16.554	16.662	VV	5918	179602	12.33%	1.173%
255	16.713	16.662	16.817	VV	25763	647761	44.46%	4.229%
256	16.849	16.817	16.935	VV	4414	101026	6.93%	0.660%
257	16.994	16.935	17.014	PV	6187	108942	7.48%	0.711%
258	17.038	17.014	17.075	VV	13309	217877	14.95%	1.423%
259	17.102	17.075	17.150	VV	15833	287710	19.75%	1.878%
260	17.171	17.150	17.189	VV	4077	63893	4.39%	0.417%
261	17.205	17.189	17.235	VV	3691	67336	4.62%	0.440%
262	17.249	17.235	17.277	VV	1175	16077	1.10%	0.105%
263	17.285	17.277	17.304	VV	192	2074	0.14%	0.014%
264	17.346	17.304	17.385	VV	1370	29961	2.06%	0.196%
					Sum of corrected areas:	15316373		

FG042425.M Wed May 14 05:39:00 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/06/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-3	SDG No.:	Q1982
Lab Sample ID:	Q1982-03	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	90.7
Sample Wt/Vol:	30.02	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
FG015833.D	1	05/13/25 10:05	05/13/25 20:47	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1920		186	1840	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.2		37 - 130	51%	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\FG051325\
Data File : FG015833.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:47
Operator : YP\AJ
Sample : Q1982-03
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-3

Integration File: autoint1.e
Quant Time: May 14 03:56:57 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...	14.993	1198220	10.177 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

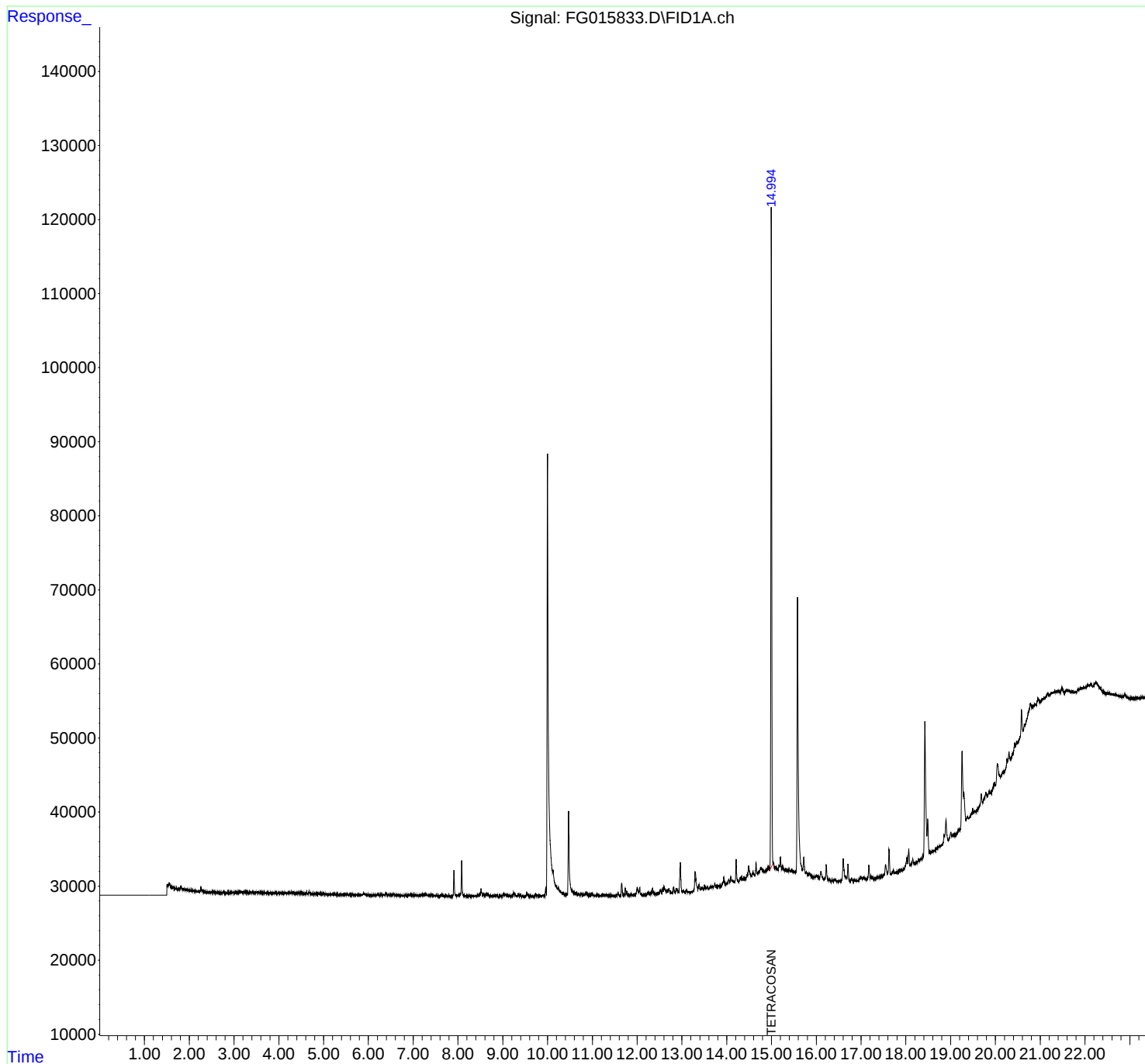
(m)=manual int.

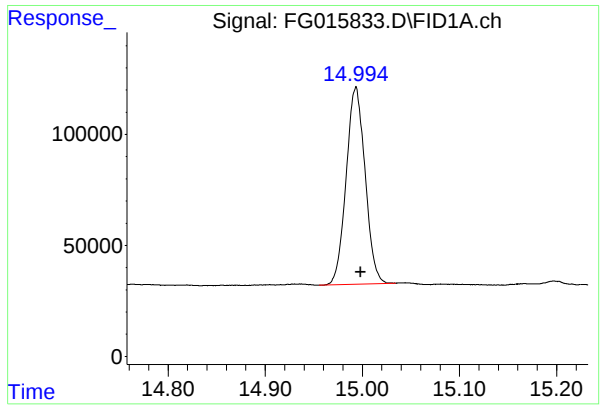
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015833.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:47
Operator : YP\AJ
Sample : Q1982-03
Misc :
ALS Vial : 32 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-3

Integration File: autoint1.e
Quant Time: May 14 03:56:57 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.: 14.993 min
Delta R.T.: -0.005 min
Response: 1198220
Conc: 10.18 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-3

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015833.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 20:47
Sample : Q1982-03
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	4.311	4.300	4.317	BV	158	572	0.04%	0.007%
2	4.323	4.317	4.348	VV	160	1757	0.13%	0.022%
3	4.354	4.348	4.365	PV	129	773	0.06%	0.010%
4	4.371	4.365	4.377	VV	122	561	0.04%	0.007%
5	4.381	4.377	4.400	VV	141	1156	0.09%	0.015%
6	4.405	4.400	4.414	VV	90	500	0.04%	0.006%
7	4.424	4.414	4.438	VV	135	1448	0.11%	0.019%
8	4.442	4.438	4.471	VV	180	2081	0.16%	0.027%
9	4.499	4.471	4.509	VV	304	3810	0.29%	0.049%
10	4.511	4.509	4.523	VV	149	1070	0.08%	0.014%
11	4.526	4.523	4.530	VV	155	551	0.04%	0.007%
12	4.534	4.530	4.538	VV	143	484	0.04%	0.006%
13	4.545	4.538	4.559	VV	161	1506	0.11%	0.019%
14	4.567	4.559	4.582	VV	143	1520	0.12%	0.019%
15	4.588	4.582	4.603	VV	117	1206	0.09%	0.015%
16	4.623	4.603	4.646	VV	291	4015	0.30%	0.051%
17	4.672	4.646	4.711	PV	382	7490	0.57%	0.096%
18	4.718	4.711	4.723	VV	165	1013	0.08%	0.013%
19	4.735	4.723	4.739	VV	169	1250	0.09%	0.016%
20	4.743	4.739	4.748	VV	141	714	0.05%	0.009%
21	4.764	4.748	4.798	VV	172	3442	0.26%	0.044%
22	4.803	4.798	4.807	VV	150	644	0.05%	0.008%
23	4.812	4.807	4.821	VV	149	993	0.08%	0.013%
24	4.832	4.821	4.843	VV	246	1779	0.13%	0.023%
25	4.846	4.843	4.851	VV	167	723	0.05%	0.009%
26	4.855	4.851	4.860	VV	201	772	0.06%	0.010%
27	4.877	4.860	4.883	VV	204	1943	0.15%	0.025%
28	4.885	4.883	4.916	VV	199	2892	0.22%	0.037%
29	4.920	4.916	4.949	VV	260	3337	0.25%	0.043%
30	4.954	4.949	4.966	VV	194	1467	0.11%	0.019%
31	4.972	4.966	4.980	VV	176	1311	0.10%	0.017%
32	4.985	4.980	5.001	VV	202	1618	0.12%	0.021%
33	5.007	5.001	5.025	VV	191	1763	0.13%	0.023%
34	5.029	5.025	5.035	VV	159	677	0.05%	0.009%
35	5.039	5.035	5.049	VV	157	1091	0.08%	0.014%
36	5.054	5.049	5.059	VV	156	719	0.05%	0.009%

					rteres			
37	5.066	5.059	5.089	VV	150	1756	0.13%	0.022%
38	5.096	5.089	5.102	VV	166	730	0.06%	0.009%
39	5.106	5.102	5.113	VV	100	400	0.03%	0.005%
40	5.116	5.113	5.130	VV	141	714	0.05%	0.009%
41	5.136	5.130	5.146	VV	119	731	0.06%	0.009%
42	5.163	5.146	5.174	VV	193	2372	0.18%	0.030%
43	5.181	5.174	5.193	VV	131	1117	0.08%	0.014%
44	5.208	5.193	5.224	VV	158	1647	0.12%	0.021%
45	5.232	5.224	5.240	VV	115	699	0.05%	0.009%
46	5.249	5.240	5.266	VV	166	1373	0.10%	0.018%
47	5.272	5.266	5.280	VV	138	719	0.05%	0.009%
48	5.286	5.280	5.292	VV	154	656	0.05%	0.008%
49	5.294	5.292	5.305	VV	171	804	0.06%	0.010%
50	5.307	5.305	5.331	VV	172	1284	0.10%	0.016%
51	5.344	5.331	5.357	VV	155	1282	0.10%	0.016%
52	5.360	5.357	5.366	VV	125	509	0.04%	0.007%
53	5.377	5.366	5.396	VV	140	1674	0.13%	0.021%
54	5.399	5.396	5.415	VV	209	945	0.07%	0.012%
55	5.422	5.415	5.433	PV	123	922	0.07%	0.012%
56	5.437	5.433	5.449	VV	126	932	0.07%	0.012%
57	5.459	5.449	5.463	VV	154	931	0.07%	0.012%
58	5.478	5.463	5.488	VV	255	2405	0.18%	0.031%
59	5.493	5.488	5.497	VV	210	798	0.06%	0.010%
60	5.501	5.497	5.511	VV	139	933	0.07%	0.012%
61	5.515	5.511	5.530	VV	132	1125	0.09%	0.014%
62	5.534	5.530	5.561	VV	152	1640	0.12%	0.021%
63	5.566	5.561	5.586	VV	120	1082	0.08%	0.014%
64	5.596	5.586	5.610	VV	136	1170	0.09%	0.015%
65	5.613	5.610	5.619	VV	79	345	0.03%	0.004%
66	5.632	5.619	5.638	VV	195	1024	0.08%	0.013%
67	5.644	5.638	5.675	VV	124	1710	0.13%	0.022%
68	5.680	5.675	5.693	PV	91	825	0.06%	0.011%
69	5.697	5.693	5.701	VV	69	336	0.03%	0.004%
70	5.710	5.701	5.718	VV	140	763	0.06%	0.010%
71	5.725	5.718	5.735	VV	119	881	0.07%	0.011%
72	5.741	5.735	5.746	VV	156	552	0.04%	0.007%
73	5.757	5.746	5.770	VV	132	1365	0.10%	0.017%
74	5.775	5.770	5.785	VV	95	793	0.06%	0.010%
75	5.792	5.785	5.796	VV	142	733	0.06%	0.009%
76	5.810	5.796	5.819	VV	151	1410	0.11%	0.018%
77	5.834	5.819	5.853	VV	172	2445	0.19%	0.031%
78	5.856	5.853	5.859	VV	111	364	0.03%	0.005%
79	5.865	5.859	5.875	VV	152	1147	0.09%	0.015%
80	5.899	5.875	5.915	VV	346	5709	0.43%	0.073%
81	5.919	5.915	5.940	VV	194	2222	0.17%	0.028%
82	5.944	5.940	5.949	VV	142	533	0.04%	0.007%
83	5.960	5.949	5.977	VV	135	1515	0.11%	0.019%
84	5.989	5.977	6.017	VV	152	2325	0.18%	0.030%
85	6.025	6.017	6.050	VV	206	1935	0.15%	0.025%
86	6.053	6.050	6.064	VV	96	824	0.06%	0.011%
87	6.068	6.064	6.073	VV	84	419	0.03%	0.005%
88	6.084	6.073	6.104	VV	115	1516	0.11%	0.019%
89	6.106	6.104	6.110	VV	109	372	0.03%	0.005%

					rteres			
90	6.113	6.110	6.126	VV	108	886	0.07%	0.011%
91	6.139	6.126	6.168	VV	127	1623	0.12%	0.021%
92	6.178	6.168	6.198	VV	148	1495	0.11%	0.019%
93	6.211	6.198	6.234	VV	228	3187	0.24%	0.041%
94	6.242	6.234	6.253	VV	194	1483	0.11%	0.019%
95	6.258	6.253	6.265	VV	149	782	0.06%	0.010%
96	6.267	6.265	6.309	VV	184	3610	0.27%	0.046%
97	6.312	6.309	6.321	VV	175	948	0.07%	0.012%
98	6.325	6.321	6.347	VV	142	2038	0.15%	0.026%
99	6.350	6.347	6.354	VV	167	515	0.04%	0.007%
100	6.361	6.354	6.367	VV	188	1187	0.09%	0.015%
101	6.391	6.367	6.412	VV	533	7678	0.58%	0.098%
102	6.426	6.412	6.437	VV	183	2053	0.16%	0.026%
103	6.446	6.437	6.467	VV	183	2826	0.21%	0.036%
104	6.473	6.467	6.495	VV	181	2441	0.19%	0.031%
105	6.503	6.495	6.526	VV	171	2458	0.19%	0.031%
106	6.532	6.526	6.544	VV	205	1644	0.12%	0.021%
107	6.566	6.544	6.663	VV	340	10406	0.79%	0.133%
108	6.682	6.663	6.730	VV	220	4025	0.31%	0.051%
109	6.738	6.730	6.784	VV	134	2440	0.18%	0.031%
110	6.799	6.784	6.821	VV	106	1666	0.13%	0.021%
111	6.825	6.821	6.856	VV	107	1965	0.15%	0.025%
112	6.870	6.856	6.911	VV	198	4278	0.32%	0.055%
113	6.914	6.911	6.927	VV	163	1460	0.11%	0.019%
114	6.934	6.927	6.942	VV	205	1488	0.11%	0.019%
115	6.946	6.942	6.989	VV	194	4942	0.37%	0.063%
116	7.005	6.989	7.036	VV	194	4134	0.31%	0.053%
117	7.043	7.036	7.071	VV	177	2597	0.20%	0.033%
118	7.075	7.071	7.083	VV	167	900	0.07%	0.012%
119	7.099	7.083	7.122	VV	150	2556	0.19%	0.033%
120	7.130	7.122	7.147	VV	138	1731	0.13%	0.022%
121	7.227	7.147	7.235	VV	272	10117	0.77%	0.129%
122	7.250	7.235	7.293	VV	320	8385	0.64%	0.107%
123	7.301	7.293	7.341	VV	243	5135	0.39%	0.066%
124	7.357	7.341	7.379	VV	195	3469	0.26%	0.044%
125	7.401	7.379	7.446	VV	248	7220	0.55%	0.092%
126	7.463	7.446	7.486	VV	189	3135	0.24%	0.040%
127	7.508	7.486	7.552	VV	170	4556	0.35%	0.058%
128	7.568	7.552	7.597	VV	157	2189	0.17%	0.028%
129	7.632	7.597	7.690	VV	250	7169	0.54%	0.092%
130	7.699	7.690	7.709	VV	104	909	0.07%	0.012%
131	7.720	7.709	7.731	VV	115	1092	0.08%	0.014%
132	7.740	7.731	7.775	VV	123	2072	0.16%	0.026%
133	7.794	7.775	7.836	VV	108	2716	0.21%	0.035%
134	7.864	7.836	7.882	PV	149	2184	0.17%	0.028%
135	7.911	7.882	7.973	VV	3592	46865	3.55%	0.599%
136	7.986	7.973	8.001	VV	184	2070	0.16%	0.026%
137	8.017	8.001	8.030	VV	299	3203	0.24%	0.041%
138	8.084	8.030	8.189	VV	4883	68804	5.22%	0.880%
139	8.200	8.189	8.219	VV	181	2291	0.17%	0.029%
140	8.226	8.219	8.246	VV	149	1799	0.14%	0.023%
141	8.264	8.246	8.287	VV	183	2753	0.21%	0.035%

					rteres			
142	8.297	8.287	8.306	VV	95	792	0.06%	0.010%
143	8.327	8.306	8.357	VV	166	3322	0.25%	0.042%
144	8.396	8.357	8.406	VV	126	2726	0.21%	0.035%
145	8.481	8.406	8.492	VV	277	9695	0.74%	0.124%
146	8.516	8.492	8.559	VV	1115	21095	1.60%	0.270%
147	8.570	8.559	8.591	VV	370	4914	0.37%	0.063%
148	8.658	8.591	8.705	VV	497	18467	1.40%	0.236%
149	8.712	8.705	8.746	VV	174	3491	0.26%	0.045%
150	8.755	8.746	8.792	VV	195	2903	0.22%	0.037%
151	8.820	8.792	8.826	PV	125	1926	0.15%	0.025%
152	8.854	8.826	8.862	VV	242	3503	0.27%	0.045%
153	8.874	8.862	8.905	VV	289	3786	0.29%	0.048%
154	8.948	8.905	8.984	VV	186	5200	0.39%	0.066%
155	9.006	8.984	9.044	VV	311	8850	0.67%	0.113%
156	9.059	9.044	9.071	VV	301	3840	0.29%	0.049%
157	9.080	9.071	9.151	VV	320	7696	0.58%	0.098%
158	9.169	9.151	9.192	VV	203	3189	0.24%	0.041%
159	9.206	9.192	9.217	VV	226	2192	0.17%	0.028%
160	9.244	9.217	9.318	VV	522	16046	1.22%	0.205%
161	9.345	9.318	9.372	VV	385	7046	0.53%	0.090%
162	9.388	9.372	9.482	VV	302	7225	0.55%	0.092%
163	9.490	9.482	9.506	PV	59	761	0.06%	0.010%
164	9.542	9.506	9.599	VV	506	12040	0.91%	0.154%
165	9.606	9.599	9.668	VV	153	3544	0.27%	0.045%
166	9.677	9.668	9.695	VV	117	1008	0.08%	0.013%
167	9.735	9.695	9.754	PV	442	7370	0.56%	0.094%
168	9.762	9.754	9.793	VV	149	3276	0.25%	0.042%
169	9.818	9.793	9.870	VV	210	6228	0.47%	0.080%
170	9.879	9.870	9.896	VV	145	1967	0.15%	0.025%
171	9.904	9.896	9.937	VV	210	2723	0.21%	0.035%
172	9.959	9.937	9.974	VV	1207	13420	1.02%	0.172%
173	10.000	9.974	10.114	VV	59720	1284379	97.39%	16.419%
174	10.125	10.114	10.221	VV	3550	128328	9.73%	1.641%
175	10.239	10.221	10.421	VV	1162	70196	5.32%	0.897%
176	10.471	10.421	10.569	VV	11530	218637	16.58%	2.795%
177	10.578	10.569	10.632	VV	595	18537	1.41%	0.237%
178	10.645	10.632	10.670	VV	595	8958	0.68%	0.115%
179	10.688	10.670	10.718	VV	383	8511	0.65%	0.109%
180	10.751	10.718	10.791	VV	409	12259	0.93%	0.157%
181	10.795	10.791	10.818	VV	304	3347	0.25%	0.043%
182	10.844	10.818	10.858	VV	418	8400	0.64%	0.107%
183	10.869	10.858	10.912	VV	502	9415	0.71%	0.120%
184	10.942	10.912	10.959	VV	283	6180	0.47%	0.079%
185	10.999	10.959	11.052	VV	369	11712	0.89%	0.150%
186	11.061	11.052	11.077	VV	154	1979	0.15%	0.025%
187	11.101	11.077	11.134	VV	252	6073	0.46%	0.078%
188	11.150	11.134	11.182	VV	241	4135	0.31%	0.053%
189	11.197	11.182	11.224	VV	154	2587	0.20%	0.033%
190	11.249	11.224	11.282	VV	307	5863	0.44%	0.075%
191	11.319	11.282	11.366	VV	278	8536	0.65%	0.109%
192	11.394	11.366	11.427	VV	192	4788	0.36%	0.061%
193	11.439	11.427	11.462	VV	130	1628	0.12%	0.021%
194	11.510	11.462	11.537	VV	131	3213	0.24%	0.041%

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195	11.575	11.537	11.607	VV	570	9353	0.71%	0.120%
196	11.654	11.607	11.712	PV	1740	29927	2.27%	0.383%
197	11.735	11.712	11.754	VV	1048	13910	1.05%	0.178%
198	11.770	11.754	11.804	VV	640	9270	0.70%	0.119%
199	11.824	11.804	11.842	VV	124	1727	0.13%	0.022%
200	11.871	11.842	11.909	VV	216	5206	0.39%	0.067%
201	11.925	11.909	11.947	VV	194	2576	0.20%	0.033%
202	12.001	11.947	12.041	VV	1133	29170	2.21%	0.373%
203	12.058	12.041	12.097	VV	1094	16694	1.27%	0.213%
204	12.109	12.097	12.121	VV	92	1357	0.10%	0.017%
205	12.130	12.121	12.147	VV	121	1493	0.11%	0.019%
206	12.247	12.147	12.277	VV	509	14369	1.09%	0.184%
207	12.305	12.277	12.320	VV	362	6319	0.48%	0.081%
208	12.343	12.320	12.383	VV	819	16995	1.29%	0.217%
209	12.397	12.383	12.429	VV	205	3817	0.29%	0.049%
210	12.451	12.429	12.472	PV	332	4844	0.37%	0.062%
211	12.526	12.472	12.548	VV	646	16181	1.23%	0.207%
212	12.570	12.548	12.584	VV	958	12576	0.95%	0.161%
213	12.599	12.584	12.651	VV	1103	27494	2.08%	0.351%
214	12.667	12.651	12.682	VV	576	8488	0.64%	0.109%
215	12.710	12.682	12.779	VV	762	22150	1.68%	0.283%
216	12.815	12.779	12.847	VV	899	16673	1.26%	0.213%
217	12.887	12.847	12.936	VV	691	21134	1.60%	0.270%
218	12.964	12.936	13.016	VV	4188	73916	5.60%	0.945%
219	13.039	13.016	13.074	VV	403	7759	0.59%	0.099%
220	13.096	13.074	13.191	VV	467	12185	0.92%	0.156%
221	13.216	13.191	13.226	PV	185	2401	0.18%	0.031%
222	13.296	13.226	13.354	VV	2737	76023	5.76%	0.972%
223	13.379	13.354	13.431	VV	1042	28309	2.15%	0.362%
224	13.458	13.431	13.482	VV	627	14923	1.13%	0.191%
225	13.503	13.482	13.546	VV	932	22398	1.70%	0.286%
226	13.568	13.546	13.599	VV	680	16311	1.24%	0.209%
227	13.637	13.599	13.654	VV	720	18031	1.37%	0.231%
228	13.664	13.654	13.699	VV	656	16369	1.24%	0.209%
229	13.733	13.699	13.761	VV	1063	28433	2.16%	0.363%
230	13.778	13.761	13.804	VV	754	16777	1.27%	0.214%
231	13.840	13.804	13.872	VV	718	25301	1.92%	0.323%
232	13.934	13.872	13.976	VV	1831	65257	4.95%	0.834%
233	13.999	13.976	14.012	VV	962	19397	1.47%	0.248%
234	14.045	14.012	14.067	VV	1448	37965	2.88%	0.485%
235	14.091	14.067	14.122	VV	1843	44792	3.40%	0.573%
236	14.133	14.122	14.163	VV	1332	29193	2.21%	0.373%
237	14.210	14.163	14.269	VV	4111	107631	8.16%	1.376%
238	14.322	14.269	14.361	VV	1679	76925	5.83%	0.983%
239	14.392	14.361	14.401	VV	1504	34039	2.58%	0.435%
240	14.407	14.401	14.427	VV	1444	22439	1.70%	0.287%
241	14.488	14.427	14.562	VV	3118	167082	12.67%	2.136%
242	14.586	14.562	14.626	VV	2190	73858	5.60%	0.944%
243	14.654	14.626	14.684	VV	3470	84941	6.44%	1.086%
244	14.763	14.684	14.847	VV	2753	228353	17.31%	2.919%
245	14.856	14.847	14.882	VV	2321	46984	3.56%	0.601%
246	14.936	14.882	14.959	VV	2834	114476	8.68%	1.463%

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247	14.993	14.959	15.033	VV	90889	1318844	100.00%	16.860%
248	15.043	15.033	15.071	VV	3276	67238	5.10%	0.860%
249	15.082	15.071	15.147	VV	2646	113946	8.64%	1.457%
250	15.167	15.147	15.179	VV	2907	50756	3.85%	0.649%
251	15.198	15.179	15.222	VV	4032	82550	6.26%	1.055%
252	15.248	15.222	15.306	VV	2669	119291	9.05%	1.525%
253	15.337	15.306	15.371	VV	2334	83797	6.35%	1.071%
254	15.391	15.371	15.437	VV	2279	82933	6.29%	1.060%
255	15.448	15.437	15.467	VV	2136	36859	2.79%	0.471%
256	15.481	15.467	15.511	VV	2018	49778	3.77%	0.636%
257	15.529	15.511	15.542	VV	1899	35097	2.66%	0.449%
258	15.578	15.542	15.690	VV	38992	846703	64.20%	10.824%
259	15.718	15.690	15.757	VV	3700	102603	7.78%	1.312%
260	15.774	15.757	15.826	VV	1741	62236	4.72%	0.796%
261	15.852	15.826	15.886	VV	1584	48878	3.71%	0.625%
262	15.893	15.886	15.957	VV	1143	43575	3.30%	0.557%
263	15.973	15.957	15.994	VV	1064	22437	1.70%	0.287%
264	16.014	15.994	16.076	VV	1148	47642	3.61%	0.609%
265	16.102	16.076	16.185	VV	1746	64785	4.91%	0.828%
266	16.221	16.185	16.278	VV	2492	57215	4.34%	0.731%
267	16.285	16.278	16.327	VV	471	11185	0.85%	0.143%
268	16.352	16.327	16.379	VV	428	10051	0.76%	0.128%
269	16.409	16.379	16.466	VV	514	16737	1.27%	0.214%
270	16.479	16.466	16.497	VV	252	3891	0.30%	0.050%
271	16.513	16.497	16.557	VV	280	7873	0.60%	0.101%
272	16.600	16.557	16.647	VV	3205	76123	5.77%	0.973%
273	16.659	16.647	16.681	VV	741	13008	0.99%	0.166%
274	16.706	16.681	16.756	VV	2362	37097	2.81%	0.474%
275	16.787	16.756	16.841	VV	453	10302	0.78%	0.132%
276	16.864	16.841	16.884	VV	183	2619	0.20%	0.033%
277	16.925	16.884	16.941	VV	94	1529	0.12%	0.020%
278	16.986	16.941	17.001	PV	488	11071	0.84%	0.142%
279	17.007	17.001	17.037	VV	459	7242	0.55%	0.093%
280	17.065	17.037	17.117	VV	356	12181	0.92%	0.156%
281	17.173	17.117	17.199	VV	1978	33593	2.55%	0.429%
282	17.222	17.199	17.240	VV	535	7560	0.57%	0.097%
283	17.255	17.240	17.284	VV	342	4731	0.36%	0.060%
284	17.288	17.284	17.317	VV	120	1345	0.10%	0.017%
285	17.372	17.317	17.394	PV	182	3484	0.26%	0.045%

Sum of corrected areas: 7822506

FG042425.M Wed May 14 05:39:46 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/07/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-4	SDG No.:	Q1982
Lab Sample ID:	Q1982-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	87.4
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
FF015836.D	1	05/13/25 10:05	05/13/25 17:22	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	18200		193	1910	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	21.0		37 - 130	105%	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\FF051325\
Data File : FF015836.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:22
Operator : YP\AJ
Sample : Q1982-04
Misc :
ALS Vial : 75 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-4

Integration File: autoint1.e
Quant Time: May 14 05:51:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	2365328	20.960 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

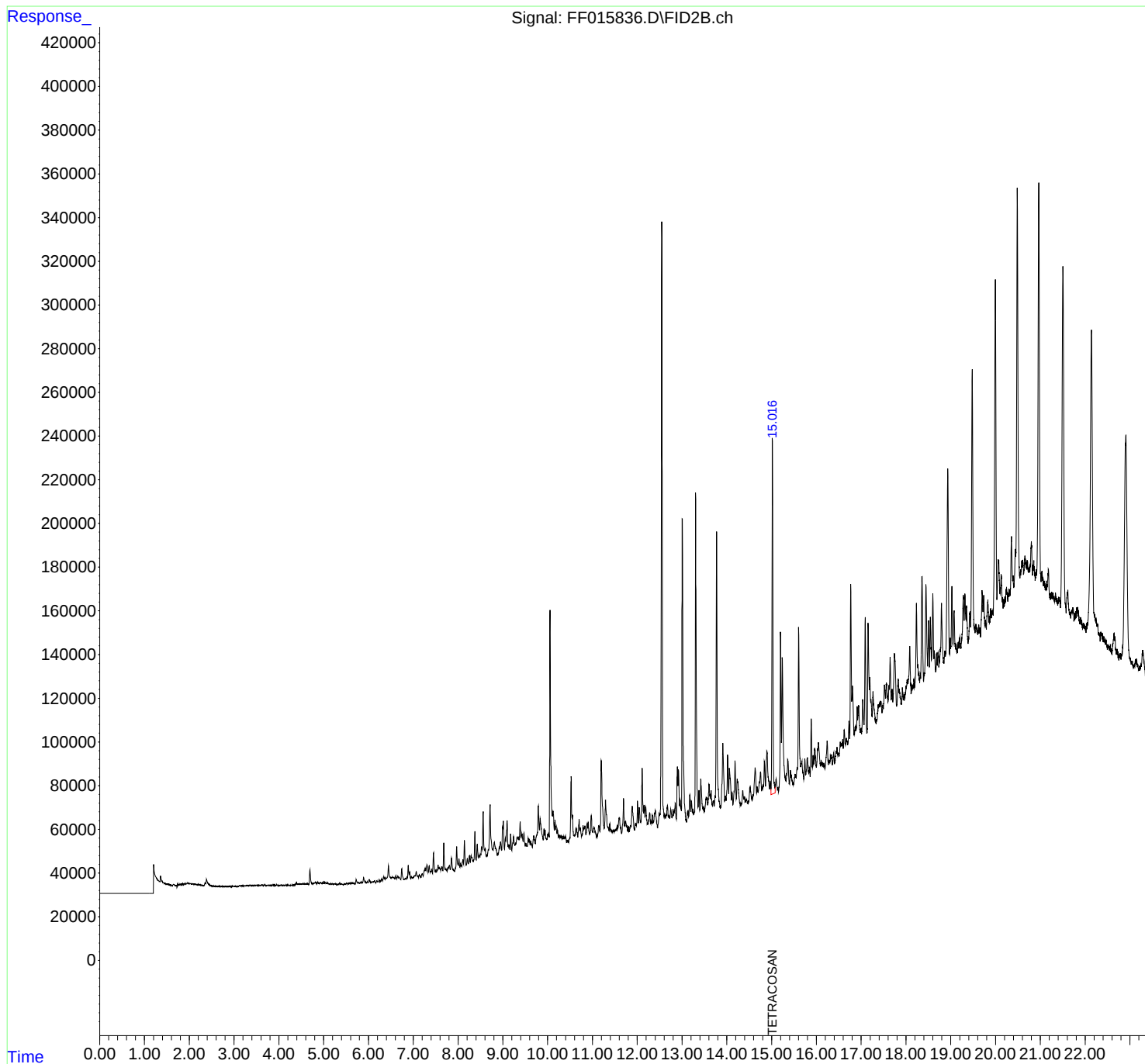
(m)=manual int.

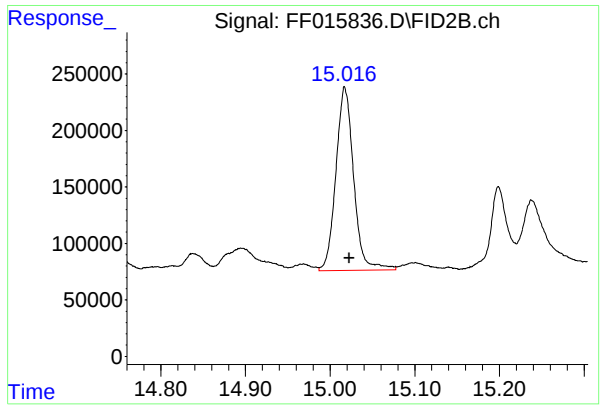
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015836.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:22
Operator : YP\AJ
Sample : Q1982-04
Misc :
ALS Vial : 75 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-4

Integration File: autoint1.e
Quant Time: May 14 05:51:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.005 min

Response: 2365328

Conc: 20.96 ug/ml

Instrument :

FID_F

ClientSampleId :

TP-4

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015836.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:22
Sample : Q1982-04
Misc :
ALS Vial : 75 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.305	4.300	4.310	BV	107	408	0.01%	0.001%
2	4.332	4.310	4.337	PV	188	1846	0.05%	0.003%
3	4.395	4.337	4.421	VV	1071	28971	0.71%	0.049%
4	4.426	4.421	4.454	VV	634	11606	0.29%	0.020%
5	4.467	4.454	4.481	VV	662	9634	0.24%	0.016%
6	4.486	4.481	4.495	VV	582	4480	0.11%	0.008%
7	4.508	4.495	4.523	VV	680	10037	0.25%	0.017%
8	4.527	4.523	4.533	VV	668	3736	0.09%	0.006%
9	4.541	4.533	4.572	VV	632	13520	0.33%	0.023%
10	4.607	4.572	4.628	VV	736	20131	0.50%	0.034%
11	4.641	4.628	4.665	VV	756	13414	0.33%	0.023%
12	4.694	4.665	4.743	VV	6993	122170	3.01%	0.206%
13	4.748	4.743	4.768	VV	849	10700	0.26%	0.018%
14	4.815	4.768	4.842	VV	1335	42841	1.05%	0.072%
15	4.861	4.842	4.902	VV	1162	33429	0.82%	0.056%
16	4.934	4.902	4.938	VV	1018	19582	0.48%	0.033%
17	4.942	4.938	4.958	VV	962	11052	0.27%	0.019%
18	4.971	4.958	4.990	VV	1000	17456	0.43%	0.029%
19	5.011	4.990	5.071	VV	1359	45807	1.13%	0.077%
20	5.084	5.071	5.126	VV	1048	24517	0.60%	0.041%
21	5.160	5.126	5.178	VV	607	14502	0.36%	0.024%
22	5.181	5.178	5.184	VV	348	1404	0.03%	0.002%
23	5.193	5.184	5.222	VV	446	7556	0.19%	0.013%
24	5.228	5.222	5.233	VV	295	1803	0.04%	0.003%
25	5.254	5.233	5.312	VV	579	15683	0.39%	0.026%
26	5.354	5.312	5.367	VV	774	13697	0.34%	0.023%
27	5.370	5.367	5.386	VV	583	5159	0.13%	0.009%
28	5.406	5.386	5.437	VV	504	7693	0.19%	0.013%
29	5.461	5.437	5.477	PV	302	4426	0.11%	0.007%
30	5.504	5.477	5.520	VV	481	9076	0.22%	0.015%
31	5.541	5.520	5.558	VV	518	9455	0.23%	0.016%
32	5.575	5.558	5.579	VV	546	6227	0.15%	0.010%
33	5.590	5.579	5.604	VV	594	7154	0.18%	0.012%
34	5.622	5.604	5.643	VV	618	11801	0.29%	0.020%
35	5.646	5.643	5.668	VV	524	6383	0.16%	0.011%
36	5.680	5.668	5.696	VV	366	4513	0.11%	0.008%

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37	5.728	5.696	5.768	VV	2036	38003	0.93%	0.064%
38	5.778	5.768	5.793	VV	556	6228	0.15%	0.010%
39	5.806	5.793	5.811	VV	371	3549	0.09%	0.006%
40	5.835	5.811	5.854	VV	755	14243	0.35%	0.024%
41	5.864	5.854	5.870	VV	549	4637	0.11%	0.008%
42	5.893	5.870	5.934	VV	2717	49860	1.23%	0.084%
43	5.942	5.934	5.956	VV	604	6106	0.15%	0.010%
44	5.975	5.956	5.995	VV	789	11171	0.27%	0.019%
45	6.017	5.995	6.062	VV	1399	31122	0.77%	0.052%
46	6.079	6.062	6.109	VV	720	12543	0.31%	0.021%
47	6.139	6.109	6.166	VV	981	19038	0.47%	0.032%
48	6.190	6.166	6.207	PV	964	12440	0.31%	0.021%
49	6.239	6.207	6.260	VV	1075	19243	0.47%	0.032%
50	6.298	6.260	6.319	VV	1405	29452	0.72%	0.050%
51	6.341	6.319	6.373	VV	2398	51266	1.26%	0.086%
52	6.390	6.373	6.406	VV	1801	31176	0.77%	0.052%
53	6.448	6.406	6.509	VV	7232	180246	4.43%	0.303%
54	6.535	6.509	6.553	VV	1972	42897	1.06%	0.072%
55	6.567	6.553	6.593	VV	1560	31498	0.77%	0.053%
56	6.611	6.593	6.635	VV	2278	38142	0.94%	0.064%
57	6.653	6.635	6.675	VV	1877	35115	0.86%	0.059%
58	6.689	6.675	6.724	VV	1336	25891	0.64%	0.044%
59	6.743	6.724	6.787	VV	5207	79811	1.96%	0.134%
60	6.798	6.787	6.808	PV	307	1987	0.05%	0.003%
61	6.835	6.808	6.848	VV	611	8830	0.22%	0.015%
62	6.863	6.848	6.871	VV	1193	10606	0.26%	0.018%
63	6.890	6.871	6.909	VV	6398	81316	2.00%	0.137%
64	6.923	6.909	6.948	VV	3309	43375	1.07%	0.073%
65	6.963	6.948	6.979	PV	1025	9820	0.24%	0.017%
66	7.030	6.979	7.038	VV	1144	25942	0.64%	0.044%
67	7.042	7.038	7.050	VV	1080	7455	0.18%	0.013%
68	7.066	7.050	7.093	VV	2960	46586	1.15%	0.078%
69	7.102	7.093	7.116	VV	940	9584	0.24%	0.016%
70	7.134	7.116	7.176	VV	1256	23689	0.58%	0.040%
71	7.200	7.176	7.223	PV	1623	28572	0.70%	0.048%
72	7.268	7.223	7.282	VV	4104	94363	2.32%	0.159%
73	7.309	7.282	7.335	VV	5374	118605	2.92%	0.200%
74	7.358	7.335	7.378	VV	4749	81066	1.99%	0.136%
75	7.392	7.378	7.398	VV	1979	21425	0.53%	0.036%
76	7.415	7.398	7.431	VV	2983	42121	1.04%	0.071%
77	7.453	7.431	7.492	VV	10312	171306	4.21%	0.288%
78	7.508	7.492	7.523	VV	2428	35242	0.87%	0.059%
79	7.557	7.523	7.573	VV	4355	79713	1.96%	0.134%
80	7.588	7.573	7.616	VV	3044	66432	1.63%	0.112%
81	7.640	7.616	7.663	VV	3304	68078	1.67%	0.115%
82	7.683	7.663	7.719	VV	14081	189694	4.67%	0.319%
83	7.722	7.719	7.755	VV	1816	31526	0.78%	0.053%
84	7.771	7.755	7.778	VV	2301	25370	0.62%	0.043%
85	7.808	7.778	7.828	VV	3271	71461	1.76%	0.120%
86	7.856	7.828	7.885	VV	6450	113796	2.80%	0.192%
87	7.899	7.885	7.923	VV	1389	17348	0.43%	0.029%
88	7.971	7.923	8.006	PV	11307	196989	4.85%	0.332%
89	8.023	8.006	8.042	VV	5481	76903	1.89%	0.129%

					rteres			
90	8.058	8.042	8.085	VV	2788	55735	1.37%	0.094%
91	8.110	8.085	8.126	VV	4656	82007	2.02%	0.138%
92	8.144	8.126	8.183	VV	13340	213713	5.26%	0.360%
93	8.210	8.183	8.230	VV	4859	90191	2.22%	0.152%
94	8.256	8.230	8.273	VV	5917	101521	2.50%	0.171%
95	8.291	8.273	8.306	VV	5789	89832	2.21%	0.151%
96	8.310	8.306	8.333	VV	4935	64191	1.58%	0.108%
97	8.347	8.333	8.355	VV	3562	42761	1.05%	0.072%
98	8.377	8.355	8.407	VV	16289	240618	5.92%	0.405%
99	8.431	8.407	8.456	VV	10413	191130	4.70%	0.322%
100	8.470	8.456	8.488	VV	5281	92888	2.29%	0.156%
101	8.504	8.488	8.510	VV	5446	66554	1.64%	0.112%
102	8.526	8.510	8.542	VV	8564	144066	3.54%	0.243%
103	8.562	8.542	8.594	VV	24747	406656	10.00%	0.685%
104	8.607	8.594	8.632	VV	7583	136489	3.36%	0.230%
105	8.642	8.632	8.658	VV	4603	68749	1.69%	0.116%
106	8.677	8.658	8.683	VV	6830	89869	2.21%	0.151%
107	8.717	8.683	8.777	VV	27277	701493	17.26%	1.181%
108	8.811	8.777	8.879	VV	9615	409907	10.08%	0.690%
109	8.892	8.879	8.902	VV	4163	53724	1.32%	0.090%
110	8.920	8.902	8.930	VV	6597	95470	2.35%	0.161%
111	8.952	8.930	8.976	VV	9102	204603	5.03%	0.344%
112	8.996	8.976	9.003	VV	15939	182175	4.48%	0.307%
113	9.012	9.003	9.038	VV	18365	270239	6.65%	0.455%
114	9.057	9.038	9.069	VV	10387	156707	3.86%	0.264%
115	9.097	9.069	9.124	VV	18311	402614	9.90%	0.678%
116	9.137	9.124	9.159	VV	6990	130055	3.20%	0.219%
117	9.176	9.159	9.201	VV	11721	189359	4.66%	0.319%
118	9.242	9.201	9.274	VV	10427	324096	7.97%	0.546%
119	9.287	9.274	9.295	VV	7272	85972	2.12%	0.145%
120	9.319	9.295	9.343	VV	9806	254076	6.25%	0.428%
121	9.356	9.343	9.370	VV	9574	145630	3.58%	0.245%
122	9.388	9.370	9.408	VV	16448	276328	6.80%	0.465%
123	9.431	9.408	9.454	VV	10756	258564	6.36%	0.435%
124	9.472	9.454	9.503	VV	10920	237140	5.83%	0.399%
125	9.516	9.503	9.531	VV	6052	93992	2.31%	0.158%
126	9.539	9.531	9.549	VV	4992	50498	1.24%	0.085%
127	9.569	9.549	9.584	VV	8178	137613	3.39%	0.232%
128	9.594	9.584	9.612	VV	7413	106385	2.62%	0.179%
129	9.622	9.612	9.660	VV	6627	150308	3.70%	0.253%
130	9.690	9.660	9.727	VV	8751	259118	6.37%	0.436%
131	9.792	9.727	9.821	VV	21961	656478	16.15%	1.105%
132	9.836	9.821	9.902	VV	15848	520799	12.81%	0.877%
133	9.921	9.902	9.933	VV	10988	156600	3.85%	0.264%
134	9.945	9.933	9.983	VV	10067	226502	5.57%	0.381%
135	10.005	9.983	10.014	VV	8059	131475	3.23%	0.221%
136	10.025	10.014	10.038	VV	8449	109673	2.70%	0.185%
137	10.054	10.038	10.108	VV	110291	1830853	45.04%	3.082%
138	10.121	10.108	10.151	VV	18073	375339	9.23%	0.632%
139	10.167	10.151	10.182	VV	13983	213664	5.26%	0.360%
140	10.191	10.182	10.209	VV	10734	155717	3.83%	0.262%
141	10.223	10.209	10.243	VV	9057	153948	3.79%	0.259%

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142	10.253	10.243	10.278	VV	6635	128274	3.16%	0.216%
143	10.298	10.278	10.316	VV	6374	126604	3.11%	0.213%
144	10.329	10.316	10.349	VV	5694	102311	2.52%	0.172%
145	10.365	10.349	10.385	VV	5308	104604	2.57%	0.176%
146	10.398	10.385	10.432	VV	5494	115350	2.84%	0.194%
147	10.447	10.432	10.468	VV	3272	60523	1.49%	0.102%
148	10.525	10.468	10.545	VV	32274	542221	13.34%	0.913%
149	10.554	10.545	10.582	VV	14429	220427	5.42%	0.371%
150	10.587	10.582	10.601	VV	5104	57820	1.42%	0.097%
151	10.608	10.601	10.614	VV	5002	38886	0.96%	0.065%
152	10.636	10.614	10.671	VV	8214	220300	5.42%	0.371%
153	10.702	10.671	10.721	VV	11909	230470	5.67%	0.388%
154	10.729	10.721	10.760	VV	7754	140672	3.46%	0.237%
155	10.793	10.760	10.808	VV	8542	179116	4.41%	0.302%
156	10.830	10.808	10.860	VV	8257	203878	5.02%	0.343%
157	10.879	10.860	10.894	VV	8771	143980	3.54%	0.242%
158	10.906	10.894	10.941	VV	9554	180613	4.44%	0.304%
159	10.974	10.941	11.007	VV	12416	290845	7.16%	0.490%
160	11.035	11.007	11.044	VV	6727	133097	3.27%	0.224%
161	11.046	11.044	11.066	VV	6367	68812	1.69%	0.116%
162	11.069	11.066	11.091	VV	4484	49831	1.23%	0.084%
163	11.102	11.091	11.108	VV	2555	25652	0.63%	0.043%
164	11.144	11.108	11.167	VV	7121	172639	4.25%	0.291%
165	11.198	11.167	11.263	VV	36471	881138	21.68%	1.483%
166	11.293	11.263	11.367	VV	17859	560292	13.78%	0.943%
167	11.388	11.367	11.423	VV	6957	155458	3.82%	0.262%
168	11.432	11.423	11.449	VV	3846	53841	1.32%	0.091%
169	11.466	11.449	11.484	VV	3712	64853	1.60%	0.109%
170	11.502	11.484	11.506	VV	3539	40420	0.99%	0.068%
171	11.517	11.506	11.528	VV	3632	44310	1.09%	0.075%
172	11.548	11.528	11.564	VV	4839	92123	2.27%	0.155%
173	11.603	11.564	11.651	VV	8803	275233	6.77%	0.463%
174	11.696	11.651	11.721	VV	17072	326931	8.04%	0.550%
175	11.738	11.721	11.759	VV	6300	120905	2.97%	0.204%
176	11.769	11.759	11.790	VV	4331	66273	1.63%	0.112%
177	11.804	11.790	11.822	VV	3668	49679	1.22%	0.084%
178	11.851	11.822	11.859	VV	4088	65075	1.60%	0.110%
179	11.887	11.859	11.937	VV	12628	326393	8.03%	0.549%
180	11.967	11.937	11.983	VV	4331	93223	2.29%	0.157%
181	12.007	11.983	12.028	VV	14596	233887	5.75%	0.394%
182	12.045	12.028	12.075	VV	11438	208336	5.13%	0.351%
183	12.108	12.075	12.141	VV	29127	544931	13.41%	0.917%
184	12.155	12.141	12.173	VV	11859	179977	4.43%	0.303%
185	12.188	12.173	12.233	VV	11201	239523	5.89%	0.403%
186	12.278	12.233	12.303	VV	7961	208716	5.13%	0.351%
187	12.310	12.303	12.318	VV	3721	29265	0.72%	0.049%
188	12.338	12.318	12.361	VV	6630	120878	2.97%	0.203%
189	12.388	12.361	12.395	VV	7283	109797	2.70%	0.185%
190	12.405	12.395	12.453	VV	8567	161931	3.98%	0.273%
191	12.488	12.453	12.498	VV	6886	99963	2.46%	0.168%
192	12.507	12.498	12.512	VV	6556	52602	1.29%	0.089%
193	12.549	12.512	12.628	VV	276805	4064805	100.00%	6.843%
194	12.674	12.628	12.702	VV	9617	277377	6.82%	0.467%

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195	12.708	12.702	12.727	VV	4650	63643	1.57%	0.107%
196	12.748	12.727	12.777	VV	7645	161137	3.96%	0.271%
197	12.797	12.777	12.812	VV	7257	111809	2.75%	0.188%
198	12.848	12.812	12.871	VV	9801	231683	5.70%	0.390%
199	12.895	12.871	12.907	VV	26377	350137	8.61%	0.589%
200	12.921	12.907	12.946	VV	24903	397946	9.79%	0.670%
201	12.957	12.946	12.987	VV	10964	208109	5.12%	0.350%
202	13.006	12.987	13.099	VV	139194	2243509	55.19%	3.777%
203	13.135	13.099	13.148	PV	5071	90732	2.23%	0.153%
204	13.173	13.148	13.195	VV	12208	208075	5.12%	0.350%
205	13.209	13.195	13.232	VV	9114	140672	3.46%	0.237%
206	13.244	13.232	13.260	VV	5137	65543	1.61%	0.110%
207	13.303	13.260	13.357	VV	149592	2222045	54.67%	3.741%
208	13.377	13.357	13.397	VV	12917	199555	4.91%	0.336%
209	13.419	13.397	13.464	VV	17949	382140	9.40%	0.643%
210	13.471	13.464	13.502	VV	4578	82303	2.02%	0.139%
211	13.542	13.502	13.548	VV	8614	172675	4.25%	0.291%
212	13.554	13.548	13.575	VV	8438	107122	2.64%	0.180%
213	13.603	13.575	13.631	VV	13960	321201	7.90%	0.541%
214	13.647	13.631	13.682	VV	10914	222736	5.48%	0.375%
215	13.705	13.682	13.718	VV	6278	111789	2.75%	0.188%
216	13.736	13.718	13.743	VV	7999	94415	2.32%	0.159%
217	13.771	13.743	13.862	VV	128707	2051364	50.47%	3.453%
218	13.910	13.862	13.957	VV	31233	784106	19.29%	1.320%
219	13.968	13.957	13.984	VV	6352	91362	2.25%	0.154%
220	14.016	13.984	14.042	VV	25133	442721	10.89%	0.745%
221	14.056	14.042	14.105	VV	18745	454191	11.17%	0.765%
222	14.117	14.105	14.137	VV	7050	92795	2.28%	0.156%
223	14.183	14.137	14.211	VV	21308	408729	10.06%	0.688%
224	14.230	14.211	14.298	VV	12690	350441	8.62%	0.590%
225	14.314	14.298	14.328	VV	1230	11524	0.28%	0.019%
226	14.354	14.328	14.382	VV	6583	120816	2.97%	0.203%
227	14.395	14.382	14.413	VV	3494	48370	1.19%	0.081%
228	14.428	14.413	14.432	VV	1867	19027	0.47%	0.032%
229	14.437	14.432	14.469	VV	2229	23428	0.58%	0.039%
230	14.475	14.469	14.481	PV	799	4074	0.10%	0.007%
231	14.515	14.481	14.565	VV	7036	181141	4.46%	0.305%
232	14.631	14.565	14.663	VV	15012	404823	9.96%	0.681%
233	14.680	14.663	14.697	VV	5823	92404	2.27%	0.156%
234	14.753	14.697	14.777	VV	12203	355753	8.75%	0.599%
235	14.796	14.777	14.801	VV	5253	65077	1.60%	0.110%
236	14.814	14.801	14.820	VV	5889	58847	1.45%	0.099%
237	14.838	14.820	14.862	VV	16413	270657	6.66%	0.456%
238	14.895	14.862	14.951	VV	20633	618284	15.21%	1.041%
239	14.969	14.951	14.987	VV	6232	96339	2.37%	0.162%
240	15.017	14.987	15.077	VV	162107	2369304	58.29%	3.989%
241	15.101	15.077	15.133	VV	6434	129367	3.18%	0.218%
242	15.140	15.133	15.153	VV	2133	14559	0.36%	0.025%
243	15.199	15.153	15.220	PV	72746	997037	24.53%	1.678%
244	15.238	15.220	15.316	VV	59989	1295165	31.86%	2.180%
245	15.361	15.316	15.392	VV	12881	318420	7.83%	0.536%
246	15.420	15.392	15.469	VV	7328	164942	4.06%	0.278%

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247	15.477	15.469	15.492	VV	1110	8080	0.20%	0.014%
248	15.522	15.492	15.549	VV	4392	96113	2.36%	0.162%
249	15.570	15.549	15.576	VV	7074	88737	2.18%	0.149%
250	15.603	15.576	15.646	VV	71004	1130409	27.81%	1.903%
251	15.675	15.646	15.717	VV	8961	233084	5.73%	0.392%
252	15.742	15.717	15.764	VV	9368	126313	3.11%	0.213%
253	15.799	15.764	15.830	VV	9368	199067	4.90%	0.335%
254	15.842	15.830	15.859	VV	4575	44104	1.09%	0.074%
255	15.884	15.859	15.910	PV	26235	364509	8.97%	0.614%
256	15.925	15.910	15.942	VV	9024	129228	3.18%	0.218%
257	15.961	15.942	16.002	VV	11816	265768	6.54%	0.447%
258	16.027	16.002	16.032	VV	11123	140870	3.47%	0.237%
259	16.046	16.032	16.089	VV	13711	294517	7.25%	0.496%
260	16.108	16.089	16.128	VV	4961	78719	1.94%	0.133%
261	16.133	16.128	16.155	VV	3621	36733	0.90%	0.062%
262	16.164	16.155	16.173	VV	2956	23906	0.59%	0.040%
263	16.178	16.173	16.190	VV	2077	12630	0.31%	0.021%
264	16.241	16.190	16.265	PV	12208	251453	6.19%	0.423%
265	16.270	16.265	16.289	VV	2814	30940	0.76%	0.052%
266	16.334	16.289	16.356	VV	4787	123415	3.04%	0.208%
267	16.386	16.356	16.406	VV	5320	75183	1.85%	0.127%
268	16.440	16.406	16.448	PV	5236	74704	1.84%	0.126%
269	16.460	16.448	16.476	VV	6623	78545	1.93%	0.132%
270	16.491	16.476	16.503	VV	3339	44551	1.10%	0.075%
271	16.532	16.503	16.552	VV	7413	141446	3.48%	0.238%
272	16.586	16.552	16.598	VV	7646	158815	3.91%	0.267%
273	16.622	16.598	16.647	VV	11362	210027	5.17%	0.354%
274	16.668	16.647	16.701	VV	6408	162457	4.00%	0.273%
275	16.727	16.701	16.742	VV	13173	195946	4.82%	0.330%
276	16.766	16.742	16.790	VV	75096	1139615	28.04%	1.918%
277	16.803	16.790	16.845	VV	27785	581048	14.29%	0.978%
278	16.867	16.845	16.877	VV	8138	133086	3.27%	0.224%
279	16.910	16.877	16.922	VV	16546	277234	6.82%	0.467%
280	16.944	16.922	16.981	VV	16037	347047	8.54%	0.584%
281	16.999	16.981	17.010	VV	4843	63978	1.57%	0.108%
282	17.033	17.010	17.062	VV	16747	304313	7.49%	0.512%
283	17.089	17.062	17.125	VV	53524	812396	19.99%	1.368%
284	17.154	17.125	17.180	PV	49940	810494	19.94%	1.364%
285	17.193	17.180	17.210	VV	24247	343544	8.45%	0.578%
286	17.217	17.210	17.245	VV	13737	205631	5.06%	0.346%
287	17.262	17.245	17.336	VV	15844	385369	9.48%	0.649%
288	17.342	17.336	17.349	PV	1789	9659	0.24%	0.016%
289	17.407	17.349	17.412	VV	6174	176475	4.34%	0.297%
290	17.417	17.412	17.425	VV	6767	45072	1.11%	0.076%
291	17.430	17.425	17.468	VV	6519	94561	2.33%	0.159%
292	17.483	17.468	17.494	PV	2126	14645	0.36%	0.025%
					Sum of corrected areas:		59402363	

FF042225.M Wed May 14 06:57:06 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/07/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-5	SDG No.:	Q1982
Lab Sample ID:	Q1982-05	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	89.9
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
FF015837.D	1	05/13/25 10:05	05/13/25 17:51	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2870		188	1850	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.8		37 - 130	59%	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\FF051325\
Data File : FF015837.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:51
Operator : YP\AJ
Sample : Q1982-05
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-5

Integration File: autoint1.e
Quant Time: May 14 05:51:46 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	1330549	11.791 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

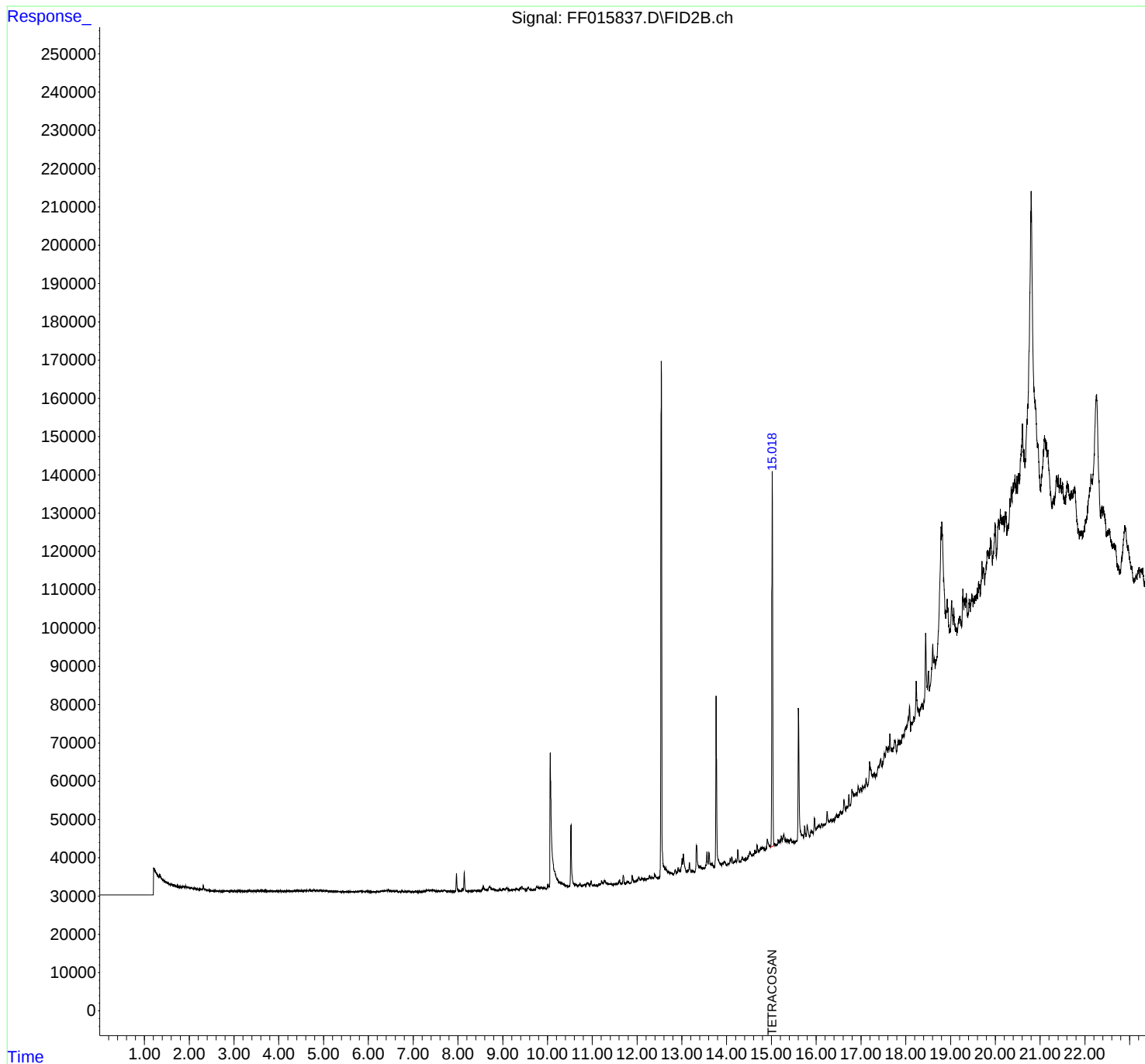
(m)=manual int.

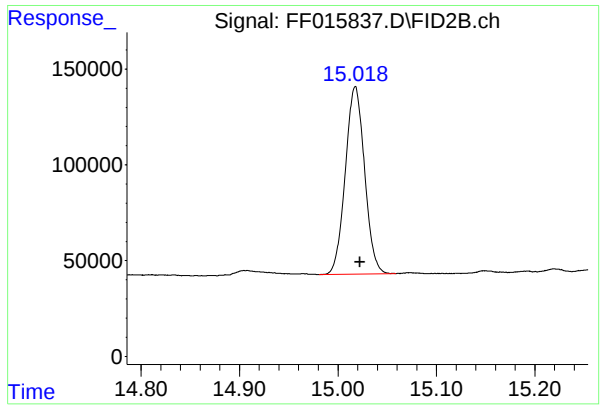
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015837.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:51
Operator : YP\AJ
Sample : Q1982-05
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-5

Integration File: autoint1.e
Quant Time: May 14 05:51:46 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.005 min
Response: 1330549
Conc: 11.79 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-5

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015837.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 17:51
Sample : Q1982-05
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.327	4.300	4.338	BV	112	500	0.03%	0.005%
2	4.349	4.338	4.362	VV	102	882	0.05%	0.008%
3	4.368	4.362	4.382	PV	106	894	0.05%	0.008%
4	4.392	4.382	4.402	VV	187	1456	0.08%	0.014%
5	4.405	4.402	4.412	VV	209	828	0.05%	0.008%
6	4.415	4.412	4.429	VV	141	1154	0.06%	0.011%
7	4.439	4.429	4.444	VV	167	1220	0.07%	0.012%
8	4.448	4.444	4.460	VV	197	1354	0.08%	0.013%
9	4.467	4.460	4.494	VV	168	2576	0.14%	0.024%
10	4.508	4.494	4.514	VV	184	1518	0.08%	0.014%
11	4.518	4.514	4.527	VV	170	959	0.05%	0.009%
12	4.535	4.527	4.539	VV	160	934	0.05%	0.009%
13	4.550	4.539	4.560	VV	133	1512	0.08%	0.014%
14	4.578	4.560	4.602	VV	304	5244	0.29%	0.049%
15	4.622	4.602	4.665	VV	261	7111	0.40%	0.067%
16	4.684	4.665	4.703	VV	446	6058	0.34%	0.057%
17	4.706	4.703	4.711	VV	246	966	0.05%	0.009%
18	4.714	4.711	4.732	VV	254	2342	0.13%	0.022%
19	4.735	4.732	4.739	VV	224	783	0.04%	0.007%
20	4.755	4.739	4.759	VV	346	3227	0.18%	0.030%
21	4.764	4.759	4.774	VV	318	2581	0.14%	0.024%
22	4.793	4.774	4.837	VV	397	10618	0.59%	0.100%
23	4.846	4.837	4.866	VV	262	3793	0.21%	0.036%
24	4.873	4.866	4.884	VV	259	2590	0.14%	0.024%
25	4.895	4.884	4.907	VV	268	3439	0.19%	0.032%
26	4.911	4.907	4.939	VV	292	4754	0.26%	0.045%
27	4.946	4.939	4.951	VV	287	1778	0.10%	0.017%
28	4.957	4.951	4.968	VV	266	2316	0.13%	0.022%
29	4.984	4.968	5.004	VV	340	5417	0.30%	0.051%
30	5.021	5.004	5.030	VV	325	3803	0.21%	0.036%
31	5.033	5.030	5.059	VV	255	3560	0.20%	0.034%
32	5.065	5.059	5.071	VV	238	1529	0.09%	0.014%
33	5.076	5.071	5.107	VV	252	4273	0.24%	0.040%
34	5.111	5.107	5.122	VV	173	1263	0.07%	0.012%
35	5.133	5.122	5.145	VV	192	2033	0.11%	0.019%
36	5.155	5.145	5.163	VV	198	1749	0.10%	0.017%

					rteres			
37	5.169	5.163	5.177	VV	173	1163	0.06%	0.011%
38	5.191	5.177	5.202	VV	189	1879	0.10%	0.018%
39	5.205	5.202	5.220	VV	147	1316	0.07%	0.012%
40	5.224	5.220	5.232	VV	168	954	0.05%	0.009%
41	5.237	5.232	5.245	VV	193	1372	0.08%	0.013%
42	5.249	5.245	5.260	VV	216	1184	0.07%	0.011%
43	5.273	5.260	5.295	VV	196	2512	0.14%	0.024%
44	5.301	5.295	5.316	VV	144	1335	0.07%	0.013%
45	5.319	5.316	5.330	VV	161	953	0.05%	0.009%
46	5.337	5.330	5.344	VV	149	1036	0.06%	0.010%
47	5.346	5.344	5.376	VV	185	1871	0.10%	0.018%
48	5.385	5.376	5.396	PV	135	1006	0.06%	0.009%
49	5.402	5.396	5.416	VV	106	872	0.05%	0.008%
50	5.420	5.416	5.425	VV	111	432	0.02%	0.004%
51	5.430	5.425	5.449	VV	114	1163	0.06%	0.011%
52	5.454	5.449	5.472	VV	191	1244	0.07%	0.012%
53	5.481	5.472	5.503	VV	131	1762	0.10%	0.017%
54	5.507	5.503	5.516	VV	140	661	0.04%	0.006%
55	5.522	5.516	5.526	VV	171	660	0.04%	0.006%
56	5.530	5.526	5.536	VV	124	649	0.04%	0.006%
57	5.550	5.536	5.564	VV	168	2120	0.12%	0.020%
58	5.572	5.564	5.584	VV	229	1554	0.09%	0.015%
59	5.595	5.584	5.601	VV	112	884	0.05%	0.008%
60	5.606	5.601	5.614	VV	104	719	0.04%	0.007%
61	5.619	5.614	5.632	VV	123	893	0.05%	0.008%
62	5.638	5.632	5.645	PV	114	680	0.04%	0.006%
63	5.651	5.645	5.657	VV	113	610	0.03%	0.006%
64	5.671	5.657	5.679	VV	139	1259	0.07%	0.012%
65	5.682	5.679	5.687	VV	65	350	0.02%	0.003%
66	5.715	5.687	5.727	VV	248	3697	0.21%	0.035%
67	5.732	5.727	5.739	VV	212	1053	0.06%	0.010%
68	5.741	5.739	5.764	VV	212	2437	0.14%	0.023%
69	5.773	5.764	5.787	VV	199	2207	0.12%	0.021%
70	5.810	5.787	5.814	VV	358	3442	0.19%	0.032%
71	5.818	5.814	5.829	VV	236	2019	0.11%	0.019%
72	5.833	5.829	5.869	VV	308	5077	0.28%	0.048%
73	5.880	5.869	5.891	VV	312	3026	0.17%	0.029%
74	5.897	5.891	5.916	VV	270	2872	0.16%	0.027%
75	5.922	5.916	5.934	VV	189	1336	0.07%	0.013%
76	5.936	5.934	5.940	VV	133	453	0.03%	0.004%
77	5.948	5.940	5.958	VV	211	1633	0.09%	0.015%
78	5.968	5.958	5.972	VV	234	1319	0.07%	0.012%
79	5.978	5.972	5.986	VV	201	1273	0.07%	0.012%
80	5.994	5.986	6.000	VV	196	1192	0.07%	0.011%
81	6.006	6.000	6.014	VV	214	1153	0.06%	0.011%
82	6.018	6.014	6.053	VV	166	2000	0.11%	0.019%
83	6.062	6.053	6.067	VV	179	636	0.04%	0.006%
84	6.088	6.067	6.096	VV	116	1103	0.06%	0.010%
85	6.102	6.096	6.119	VV	122	1119	0.06%	0.011%
86	6.124	6.119	6.136	VV	76	466	0.03%	0.004%
87	6.161	6.136	6.166	VV	106	837	0.05%	0.008%
88	6.183	6.166	6.189	VV	176	1241	0.07%	0.012%
89	6.216	6.189	6.228	VV	173	2767	0.15%	0.026%

					rteres			
90	6.238	6.228	6.257	VV	207	2500	0.14%	0.024%
91	6.292	6.257	6.303	VV	311	6325	0.35%	0.060%
92	6.305	6.303	6.311	VV	297	1220	0.07%	0.012%
93	6.379	6.311	6.392	VV	426	15547	0.86%	0.147%
94	6.397	6.392	6.404	VV	400	2527	0.14%	0.024%
95	6.411	6.404	6.419	VV	370	3064	0.17%	0.029%
96	6.445	6.419	6.473	VV	659	14673	0.82%	0.138%
97	6.484	6.473	6.594	VV	358	18972	1.05%	0.179%
98	6.637	6.594	6.659	VV	486	7463	0.41%	0.070%
99	6.670	6.659	6.672	VV	155	830	0.05%	0.008%
100	6.679	6.672	6.691	VV	173	1474	0.08%	0.014%
101	6.695	6.691	6.715	VV	150	1576	0.09%	0.015%
102	6.719	6.715	6.723	VV	125	407	0.02%	0.004%
103	6.742	6.723	6.767	VV	332	5705	0.32%	0.054%
104	6.770	6.767	6.804	VV	174	2597	0.14%	0.025%
105	6.815	6.804	6.860	VV	174	3698	0.21%	0.035%
106	6.885	6.860	6.901	VV	235	3475	0.19%	0.033%
107	6.909	6.901	6.942	VV	166	2560	0.14%	0.024%
108	6.950	6.942	6.976	VV	113	803	0.04%	0.008%
109	6.996	6.976	7.011	PV	99	893	0.05%	0.008%
110	7.015	7.011	7.021	VV	70	268	0.01%	0.003%
111	7.060	7.021	7.092	VV	182	4427	0.25%	0.042%
112	7.097	7.092	7.114	VV	114	748	0.04%	0.007%
113	7.128	7.114	7.152	VV	166	1310	0.07%	0.012%
114	7.166	7.152	7.214	VV	88	2268	0.13%	0.021%
115	7.236	7.214	7.242	VV	234	2306	0.13%	0.022%
116	7.273	7.242	7.282	VV	355	6192	0.34%	0.058%
117	7.304	7.282	7.336	VV	432	12423	0.69%	0.117%
118	7.348	7.336	7.364	VV	495	6878	0.38%	0.065%
119	7.369	7.364	7.372	VV	372	1758	0.10%	0.017%
120	7.389	7.372	7.404	VV	433	6863	0.38%	0.065%
121	7.408	7.404	7.411	VV	424	1621	0.09%	0.015%
122	7.431	7.411	7.434	VV	418	5233	0.29%	0.049%
123	7.438	7.434	7.440	VV	383	1312	0.07%	0.012%
124	7.450	7.440	7.506	VV	539	13217	0.73%	0.125%
125	7.519	7.506	7.527	VV	303	2830	0.16%	0.027%
126	7.537	7.527	7.547	VV	275	2540	0.14%	0.024%
127	7.553	7.547	7.577	VV	272	3929	0.22%	0.037%
128	7.582	7.577	7.594	VV	252	2355	0.13%	0.022%
129	7.633	7.594	7.651	VV	362	9094	0.51%	0.086%
130	7.688	7.651	7.758	VV	433	16398	0.91%	0.155%
131	7.785	7.758	7.792	VV	192	2705	0.15%	0.026%
132	7.796	7.792	7.819	VV	241	2890	0.16%	0.027%
133	7.861	7.819	7.886	VV	218	4642	0.26%	0.044%
134	7.899	7.886	7.904	PV	81	624	0.03%	0.006%
135	7.910	7.904	7.925	PV	107	815	0.05%	0.008%
136	7.969	7.925	8.011	VV	4728	63393	3.52%	0.598%
137	8.013	8.011	8.052	VV	285	4460	0.25%	0.042%
138	8.058	8.052	8.062	VV	217	1118	0.06%	0.011%
139	8.102	8.062	8.119	VV	610	13494	0.75%	0.127%
140	8.143	8.119	8.198	VV	5026	66487	3.70%	0.627%
141	8.207	8.198	8.229	VV	154	1894	0.11%	0.018%

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142	8.233	8.229	8.239	PV	67	313	0.02%	0.003%
143	8.252	8.239	8.269	VV	160	1702	0.09%	0.016%
144	8.289	8.269	8.307	VV	253	3263	0.18%	0.031%
145	8.328	8.307	8.334	VV	179	1892	0.11%	0.018%
146	8.337	8.334	8.349	VV	177	963	0.05%	0.009%
147	8.378	8.349	8.419	VV	339	5950	0.33%	0.056%
148	8.436	8.419	8.471	VV	256	5269	0.29%	0.050%
149	8.474	8.471	8.481	VV	181	854	0.05%	0.008%
150	8.486	8.481	8.496	VV	186	970	0.05%	0.009%
151	8.501	8.496	8.516	VV	126	1342	0.07%	0.013%
152	8.567	8.516	8.656	VV	1142	39912	2.22%	0.377%
153	8.703	8.656	8.782	VV	1198	49711	2.76%	0.469%
154	8.791	8.782	8.796	VV	472	3629	0.20%	0.034%
155	8.800	8.796	8.834	VV	455	7731	0.43%	0.073%
156	8.839	8.834	8.848	VV	275	1714	0.10%	0.016%
157	8.852	8.848	8.856	VV	219	945	0.05%	0.009%
158	8.861	8.856	8.869	VV	161	1129	0.06%	0.011%
159	8.891	8.869	8.896	VV	184	2077	0.12%	0.020%
160	8.931	8.896	8.980	VV	445	10329	0.57%	0.097%
161	9.014	8.980	9.042	VV	548	12791	0.71%	0.121%
162	9.098	9.042	9.162	VV	785	26015	1.45%	0.245%
163	9.175	9.162	9.203	VV	154	2641	0.15%	0.025%
164	9.245	9.203	9.276	VV	278	6803	0.38%	0.064%
165	9.300	9.276	9.337	VV	584	11077	0.62%	0.105%
166	9.346	9.337	9.350	VV	258	1701	0.09%	0.016%
167	9.353	9.350	9.374	VV	230	3007	0.17%	0.028%
168	9.394	9.374	9.411	VV	629	10032	0.56%	0.095%
169	9.430	9.411	9.466	VV	1031	19893	1.11%	0.188%
170	9.472	9.466	9.501	VV	355	4913	0.27%	0.046%
171	9.504	9.501	9.509	VV	109	514	0.03%	0.005%
172	9.516	9.509	9.521	VV	120	711	0.04%	0.007%
173	9.525	9.521	9.532	VV	150	609	0.03%	0.006%
174	9.570	9.532	9.634	VV	798	15630	0.87%	0.147%
175	9.637	9.634	9.642	VV	76	226	0.01%	0.002%
176	9.701	9.642	9.726	PV	127	2267	0.13%	0.021%
177	9.758	9.726	9.789	VV	829	18612	1.03%	0.176%
178	9.800	9.789	9.829	VV	523	9545	0.53%	0.090%
179	9.852	9.829	9.907	VV	605	19578	1.09%	0.185%
180	9.921	9.907	9.937	VV	410	6055	0.34%	0.057%
181	9.946	9.937	9.981	VV	374	4657	0.26%	0.044%
182	10.006	9.981	10.041	VV	1205	23779	1.32%	0.224%
183	10.064	10.041	10.279	VV	35088	1060858	58.98%	10.009%
184	10.294	10.279	10.366	VV	1517	63115	3.51%	0.595%
185	10.373	10.366	10.389	VV	852	11160	0.62%	0.105%
186	10.397	10.389	10.461	VV	735	24654	1.37%	0.233%
187	10.526	10.461	10.584	VV	16323	262205	14.58%	2.474%
188	10.590	10.584	10.617	VV	1028	15907	0.88%	0.150%
189	10.639	10.617	10.686	VV	784	23279	1.29%	0.220%
190	10.726	10.686	10.754	VV	920	22694	1.26%	0.214%
191	10.784	10.754	10.792	VV	401	7809	0.43%	0.074%
192	10.826	10.792	10.860	VV	578	18189	1.01%	0.172%
193	10.884	10.860	10.894	VV	1069	14457	0.80%	0.136%
194	10.905	10.894	10.927	VV	1020	14952	0.83%	0.141%

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195	10.936	10.927	10.951	VV	464	5611	0.31%	0.053%
196	10.976	10.951	11.006	VV	1459	24654	1.37%	0.233%
197	11.039	11.006	11.098	VV	323	10658	0.59%	0.101%
198	11.156	11.098	11.169	VV	440	11827	0.66%	0.112%
199	11.209	11.169	11.242	VV	1356	33187	1.85%	0.313%
200	11.275	11.242	11.372	VV	1347	55656	3.09%	0.525%
201	11.389	11.372	11.410	VV	406	7551	0.42%	0.071%
202	11.427	11.410	11.470	VV	408	9104	0.51%	0.086%
203	11.540	11.470	11.559	PV	334	10732	0.60%	0.101%
204	11.608	11.559	11.646	VV	1165	27181	1.51%	0.256%
205	11.694	11.646	11.730	VV	2393	40501	2.25%	0.382%
206	11.779	11.730	11.794	PV	692	11584	0.64%	0.109%
207	11.806	11.794	11.833	VV	588	7624	0.42%	0.072%
208	11.889	11.833	11.951	PV	2015	41502	2.31%	0.392%
209	11.972	11.951	11.988	VV	538	7472	0.42%	0.070%
210	12.039	11.988	12.072	VV	1266	35520	1.97%	0.335%
211	12.103	12.072	12.120	VV	1024	19218	1.07%	0.181%
212	12.131	12.120	12.154	VV	625	10644	0.59%	0.100%
213	12.169	12.154	12.193	VV	476	8595	0.48%	0.081%
214	12.280	12.193	12.306	VV	1223	33558	1.87%	0.317%
215	12.337	12.306	12.356	VV	666	14611	0.81%	0.138%
216	12.391	12.356	12.442	VV	1300	32414	1.80%	0.306%
217	12.447	12.442	12.470	VV	272	2574	0.14%	0.024%
218	12.489	12.470	12.506	VV	277	3486	0.19%	0.033%
219	12.541	12.506	12.596	VV	134855	1798702	100.00%	16.970%
220	12.604	12.596	12.626	VV	2821	46091	2.56%	0.435%
221	12.640	12.626	12.736	VV	2344	98461	5.47%	0.929%
222	12.764	12.736	12.801	VV	887	27205	1.51%	0.257%
223	12.853	12.801	12.882	VV	1480	37528	2.09%	0.354%
224	12.917	12.882	12.937	VV	1830	37135	2.06%	0.350%
225	12.949	12.937	12.970	VV	1220	20165	1.12%	0.190%
226	13.004	12.970	13.019	VV	4183	76421	4.25%	0.721%
227	13.035	13.019	13.114	VV	5259	124697	6.93%	1.176%
228	13.134	13.114	13.147	VV	773	12057	0.67%	0.114%
229	13.167	13.147	13.210	VV	2629	45897	2.55%	0.433%
230	13.246	13.210	13.270	VV	454	10517	0.58%	0.099%
231	13.328	13.270	13.394	PV	6860	155690	8.66%	1.469%
232	13.417	13.394	13.467	VV	1218	35224	1.96%	0.332%
233	13.490	13.467	13.507	VV	587	11806	0.66%	0.111%
234	13.558	13.507	13.586	VV	4582	90575	5.04%	0.855%
235	13.606	13.586	13.654	VV	4318	87619	4.87%	0.827%
236	13.673	13.654	13.731	VV	1233	34575	1.92%	0.326%
237	13.765	13.731	13.886	VV	44622	657164	36.54%	6.200%
238	13.911	13.886	13.924	VV	790	15241	0.85%	0.144%
239	13.949	13.924	13.997	VV	1161	32777	1.82%	0.309%
240	14.032	13.997	14.052	PV	339	6333	0.35%	0.060%
241	14.077	14.052	14.098	VV	1533	25694	1.43%	0.242%
242	14.117	14.098	14.151	VV	1784	28716	1.60%	0.271%
243	14.173	14.151	14.186	VV	669	8594	0.48%	0.081%
244	14.204	14.186	14.224	VV	1002	13680	0.76%	0.129%
245	14.249	14.224	14.298	VV	3368	50475	2.81%	0.476%
246	14.351	14.298	14.384	PV	1075	22966	1.28%	0.217%

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247	14.447	14.384	14.456	VV	181	8194	0.46%	0.077%
248	14.516	14.456	14.579	VV	1942	64671	3.60%	0.610%
249	14.629	14.579	14.651	VV	1651	40654	2.26%	0.384%
250	14.680	14.651	14.726	VV	2851	67334	3.74%	0.635%
251	14.756	14.726	14.771	VV	1673	37904	2.11%	0.358%
252	14.790	14.771	14.802	VV	1708	30447	1.69%	0.287%
253	14.810	14.802	14.866	VV	1585	47590	2.65%	0.449%
254	14.907	14.866	14.981	VV	3389	128015	7.12%	1.208%
255	15.018	14.981	15.059	VV	99019	1382185	76.84%	13.040%
256	15.073	15.059	15.091	VV	1658	26478	1.47%	0.250%
257	15.150	15.091	15.174	VV	2304	69608	3.87%	0.657%
258	15.192	15.174	15.202	VV	1927	28541	1.59%	0.269%
259	15.220	15.202	15.237	VV	2940	47496	2.64%	0.448%
260	15.277	15.237	15.317	VV	3199	106074	5.90%	1.001%
261	15.335	15.317	15.352	VV	1454	26673	1.48%	0.252%
262	15.374	15.352	15.401	VV	1157	28169	1.57%	0.266%
263	15.423	15.401	15.433	VV	1322	19468	1.08%	0.184%
264	15.442	15.433	15.471	VV	1021	15266	0.85%	0.144%
265	15.509	15.471	15.522	VV	282	6126	0.34%	0.058%
266	15.603	15.522	15.715	PV	34665	602858	33.52%	5.688%
267	15.742	15.715	15.776	VV	3247	56229	3.13%	0.530%
268	15.800	15.776	15.848	VV	3296	66907	3.72%	0.631%
269	15.887	15.848	15.907	PV	1496	28453	1.58%	0.268%
270	15.916	15.907	15.936	VV	771	9667	0.54%	0.091%
271	15.960	15.936	15.986	VV	4070	64331	3.58%	0.607%
272	16.068	15.986	16.102	VV	1284	76760	4.27%	0.724%
273	16.126	16.102	16.151	VV	1466	29495	1.64%	0.278%
274	16.172	16.151	16.197	VV	925	20610	1.15%	0.194%
275	16.243	16.197	16.296	VV	3713	85655	4.76%	0.808%
276	16.331	16.296	16.357	VV	866	24341	1.35%	0.230%
277	16.380	16.357	16.402	VV	790	12291	0.68%	0.116%
278	16.455	16.402	16.481	PV	1084	26720	1.49%	0.252%
279	16.538	16.481	16.572	VV	1138	27285	1.52%	0.257%
280	16.620	16.572	16.662	PV	3283	57573	3.20%	0.543%
281	16.683	16.662	16.693	PV	788	8879	0.49%	0.084%
282	16.728	16.693	16.749	VV	3205	44012	2.45%	0.415%
283	16.758	16.749	16.764	VV	209	1119	0.06%	0.011%
284	16.797	16.764	16.847	PV	3754	106867	5.94%	1.008%
285	16.867	16.847	16.881	VV	1826	32579	1.81%	0.307%
286	16.894	16.881	16.912	VV	1908	25530	1.42%	0.241%
287	16.937	16.912	16.976	VV	2941	65757	3.66%	0.620%
288	16.993	16.976	17.018	VV	1663	32061	1.78%	0.302%
289	17.036	17.018	17.056	VV	1611	27461	1.53%	0.259%
290	17.083	17.056	17.096	VV	1181	22507	1.25%	0.212%
291	17.113	17.096	17.147	VV	2815	44420	2.47%	0.419%
292	17.193	17.147	17.272	PV	5964	188748	10.49%	1.781%
293	17.298	17.272	17.321	VV	1502	32538	1.81%	0.307%
294	17.333	17.321	17.349	PV	705	7140	0.40%	0.067%
295	17.393	17.349	17.409	PV	1545	39112	2.17%	0.369%
296	17.442	17.409	17.469	VV	2630	55828	3.10%	0.527%
Sum of corrected areas:						10599387		

FF042225.M Wed May 14 06:57:41 2025

rteres

Report of Analysis

Client:	CDM Smith	Date Collected:	05/07/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-6	SDG No.:	Q1982
Lab Sample ID:	Q1982-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	86.2
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	Diesel Range Organics
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015838.D	1	05/13/25 10:05	05/13/25 18:21	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2780		196	1930	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	12.0		37 - 130	60%	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\FF051325\
Data File : FF015838.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:21
Operator : YP\AJ
Sample : Q1982-06
Misc :
ALS Vial : 77 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-6

Integration File: autoint1.e
Quant Time: May 14 05:51:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	1353242	11.992 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

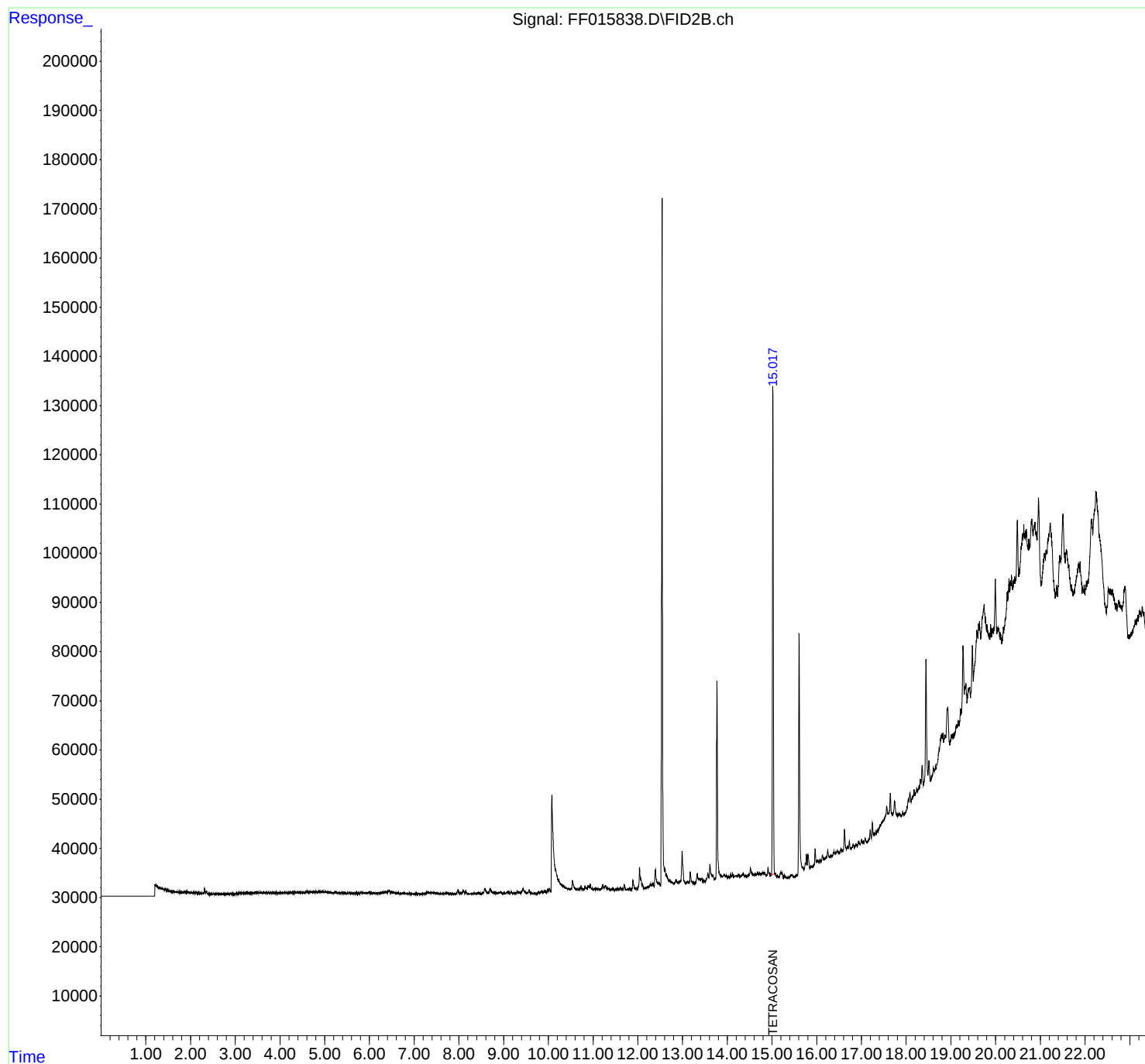
(m)=manual int.

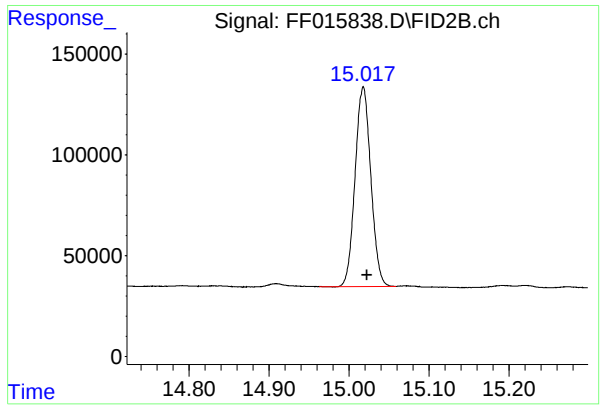
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015838.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:21
Operator : YP\AJ
Sample : Q1982-06
Misc :
ALS Vial : 77 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-6

Integration File: autoint1.e
Quant Time: May 14 05:51:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.005 min
Response: 1353242
Conc: 11.99 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-6

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015838.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:21
Sample : Q1982-06
Misc :
ALS Vial : 77 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.324	4.300	4.339	BV	62	66	0.00%	0.001%
2	4.349	4.339	4.357	PV	112	671	0.04%	0.007%
3	4.369	4.357	4.377	VV	149	937	0.05%	0.009%
4	4.399	4.377	4.411	VV	167	2198	0.12%	0.022%
5	4.415	4.411	4.421	VV	122	469	0.02%	0.005%
6	4.430	4.421	4.441	VV	104	812	0.04%	0.008%
7	4.470	4.441	4.486	VV	126	1628	0.09%	0.016%
8	4.496	4.486	4.515	VV	141	1572	0.08%	0.016%
9	4.520	4.515	4.541	VV	132	1363	0.07%	0.014%
10	4.549	4.541	4.555	VV	163	841	0.04%	0.008%
11	4.574	4.555	4.587	VV	243	2955	0.16%	0.030%
12	4.609	4.587	4.629	VV	267	4497	0.24%	0.045%
13	4.632	4.629	4.642	VV	240	1285	0.07%	0.013%
14	4.647	4.642	4.657	VV	195	1515	0.08%	0.015%
15	4.661	4.657	4.665	VV	231	704	0.04%	0.007%
16	4.683	4.665	4.714	VV	364	6188	0.33%	0.062%
17	4.729	4.714	4.733	VV	214	1476	0.08%	0.015%
18	4.739	4.733	4.743	VV	181	920	0.05%	0.009%
19	4.766	4.743	4.773	VV	320	4379	0.23%	0.044%
20	4.807	4.773	4.827	VV	367	9370	0.50%	0.094%
21	4.838	4.827	4.850	VV	306	3320	0.18%	0.033%
22	4.889	4.850	4.894	VV	338	6991	0.37%	0.070%
23	4.900	4.894	4.904	VV	355	1816	0.10%	0.018%
24	4.909	4.904	4.914	VV	333	1722	0.09%	0.017%
25	4.930	4.914	4.937	VV	326	3940	0.21%	0.040%
26	4.948	4.937	4.952	VV	342	2633	0.14%	0.026%
27	4.962	4.952	4.970	VV	370	3010	0.16%	0.030%
28	4.973	4.970	4.979	VV	359	1544	0.08%	0.016%
29	4.984	4.979	4.993	VV	318	2393	0.13%	0.024%
30	5.000	4.993	5.006	VV	302	2198	0.12%	0.022%
31	5.024	5.006	5.031	VV	333	4374	0.23%	0.044%
32	5.034	5.031	5.043	VV	303	1890	0.10%	0.019%
33	5.046	5.043	5.055	VV	275	1623	0.09%	0.016%
34	5.061	5.055	5.065	VV	299	1550	0.08%	0.016%
35	5.071	5.065	5.084	VV	303	2578	0.14%	0.026%
36	5.088	5.084	5.092	VV	199	1024	0.05%	0.010%

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37	5.097	5.092	5.111	VV	279	2520	0.13%	0.025%
38	5.127	5.111	5.134	VV	259	3000	0.16%	0.030%
39	5.139	5.134	5.157	VV	220	2314	0.12%	0.023%
40	5.164	5.157	5.192	VV	163	3183	0.17%	0.032%
41	5.199	5.192	5.214	VV	170	1740	0.09%	0.017%
42	5.240	5.214	5.252	VV	255	4413	0.23%	0.044%
43	5.256	5.252	5.267	VV	174	1292	0.07%	0.013%
44	5.272	5.267	5.303	VV	209	2865	0.15%	0.029%
45	5.308	5.303	5.329	VV	101	1141	0.06%	0.011%
46	5.336	5.329	5.345	VV	115	888	0.05%	0.009%
47	5.349	5.345	5.353	VV	110	373	0.02%	0.004%
48	5.358	5.353	5.374	PV	123	930	0.05%	0.009%
49	5.377	5.374	5.396	VV	125	1027	0.05%	0.010%
50	5.399	5.396	5.438	VV	130	1995	0.11%	0.020%
51	5.441	5.438	5.466	VV	143	1414	0.07%	0.014%
52	5.470	5.466	5.479	VV	117	570	0.03%	0.006%
53	5.483	5.479	5.499	VV	115	849	0.04%	0.009%
54	5.502	5.499	5.524	VV	133	1131	0.06%	0.011%
55	5.530	5.524	5.541	VV	100	780	0.04%	0.008%
56	5.556	5.541	5.568	VV	223	2029	0.11%	0.020%
57	5.571	5.568	5.615	VV	174	2091	0.11%	0.021%
58	5.619	5.615	5.640	VV	77	784	0.04%	0.008%
59	5.655	5.640	5.660	PV	119	593	0.03%	0.006%
60	5.667	5.660	5.681	VV	81	746	0.04%	0.007%
61	5.686	5.681	5.689	VV	64	300	0.02%	0.003%
62	5.693	5.689	5.708	VV	141	799	0.04%	0.008%
63	5.721	5.708	5.725	VV	167	754	0.04%	0.008%
64	5.741	5.725	5.747	PV	138	1351	0.07%	0.014%
65	5.765	5.747	5.786	VV	172	2471	0.13%	0.025%
66	5.804	5.786	5.819	VV	186	2647	0.14%	0.027%
67	5.822	5.819	5.857	VV	185	3795	0.20%	0.038%
68	5.862	5.857	5.866	VV	165	833	0.04%	0.008%
69	5.873	5.866	5.911	VV	194	4394	0.23%	0.044%
70	5.919	5.911	5.925	VV	177	1114	0.06%	0.011%
71	5.927	5.925	5.942	VV	184	1518	0.08%	0.015%
72	5.948	5.942	5.960	VV	169	1537	0.08%	0.015%
73	5.978	5.960	6.000	VV	314	5283	0.28%	0.053%
74	6.003	6.000	6.016	VV	190	1792	0.09%	0.018%
75	6.021	6.016	6.032	VV	225	1184	0.06%	0.012%
76	6.035	6.032	6.055	VV	168	1588	0.08%	0.016%
77	6.068	6.055	6.089	VV	169	2554	0.14%	0.026%
78	6.094	6.089	6.108	VV	182	1472	0.08%	0.015%
79	6.110	6.108	6.115	VV	153	500	0.03%	0.005%
80	6.119	6.115	6.135	VV	194	1360	0.07%	0.014%
81	6.149	6.135	6.169	VV	189	2682	0.14%	0.027%
82	6.185	6.169	6.201	VV	219	2639	0.14%	0.027%
83	6.212	6.201	6.225	VV	187	2095	0.11%	0.021%
84	6.232	6.225	6.240	VV	190	1455	0.08%	0.015%
85	6.247	6.240	6.252	VV	242	1298	0.07%	0.013%
86	6.255	6.252	6.260	VV	233	906	0.05%	0.009%
87	6.291	6.260	6.310	VV	363	8091	0.43%	0.081%
88	6.318	6.310	6.321	VV	309	1900	0.10%	0.019%
89	6.327	6.321	6.334	VV	343	2299	0.12%	0.023%

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90	6.347	6.334	6.356	VV	408	4756	0.25%	0.048%
91	6.397	6.356	6.413	VV	448	13472	0.71%	0.135%
92	6.444	6.413	6.475	VV	800	18370	0.97%	0.185%
93	6.489	6.475	6.503	VV	358	5652	0.30%	0.057%
94	6.507	6.503	6.511	VV	355	1607	0.08%	0.016%
95	6.522	6.511	6.560	VV	412	8894	0.47%	0.089%
96	6.566	6.560	6.592	VV	250	4007	0.21%	0.040%
97	6.608	6.592	6.636	VV	235	4898	0.26%	0.049%
98	6.646	6.636	6.676	VV	228	3832	0.20%	0.039%
99	6.679	6.676	6.699	VV	201	1571	0.08%	0.016%
100	6.702	6.699	6.708	VV	174	530	0.03%	0.005%
101	6.716	6.708	6.731	VV	133	1416	0.07%	0.014%
102	6.751	6.731	6.772	VV	269	4825	0.26%	0.049%
103	6.775	6.772	6.791	VV	210	1734	0.09%	0.017%
104	6.799	6.791	6.813	VV	195	1845	0.10%	0.019%
105	6.819	6.813	6.840	VV	205	1846	0.10%	0.019%
106	6.845	6.840	6.857	VV	108	918	0.05%	0.009%
107	6.862	6.857	6.882	VV	147	1598	0.08%	0.016%
108	6.891	6.882	6.920	VV	179	2758	0.15%	0.028%
109	6.924	6.920	6.950	VV	138	1300	0.07%	0.013%
110	6.958	6.950	6.966	VV	121	602	0.03%	0.006%
111	6.972	6.966	6.981	VV	113	577	0.03%	0.006%
112	6.985	6.981	7.000	VV	93	743	0.04%	0.007%
113	7.001	7.000	7.005	VV	81	181	0.01%	0.002%
114	7.022	7.005	7.046	VV	126	1976	0.10%	0.020%
115	7.076	7.046	7.079	VV	156	1602	0.08%	0.016%
116	7.083	7.079	7.093	VV	98	830	0.04%	0.008%
117	7.097	7.093	7.110	VV	86	779	0.04%	0.008%
118	7.114	7.110	7.126	VV	71	570	0.03%	0.006%
119	7.134	7.126	7.151	VV	87	700	0.04%	0.007%
120	7.158	7.151	7.177	PV	136	1242	0.07%	0.012%
121	7.183	7.177	7.205	VV	141	1578	0.08%	0.016%
122	7.208	7.205	7.212	VV	146	453	0.02%	0.005%
123	7.233	7.212	7.241	VV	184	2438	0.13%	0.025%
124	7.300	7.241	7.311	VV	391	11405	0.60%	0.115%
125	7.314	7.311	7.339	VV	368	5593	0.30%	0.056%
126	7.346	7.339	7.384	VV	374	8175	0.43%	0.082%
127	7.391	7.384	7.408	VV	341	3653	0.19%	0.037%
128	7.430	7.408	7.436	VV	349	4498	0.24%	0.045%
129	7.450	7.436	7.507	VV	401	9807	0.52%	0.099%
130	7.512	7.507	7.529	VV	211	2140	0.11%	0.022%
131	7.532	7.529	7.536	VV	163	634	0.03%	0.006%
132	7.541	7.536	7.561	VV	145	1944	0.10%	0.020%
133	7.567	7.561	7.583	VV	172	1957	0.10%	0.020%
134	7.585	7.583	7.627	VV	163	3138	0.17%	0.032%
135	7.630	7.627	7.634	VV	180	528	0.03%	0.005%
136	7.654	7.634	7.684	VV	200	4092	0.22%	0.041%
137	7.703	7.684	7.724	VV	199	4245	0.22%	0.043%
138	7.728	7.724	7.779	VV	256	3934	0.21%	0.040%
139	7.797	7.779	7.803	VV	132	1388	0.07%	0.014%
140	7.811	7.803	7.834	VV	116	1770	0.09%	0.018%
141	7.836	7.834	7.840	VV	131	293	0.02%	0.003%

					rteres			
142	7.859	7.840	7.869	PV	146	1849	0.10%	0.019%
143	7.876	7.869	7.882	VV	128	736	0.04%	0.007%
144	7.886	7.882	7.929	VV	99	2743	0.15%	0.028%
145	7.974	7.929	8.052	VV	823	24631	1.30%	0.248%
146	8.099	8.052	8.136	VV	656	20595	1.09%	0.207%
147	8.152	8.136	8.208	VV	593	10798	0.57%	0.109%
148	8.218	8.208	8.249	VV	115	1524	0.08%	0.015%
149	8.270	8.249	8.284	VV	129	1502	0.08%	0.015%
150	8.299	8.284	8.307	VV	97	1274	0.07%	0.013%
151	8.324	8.307	8.367	VV	189	4318	0.23%	0.043%
152	8.376	8.367	8.397	VV	189	1948	0.10%	0.020%
153	8.427	8.397	8.479	VV	277	8128	0.43%	0.082%
154	8.491	8.479	8.509	VV	148	1958	0.10%	0.020%
155	8.579	8.509	8.662	VV	1075	40471	2.14%	0.407%
156	8.701	8.662	8.782	VV	1066	37869	2.00%	0.381%
157	8.802	8.782	8.836	VV	376	8290	0.44%	0.083%
158	8.846	8.836	8.857	VV	219	2144	0.11%	0.022%
159	8.886	8.857	8.904	VV	278	6381	0.34%	0.064%
160	8.934	8.904	8.982	VV	498	12558	0.66%	0.126%
161	9.001	8.982	9.047	VV	281	6626	0.35%	0.067%
162	9.106	9.047	9.147	VV	429	16214	0.86%	0.163%
163	9.169	9.147	9.208	VV	466	9442	0.50%	0.095%
164	9.249	9.208	9.280	VV	222	5586	0.30%	0.056%
165	9.302	9.280	9.329	VV	558	9312	0.49%	0.094%
166	9.341	9.329	9.376	VV	375	7098	0.38%	0.071%
167	9.434	9.376	9.520	VV	1097	42010	2.22%	0.422%
168	9.571	9.520	9.642	VV	811	21153	1.12%	0.213%
169	9.648	9.642	9.716	VV	92	2555	0.14%	0.026%
170	9.777	9.716	9.800	PV	271	6784	0.36%	0.068%
171	9.816	9.800	9.834	VV	264	5098	0.27%	0.051%
172	9.854	9.834	9.889	VV	464	10029	0.53%	0.101%
173	9.920	9.889	9.937	VV	502	10607	0.56%	0.107%
174	9.947	9.937	9.963	VV	352	4676	0.25%	0.047%
175	9.985	9.963	10.015	VV	884	17918	0.95%	0.180%
176	10.032	10.015	10.055	VV	930	15709	0.83%	0.158%
177	10.080	10.055	10.321	VV	19823	836420	44.23%	8.411%
178	10.330	10.321	10.456	VV	1384	80588	4.26%	0.810%
179	10.470	10.456	10.484	VV	687	10682	0.56%	0.107%
180	10.507	10.484	10.517	VV	832	13698	0.72%	0.138%
181	10.540	10.517	10.622	VV	2370	76226	4.03%	0.767%
182	10.649	10.622	10.676	VV	655	18184	0.96%	0.183%
183	10.696	10.676	10.707	VV	726	11776	0.62%	0.118%
184	10.729	10.707	10.790	VV	1210	34739	1.84%	0.349%
185	10.818	10.790	10.837	VV	1217	22657	1.20%	0.228%
186	10.848	10.837	10.865	VV	871	12040	0.64%	0.121%
187	10.887	10.865	10.901	VV	1183	19111	1.01%	0.192%
188	10.910	10.901	10.924	VV	1148	13408	0.71%	0.135%
189	10.939	10.924	10.964	VV	1550	22651	1.20%	0.228%
190	10.983	10.964	11.004	VV	650	12258	0.65%	0.123%
191	11.033	11.004	11.056	VV	595	14087	0.74%	0.142%
192	11.072	11.056	11.103	VV	640	14981	0.79%	0.151%
193	11.117	11.103	11.141	VV	480	8998	0.48%	0.090%
194	11.159	11.141	11.171	VV	508	7054	0.37%	0.071%

					rteres			
195	11.212	11.171	11.243	VV	1332	33721	1.78%	0.339%
196	11.281	11.243	11.316	VV	1096	33573	1.78%	0.338%
197	11.322	11.316	11.402	VV	523	17895	0.95%	0.180%
198	11.429	11.402	11.446	VV	431	8289	0.44%	0.083%
199	11.459	11.446	11.486	VV	402	5336	0.28%	0.054%
200	11.504	11.486	11.520	VV	348	5324	0.28%	0.054%
201	11.537	11.520	11.565	VV	412	8320	0.44%	0.084%
202	11.610	11.565	11.637	VV	657	14022	0.74%	0.141%
203	11.657	11.637	11.671	VV	316	4565	0.24%	0.046%
204	11.696	11.671	11.746	VV	1213	22651	1.20%	0.228%
205	11.784	11.746	11.797	VV	241	4614	0.24%	0.046%
206	11.810	11.797	11.827	VV	264	2798	0.15%	0.028%
207	11.841	11.827	11.867	VV	232	2520	0.13%	0.025%
208	11.891	11.867	11.939	PV	1954	34364	1.82%	0.346%
209	11.964	11.939	11.981	VV	393	5567	0.29%	0.056%
210	12.038	11.981	12.059	VV	4333	73971	3.91%	0.744%
211	12.067	12.059	12.093	VV	2241	32361	1.71%	0.325%
212	12.104	12.093	12.156	VV	1001	16738	0.88%	0.168%
213	12.171	12.156	12.196	VV	294	5270	0.28%	0.053%
214	12.225	12.196	12.246	VV	500	9092	0.48%	0.091%
215	12.281	12.246	12.300	VV	919	18532	0.98%	0.186%
216	12.333	12.300	12.359	VV	937	25288	1.34%	0.254%
217	12.393	12.359	12.445	VV	3726	89789	4.75%	0.903%
218	12.458	12.445	12.481	VV	1061	19184	1.01%	0.193%
219	12.489	12.481	12.506	VV	916	10391	0.55%	0.104%
220	12.542	12.506	12.593	VV	140456	1891265	100.00%	19.018%
221	12.606	12.593	12.629	VV	3902	69754	3.69%	0.701%
222	12.638	12.629	12.697	VV	2669	78094	4.13%	0.785%
223	12.712	12.697	12.809	VV	1345	63874	3.38%	0.642%
224	12.855	12.809	12.907	VV	1395	53318	2.82%	0.536%
225	12.920	12.907	12.936	VV	1001	14790	0.78%	0.149%
226	12.989	12.936	13.061	VV	6987	172536	9.12%	1.735%
227	13.099	13.061	13.116	VV	757	20149	1.07%	0.203%
228	13.130	13.116	13.147	VV	734	12177	0.64%	0.122%
229	13.171	13.147	13.231	VV	2758	60437	3.20%	0.608%
230	13.244	13.231	13.266	VV	545	10407	0.55%	0.105%
231	13.273	13.266	13.288	VV	417	5080	0.27%	0.051%
232	13.327	13.288	13.357	VV	2250	53084	2.81%	0.534%
233	13.373	13.357	13.402	VV	1248	30057	1.59%	0.302%
234	13.422	13.402	13.451	VV	1183	29062	1.54%	0.292%
235	13.458	13.451	13.497	VV	773	18402	0.97%	0.185%
236	13.564	13.497	13.587	VV	2256	68115	3.60%	0.685%
237	13.610	13.587	13.662	VV	3936	105137	5.56%	1.057%
238	13.677	13.662	13.722	VV	1805	47037	2.49%	0.473%
239	13.768	13.722	13.897	VV	41162	687636	36.36%	6.915%
240	13.929	13.897	13.965	VV	1736	59242	3.13%	0.596%
241	13.977	13.965	14.002	VV	1447	28405	1.50%	0.286%
242	14.027	14.002	14.054	VV	1230	33815	1.79%	0.340%
243	14.076	14.054	14.097	VV	1781	35798	1.89%	0.360%
244	14.119	14.097	14.162	VV	1610	49242	2.60%	0.495%
245	14.206	14.162	14.232	VV	1217	48370	2.56%	0.486%
246	14.253	14.232	14.296	VV	1412	45114	2.39%	0.454%

						rteres		
247	14.356	14.296	14.428	VV	1490	90941	4.81%	0.914%
248	14.448	14.428	14.466	VV	1071	23134	1.22%	0.233%
249	14.516	14.466	14.587	VV	2587	112298	5.94%	1.129%
250	14.603	14.587	14.612	VV	1160	17385	0.92%	0.175%
251	14.631	14.612	14.649	VV	1251	24907	1.32%	0.250%
252	14.680	14.649	14.700	VV	1652	40754	2.15%	0.410%
253	14.719	14.700	14.742	VV	1345	31760	1.68%	0.319%
254	14.756	14.742	14.767	VV	1232	17437	0.92%	0.175%
255	14.791	14.767	14.812	VV	1470	35509	1.88%	0.357%
256	14.839	14.812	14.870	VV	1362	39146	2.07%	0.394%
257	14.909	14.870	14.982	VV	2378	80642	4.26%	0.811%
258	15.018	14.982	15.058	VV	100101	1396102	73.82%	14.039%
259	15.071	15.058	15.149	VV	1177	35296	1.87%	0.355%
260	15.192	15.149	15.209	VV	1289	27192	1.44%	0.273%
261	15.220	15.209	15.252	VV	1262	18262	0.97%	0.184%
262	15.273	15.252	15.297	VV	616	8819	0.47%	0.089%
263	15.305	15.297	15.329	VV	142	1967	0.10%	0.020%
264	15.421	15.329	15.434	PV	505	10146	0.54%	0.102%
265	15.446	15.434	15.494	VV	484	9509	0.50%	0.096%
266	15.604	15.494	15.679	PV	49018	756072	39.98%	7.603%
267	15.685	15.679	15.711	VV	1218	18262	0.97%	0.184%
268	15.768	15.711	15.785	VV	3403	76321	4.04%	0.767%
269	15.803	15.785	15.849	VV	3299	69081	3.65%	0.695%
270	15.877	15.849	15.901	VV	590	12848	0.68%	0.129%
271	15.962	15.901	16.000	VV	3735	73613	3.89%	0.740%
272	16.019	16.000	16.056	VV	1048	29979	1.59%	0.301%
273	16.126	16.056	16.152	VV	1691	56005	2.96%	0.563%
274	16.171	16.152	16.184	VV	887	16029	0.85%	0.161%
275	16.244	16.184	16.291	VV	2232	69461	3.67%	0.698%
276	16.311	16.291	16.324	VV	822	14552	0.77%	0.146%
277	16.382	16.324	16.405	VV	1410	42129	2.23%	0.424%
278	16.459	16.405	16.500	VV	1086	49515	2.62%	0.498%
279	16.542	16.500	16.562	VV	1062	30334	1.60%	0.305%
280	16.620	16.562	16.666	VV	4745	104279	5.51%	1.049%
281	16.686	16.666	16.705	VV	1085	21404	1.13%	0.215%
282	16.727	16.705	16.752	VV	1951	31304	1.66%	0.315%
283	16.815	16.752	16.837	VV	1023	26727	1.41%	0.269%
284	16.885	16.837	16.907	VV	571	17294	0.91%	0.174%
285	16.944	16.907	16.969	VV	1015	23305	1.23%	0.234%
286	17.002	16.969	17.027	VV	1022	21899	1.16%	0.220%
287	17.034	17.027	17.051	VV	498	5803	0.31%	0.058%
288	17.084	17.051	17.119	VV	915	19745	1.04%	0.199%
289	17.195	17.119	17.219	PV	1932	28703	1.52%	0.289%
290	17.243	17.219	17.269	VV	2943	39284	2.08%	0.395%
291	17.286	17.269	17.299	VV	411	5487	0.29%	0.055%
292	17.319	17.299	17.332	VV	423	4383	0.23%	0.044%
					Sum of corrected areas:		9944711	

FF042225.M Wed May 14 06:59:15 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/07/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-8	SDG No.:	Q1982
Lab Sample ID:	Q1982-07	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.7
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	Diesel Range Organics
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015839.D	1	05/13/25 10:05	05/13/25 18:50	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	5650		202	1990	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\FF051325\
Data File : FF015839.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:50
Operator : YP\AJ
Sample : Q1982-07
Misc :
ALS Vial : 78 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-8

Integration File: autoint1.e
Quant Time: May 14 05:52:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	1210127	10.724 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

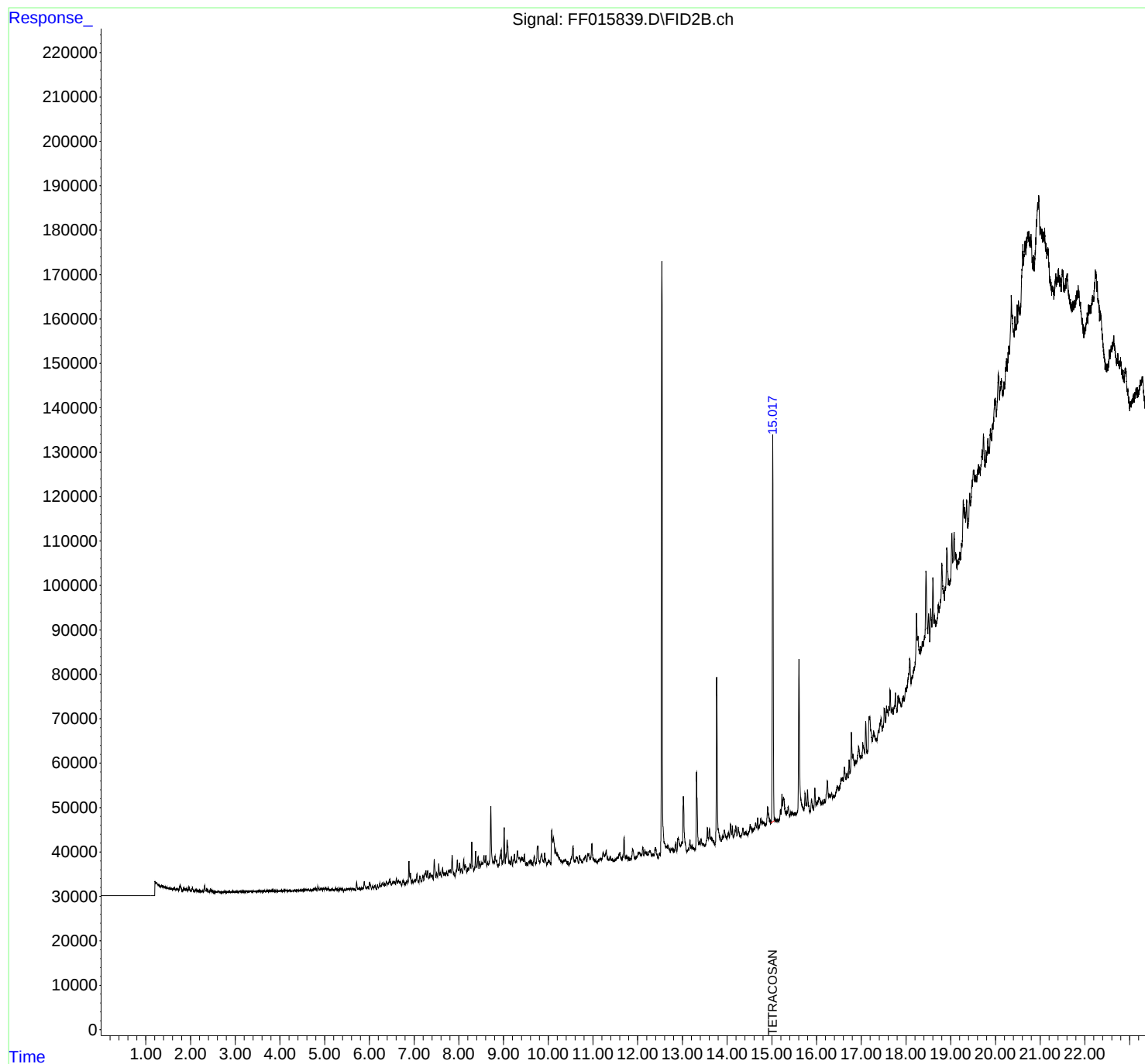
(m)=manual int.

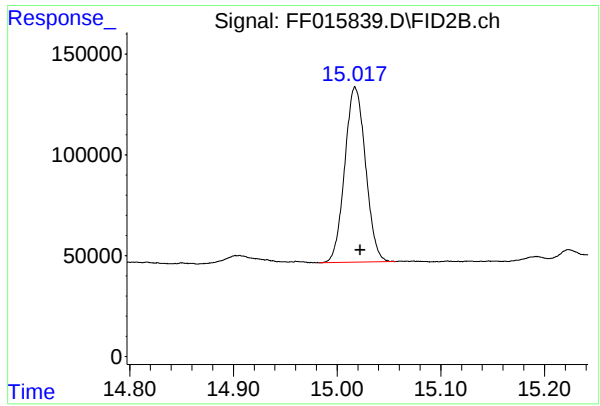
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015839.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:50
Operator : YP\AJ
Sample : Q1982-07
Misc :
ALS Vial : 78 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-8

Integration File: autoint1.e
Quant Time: May 14 05:52:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.005 min
Response: 1210127
Conc: 10.72 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-8

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015839.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 18:50
Sample : Q1982-07
Misc :
ALS Vial : 78 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.308	4.300	4.326	BV	43	270	0.02%	0.001%
2	4.337	4.326	4.352	PV	169	1501	0.08%	0.008%
3	4.356	4.352	4.363	VV	91	491	0.03%	0.003%
4	4.366	4.363	4.371	VV	147	420	0.02%	0.002%
5	4.379	4.371	4.388	VV	111	1016	0.06%	0.006%
6	4.393	4.388	4.408	VV	149	1419	0.08%	0.008%
7	4.414	4.408	4.421	VV	98	549	0.03%	0.003%
8	4.427	4.421	4.433	PV	110	491	0.03%	0.003%
9	4.458	4.433	4.480	VV	231	4138	0.23%	0.023%
10	4.483	4.480	4.490	VV	171	678	0.04%	0.004%
11	4.504	4.490	4.510	VV	261	2414	0.13%	0.013%
12	4.523	4.510	4.531	VV	257	2537	0.14%	0.014%
13	4.543	4.531	4.554	VV	251	2694	0.15%	0.015%
14	4.580	4.554	4.610	VV	364	9439	0.52%	0.052%
15	4.628	4.610	4.655	VV	380	7593	0.42%	0.042%
16	4.658	4.655	4.668	VV	223	1564	0.09%	0.009%
17	4.687	4.668	4.717	VV	367	6851	0.38%	0.038%
18	4.755	4.717	4.758	VV	459	6789	0.38%	0.037%
19	4.790	4.758	4.829	VV	623	18956	1.05%	0.104%
20	4.848	4.829	4.866	VV	1058	13575	0.75%	0.075%
21	4.873	4.866	4.890	VV	510	6071	0.34%	0.033%
22	4.908	4.890	4.912	VV	530	5770	0.32%	0.032%
23	4.917	4.912	4.952	VV	531	9755	0.54%	0.054%
24	4.975	4.952	4.992	VV	478	9792	0.54%	0.054%
25	5.006	4.992	5.019	VV	664	9504	0.53%	0.052%
26	5.027	5.019	5.051	VV	669	8821	0.49%	0.049%
27	5.078	5.051	5.118	VV	684	15871	0.88%	0.087%
28	5.133	5.118	5.138	VV	347	3176	0.18%	0.017%
29	5.144	5.138	5.166	VV	414	5343	0.30%	0.029%
30	5.179	5.166	5.200	VV	448	6393	0.36%	0.035%
31	5.244	5.200	5.263	VV	743	13030	0.72%	0.072%
32	5.276	5.263	5.302	VV	483	7354	0.41%	0.040%
33	5.321	5.302	5.332	VV	516	6573	0.37%	0.036%
34	5.345	5.332	5.361	VV	655	8116	0.45%	0.045%
35	5.366	5.361	5.375	VV	419	3263	0.18%	0.018%
36	5.388	5.375	5.421	VV	619	9688	0.54%	0.053%

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37	5.442	5.421	5.463	PV	314	4545	0.25%	0.025%
38	5.483	5.463	5.499	VV	503	7391	0.41%	0.041%
39	5.508	5.499	5.516	VV	392	3732	0.21%	0.021%
40	5.524	5.516	5.531	VV	422	3329	0.19%	0.018%
41	5.545	5.531	5.560	VV	525	6924	0.38%	0.038%
42	5.577	5.560	5.594	VV	534	8270	0.46%	0.046%
43	5.605	5.594	5.628	VV	544	8451	0.47%	0.047%
44	5.633	5.628	5.655	VV	405	4958	0.28%	0.027%
45	5.672	5.655	5.689	VV	345	3566	0.20%	0.020%
46	5.716	5.689	5.737	PV	1870	25745	1.43%	0.142%
47	5.746	5.737	5.760	VV	483	5708	0.32%	0.031%
48	5.776	5.760	5.789	VV	482	6224	0.35%	0.034%
49	5.795	5.789	5.809	VV	393	3833	0.21%	0.021%
50	5.830	5.809	5.840	VV	544	7500	0.42%	0.041%
51	5.852	5.840	5.863	VV	450	5538	0.31%	0.030%
52	5.885	5.863	5.922	VV	1862	35192	1.96%	0.194%
53	5.938	5.922	5.942	VV	540	5187	0.29%	0.029%
54	5.949	5.942	5.953	VV	523	3222	0.18%	0.018%
55	5.968	5.953	5.986	VV	797	10770	0.60%	0.059%
56	6.006	5.986	6.050	VV	1711	35577	1.98%	0.196%
57	6.071	6.050	6.099	VV	867	14114	0.78%	0.078%
58	6.132	6.099	6.155	VV	973	18564	1.03%	0.102%
59	6.181	6.155	6.199	PV	1134	13554	0.75%	0.075%
60	6.233	6.199	6.254	VV	1324	24155	1.34%	0.133%
61	6.286	6.254	6.308	VV	1371	30071	1.67%	0.166%
62	6.329	6.308	6.351	VV	1232	24807	1.38%	0.137%
63	6.380	6.351	6.406	VV	1465	35535	1.98%	0.196%
64	6.418	6.406	6.429	VV	1208	14313	0.80%	0.079%
65	6.454	6.429	6.500	VV	1826	53621	2.98%	0.295%
66	6.525	6.500	6.545	VV	1427	29265	1.63%	0.161%
67	6.560	6.545	6.586	VV	1347	25634	1.42%	0.141%
68	6.605	6.586	6.629	VV	2002	34040	1.89%	0.187%
69	6.652	6.629	6.668	VV	1428	27738	1.54%	0.153%
70	6.679	6.668	6.724	VV	1244	28376	1.58%	0.156%
71	6.749	6.724	6.781	VV	1373	31276	1.74%	0.172%
72	6.793	6.781	6.808	VV	639	7843	0.44%	0.043%
73	6.832	6.808	6.845	VV	975	17127	0.95%	0.094%
74	6.859	6.845	6.868	VV	1418	14520	0.81%	0.080%
75	6.885	6.868	6.907	VV	5544	76298	4.24%	0.420%
76	6.920	6.907	6.943	VV	2811	38772	2.16%	0.213%
77	6.957	6.943	6.980	VV	1297	19829	1.10%	0.109%
78	6.998	6.980	7.010	VV	1196	16447	0.91%	0.091%
79	7.027	7.010	7.032	VV	1179	14575	0.81%	0.080%
80	7.036	7.032	7.043	VV	1183	7179	0.40%	0.040%
81	7.063	7.043	7.090	VV	2529	46551	2.59%	0.256%
82	7.098	7.090	7.111	VV	907	9699	0.54%	0.053%
83	7.128	7.111	7.157	VV	1841	35135	1.95%	0.193%
84	7.161	7.157	7.172	VV	820	6485	0.36%	0.036%
85	7.197	7.172	7.217	VV	2014	38619	2.15%	0.213%
86	7.238	7.217	7.249	VV	2226	32442	1.80%	0.179%
87	7.265	7.249	7.282	VV	3044	46989	2.61%	0.259%
88	7.304	7.282	7.332	VV	2935	60346	3.35%	0.332%
89	7.355	7.332	7.374	VV	2337	46290	2.57%	0.255%

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90	7.407	7.374	7.428	VV	1789	49775	2.77%	0.274%
91	7.451	7.428	7.490	VV	5349	107158	5.96%	0.590%
92	7.504	7.490	7.523	VV	2243	34433	1.91%	0.190%
93	7.552	7.523	7.572	VV	4309	72241	4.02%	0.398%
94	7.581	7.572	7.611	VV	2081	40979	2.28%	0.226%
95	7.638	7.611	7.669	VV	3192	77183	4.29%	0.425%
96	7.686	7.669	7.705	VV	2120	38429	2.14%	0.212%
97	7.728	7.705	7.752	VV	2115	48633	2.70%	0.268%
98	7.769	7.752	7.778	VV	2546	32203	1.79%	0.177%
99	7.782	7.778	7.795	VV	2284	22874	1.27%	0.126%
100	7.807	7.795	7.824	VV	2728	41351	2.30%	0.228%
101	7.853	7.824	7.880	VV	5824	115474	6.42%	0.636%
102	7.893	7.880	7.919	VV	1864	33810	1.88%	0.186%
103	7.941	7.919	7.948	VV	2198	28381	1.58%	0.156%
104	7.967	7.948	8.002	VV	4667	96547	5.37%	0.531%
105	8.019	8.002	8.036	VV	3907	59195	3.29%	0.326%
106	8.055	8.036	8.083	VV	2619	59514	3.31%	0.328%
107	8.110	8.083	8.128	VV	4555	82298	4.57%	0.453%
108	8.142	8.128	8.153	VV	3393	45999	2.56%	0.253%
109	8.162	8.153	8.179	VV	3045	38811	2.16%	0.214%
110	8.210	8.179	8.226	VV	2559	61972	3.44%	0.341%
111	8.253	8.226	8.269	VV	3402	73831	4.10%	0.406%
112	8.291	8.269	8.335	VV	8336	162954	9.06%	0.897%
113	8.376	8.335	8.404	VV	6173	134909	7.50%	0.742%
114	8.431	8.404	8.452	VV	4874	100606	5.59%	0.554%
115	8.470	8.452	8.489	VV	3786	67700	3.76%	0.373%
116	8.507	8.489	8.514	VV	3341	45452	2.53%	0.250%
117	8.535	8.514	8.543	VV	3363	57128	3.18%	0.314%
118	8.562	8.543	8.586	VV	4997	104269	5.80%	0.574%
119	8.605	8.586	8.625	VV	4954	90252	5.02%	0.497%
120	8.645	8.625	8.667	VV	3207	74009	4.11%	0.407%
121	8.717	8.667	8.761	VV	15889	350089	19.46%	1.927%
122	8.788	8.761	8.793	VV	3334	61631	3.43%	0.339%
123	8.809	8.793	8.838	VV	4621	104757	5.82%	0.577%
124	8.842	8.838	8.875	VV	3467	63750	3.54%	0.351%
125	8.891	8.875	8.901	VV	2730	37937	2.11%	0.209%
126	8.919	8.901	8.929	VV	4394	62000	3.45%	0.341%
127	8.949	8.929	8.971	VV	5825	110992	6.17%	0.611%
128	8.986	8.971	8.995	VV	3356	44157	2.45%	0.243%
129	9.015	8.995	9.038	VV	10679	156714	8.71%	0.863%
130	9.056	9.038	9.065	VV	4722	63829	3.55%	0.351%
131	9.082	9.065	9.125	VV	7951	189585	10.54%	1.043%
132	9.144	9.125	9.160	VV	2909	57390	3.19%	0.316%
133	9.179	9.160	9.202	VV	4082	76233	4.24%	0.420%
134	9.243	9.202	9.267	VV	4517	125586	6.98%	0.691%
135	9.312	9.267	9.344	VV	5242	170252	9.46%	0.937%
136	9.357	9.344	9.380	VV	3615	73103	4.06%	0.402%
137	9.403	9.380	9.448	VV	3527	129749	7.21%	0.714%
138	9.469	9.448	9.502	VV	4261	96470	5.36%	0.531%
139	9.513	9.502	9.545	VV	2329	53076	2.95%	0.292%
140	9.567	9.545	9.580	VV	2553	47448	2.64%	0.261%
141	9.594	9.580	9.608	VV	2917	41310	2.30%	0.227%

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142	9.623	9.608	9.642	VV	2776	47096	2.62%	0.259%
143	9.645	9.642	9.659	VV	2047	18470	1.03%	0.102%
144	9.689	9.659	9.721	VV	3646	97975	5.45%	0.539%
145	9.759	9.721	9.765	VV	5772	94086	5.23%	0.518%
146	9.771	9.765	9.814	VV	5688	102437	5.69%	0.564%
147	9.854	9.814	9.901	VV	3995	148980	8.28%	0.820%
148	9.920	9.901	9.969	VV	4114	103659	5.76%	0.571%
149	10.005	9.969	10.018	VV	2246	54129	3.01%	0.298%
150	10.025	10.018	10.057	VV	2218	41592	2.31%	0.229%
151	10.079	10.057	10.102	VV	9021	168805	9.38%	0.929%
152	10.119	10.102	10.152	VV	7356	179137	9.96%	0.986%
153	10.167	10.152	10.210	VV	4628	131327	7.30%	0.723%
154	10.221	10.210	10.238	VV	3323	49981	2.78%	0.275%
155	10.248	10.238	10.261	VV	2638	33426	1.86%	0.184%
156	10.266	10.261	10.282	VV	2244	26558	1.48%	0.146%
157	10.293	10.282	10.314	VV	1998	33577	1.87%	0.185%
158	10.352	10.314	10.359	VV	2118	47789	2.66%	0.263%
159	10.378	10.359	10.387	VV	2009	32099	1.78%	0.177%
160	10.393	10.387	10.427	VV	1912	36964	2.05%	0.203%
161	10.445	10.427	10.466	VV	1631	28235	1.57%	0.155%
162	10.485	10.466	10.491	VV	1225	15378	0.85%	0.085%
163	10.553	10.491	10.584	VV	4940	143561	7.98%	0.790%
164	10.599	10.584	10.609	VV	1595	22287	1.24%	0.123%
165	10.627	10.609	10.643	VV	2436	42314	2.35%	0.233%
166	10.649	10.643	10.679	VV	2246	35066	1.95%	0.193%
167	10.702	10.679	10.759	VV	2676	76286	4.24%	0.420%
168	10.794	10.759	10.805	VV	1913	40799	2.27%	0.225%
169	10.833	10.805	10.863	VV	2562	65402	3.64%	0.360%
170	10.883	10.863	10.893	VV	2824	39118	2.17%	0.215%
171	10.905	10.893	10.939	VV	2838	59297	3.30%	0.326%
172	10.976	10.939	11.009	VV	4988	114505	6.37%	0.630%
173	11.022	11.009	11.064	VV	1572	38988	2.17%	0.215%
174	11.072	11.064	11.094	VV	954	14981	0.83%	0.082%
175	11.098	11.094	11.103	VV	782	4223	0.23%	0.023%
176	11.157	11.103	11.172	VV	1504	48366	2.69%	0.266%
177	11.183	11.172	11.194	VV	1376	16540	0.92%	0.091%
178	11.226	11.194	11.257	VV	2851	77276	4.30%	0.425%
179	11.297	11.257	11.343	VV	3227	100844	5.61%	0.555%
180	11.355	11.343	11.369	VV	1114	16447	0.91%	0.091%
181	11.386	11.369	11.409	VV	1697	30258	1.68%	0.167%
182	11.426	11.409	11.449	VV	1055	20617	1.15%	0.113%
183	11.455	11.449	11.469	VV	740	7382	0.41%	0.041%
184	11.500	11.469	11.520	VV	862	22310	1.24%	0.123%
185	11.541	11.520	11.549	VV	1431	19650	1.09%	0.108%
186	11.555	11.549	11.562	VV	1283	9744	0.54%	0.054%
187	11.583	11.562	11.593	VV	2008	29336	1.63%	0.161%
188	11.605	11.593	11.644	VV	2436	44026	2.45%	0.242%
189	11.696	11.644	11.726	VV	5570	115196	6.40%	0.634%
190	11.735	11.726	11.743	VV	1206	10929	0.61%	0.060%
191	11.748	11.743	11.754	VV	1164	7718	0.43%	0.042%
192	11.766	11.754	11.788	VV	1190	18234	1.01%	0.100%
193	11.805	11.788	11.823	VV	1163	14197	0.79%	0.078%
194	11.848	11.823	11.857	VV	696	11337	0.63%	0.062%

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195	11.888	11.857	11.943	VV	2859	80875	4.50%	0.445%
196	11.973	11.943	11.980	VV	999	17160	0.95%	0.094%
197	12.009	11.980	12.024	VV	1857	37204	2.07%	0.205%
198	12.033	12.024	12.077	VV	1946	48333	2.69%	0.266%
199	12.115	12.077	12.139	VV	2938	66735	3.71%	0.367%
200	12.159	12.139	12.178	VV	2340	39446	2.19%	0.217%
201	12.190	12.178	12.234	VV	1828	46196	2.57%	0.254%
202	12.257	12.234	12.269	VV	1881	31908	1.77%	0.176%
203	12.277	12.269	12.318	VV	1985	41242	2.29%	0.227%
204	12.350	12.318	12.367	VV	1128	27410	1.52%	0.151%
205	12.394	12.367	12.459	VV	2494	72132	4.01%	0.397%
206	12.485	12.459	12.504	PV	1055	19134	1.06%	0.105%
207	12.541	12.504	12.599	VV	134342	1798942	100.00%	9.901%
208	12.604	12.599	12.628	VV	3135	46954	2.61%	0.258%
209	12.637	12.628	12.657	VV	2360	38708	2.15%	0.213%
210	12.676	12.657	12.701	VV	2581	56180	3.12%	0.309%
211	12.707	12.701	12.729	VV	1669	21565	1.20%	0.119%
212	12.751	12.729	12.756	VV	1485	19533	1.09%	0.108%
213	12.768	12.756	12.790	VV	1678	28284	1.57%	0.156%
214	12.795	12.790	12.814	VV	1251	13854	0.77%	0.076%
215	12.853	12.814	12.874	VV	2875	58642	3.26%	0.323%
216	12.906	12.874	12.944	VV	3591	104663	5.82%	0.576%
217	12.947	12.944	12.963	VV	1983	21065	1.17%	0.116%
218	12.987	12.963	12.999	VV	2609	46987	2.61%	0.259%
219	13.020	12.999	13.098	VV	12676	251621	13.99%	1.385%
220	13.135	13.098	13.150	PV	833	12899	0.72%	0.071%
221	13.167	13.150	13.203	VV	2592	44190	2.46%	0.243%
222	13.222	13.203	13.239	VV	937	15225	0.85%	0.084%
223	13.247	13.239	13.265	VV	644	5724	0.32%	0.032%
224	13.279	13.265	13.289	VV	439	3987	0.22%	0.022%
225	13.315	13.289	13.365	VV	17481	294631	16.38%	1.622%
226	13.378	13.365	13.395	VV	1628	24151	1.34%	0.133%
227	13.416	13.395	13.462	VV	2131	53205	2.96%	0.293%
228	13.472	13.462	13.496	VV	906	14562	0.81%	0.080%
229	13.502	13.496	13.508	VV	554	3037	0.17%	0.017%
230	13.556	13.508	13.585	VV	4303	95102	5.29%	0.523%
231	13.605	13.585	13.624	VV	4014	63790	3.55%	0.351%
232	13.643	13.624	13.670	VV	2065	45631	2.54%	0.251%
233	13.673	13.670	13.687	VV	1305	10058	0.56%	0.055%
234	13.697	13.687	13.718	VV	1065	11486	0.64%	0.063%
235	13.766	13.718	13.870	PV	37661	583012	32.41%	3.209%
236	13.904	13.870	13.913	VV	1443	26927	1.50%	0.148%
237	13.936	13.913	13.993	VV	2731	74046	4.12%	0.408%
238	14.031	13.993	14.050	VV	1834	44456	2.47%	0.245%
239	14.074	14.050	14.100	VV	3578	68427	3.80%	0.377%
240	14.118	14.100	14.144	VV	3045	40733	2.26%	0.224%
241	14.192	14.144	14.218	VV	2913	71334	3.97%	0.393%
242	14.245	14.218	14.286	VV	2422	56392	3.13%	0.310%
243	14.293	14.286	14.310	VV	418	3527	0.20%	0.019%
244	14.352	14.310	14.377	PV	1963	37242	2.07%	0.205%
245	14.388	14.377	14.395	VV	740	6235	0.35%	0.034%
246	14.404	14.395	14.408	VV	860	5818	0.32%	0.032%

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247	14.413	14.408	14.435	VV	919	10802	0.60%	0.059%
248	14.439	14.435	14.448	VV	522	2643	0.15%	0.015%
249	14.452	14.448	14.464	VV	330	1820	0.10%	0.010%
250	14.512	14.464	14.534	PV	2319	48702	2.71%	0.268%
251	14.540	14.534	14.566	VV	1423	19297	1.07%	0.106%
252	14.636	14.566	14.661	VV	2191	66617	3.70%	0.367%
253	14.680	14.661	14.704	VV	3127	45201	2.51%	0.249%
254	14.752	14.704	14.780	VV	2695	74329	4.13%	0.409%
255	14.799	14.780	14.813	VV	1817	31744	1.76%	0.175%
256	14.817	14.813	14.840	VV	1749	20744	1.15%	0.114%
257	14.851	14.840	14.867	VV	1222	15110	0.84%	0.083%
258	14.905	14.867	14.959	VV	4660	133605	7.43%	0.735%
259	14.962	14.959	14.983	VV	1551	16631	0.92%	0.092%
260	15.017	14.983	15.057	VV	87754	1254026	69.71%	6.902%
261	15.061	15.057	15.090	VV	1330	23476	1.31%	0.129%
262	15.107	15.090	15.121	VV	1271	18426	1.02%	0.101%
263	15.127	15.121	15.135	VV	1063	8228	0.46%	0.045%
264	15.147	15.135	15.165	VV	1077	16714	0.93%	0.092%
265	15.193	15.165	15.204	VV	3093	50425	2.80%	0.278%
266	15.223	15.204	15.240	VV	6484	96365	5.36%	0.530%
267	15.262	15.240	15.299	VV	5610	151128	8.40%	0.832%
268	15.305	15.299	15.317	VV	2314	21795	1.21%	0.120%
269	15.335	15.317	15.343	VV	2194	27828	1.55%	0.153%
270	15.367	15.343	15.401	VV	3199	69048	3.84%	0.380%
271	15.426	15.401	15.435	VV	1642	28314	1.57%	0.156%
272	15.445	15.435	15.458	VV	1638	18266	1.02%	0.101%
273	15.474	15.458	15.488	VV	1464	20116	1.12%	0.111%
274	15.506	15.488	15.526	VV	1249	21827	1.21%	0.120%
275	15.531	15.526	15.536	VV	742	4204	0.23%	0.023%
276	15.604	15.536	15.715	VV	35469	679060	37.75%	3.737%
277	15.741	15.715	15.777	VV	4904	98170	5.46%	0.540%
278	15.796	15.777	15.843	VV	5343	101116	5.62%	0.557%
279	15.847	15.843	15.855	VV	504	2408	0.13%	0.013%
280	15.887	15.855	15.933	PV	2929	61268	3.41%	0.337%
281	15.960	15.933	15.984	VV	4928	72691	4.04%	0.400%
282	16.052	15.984	16.094	VV	2177	92178	5.12%	0.507%
283	16.097	16.094	16.108	VV	707	3810	0.21%	0.021%
284	16.126	16.108	16.144	VV	982	12507	0.70%	0.069%
285	16.173	16.144	16.195	VV	972	16056	0.89%	0.088%
286	16.242	16.195	16.269	VV	4795	105187	5.85%	0.579%
287	16.286	16.269	16.303	VV	1417	24123	1.34%	0.133%
288	16.336	16.303	16.357	VV	1518	32037	1.78%	0.176%
289	16.377	16.357	16.381	VV	561	4954	0.28%	0.027%
290	16.386	16.381	16.404	VV	562	6105	0.34%	0.034%
291	16.461	16.404	16.473	PV	2003	40374	2.24%	0.222%
292	16.478	16.473	16.499	VV	1487	13868	0.77%	0.076%
293	16.549	16.499	16.558	VV	2596	46732	2.60%	0.257%
294	16.564	16.558	16.571	VV	2160	14978	0.83%	0.082%
295	16.581	16.571	16.599	VV	2177	27699	1.54%	0.152%
296	16.622	16.599	16.654	VV	3883	75313	4.19%	0.414%
297	16.678	16.654	16.698	VV	1756	31541	1.75%	0.174%
298	16.702	16.698	16.707	VV	527	2702	0.15%	0.015%
299	16.727	16.707	16.752	VV	4178	58219	3.24%	0.320%

					rters			
300	16.777	16.752	16.801	VV	9661	146438	8.14%	0.806%
301	16.814	16.801	16.849	VV	4130	82895	4.61%	0.456%
302	16.870	16.849	16.876	VV	1936	27008	1.50%	0.149%
303	16.888	16.876	16.899	VV	1794	21299	1.18%	0.117%
304	16.939	16.899	16.977	VV	4356	122647	6.82%	0.675%
305	16.983	16.977	16.992	VV	1659	11331	0.63%	0.062%
306	16.996	16.992	17.000	VV	1219	4903	0.27%	0.027%
307	17.032	17.000	17.063	VV	3992	78727	4.38%	0.433%
308	17.067	17.063	17.078	VV	1786	12606	0.70%	0.069%
309	17.097	17.078	17.129	VV	7837	112457	6.25%	0.619%
310	17.170	17.129	17.178	PV	7832	94481	5.25%	0.520%
311	17.191	17.178	17.245	VV	7504	181663	10.10%	1.000%
312	17.274	17.245	17.304	VV	3228	76991	4.28%	0.424%
313	17.307	17.304	17.334	VV	1653	13995	0.78%	0.077%
314	17.338	17.334	17.345	VV	631	2100	0.12%	0.012%
315	17.384	17.345	17.389	PV	1557	23108	1.28%	0.127%
316	17.393	17.389	17.397	VV	1440	6313	0.35%	0.035%
317	17.442	17.397	17.464	VV	3357	88465	4.92%	0.487%
					Sum of corrected areas:		18169693	

FF042225.M Wed May 14 06:59:39 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/07/25
Project:	South River WM Replacement	Date Received:	05/07/25
Client Sample ID:	TP-9	SDG No.:	Q1982
Lab Sample ID:	Q1982-08	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	81.3
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
FF015840.D	1	05/13/25 10:05	05/13/25 19:19	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	4630		208	2050	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	12.7		37 - 130	63%	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\FF051325\
Data File : FF015840.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 19:19
Operator : YP\AJ
Sample : Q1982-08
Misc :
ALS Vial : 79 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-9

Integration File: autoint1.e
Quant Time: May 14 05:52:16 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	1430131	12.673 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

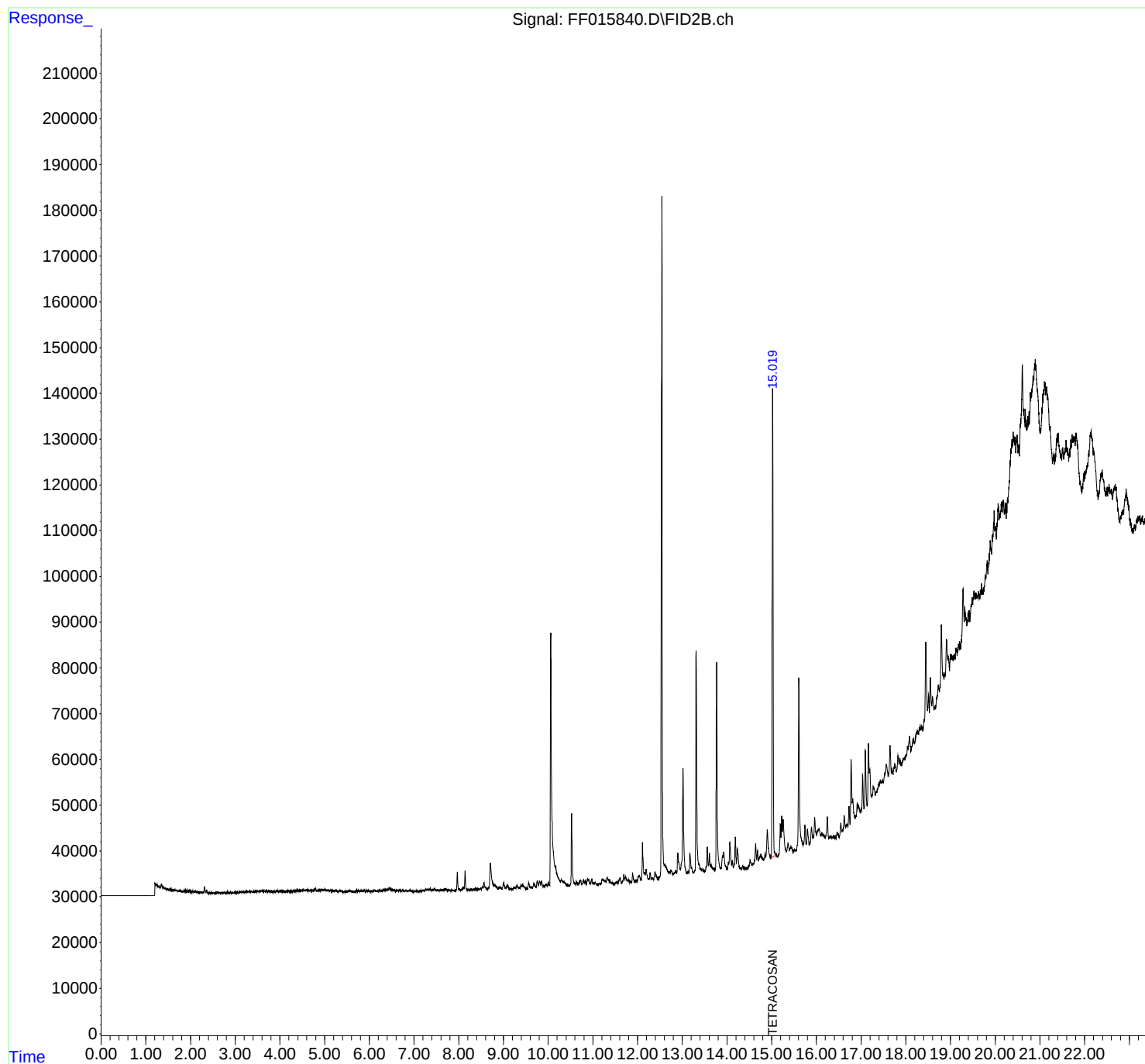
(m)=manual int.

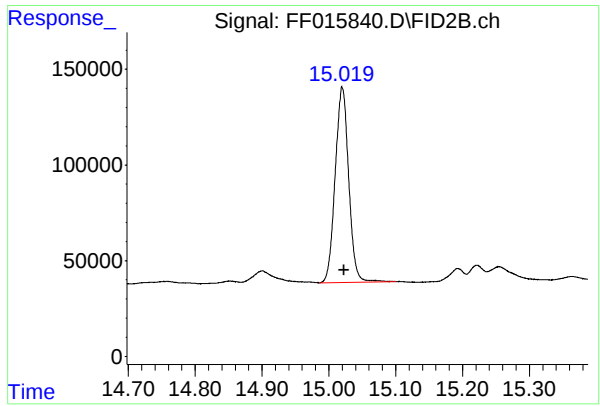
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015840.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 19:19
Operator : YP\AJ
Sample : Q1982-08
Misc :
ALS Vial : 79 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-9

Integration File: autoint1.e
Quant Time: May 14 05:52:16 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.002 min
Response: 1430131
Conc: 12.67 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-9

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
 Data File : FF015840.D
 Signal(s) : FID2B.ch
 Acq On : 13 May 2025 19:19
 Sample : Q1982-08
 Misc :
 ALS Vial : 79 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.328	4.300	4.334	BV	140	761	0.04%	0.005%
2	4.360	4.334	4.365	PV	195	2541	0.13%	0.017%
3	4.382	4.365	4.388	VV	278	2799	0.14%	0.019%
4	4.390	4.388	4.411	VV	246	2910	0.15%	0.020%
5	4.445	4.411	4.453	VV	271	5211	0.26%	0.035%
6	4.456	4.453	4.487	VV	275	4835	0.24%	0.032%
7	4.515	4.487	4.532	VV	326	7281	0.37%	0.049%
8	4.537	4.532	4.550	VV	320	2769	0.14%	0.019%
9	4.575	4.550	4.585	VV	425	6834	0.34%	0.046%
10	4.588	4.585	4.612	VV	353	4749	0.24%	0.032%
11	4.622	4.612	4.628	VV	390	2515	0.13%	0.017%
12	4.632	4.628	4.643	VV	350	2664	0.13%	0.018%
13	4.649	4.643	4.665	VV	291	3356	0.17%	0.022%
14	4.687	4.665	4.710	VV	415	7445	0.37%	0.050%
15	4.792	4.710	4.834	VV	616	26697	1.34%	0.179%
16	4.845	4.834	4.862	VV	343	4991	0.25%	0.033%
17	4.879	4.862	4.893	VV	404	6311	0.32%	0.042%
18	4.897	4.893	4.901	VV	411	1702	0.09%	0.011%
19	4.905	4.901	4.914	VV	424	2992	0.15%	0.020%
20	4.921	4.914	4.934	VV	463	4949	0.25%	0.033%
21	4.938	4.934	4.953	VV	442	4619	0.23%	0.031%
22	4.962	4.953	4.978	VV	499	6744	0.34%	0.045%
23	5.004	4.978	5.037	VV	614	17131	0.86%	0.115%
24	5.042	5.037	5.048	VV	431	2741	0.14%	0.018%
25	5.053	5.048	5.068	VV	451	4893	0.25%	0.033%
26	5.075	5.068	5.079	VV	454	2513	0.13%	0.017%
27	5.085	5.079	5.120	VV	455	8430	0.42%	0.056%
28	5.136	5.120	5.142	VV	431	4195	0.21%	0.028%
29	5.143	5.142	5.171	VV	370	5002	0.25%	0.034%
30	5.179	5.171	5.200	VV	296	3782	0.19%	0.025%
31	5.222	5.200	5.230	VV	291	4290	0.22%	0.029%
32	5.244	5.230	5.288	VV	425	9484	0.48%	0.064%
33	5.290	5.288	5.300	VV	168	1146	0.06%	0.008%
34	5.315	5.300	5.326	VV	271	2823	0.14%	0.019%
35	5.345	5.326	5.359	VV	439	5841	0.29%	0.039%
36	5.369	5.359	5.377	VV	335	2916	0.15%	0.020%

					rteres			
37	5.383	5.377	5.392	VV	244	1620	0.08%	0.011%
38	5.401	5.392	5.415	VV	155	1678	0.08%	0.011%
39	5.420	5.415	5.424	PV	105	409	0.02%	0.003%
40	5.456	5.424	5.476	VV	204	3672	0.18%	0.025%
41	5.491	5.476	5.504	VV	165	1830	0.09%	0.012%
42	5.514	5.504	5.521	VV	218	1606	0.08%	0.011%
43	5.529	5.521	5.534	VV	237	1406	0.07%	0.009%
44	5.546	5.534	5.553	VV	250	2208	0.11%	0.015%
45	5.569	5.553	5.596	VV	457	6746	0.34%	0.045%
46	5.603	5.596	5.621	VV	224	1982	0.10%	0.013%
47	5.625	5.621	5.630	VV	140	666	0.03%	0.004%
48	5.657	5.630	5.684	VV	178	3342	0.17%	0.022%
49	5.718	5.684	5.730	VV	416	6279	0.32%	0.042%
50	5.750	5.730	5.762	VV	426	5247	0.26%	0.035%
51	5.773	5.762	5.788	VV	248	3525	0.18%	0.024%
52	5.801	5.788	5.817	VV	327	4026	0.20%	0.027%
53	5.822	5.817	5.833	VV	271	2327	0.12%	0.016%
54	5.835	5.833	5.856	VV	260	3132	0.16%	0.021%
55	5.859	5.856	5.866	VV	278	1263	0.06%	0.008%
56	5.882	5.866	5.928	VV	459	9974	0.50%	0.067%
57	5.943	5.928	5.954	VV	321	3758	0.19%	0.025%
58	5.974	5.954	5.994	VV	325	5856	0.29%	0.039%
59	6.004	5.994	6.035	VV	261	4698	0.24%	0.031%
60	6.041	6.035	6.047	VV	184	956	0.05%	0.006%
61	6.048	6.047	6.054	VV	209	572	0.03%	0.004%
62	6.081	6.054	6.102	VV	286	5666	0.28%	0.038%
63	6.124	6.102	6.165	VV	307	7889	0.40%	0.053%
64	6.179	6.165	6.199	VV	281	4269	0.21%	0.029%
65	6.209	6.199	6.217	VV	320	2759	0.14%	0.018%
66	6.233	6.217	6.254	VV	504	7816	0.39%	0.052%
67	6.271	6.254	6.275	VV	325	3453	0.17%	0.023%
68	6.304	6.275	6.315	VV	378	8128	0.41%	0.054%
69	6.330	6.315	6.342	VV	471	7000	0.35%	0.047%
70	6.349	6.342	6.353	VV	440	2667	0.13%	0.018%
71	6.377	6.353	6.404	VV	588	14841	0.74%	0.099%
72	6.420	6.404	6.424	VV	539	5900	0.30%	0.040%
73	6.446	6.424	6.469	VV	911	18258	0.92%	0.122%
74	6.472	6.469	6.486	VV	611	5309	0.27%	0.036%
75	6.490	6.486	6.497	VV	454	2903	0.15%	0.019%
76	6.511	6.497	6.590	VV	532	20671	1.04%	0.139%
77	6.604	6.590	6.617	VV	294	3919	0.20%	0.026%
78	6.637	6.617	6.664	VV	424	8566	0.43%	0.057%
79	6.680	6.664	6.714	VV	441	9142	0.46%	0.061%
80	6.721	6.714	6.725	VV	191	1069	0.05%	0.007%
81	6.741	6.725	6.785	VV	465	10615	0.53%	0.071%
82	6.790	6.785	6.796	VV	171	972	0.05%	0.007%
83	6.826	6.796	6.852	VV	299	7117	0.36%	0.048%
84	6.859	6.852	6.873	VV	226	2590	0.13%	0.017%
85	6.884	6.873	6.907	VV	410	5656	0.28%	0.038%
86	6.919	6.907	6.950	VV	373	5015	0.25%	0.034%
87	6.966	6.950	6.975	VV	131	1153	0.06%	0.008%
88	6.997	6.975	7.017	VV	184	2770	0.14%	0.019%
89	7.044	7.017	7.064	VV	249	4461	0.22%	0.030%

					rteres			
90	7.070	7.064	7.086	VV	247	1847	0.09%	0.012%
91	7.091	7.086	7.094	PV	119	333	0.02%	0.002%
92	7.100	7.094	7.112	VV	145	1169	0.06%	0.008%
93	7.115	7.112	7.120	VV	138	505	0.03%	0.003%
94	7.138	7.120	7.152	VV	214	2772	0.14%	0.019%
95	7.164	7.152	7.174	VV	188	2040	0.10%	0.014%
96	7.194	7.174	7.219	VV	339	6343	0.32%	0.043%
97	7.241	7.219	7.249	VV	339	4659	0.23%	0.031%
98	7.267	7.249	7.282	VV	536	8668	0.44%	0.058%
99	7.310	7.282	7.327	VV	587	12770	0.64%	0.086%
100	7.350	7.327	7.427	VV	539	25369	1.27%	0.170%
101	7.455	7.427	7.517	VV	650	21509	1.08%	0.144%
102	7.543	7.517	7.565	VV	312	7332	0.37%	0.049%
103	7.575	7.565	7.607	VV	275	5572	0.28%	0.037%
104	7.642	7.607	7.667	VV	321	8621	0.43%	0.058%
105	7.689	7.667	7.753	VV	604	17759	0.89%	0.119%
106	7.765	7.753	7.775	VV	241	2631	0.13%	0.018%
107	7.791	7.775	7.802	VV	239	3460	0.17%	0.023%
108	7.810	7.802	7.819	VV	246	1960	0.10%	0.013%
109	7.832	7.819	7.845	VV	194	2433	0.12%	0.016%
110	7.863	7.845	7.886	VV	287	4512	0.23%	0.030%
111	7.894	7.886	7.911	VV	102	1245	0.06%	0.008%
112	7.921	7.911	7.937	VV	115	1725	0.09%	0.012%
113	7.970	7.937	8.041	VV	4182	59411	2.98%	0.398%
114	8.104	8.041	8.124	VV	744	21201	1.06%	0.142%
115	8.143	8.124	8.192	VV	4347	56619	2.84%	0.379%
116	8.204	8.192	8.214	VV	251	2553	0.13%	0.017%
117	8.219	8.214	8.228	VV	213	1236	0.06%	0.008%
118	8.258	8.228	8.275	VV	250	5259	0.26%	0.035%
119	8.295	8.275	8.307	VV	249	3598	0.18%	0.024%
120	8.325	8.307	8.340	VV	287	4246	0.21%	0.028%
121	8.342	8.340	8.353	VV	229	1449	0.07%	0.010%
122	8.378	8.353	8.417	VV	518	10881	0.55%	0.073%
123	8.428	8.417	8.457	VV	309	5731	0.29%	0.038%
124	8.471	8.457	8.495	VV	386	6955	0.35%	0.047%
125	8.536	8.495	8.550	VV	871	18386	0.92%	0.123%
126	8.565	8.550	8.644	VV	1745	42293	2.12%	0.283%
127	8.708	8.644	8.881	VV	5993	225938	11.34%	1.514%
128	8.887	8.881	8.902	VV	512	5073	0.25%	0.034%
129	8.927	8.902	8.971	VV	616	17253	0.87%	0.116%
130	9.001	8.971	9.042	VV	1528	37243	1.87%	0.250%
131	9.098	9.042	9.134	VV	934	32301	1.62%	0.216%
132	9.135	9.134	9.147	VV	308	1803	0.09%	0.012%
133	9.152	9.147	9.162	VV	226	1784	0.09%	0.012%
134	9.178	9.162	9.205	VV	324	4570	0.23%	0.031%
135	9.239	9.205	9.266	PV	529	13513	0.68%	0.091%
136	9.300	9.266	9.343	VV	808	22969	1.15%	0.154%
137	9.347	9.343	9.351	VV	372	1685	0.08%	0.011%
138	9.354	9.351	9.372	VV	366	3841	0.19%	0.026%
139	9.391	9.372	9.402	VV	921	12237	0.61%	0.082%
140	9.409	9.402	9.415	VV	811	5817	0.29%	0.039%
141	9.433	9.415	9.512	VV	1014	28678	1.44%	0.192%

					rteres			
142	9.518	9.512	9.536	VV	141	1082	0.05%	0.007%
143	9.567	9.536	9.602	PV	1371	27118	1.36%	0.182%
144	9.621	9.602	9.647	VV	427	7990	0.40%	0.054%
145	9.677	9.647	9.730	VV	1078	31318	1.57%	0.210%
146	9.754	9.730	9.785	VV	1630	32934	1.65%	0.221%
147	9.808	9.785	9.835	VV	1655	36575	1.84%	0.245%
148	9.837	9.835	9.841	VV	1102	3694	0.19%	0.025%
149	9.857	9.841	9.909	VV	1582	33515	1.68%	0.225%
150	9.922	9.909	9.929	VV	565	6070	0.30%	0.041%
151	9.931	9.929	9.933	VV	581	1492	0.07%	0.010%
152	9.951	9.933	9.977	VV	915	18842	0.95%	0.126%
153	10.004	9.977	10.022	VV	1285	22184	1.11%	0.149%
154	10.029	10.022	10.036	VV	676	5668	0.28%	0.038%
155	10.058	10.036	10.160	VV	55767	1165775	58.51%	7.813%
156	10.168	10.160	10.277	VV	4775	178922	8.98%	1.199%
157	10.299	10.277	10.340	VV	1682	52205	2.62%	0.350%
158	10.352	10.340	10.445	VV	1299	48214	2.42%	0.323%
159	10.450	10.445	10.473	VV	411	5484	0.28%	0.037%
160	10.526	10.473	10.610	VV	16053	254421	12.77%	1.705%
161	10.627	10.610	10.671	VV	1008	25807	1.30%	0.173%
162	10.700	10.671	10.710	VV	1238	19727	0.99%	0.132%
163	10.727	10.710	10.754	VV	1329	25366	1.27%	0.170%
164	10.788	10.754	10.814	VV	1387	33027	1.66%	0.221%
165	10.835	10.814	10.859	VV	1139	22103	1.11%	0.148%
166	10.882	10.859	10.896	VV	1625	25243	1.27%	0.169%
167	10.907	10.896	10.940	VV	1451	24914	1.25%	0.167%
168	10.978	10.940	11.009	VV	1539	35012	1.76%	0.235%
169	11.014	11.009	11.018	VV	464	2498	0.13%	0.017%
170	11.024	11.018	11.028	VV	488	2762	0.14%	0.019%
171	11.045	11.028	11.061	VV	610	10824	0.54%	0.073%
172	11.065	11.061	11.109	VV	569	7936	0.40%	0.053%
173	11.146	11.109	11.174	VV	418	12069	0.61%	0.081%
174	11.205	11.174	11.218	VV	1360	20780	1.04%	0.139%
175	11.230	11.218	11.265	VV	1302	31087	1.56%	0.208%
176	11.274	11.265	11.295	VV	972	14913	0.75%	0.100%
177	11.317	11.295	11.410	VV	1666	68954	3.46%	0.462%
178	11.418	11.410	11.475	VV	475	10826	0.54%	0.073%
179	11.484	11.475	11.488	PV	196	935	0.05%	0.006%
180	11.507	11.488	11.524	VV	428	7392	0.37%	0.050%
181	11.538	11.524	11.555	VV	503	8470	0.43%	0.057%
182	11.609	11.555	11.642	VV	1444	38372	1.93%	0.257%
183	11.693	11.642	11.713	VV	2072	40532	2.03%	0.272%
184	11.729	11.713	11.765	VV	1490	32762	1.64%	0.220%
185	11.777	11.765	11.794	VV	784	10698	0.54%	0.072%
186	11.807	11.794	11.826	VV	731	9505	0.48%	0.064%
187	11.841	11.826	11.862	VV	273	4040	0.20%	0.027%
188	11.888	11.862	11.952	PV	2050	41327	2.07%	0.277%
189	11.968	11.952	11.985	VV	532	6572	0.33%	0.044%
190	12.016	11.985	12.024	VV	1216	16579	0.83%	0.111%
191	12.039	12.024	12.080	VV	1369	30664	1.54%	0.206%
192	12.110	12.080	12.144	VV	8446	135495	6.80%	0.908%
193	12.153	12.144	12.172	VV	1915	28464	1.43%	0.191%
194	12.188	12.172	12.248	VV	2640	58439	2.93%	0.392%

					rteres			
195	12.280	12.248	12.312	VV	1735	30425	1.53%	0.204%
196	12.316	12.312	12.324	VV	434	2842	0.14%	0.019%
197	12.331	12.324	12.353	VV	459	5572	0.28%	0.037%
198	12.388	12.353	12.465	VV	1691	48077	2.41%	0.322%
199	12.543	12.465	12.596	VV	149421	1992453	100.00%	13.353%
200	12.608	12.596	12.625	VV	3140	51656	2.59%	0.346%
201	12.639	12.625	12.695	VV	2665	81877	4.11%	0.549%
202	12.708	12.695	12.721	VV	1382	20372	1.02%	0.137%
203	12.745	12.721	12.785	VV	1721	47906	2.40%	0.321%
204	12.801	12.785	12.809	VV	993	11699	0.59%	0.078%
205	12.824	12.809	12.828	VV	975	10281	0.52%	0.069%
206	12.853	12.828	12.871	VV	1531	31081	1.56%	0.208%
207	12.898	12.871	12.959	VV	5299	144096	7.23%	0.966%
208	13.014	12.959	13.108	VV	23627	475773	23.88%	3.189%
209	13.130	13.108	13.148	VV	957	17900	0.90%	0.120%
210	13.171	13.148	13.202	VV	4705	85882	4.31%	0.576%
211	13.209	13.202	13.259	VV	1749	32862	1.65%	0.220%
212	13.279	13.259	13.283	VV	1002	11011	0.55%	0.074%
213	13.309	13.283	13.367	VV	48884	725666	36.42%	4.863%
214	13.375	13.367	13.404	VV	2283	38496	1.93%	0.258%
215	13.424	13.404	13.445	VV	1140	25283	1.27%	0.169%
216	13.451	13.445	13.472	VV	965	13341	0.67%	0.089%
217	13.480	13.472	13.510	VV	851	13855	0.70%	0.093%
218	13.533	13.510	13.538	VV	1515	16503	0.83%	0.111%
219	13.557	13.538	13.582	VV	5756	86322	4.33%	0.579%
220	13.606	13.582	13.630	VV	4305	77361	3.88%	0.518%
221	13.647	13.630	13.665	VV	1666	30042	1.51%	0.201%
222	13.677	13.665	13.695	VV	1053	16755	0.84%	0.112%
223	13.705	13.695	13.719	VV	856	10419	0.52%	0.070%
224	13.733	13.719	13.737	VV	710	6478	0.33%	0.043%
225	13.768	13.737	13.864	VV	45661	692332	34.75%	4.640%
226	13.901	13.864	13.911	VV	3429	62354	3.13%	0.418%
227	13.924	13.911	14.007	VV	4103	105018	5.27%	0.704%
228	14.030	14.007	14.041	VV	1909	26288	1.32%	0.176%
229	14.062	14.041	14.104	VV	6167	127584	6.40%	0.855%
230	14.119	14.104	14.140	VV	2107	29124	1.46%	0.195%
231	14.185	14.140	14.210	VV	7157	117381	5.89%	0.787%
232	14.230	14.210	14.314	VV	4566	106100	5.33%	0.711%
233	14.354	14.314	14.404	VV	611	14194	0.71%	0.095%
234	14.414	14.404	14.467	VV	175	1393	0.07%	0.009%
235	14.514	14.467	14.554	PV	1738	39372	1.98%	0.264%
236	14.575	14.554	14.589	VV	655	9821	0.49%	0.066%
237	14.638	14.589	14.664	VV	4770	89660	4.50%	0.601%
238	14.682	14.664	14.705	VV	3088	48735	2.45%	0.327%
239	14.758	14.705	14.805	VV	1963	81864	4.11%	0.549%
240	14.852	14.805	14.869	VV	1883	42429	2.13%	0.284%
241	14.900	14.869	14.985	VV	7001	192235	9.65%	1.288%
242	15.020	14.985	15.089	VV	102205	1468001	73.68%	9.838%
243	15.093	15.089	15.137	VV	858	16068	0.81%	0.108%
244	15.193	15.137	15.206	VV	7236	113941	5.72%	0.764%
245	15.222	15.206	15.237	VV	8881	127708	6.41%	0.856%
246	15.254	15.237	15.332	VV	7999	210268	10.55%	1.409%

						rteres		
247	15.365	15.332	15.396	VV	2493	59389	2.98%	0.398%
248	15.420	15.396	15.435	VV	1414	26760	1.34%	0.179%
249	15.439	15.435	15.492	VV	1182	21979	1.10%	0.147%
250	15.510	15.492	15.525	VV	566	7428	0.37%	0.050%
251	15.534	15.525	15.545	VV	290	2911	0.15%	0.020%
252	15.606	15.545	15.705	VV	37564	671102	33.68%	4.498%
253	15.743	15.705	15.777	VV	5049	97486	4.89%	0.653%
254	15.799	15.777	15.837	VV	4114	81261	4.08%	0.545%
255	15.891	15.837	15.923	VV	4125	105393	5.29%	0.706%
256	15.961	15.923	16.006	VV	6024	160026	8.03%	1.072%
257	16.024	16.006	16.034	VV	3192	45315	2.27%	0.304%
258	16.051	16.034	16.092	VV	3269	94384	4.74%	0.633%
259	16.126	16.092	16.155	VV	2096	67681	3.40%	0.454%
260	16.162	16.155	16.199	VV	1533	31927	1.60%	0.214%
261	16.243	16.199	16.277	VV	5270	106716	5.36%	0.715%
262	16.285	16.277	16.290	VV	574	3984	0.20%	0.027%
263	16.317	16.290	16.327	VV	719	12420	0.62%	0.083%
264	16.332	16.327	16.364	VV	676	8985	0.45%	0.060%
265	16.380	16.364	16.404	VV	690	8593	0.43%	0.058%
266	16.420	16.404	16.435	VV	171	1917	0.10%	0.013%
267	16.461	16.435	16.513	VV	1011	21265	1.07%	0.143%
268	16.544	16.513	16.568	PV	2484	40122	2.01%	0.269%
269	16.586	16.568	16.593	VV	677	9113	0.46%	0.061%
270	16.622	16.593	16.653	VV	3382	59597	2.99%	0.399%
271	16.680	16.653	16.705	VV	914	19197	0.96%	0.129%
272	16.728	16.705	16.752	VV	4297	55212	2.77%	0.370%
273	16.775	16.752	16.801	VV	14002	213507	10.72%	1.431%
274	16.811	16.801	16.861	VV	5091	95409	4.79%	0.639%
275	16.865	16.861	16.874	VV	544	3523	0.18%	0.024%
276	16.912	16.874	16.929	VV	3167	50670	2.54%	0.340%
277	16.943	16.929	16.979	VV	2235	42227	2.12%	0.283%
278	17.033	16.979	17.070	VV	7877	119605	6.00%	0.802%
279	17.094	17.070	17.137	VV	12655	180321	9.05%	1.208%
280	17.162	17.137	17.184	PV	13333	202662	10.17%	1.358%
281	17.194	17.184	17.225	VV	7262	110688	5.56%	0.742%
282	17.239	17.225	17.252	VV	1108	15418	0.77%	0.103%
283	17.271	17.252	17.284	VV	2526	35481	1.78%	0.238%
284	17.291	17.284	17.315	VV	1813	20894	1.05%	0.140%
285	17.343	17.315	17.352	PV	406	3999	0.20%	0.027%
286	17.432	17.352	17.449	VV	1629	56495	2.84%	0.379%
287	17.461	17.449	17.469	VV	971	8611	0.43%	0.058%
288	17.481	17.469	17.497	VV	887	9759	0.49%	0.065%
					Sum of corrected areas:		14921158	

FF042225.M Wed May 14 07:00:04 2025



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q1982 SAS No.: Q1982 SDG No.: Q1982

Calibration Sequence : FF042225			Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID	
1000	116059922	116060	FF015786.D	
500	58079559	116159	FF015787.D	
200	21235975	106180	FF015788.D	
100	11342548	113425	FF015789.D	
50	7274526	145491	FF015790.D	
AVG RF : 119463		% RSD : 12.646		AVG RT : 15.02

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q1982 SAS No.: Q1982 SDG No.: Q1982

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.: Q1982 SAS No.: Q1982 SDG No.: Q1982
DataFile: FF015835.D Analyst Name: YP\AJ Analyst Date: 05-13-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	59789393	119579	119463	0.097

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
 Data File : FF015835.D
 Signal(s) : FID2B.ch
 Acq On : 13 May 2025 16:53
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 14 05:51:25 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 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	5541961	49.110 ug/ml
Target Compounds			
2) N-DECANE	4.564	5585020	54.731 ug/ml
3) N-DODECANE	6.733	5797250	52.945 ug/ml
4) N-TETRADECANE	8.560	5816239	50.392 ug/ml
5) N-HEXADECANE	10.167	5908301	50.062 ug/ml
6) N-OCTADECANE	11.610	6124561	48.686 ug/ml
7) N-EICOSANE	12.921	6148088	47.127 ug/ml
8) N-DOCOSANE	14.119	6100209	47.890 ug/ml
10) N-TETRACOSANE	15.223	6131229	48.743 ug/ml
11) N-HEXACOSANE	16.245	6064363	49.750 ug/ml
12) N-OCTACOSANE	17.196	6114133	51.670 ug/ml

(f)=RT Delta > 1/2 Window

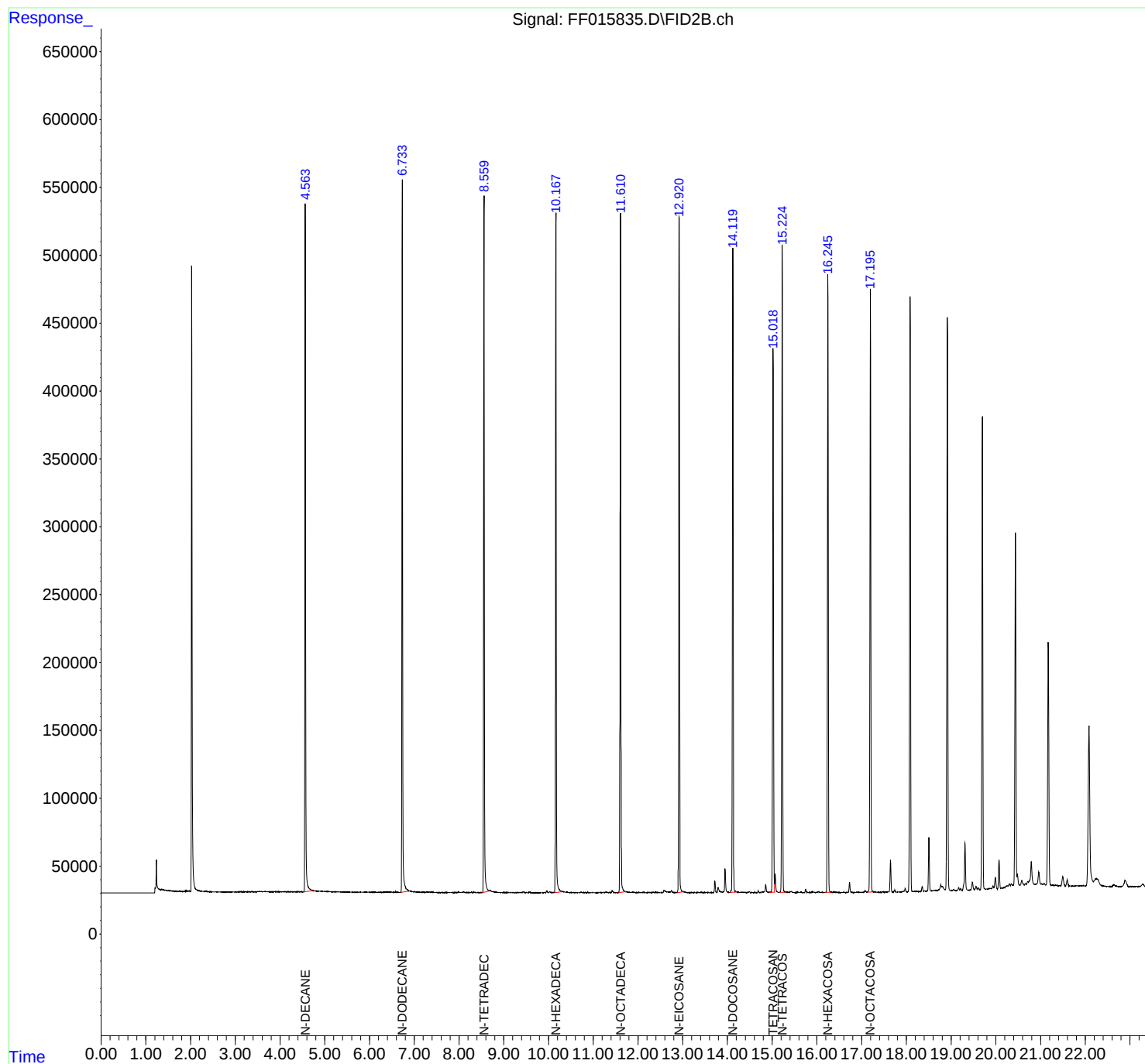
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015835.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 16:53
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 14 05:51:25 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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\FF051325\
Data File : FF015835.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 16:53
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.564	4.510	4.734	BB	506736	5585020	90.84%	8.549%
2	6.733	6.702	6.900	BB	524627	5797250	94.29%	8.874%
3	8.560	8.517	8.679	BV	510768	5816239	94.60%	8.903%
4	10.167	10.134	10.310	BB	500393	5908301	96.10%	9.044%
5	11.610	11.564	11.730	BB	501026	6124561	99.62%	9.375%
6	12.921	12.880	13.019	BB	497512	6148088	100.00%	9.411%
7	14.119	14.059	14.210	BB	472208	6100209	99.22%	9.337%
8	15.019	14.934	15.050	BV	400380	5541961	90.14%	8.483%
9	15.223	15.162	15.312	BB	477052	6131229	99.73%	9.385%
10	16.245	16.180	16.324	BB	455894	6064363	98.64%	9.282%
11	17.196	17.124	17.265	BB	443585	6114133	99.45%	9.359%
Sum of corrected areas:						65331354		

FF042225.M Wed May 14 06:44:56 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.: Q1982 SAS No.: Q1982 SDG No.: Q1982
DataFile: FF015842.D Analyst Name: YP\AJ Analyst Date: 05-13-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	55594324	111189	119463	6.926

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
 Data File : FF015842.D
 Signal(s) : FID2B.ch
 Acq On : 13 May 2025 20:18
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 14 05:52:36 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 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...	15.022	5037510	44.640 ug/ml
Target Compounds			
2) N-DECANE	4.563	5400573	52.923 ug/ml
3) N-DODECANE	6.733	5576140	50.926 ug/ml
4) N-TETRADECANE	8.560	5542764	48.022 ug/ml
5) N-HEXADECANE	10.168	5564048	47.145 ug/ml
6) N-OCTADECANE	11.612	5741424	45.640 ug/ml
7) N-EICOSANE	12.922	5715579	43.812 ug/ml
8) N-DOCOSANE	14.122	5598526	43.952 ug/ml
10) N-TETRACOSANE	15.226	5579347	44.355 ug/ml
11) N-HEXACOSANE	16.247	5444375	44.663 ug/ml
12) N-OCTACOSANE	17.198	5431548	45.902 ug/ml

(f)=RT Delta > 1/2 Window

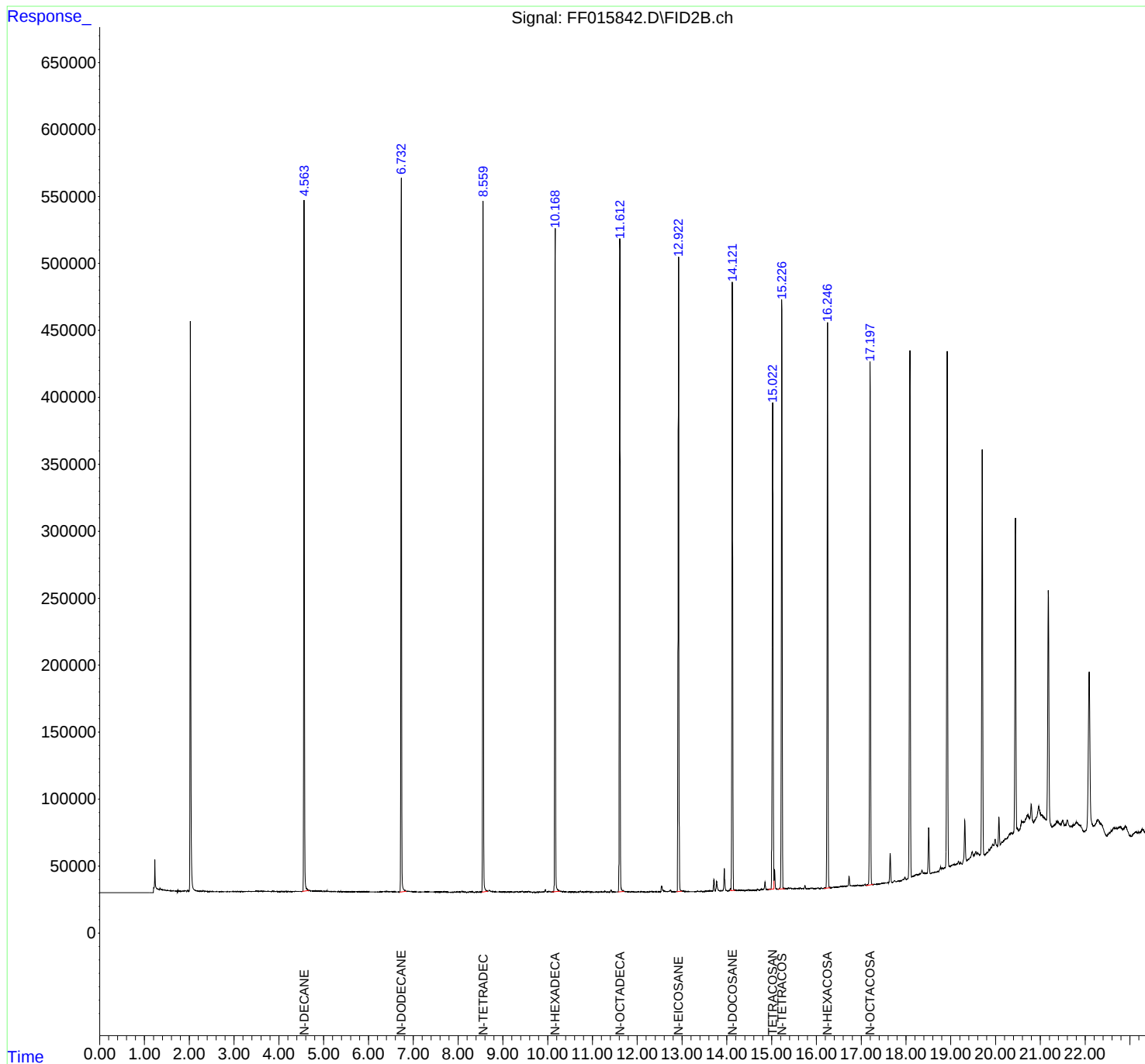
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015842.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 20:18
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 14 05:52:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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\FF051325\
Data File : FF015842.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 20:18
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.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	4.515	4.675	BB	515852	5400573	94.06%	8.907%
2	6.733	6.695	6.850	BB	533049	5576140	97.12%	9.197%
3	8.560	8.529	8.665	BB	516163	5542764	96.54%	9.142%
4	10.168	10.089	10.279	BB	495942	5564048	96.91%	9.177%
5	11.612	11.570	11.710	BB	486843	5741424	100.00%	9.469%
6	12.922	12.880	13.000	BB	473120	5715579	99.55%	9.427%
7	14.122	14.086	14.194	VB	454707	5598526	97.51%	9.234%
8	15.022	14.914	15.052	BV	362911	5037510	87.74%	8.308%
9	15.226	15.135	15.295	BB	438250	5579347	97.18%	9.202%
10	16.247	16.165	16.309	BB	422211	5444375	94.83%	8.979%
11	17.198	17.115	17.260	BB	390476	5431548	94.60%	8.958%
Sum of corrected areas:						60631834		

FF042225.M Wed May 14 06:48:03 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.: Q1982 SAS No.: Q1982 SDG No.: Q1982
DataFile: FF015848.D Analyst Name: YP\AJ Analyst Date: 05-14-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	56381376	112763	119463	5.608

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
 Data File : FF015848.D
 Signal(s) : FID2B.ch
 Acq On : 14 May 2025 00:12
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 14 05:53:40 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 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...	15.021	5115287	45.329 ug/ml
Target Compounds			
2) N-DECANE	4.563	5470044	53.604 ug/ml
3) N-DODECANE	6.732	5649385	51.594 ug/ml
4) N-TETRADECANE	8.560	5620247	48.694 ug/ml
5) N-HEXADECANE	10.167	5648090	47.857 ug/ml
6) N-OCTADECANE	11.611	5821774	46.279 ug/ml
7) N-EICOSANE	12.921	5796534	44.432 ug/ml
8) N-DOCOSANE	14.120	5670015	44.513 ug/ml
10) N-TETRACOSANE	15.224	5652393	44.936 ug/ml
11) N-HEXACOSANE	16.246	5531415	45.377 ug/ml
12) N-OCTACOSANE	17.197	5521479	46.662 ug/ml

(f)=RT Delta > 1/2 Window

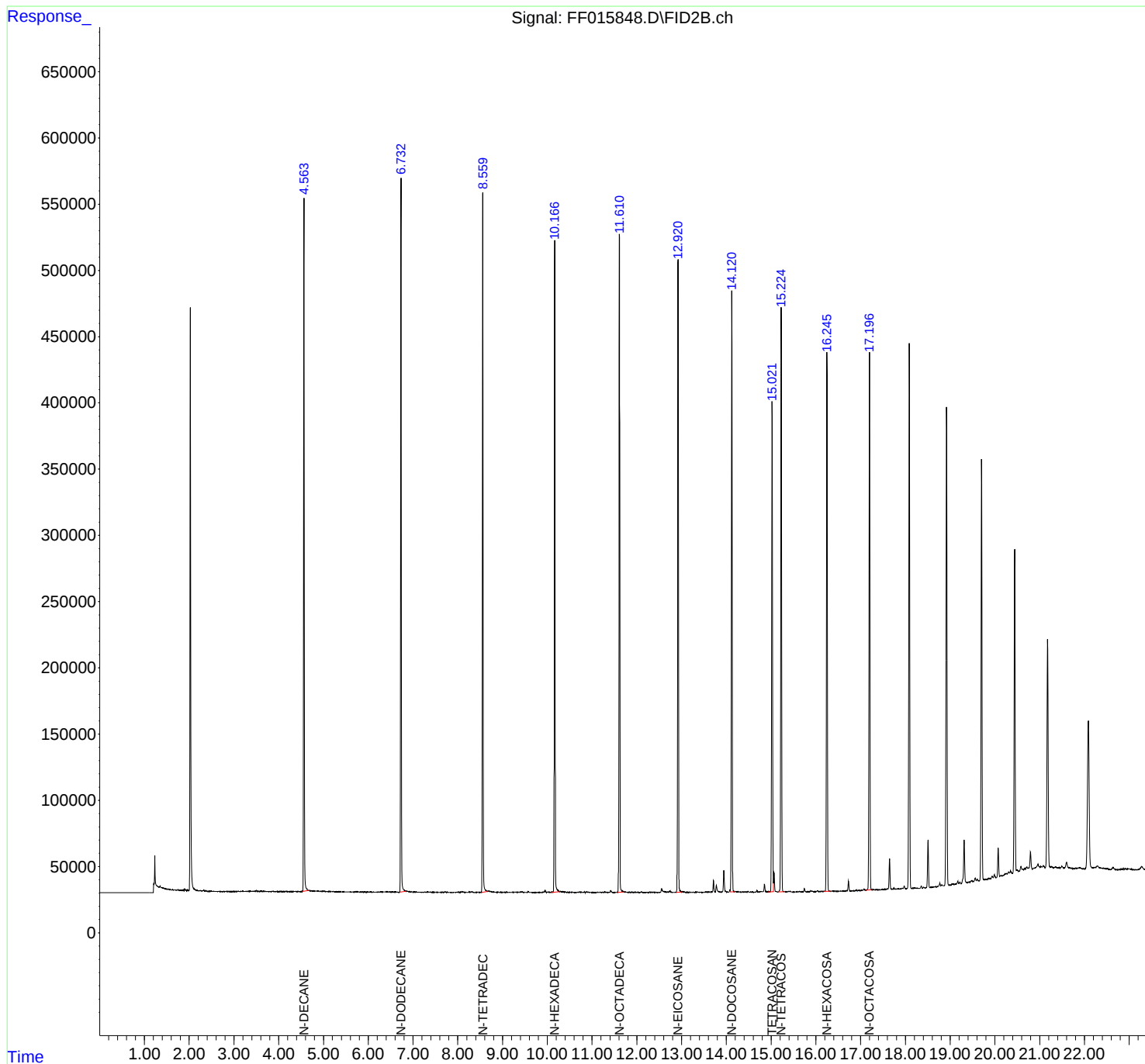
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015848.D
Signal(s) : FID2B.ch
Acq On : 14 May 2025 00:12
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 14 05:53:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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\FF051325\
Data File : FF015848.D
Signal(s) : FID2B.ch
Acq On : 14 May 2025 00:12
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.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	4.519	4.677	BB	522377	5470044	93.96%	8.895%
2	6.732	6.701	6.847	BB	537844	5649385	97.04%	9.186%
3	8.560	8.527	8.671	BB	526630	5620247	96.54%	9.139%
4	10.167	10.091	10.282	BB	491907	5648090	97.02%	9.184%
5	11.611	11.567	11.712	BB	496710	5821774	100.00%	9.467%
6	12.921	12.881	13.014	BB	478245	5796534	99.57%	9.426%
7	14.120	14.085	14.187	VB	452735	5670015	97.39%	9.220%
8	15.021	14.929	15.051	BV	368173	5115287	87.86%	8.318%
9	15.224	15.154	15.289	BB	440462	5652393	97.09%	9.191%
10	16.246	16.181	16.326	BB	405675	5531415	95.01%	8.995%
11	17.197	17.116	17.261	BB	401991	5521479	94.84%	8.979%
Sum of corrected areas:						61496663		

FF042225.M Wed May 14 06:50:46 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.: Q1982 SAS No.: Q1982 SDG No.: Q1982
DataFile: FG015825.D Analyst Name: YP\AJ Analyst Date: 05-13-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	62796625	125593	126925	1.049

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015825.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 16:53
 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 14 03:55:35 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...	14.998	5659391	48.068 ug/ml
Target Compounds			
2) N-DECANE	4.497	5569282	50.023 ug/ml
3) N-DODECANE	6.680	5878120	51.292 ug/ml
4) N-TETRADECANE	8.517	6151100	50.763 ug/ml
5) N-HEXADECANE	10.131	6321600	50.354 ug/ml
6) N-OCTADECANE	11.579	6510234	49.677 ug/ml
7) N-EICOSANE	12.893	6615705	48.797 ug/ml
8) N-DOCOSANE	14.095	6437736	48.539 ug/ml
10) N-TETRACOSANE	15.202	6444515	48.496 ug/ml
11) N-HEXACOSANE	16.226	6411471	48.345 ug/ml
12) N-OCTACOSANE	17.178	6456862	48.977 ug/ml

(f)=RT Delta > 1/2 Window

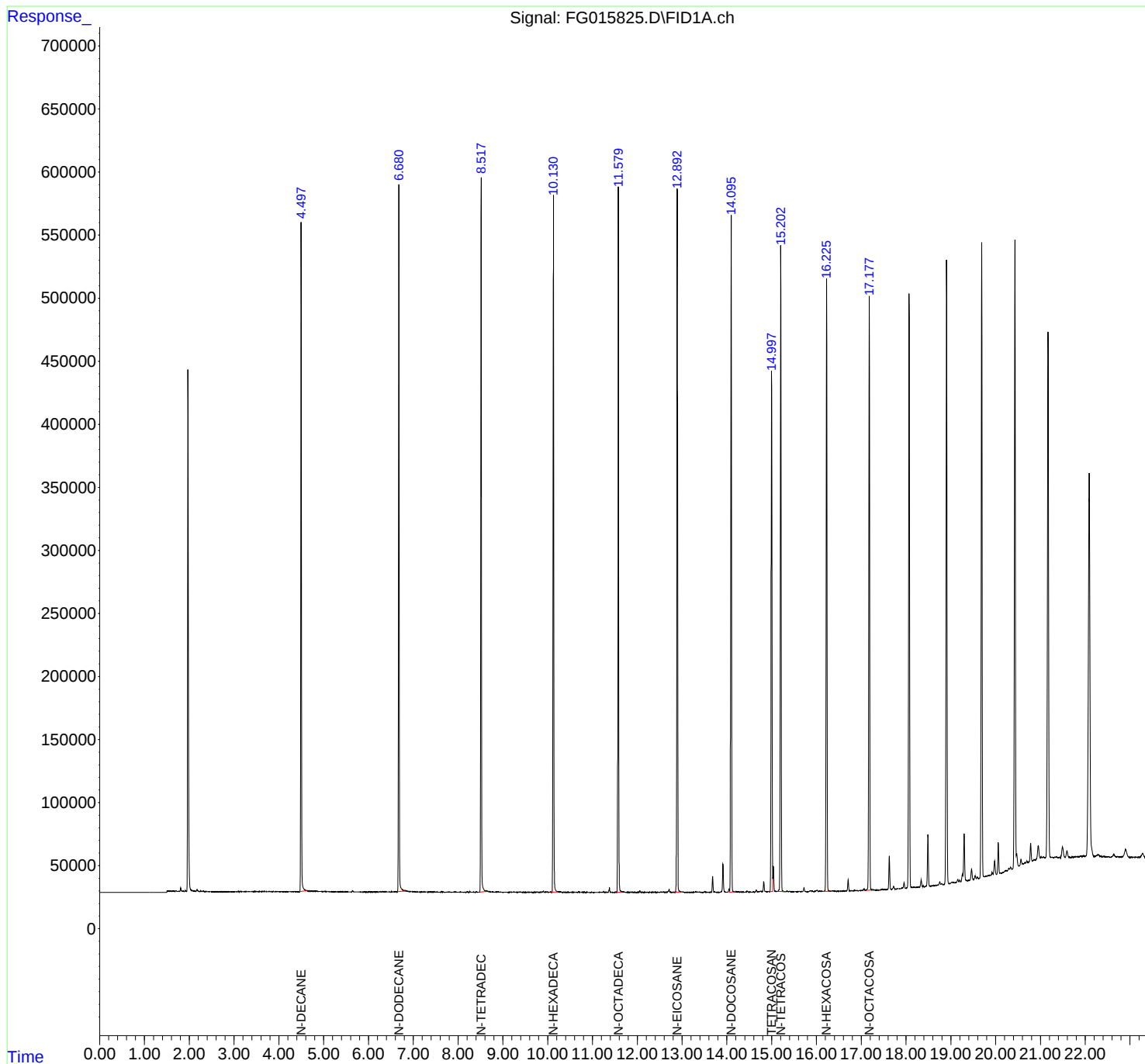
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015825.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 16:53
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 14 03:55:35 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\FG051325\
Data File : FG015825.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 16:53
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	4.497	4.458	4.614	BB	530200	5569282	84.18%	8.136%
2	6.680	6.638	6.817	BB	559379	5878120	88.85%	8.587%
3	8.517	8.480	8.637	BV	566587	6151100	92.98%	8.985%
4	10.131	10.084	10.234	BB	547795	6321600	95.55%	9.235%
5	11.579	11.541	11.669	BB	555154	6510234	98.41%	9.510%
6	12.893	12.842	12.983	BB	557804	6615705	100.00%	9.664%
7	14.095	14.061	14.173	VB	534342	6437736	97.31%	9.404%
8	14.998	14.941	15.025	BV	411404	5659391	85.54%	8.267%
9	15.202	15.135	15.273	BB	512339	6444515	97.41%	9.414%
10	16.226	16.153	16.301	BB	484679	6411471	96.91%	9.366%
11	17.178	17.098	17.249	BB	469809	6456862	97.60%	9.432%
Sum of corrected areas:						68456017		

FG042425.M Wed May 14 05:09:13 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.: Q1982 SAS No.: Q1982 SDG No.: Q1982
DataFile: FG015835.D Analyst Name: YP\AJ Analyst Date: 05-13-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	63457844	126916	126925	0.007

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015835.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 21:46
 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 14 03:57:15 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...	14.996	5710489	48.502 ug/ml
Target Compounds			
2) N-DECANE	4.497	5691010	51.117 ug/ml
3) N-DODECANE	6.679	5974108	52.129 ug/ml
4) N-TETRADECANE	8.516	6207700	51.230 ug/ml
5) N-HEXADECANE	10.129	6361678	50.674 ug/ml
6) N-OCTADECANE	11.578	6549621	49.977 ug/ml
7) N-EICOSANE	12.892	6656888	49.101 ug/ml
8) N-DOCOSANE	14.094	6494017	48.964 ug/ml
10) N-TETRACOSANE	15.201	6515965	49.034 ug/ml
11) N-HEXACOSANE	16.225	6479146	48.855 ug/ml
12) N-OCTACOSANE	17.177	6527711	49.515 ug/ml

(f)=RT Delta > 1/2 Window

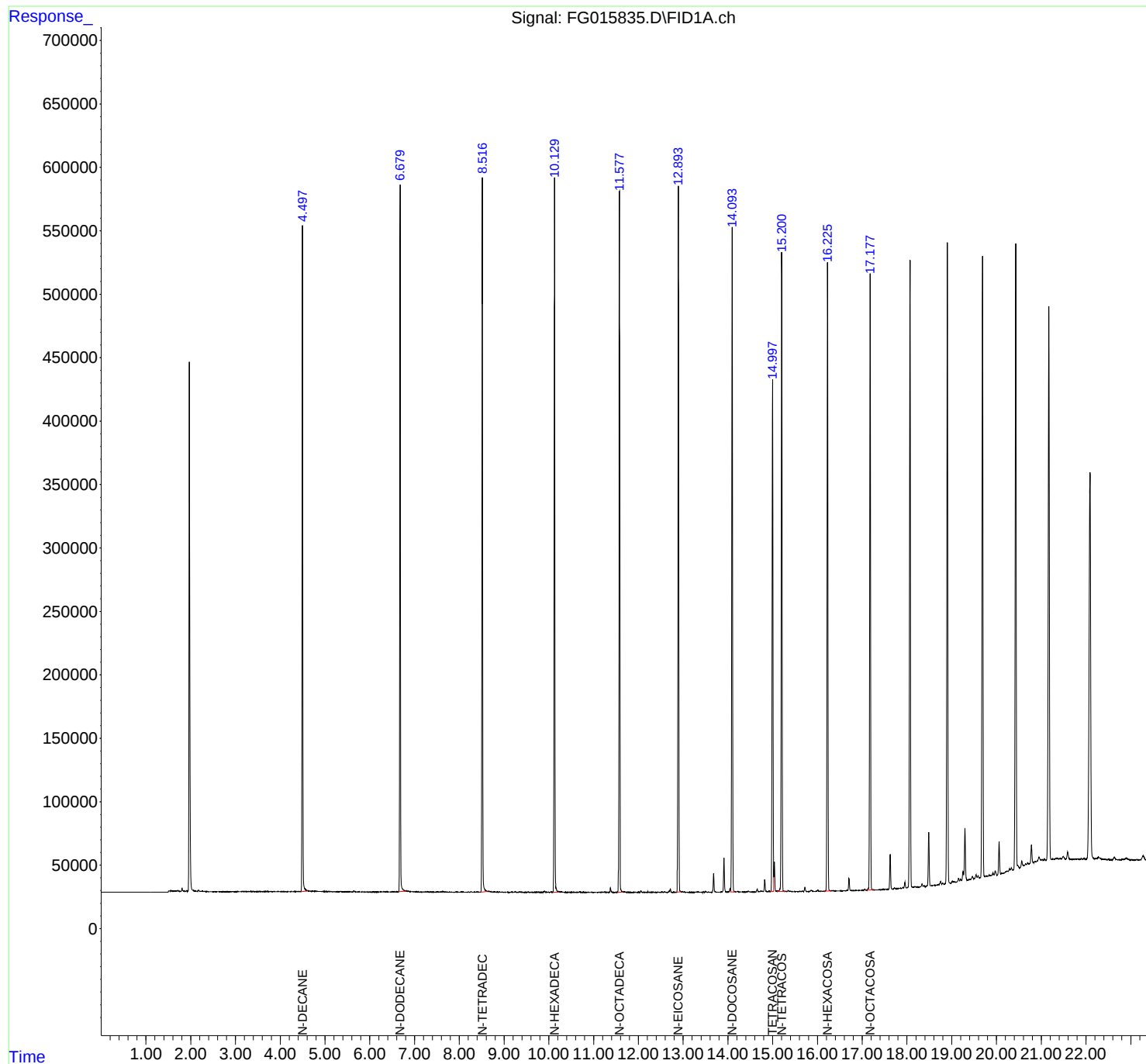
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015835.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:46
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 14 03:57:15 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\FG051325\
Data File : FG015835.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:46
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	4.497	4.456	4.619	BB	525383	5691010	85.49%	8.228%
2	6.679	6.632	6.814	BB	557151	5974108	89.74%	8.637%
3	8.516	8.476	8.633	BB	562392	6207700	93.25%	8.975%
4	10.129	10.090	10.231	BB	563052	6361678	95.57%	9.197%
5	11.578	11.537	11.660	BB	547511	6549621	98.39%	9.469%
6	12.892	12.853	12.965	BB	551855	6656888	100.00%	9.624%
7	14.094	14.059	14.166	VB	523556	6494017	97.55%	9.389%
8	14.996	14.943	15.024	BV	398233	5710489	85.78%	8.256%
9	15.201	15.094	15.275	BB	502844	6515965	97.88%	9.420%
10	16.225	16.149	16.301	BB	491501	6479146	97.33%	9.367%
11	17.177	17.088	17.241	BB	484690	6527711	98.06%	9.437%
Sum of corrected areas:						69168334		

FG042425.M Wed May 14 05:11:03 2025

Analytical Sequence

Client: CDM Smith

SDG No.: Q1982

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 15.02					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	13 May 2025 16:24	FF015834.D	15.021	
50 PPM TRPH STD	50 PPM TRPH STD	13 May 2025 16:53	FF015835.D	15.019	
TP-4	Q1982-04	13 May 2025 17:22	FF015836.D	15.017	
TP-5	Q1982-05	13 May 2025 17:51	FF015837.D	15.018	
TP-6	Q1982-06	13 May 2025 18:21	FF015838.D	15.018	
TP-8	Q1982-07	13 May 2025 18:50	FF015839.D	15.017	
TP-9	Q1982-08	13 May 2025 19:19	FF015840.D	15.020	
PIBLK02	LBLK02	13 May 2025 19:49	FF015841.D	15.021	
50 PPM TRPH STD	50 PPM TRPH STD	13 May 2025 20:18	FF015842.D	15.022	
PB167975BL	PB167975BL	13 May 2025 21:16	FF015843.D	15.022	
PB167975BS	PB167975BS	13 May 2025 21:46	FF015844.D	15.018	
PIBLK03	LBLK03	13 May 2025 23:14	FF015847.D	15.019	
50 PPM TRPH STD	50 PPM TRPH STD	14 May 2025 00:12	FF015848.D	15.021	
PIBLK04	LBLK04	13 May 2025 15:54	FG015824.D	14.995	
50 PPM TRPH STD	50 PPM TRPH STD	13 May 2025 16:53	FG015825.D	14.998	
SB2-4-5MS	Q1956-03MS	13 May 2025 18:21	FG015828.D	14.994	
SB2-4-5MSD	Q1956-04MSD	13 May 2025 18:50	FG015829.D	14.993	
TP-1	Q1982-01	13 May 2025 19:49	FG015831.D	14.995	
TP-2B	Q1982-02	13 May 2025 20:18	FG015832.D	14.993	
TP-3	Q1982-03	13 May 2025 20:47	FG015833.D	14.993	
PIBLK05	LBLK05	13 May 2025 21:16	FG015834.D	14.994	
50 PPM TRPH STD	50 PPM TRPH STD	13 May 2025 21:46	FG015835.D	14.996	



QC SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB167975BL	SDG No.:	Q1982
Lab Sample ID:	PB167975BL	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.01	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
FF015843.D	1	05/13/25 10:05	05/13/25 21:16	PB167975

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	15.5		37 - 130	77%	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

Report of Analysis

Client:	CDM Smith	Date Collected:	05/13/25
Project:	South River WM Replacement	Date Received:	05/13/25
Client Sample ID:	PIBLK-FF015834.D	SDG No.:	Q1982
Lab Sample ID:	I.BLK-FF015834.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
FF015834.D	1		05/13/25	FF051325

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	16.4		29 - 130	82%	SPK: 20

Comments:

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 E = Value Exceeds Calibration Range
 P = Indicates >25% difference for detected concentrations between the two GC columns
 Q = indicates LCS control criteria did not meet requirements
 M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 N = Presumptive Evidence of a Compound
 * = Values outside of QC limits
 D = Dilution
 S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.
 () = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015834.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 16:24
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 14 05:51:15 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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...	15.021	1851737	16.409 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

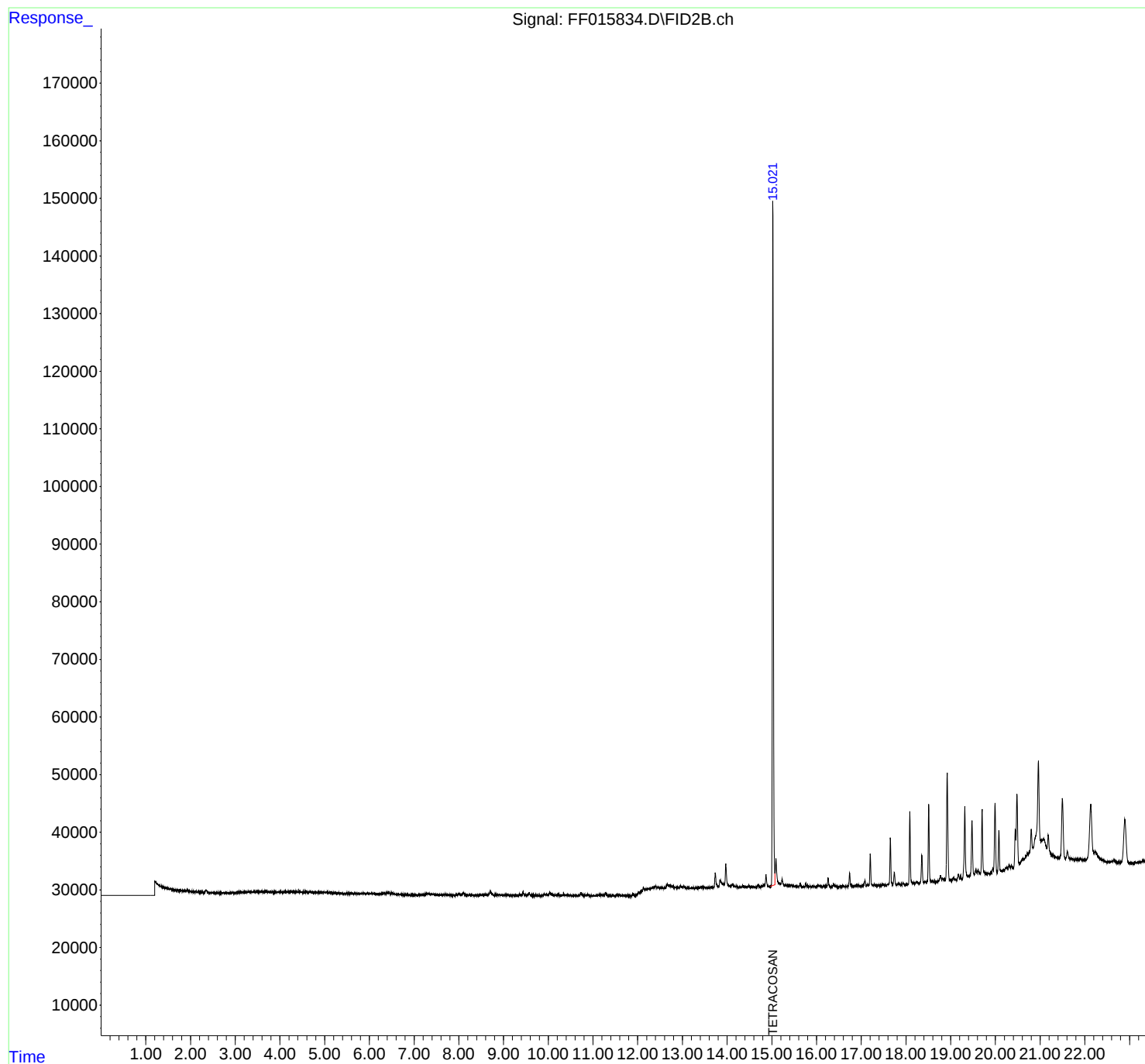
(m)=manual int.

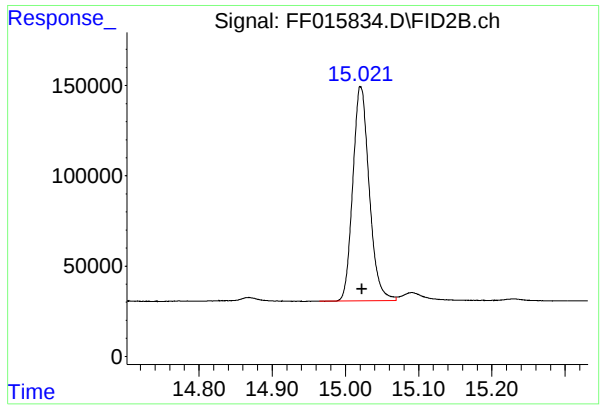
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015834.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 16:24
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 05:51:15 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.021 min
Delta R.T.: -0.002 min
Response: 1851737
Conc: 16.41 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015834.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 16:24
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.021	14.964	15.069	BV	118622	1851737	100.00%	100.000%
Sum of corrected areas:						1851737		

FF042225.M Wed May 14 06:43:57 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:	PIBLK-FF015841.D	SDG No.:	Q1982
Lab Sample ID:	I.BLK-FF015841.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
FF015841.D	1		05/13/25	FF051325

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	16.1		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\FF051325\
Data File : FF015841.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 19:49
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 14 05:52:26 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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...	15.021	1820098	16.129 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

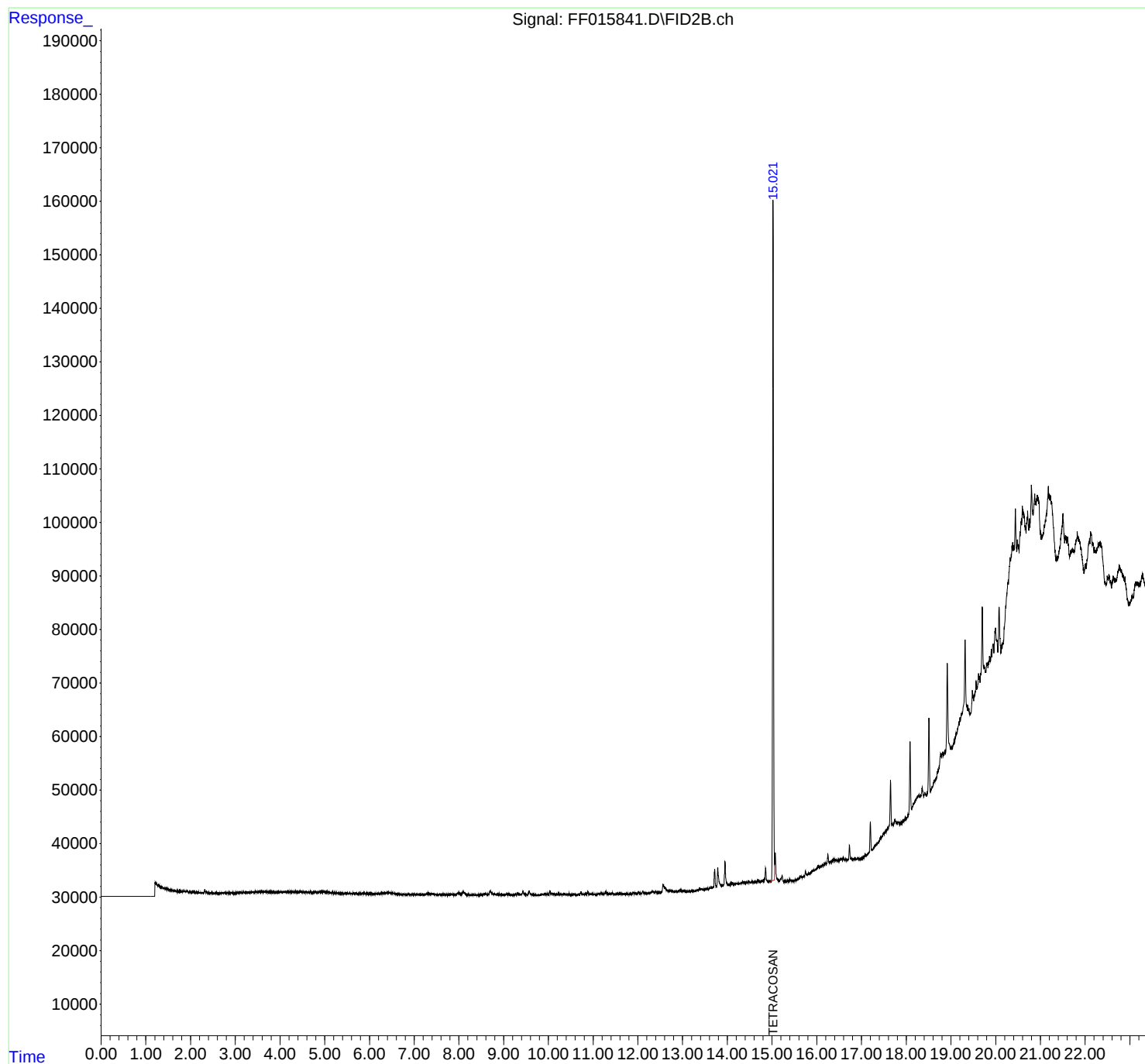
(m)=manual int.

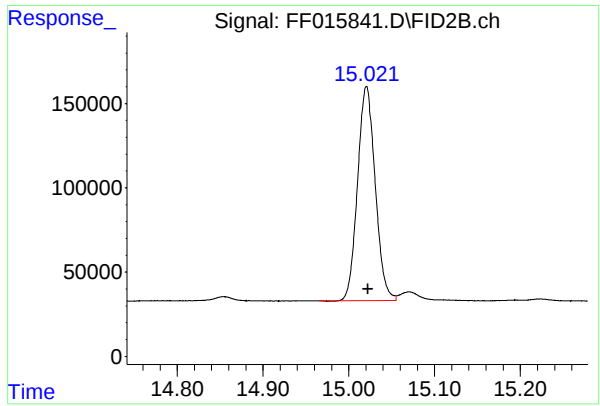
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015841.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 19:49
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 05:52:26 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.021 min
Delta R.T.: -0.002 min
Response: 1820098
Conc: 16.13 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015841.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 19:49
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.021	14.965	15.055	BV	127169	1820098	100.00%	100.000%
Sum of corrected areas:						1820098		

FF042225.M Wed May 14 06:47:25 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:	PIBLK-FF015847.D	SDG No.:	Q1982
Lab Sample ID:	I.BLK-FF015847.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015847.D	1		05/13/25	FF051325

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	16.1		29 - 130	80%	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\FF051325\
Data File : FF015847.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 23:14
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 14 05:53:30 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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	1814999	16.084 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

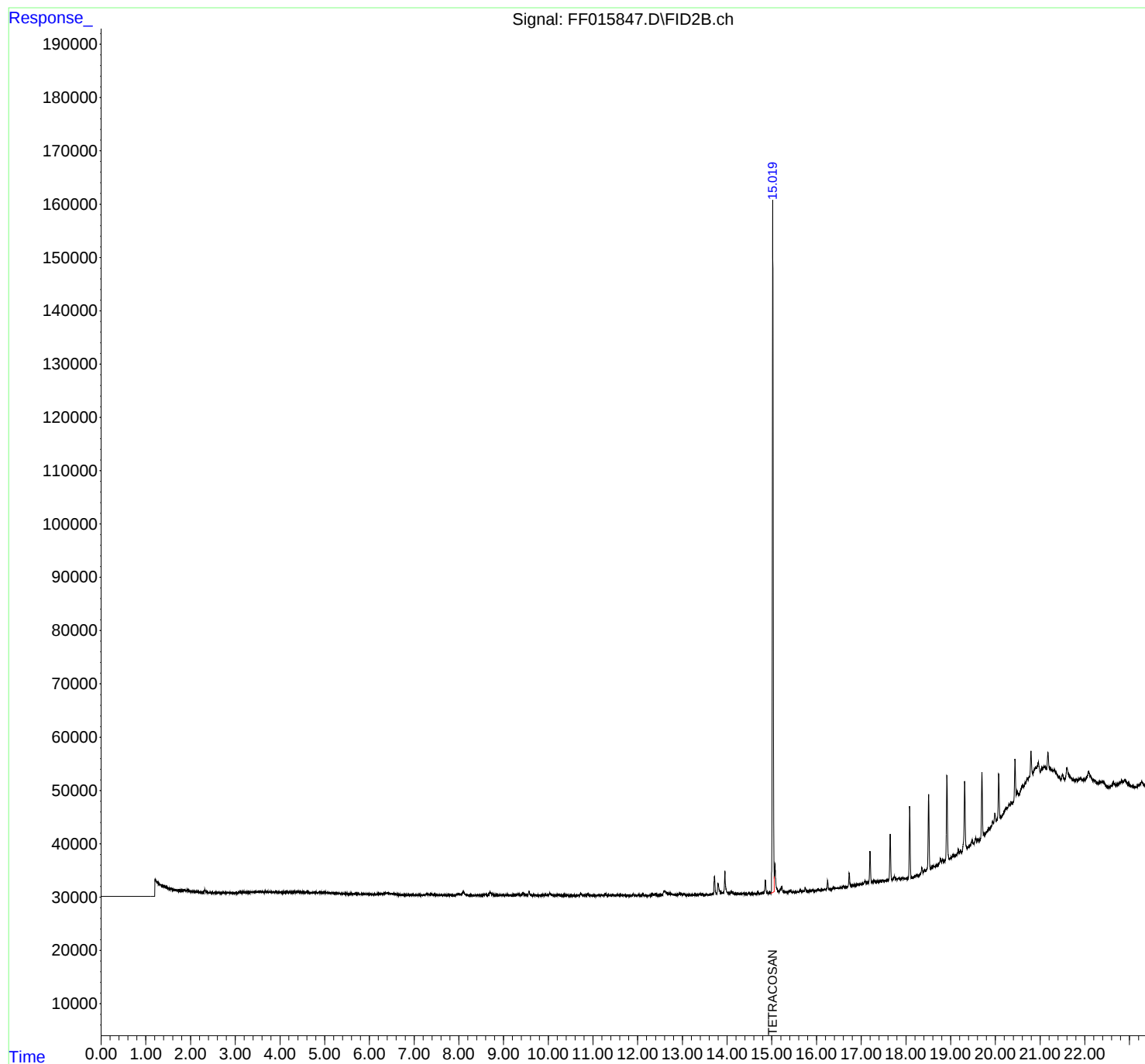
(m)=manual int.

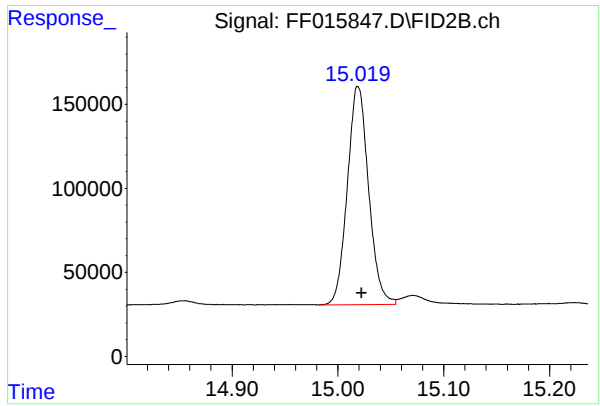
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015847.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 23:14
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 05:53:30 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: -0.003 min
Response: 1814999
Conc: 16.08 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051325\
Data File : FF015847.D
Signal(s) : FID2B.ch
Acq On : 13 May 2025 23:14
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.019	14.982	15.055	BV	129873	1814999	100.00%	100.000%
Sum of corrected areas:						1814999		

FF042225.M Wed May 14 06:50:13 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:	PIBLK-FG015824.D	SDG No.:	Q1982
Lab Sample ID:	I.BLK-FG015824.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015824.D	1		05/13/25	FG051325

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	16.9		29 - 130	85%	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\FG051325\
Data File : FG015824.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:54
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 03:55:26 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...	14.995	1994752	16.942 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

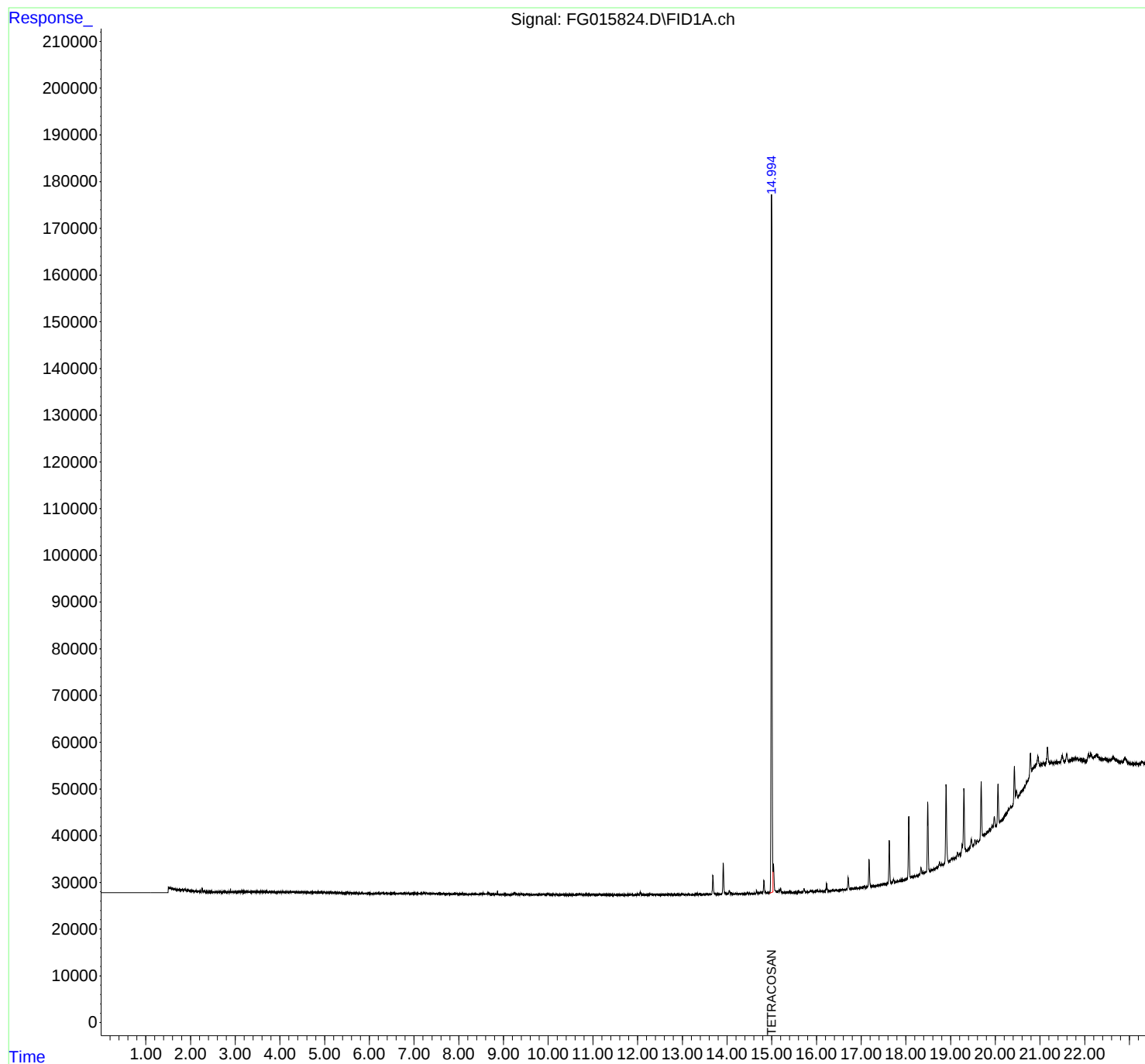
(m)=manual int.

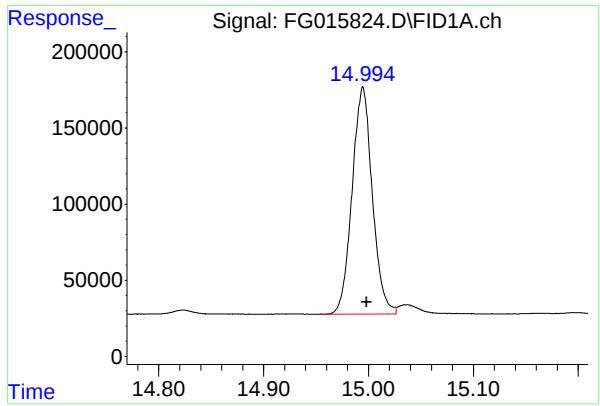
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015824.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:54
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 03:55:26 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.: 14.995 min
Delta R.T.: -0.004 min
Response: 1994752
Conc: 16.94 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015824.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:54
Sample : I.BLK
Misc :
ALS Vial : 52 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	14.995	14.953	15.026	BV	149231	1994752	100.00%	100.000%
Sum of corrected areas:						1994752		

FG042425.M Wed May 14 05:08:10 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:	PIBLK-FG015834.D	SDG No.:	Q1982
Lab Sample ID:	I.BLK-FG015834.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
FG015834.D	1		05/13/25	FG051325

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	19.2		29 - 130	96%	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\FG051325\
Data File : FG015834.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:16
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 14 03:57:07 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...	14.993	2264007	19.229 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

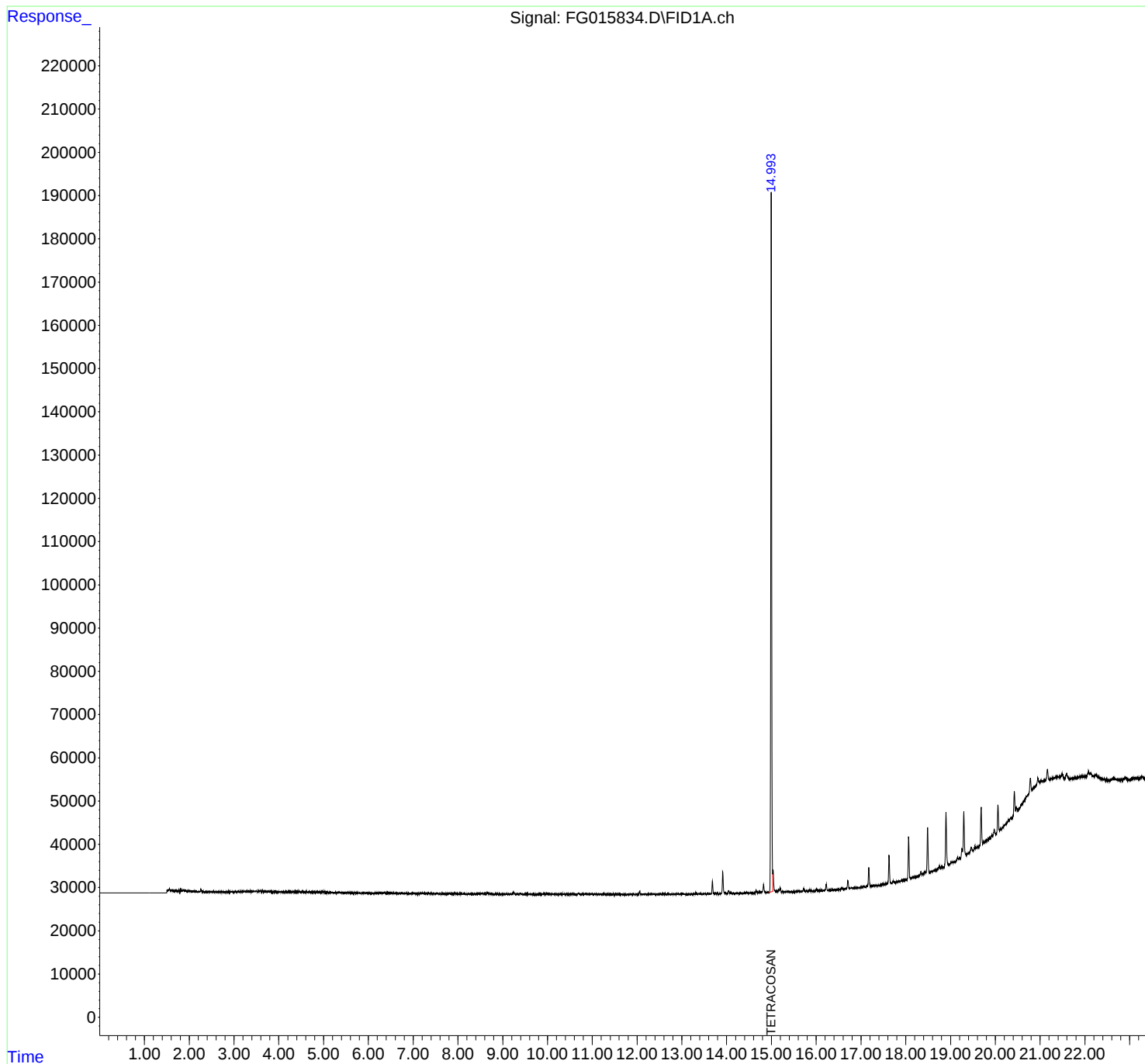
(m)=manual int.

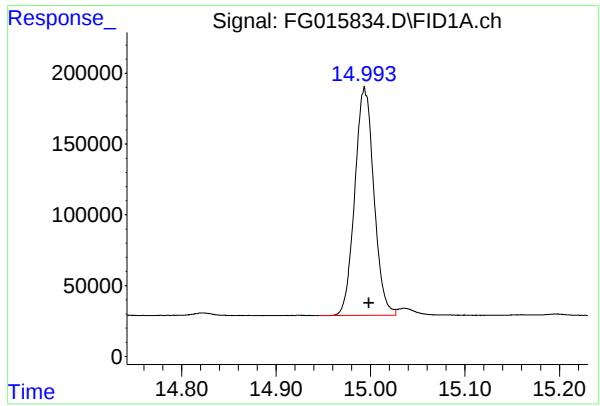
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015834.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:16
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 03:57:07 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.: 14.993 min
Delta R.T.: -0.005 min
Response: 2264007
Conc: 19.23 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015834.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:16
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	14.994	14.945	15.027	BV	161443	2264007	100.00%	100.000%
Sum of corrected areas:						2264007		

FG042425.M Wed May 14 05:10:08 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB167975BS	SDG No.:	Q1982
Lab Sample ID:	PB167975BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.02	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
FF015844.D	1	05/13/25 10:05	05/13/25 21:46	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	6090		169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	16.9		37 - 130	84%	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

Report of Analysis

Client:	CDM Smith	Date Collected:	05/02/25
Project:	South River WM Replacement	Date Received:	05/02/25
Client Sample ID:	SB2-4-5MS	SDG No.:	Q1982
Lab Sample ID:	Q1956-03MS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	93.5
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
FG015828.D	1	05/13/25 10:05	05/13/25 18:21	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	7670		181	1780	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.6		37 - 130	58%	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\FG051325\
 Data File : FG015828.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 18:21
 Operator : YP\AJ
 Sample : Q1956-03MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 SB2-4-5MS

Integration File: autoint1.e
 Quant Time: May 14 03:56:05 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...	14.994	1370551	11.641 ug/ml
Target Compounds			
2) N-DECANE	4.496	1904045	17.102 ug/ml
3) N-DODECANE	6.678	2060041	17.976 ug/ml
4) N-TETRADECANE	8.514	2111814	17.428 ug/ml
5) N-HEXADECANE	10.127	2317576	18.460 ug/ml
6) N-OCTADECANE	11.576	2409191	18.383 ug/ml
7) N-EICOSANE	12.890	2381127	17.563 ug/ml
8) N-DOCOSANE	14.092	2362384	17.812 ug/ml
10) N-TETRACOSANE	15.199	2393119	18.009 ug/ml
11) N-HEXACOSANE	16.223	2350398	17.723 ug/ml
12) N-OCTACOSANE	17.175	2353664	17.853 ug/ml

(f)=RT Delta > 1/2 Window

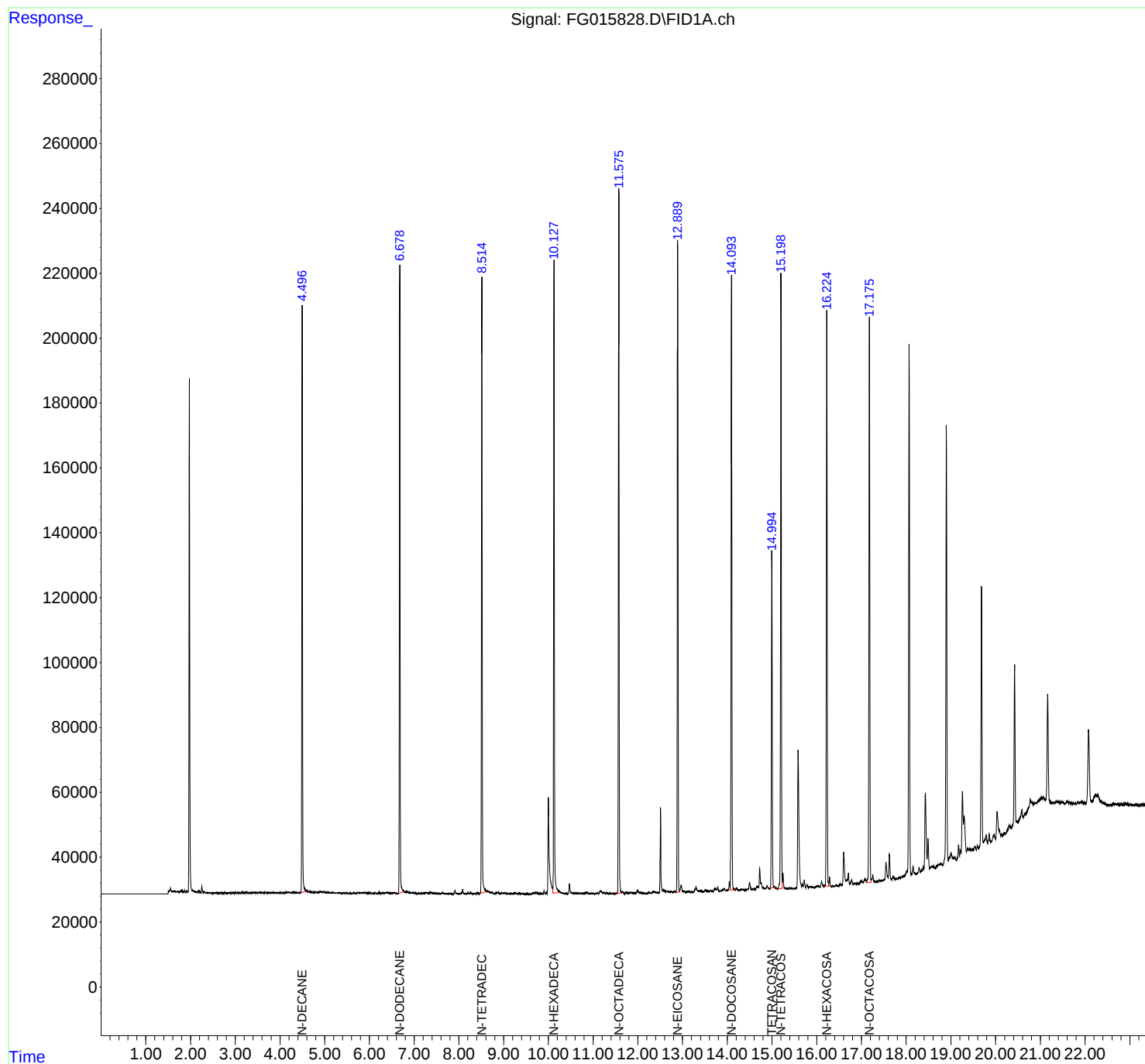
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015828.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 18:21
Operator : YP\AJ
Sample : Q1956-03MS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
SB2-4-5MS

Integration File: autoint1.e
Quant Time: May 14 03:56:05 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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015828.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 18:21
Sample : Q1956-03
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	4.321	4.300	4.358	BV	215	2923	0.12%	0.010%
2	4.383	4.358	4.401	PV	136	1982	0.08%	0.007%
3	4.406	4.401	4.422	VV	96	750	0.03%	0.003%
4	4.427	4.422	4.439	VV	111	716	0.03%	0.002%
5	4.442	4.439	4.463	VV	167	1204	0.05%	0.004%
6	4.496	4.463	4.605	PV	180925	1931642	79.59%	6.727%
7	4.623	4.605	4.653	VV	744	15322	0.63%	0.053%
8	4.672	4.653	4.728	VV	581	16038	0.66%	0.056%
9	4.739	4.728	4.760	VV	319	4982	0.21%	0.017%
10	4.782	4.760	4.792	VV	339	5028	0.21%	0.018%
11	4.797	4.792	4.805	VV	270	1845	0.08%	0.006%
12	4.808	4.805	4.825	VV	318	2929	0.12%	0.010%
13	4.830	4.825	4.843	VV	279	2480	0.10%	0.009%
14	4.847	4.843	4.851	VV	299	1258	0.05%	0.004%
15	4.873	4.851	4.880	VV	386	5281	0.22%	0.018%
16	4.903	4.880	4.907	VV	474	6324	0.26%	0.022%
17	4.918	4.907	4.924	VV	508	4637	0.19%	0.016%
18	4.928	4.924	4.949	VV	514	6596	0.27%	0.023%
19	4.952	4.949	4.966	VV	398	4119	0.17%	0.014%
20	4.973	4.966	4.981	VV	411	3165	0.13%	0.011%
21	4.984	4.981	4.993	VV	370	2393	0.10%	0.008%
22	5.013	4.993	5.035	VV	395	7356	0.30%	0.026%
23	5.049	5.035	5.054	VV	361	2831	0.12%	0.010%
24	5.068	5.054	5.072	VV	296	2617	0.11%	0.009%
25	5.076	5.072	5.110	VV	288	4871	0.20%	0.017%
26	5.113	5.110	5.121	VV	206	1221	0.05%	0.004%
27	5.127	5.121	5.131	VV	211	1039	0.04%	0.004%
28	5.159	5.131	5.173	VV	308	5658	0.23%	0.020%
29	5.177	5.173	5.183	VV	217	1123	0.05%	0.004%
30	5.188	5.183	5.205	VV	228	2185	0.09%	0.008%
31	5.206	5.205	5.224	VV	190	1702	0.07%	0.006%
32	5.227	5.224	5.235	VV	170	841	0.03%	0.003%
33	5.237	5.235	5.243	VV	162	727	0.03%	0.003%
34	5.250	5.243	5.262	VV	151	1618	0.07%	0.006%
35	5.267	5.262	5.275	VV	152	874	0.04%	0.003%
36	5.279	5.275	5.286	VV	190	794	0.03%	0.003%

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37	5.297	5.286	5.311	VV	152	1847	0.08%	0.006%
38	5.327	5.311	5.341	VV	205	2749	0.11%	0.010%
39	5.347	5.341	5.366	VV	147	1684	0.07%	0.006%
40	5.371	5.366	5.375	VV	114	539	0.02%	0.002%
41	5.379	5.375	5.388	VV	117	899	0.04%	0.003%
42	5.395	5.388	5.400	VV	155	857	0.04%	0.003%
43	5.410	5.400	5.421	VV	159	1397	0.06%	0.005%
44	5.442	5.421	5.454	VV	159	1963	0.08%	0.007%
45	5.480	5.454	5.510	VV	240	4982	0.21%	0.017%
46	5.520	5.510	5.529	VV	125	1200	0.05%	0.004%
47	5.534	5.529	5.541	PV	103	642	0.03%	0.002%
48	5.547	5.541	5.565	VV	127	1276	0.05%	0.004%
49	5.568	5.565	5.572	VV	188	475	0.02%	0.002%
50	5.575	5.572	5.586	VV	125	742	0.03%	0.003%
51	5.589	5.586	5.595	VV	97	300	0.01%	0.001%
52	5.605	5.595	5.621	VV	108	1282	0.05%	0.004%
53	5.626	5.621	5.630	VV	92	360	0.01%	0.001%
54	5.645	5.630	5.660	VV	200	2625	0.11%	0.009%
55	5.665	5.660	5.680	VV	136	1075	0.04%	0.004%
56	5.684	5.680	5.692	VV	79	476	0.02%	0.002%
57	5.696	5.692	5.703	VV	101	450	0.02%	0.002%
58	5.735	5.703	5.741	VV	404	4721	0.19%	0.016%
59	5.746	5.741	5.757	VV	386	3162	0.13%	0.011%
60	5.765	5.757	5.797	VV	351	7169	0.30%	0.025%
61	5.804	5.797	5.820	VV	295	3698	0.15%	0.013%
62	5.833	5.820	5.840	VV	279	2933	0.12%	0.010%
63	5.842	5.840	5.863	VV	222	2930	0.12%	0.010%
64	5.875	5.863	5.895	VV	298	4614	0.19%	0.016%
65	5.910	5.895	5.969	VV	305	9645	0.40%	0.034%
66	5.977	5.969	5.996	VV	269	2893	0.12%	0.010%
67	6.000	5.996	6.005	VV	166	726	0.03%	0.003%
68	6.025	6.005	6.042	VV	245	4062	0.17%	0.014%
69	6.048	6.042	6.057	VV	173	1126	0.05%	0.004%
70	6.061	6.057	6.069	VV	96	751	0.03%	0.003%
71	6.078	6.069	6.083	VV	136	947	0.04%	0.003%
72	6.095	6.083	6.108	VV	243	2295	0.09%	0.008%
73	6.116	6.108	6.120	VV	212	1211	0.05%	0.004%
74	6.125	6.120	6.134	VV	192	1164	0.05%	0.004%
75	6.138	6.134	6.152	VV	146	1240	0.05%	0.004%
76	6.155	6.152	6.182	VV	152	1422	0.06%	0.005%
77	6.214	6.182	6.231	VV	579	8264	0.34%	0.029%
78	6.235	6.231	6.241	VV	290	1378	0.06%	0.005%
79	6.248	6.241	6.287	VV	320	5893	0.24%	0.021%
80	6.293	6.287	6.298	VV	272	1544	0.06%	0.005%
81	6.302	6.298	6.307	VV	242	1268	0.05%	0.004%
82	6.315	6.307	6.330	VV	346	3461	0.14%	0.012%
83	6.333	6.330	6.338	VV	328	1329	0.05%	0.005%
84	6.343	6.338	6.353	VV	245	1933	0.08%	0.007%
85	6.392	6.353	6.426	VV	519	12916	0.53%	0.045%
86	6.437	6.426	6.445	VV	246	2036	0.08%	0.007%
87	6.447	6.445	6.460	VV	213	1637	0.07%	0.006%
88	6.465	6.460	6.489	VV	294	3459	0.14%	0.012%
89	6.497	6.489	6.508	VV	213	1998	0.08%	0.007%

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90	6.549	6.508	6.614	VV	485	15163	0.62%	0.053%
91	6.622	6.614	6.637	VV	117	1260	0.05%	0.004%
92	6.640	6.637	6.648	VV	147	589	0.02%	0.002%
93	6.678	6.648	6.806	VV	193763	2098355	86.46%	7.307%
94	6.831	6.806	6.899	VV	748	30239	1.25%	0.105%
95	6.907	6.899	6.946	VV	454	11153	0.46%	0.039%
96	6.951	6.946	6.954	VV	355	1671	0.07%	0.006%
97	6.958	6.954	6.966	VV	398	2210	0.09%	0.008%
98	6.968	6.966	7.017	VV	353	8007	0.33%	0.028%
99	7.022	7.017	7.047	VV	229	3800	0.16%	0.013%
100	7.051	7.047	7.065	VV	224	1929	0.08%	0.007%
101	7.082	7.065	7.116	VV	237	5198	0.21%	0.018%
102	7.121	7.116	7.126	VV	180	1020	0.04%	0.004%
103	7.157	7.126	7.188	VV	233	6669	0.27%	0.023%
104	7.207	7.188	7.216	VV	251	3727	0.15%	0.013%
105	7.251	7.216	7.264	VV	391	9069	0.37%	0.032%
106	7.270	7.264	7.277	VV	349	2495	0.10%	0.009%
107	7.281	7.277	7.290	VV	325	2228	0.09%	0.008%
108	7.300	7.290	7.307	VV	292	2921	0.12%	0.010%
109	7.310	7.307	7.316	VV	277	1250	0.05%	0.004%
110	7.322	7.316	7.329	VV	236	1712	0.07%	0.006%
111	7.332	7.329	7.342	VV	259	1656	0.07%	0.006%
112	7.366	7.342	7.371	VV	448	5728	0.24%	0.020%
113	7.374	7.371	7.394	VV	416	5193	0.21%	0.018%
114	7.398	7.394	7.418	VV	352	4167	0.17%	0.015%
115	7.423	7.418	7.445	VV	266	3091	0.13%	0.011%
116	7.452	7.445	7.466	VV	233	2361	0.10%	0.008%
117	7.472	7.466	7.495	VV	239	2641	0.11%	0.009%
118	7.501	7.495	7.519	VV	195	1922	0.08%	0.007%
119	7.524	7.519	7.583	VV	174	4015	0.17%	0.014%
120	7.596	7.583	7.602	VV	144	1242	0.05%	0.004%
121	7.629	7.602	7.649	VV	483	7470	0.31%	0.026%
122	7.654	7.649	7.682	VV	274	2554	0.11%	0.009%
123	7.690	7.682	7.693	VV	139	534	0.02%	0.002%
124	7.697	7.693	7.704	VV	151	810	0.03%	0.003%
125	7.706	7.704	7.721	VV	160	898	0.04%	0.003%
126	7.725	7.721	7.732	VV	98	516	0.02%	0.002%
127	7.740	7.732	7.775	VV	112	1953	0.08%	0.007%
128	7.785	7.775	7.801	VV	119	1281	0.05%	0.004%
129	7.806	7.801	7.841	VV	116	1971	0.08%	0.007%
130	7.846	7.841	7.869	VV	79	929	0.04%	0.003%
131	7.872	7.869	7.874	PV	80	138	0.01%	0.000%
132	7.912	7.874	7.951	VV	1248	18595	0.77%	0.065%
133	7.954	7.951	7.976	VV	178	2114	0.09%	0.007%
134	7.977	7.976	7.996	VV	187	1331	0.05%	0.005%
135	8.001	7.996	8.017	VV	145	1276	0.05%	0.004%
136	8.033	8.017	8.041	VV	166	1790	0.07%	0.006%
137	8.084	8.041	8.112	VV	1524	24024	0.99%	0.084%
138	8.118	8.112	8.144	VV	167	2216	0.09%	0.008%
139	8.164	8.144	8.181	VV	202	2489	0.10%	0.009%
140	8.205	8.181	8.238	VV	661	9514	0.39%	0.033%
141	8.262	8.238	8.291	VV	768	10706	0.44%	0.037%

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142	8.296	8.291	8.304	VV	175	1073	0.04%	0.004%
143	8.335	8.304	8.342	VV	148	2504	0.10%	0.009%
144	8.345	8.342	8.354	VV	152	803	0.03%	0.003%
145	8.368	8.354	8.381	VV	234	2566	0.11%	0.009%
146	8.396	8.381	8.407	VV	272	3384	0.14%	0.012%
147	8.417	8.407	8.440	VV	320	4418	0.18%	0.015%
148	8.514	8.440	8.633	VV	189564	2170072	89.42%	7.557%
149	8.650	8.633	8.685	VV	943	25160	1.04%	0.088%
150	8.691	8.685	8.729	VV	611	13301	0.55%	0.046%
151	8.744	8.729	8.761	VV	461	7414	0.31%	0.026%
152	8.763	8.761	8.779	VV	354	3331	0.14%	0.012%
153	8.783	8.779	8.814	VV	289	4830	0.20%	0.017%
154	8.842	8.814	8.849	VV	504	7865	0.32%	0.027%
155	8.851	8.849	8.857	VV	498	2126	0.09%	0.007%
156	8.862	8.857	8.866	VV	419	2095	0.09%	0.007%
157	8.870	8.866	8.904	VV	495	8694	0.36%	0.030%
158	8.907	8.904	8.912	VV	318	1230	0.05%	0.004%
159	8.918	8.912	8.922	VV	302	1523	0.06%	0.005%
160	8.928	8.922	8.931	VV	308	1593	0.07%	0.006%
161	8.934	8.931	8.937	VV	312	1153	0.05%	0.004%
162	8.943	8.937	8.976	VV	401	6729	0.28%	0.023%
163	9.002	8.976	9.040	VV	449	12103	0.50%	0.042%
164	9.046	9.040	9.078	VV	309	5221	0.22%	0.018%
165	9.080	9.078	9.095	VV	199	1709	0.07%	0.006%
166	9.108	9.095	9.121	VV	200	2399	0.10%	0.008%
167	9.138	9.121	9.159	VV	278	4658	0.19%	0.016%
168	9.169	9.159	9.192	VV	255	3277	0.14%	0.011%
169	9.247	9.192	9.285	VV	496	13866	0.57%	0.048%
170	9.290	9.285	9.327	VV	224	3423	0.14%	0.012%
171	9.343	9.327	9.369	VV	504	7006	0.29%	0.024%
172	9.393	9.369	9.411	VV	262	4735	0.20%	0.016%
173	9.417	9.411	9.429	VV	154	945	0.04%	0.003%
174	9.431	9.429	9.441	VV	111	500	0.02%	0.002%
175	9.449	9.441	9.462	VV	139	577	0.02%	0.002%
176	9.479	9.462	9.485	VV	112	658	0.03%	0.002%
177	9.489	9.485	9.498	VV	78	339	0.01%	0.001%
178	9.531	9.498	9.574	VV	269	4500	0.19%	0.016%
179	9.586	9.574	9.613	VV	89	1172	0.05%	0.004%
180	9.650	9.613	9.665	PV	528	7857	0.32%	0.027%
181	9.676	9.665	9.689	VV	561	6094	0.25%	0.021%
182	9.729	9.689	9.800	VV	617	24102	0.99%	0.084%
183	9.809	9.800	9.839	VV	232	3773	0.16%	0.013%
184	9.864	9.839	9.872	VV	239	3766	0.16%	0.013%
185	9.879	9.872	9.884	VV	193	1260	0.05%	0.004%
186	9.905	9.884	9.934	VV	946	12633	0.52%	0.044%
187	9.959	9.934	9.975	VV	837	10285	0.42%	0.036%
188	10.002	9.975	10.097	VV	29987	588364	24.24%	2.049%
189	10.127	10.097	10.332	VV	195003	2378616	98.01%	8.283%
190	10.335	10.332	10.340	VV	280	1039	0.04%	0.004%
191	10.343	10.340	10.361	VV	249	2514	0.10%	0.009%
192	10.366	10.361	10.397	VV	204	3407	0.14%	0.012%
193	10.404	10.397	10.426	VV	223	2615	0.11%	0.009%
194	10.428	10.426	10.440	VV	178	1228	0.05%	0.004%

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195	10.472	10.440	10.539	VV	3169	55735	2.30%	0.194%
196	10.547	10.539	10.593	VV	346	9461	0.39%	0.033%
197	10.599	10.593	10.603	VV	258	1484	0.06%	0.005%
198	10.612	10.603	10.632	VV	273	3793	0.16%	0.013%
199	10.645	10.632	10.667	VV	508	5822	0.24%	0.020%
200	10.688	10.667	10.712	VV	368	5977	0.25%	0.021%
201	10.723	10.712	10.729	VV	182	1554	0.06%	0.005%
202	10.733	10.729	10.740	VV	177	1013	0.04%	0.004%
203	10.759	10.740	10.776	VV	242	4019	0.17%	0.014%
204	10.794	10.776	10.809	VV	228	3283	0.14%	0.011%
205	10.815	10.809	10.817	VV	231	839	0.03%	0.003%
206	10.831	10.817	10.856	VV	560	9787	0.40%	0.034%
207	10.870	10.856	10.894	VV	533	7317	0.30%	0.025%
208	10.901	10.894	10.906	VV	125	835	0.03%	0.003%
209	10.940	10.906	10.949	VV	235	4108	0.17%	0.014%
210	10.952	10.949	10.962	VV	187	1175	0.05%	0.004%
211	10.975	10.962	11.031	VV	282	6624	0.27%	0.023%
212	11.041	11.031	11.046	VV	103	641	0.03%	0.002%
213	11.059	11.046	11.072	VV	144	1677	0.07%	0.006%
214	11.100	11.072	11.127	VV	351	6886	0.28%	0.024%
215	11.161	11.127	11.226	VV	878	33131	1.37%	0.115%
216	11.249	11.226	11.281	VV	439	10161	0.42%	0.035%
217	11.290	11.281	11.313	VV	305	4647	0.19%	0.016%
218	11.321	11.313	11.335	VV	264	2770	0.11%	0.010%
219	11.343	11.335	11.352	VV	169	1359	0.06%	0.005%
220	11.357	11.352	11.367	VV	112	696	0.03%	0.002%
221	11.393	11.367	11.421	VV	286	4707	0.19%	0.016%
222	11.442	11.421	11.449	VV	174	2252	0.09%	0.008%
223	11.462	11.449	11.485	VV	279	3072	0.13%	0.011%
224	11.507	11.485	11.530	VV	182	3498	0.14%	0.012%
225	11.576	11.530	11.639	VV	217491	2426959	100.00%	8.452%
226	11.655	11.639	11.706	VV	802	15862	0.65%	0.055%
227	11.733	11.706	11.750	VV	490	7324	0.30%	0.026%
228	11.772	11.750	11.793	VV	605	8140	0.34%	0.028%
229	11.819	11.793	11.839	VV	616	8536	0.35%	0.030%
230	11.859	11.839	11.917	VV	466	13489	0.56%	0.047%
231	11.994	11.917	12.040	VV	1206	34176	1.41%	0.119%
232	12.058	12.040	12.079	VV	567	8804	0.36%	0.031%
233	12.105	12.079	12.121	VV	316	5482	0.23%	0.019%
234	12.131	12.121	12.152	VV	247	3030	0.12%	0.011%
235	12.157	12.152	12.167	VV	117	545	0.02%	0.002%
236	12.181	12.167	12.191	PV	121	1140	0.05%	0.004%
237	12.249	12.191	12.272	VV	518	11956	0.49%	0.042%
238	12.305	12.272	12.316	VV	369	5750	0.24%	0.020%
239	12.348	12.316	12.356	VV	699	10773	0.44%	0.038%
240	12.363	12.356	12.402	VV	637	12058	0.50%	0.042%
241	12.411	12.402	12.423	VV	325	3680	0.15%	0.013%
242	12.428	12.423	12.437	VV	283	2202	0.09%	0.008%
243	12.458	12.437	12.476	VV	380	5962	0.25%	0.021%
244	12.507	12.476	12.562	VV	26446	316566	13.04%	1.102%
245	12.573	12.562	12.591	VV	1092	14486	0.60%	0.050%
246	12.600	12.591	12.622	VV	916	13178	0.54%	0.046%

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247	12.631	12.622	12.637	VV	565	4681	0.19%	0.016%
248	12.643	12.637	12.646	VV	537	2686	0.11%	0.009%
249	12.658	12.646	12.686	VV	579	11644	0.48%	0.041%
250	12.711	12.686	12.731	VV	545	11533	0.48%	0.040%
251	12.749	12.731	12.772	VV	580	9158	0.38%	0.032%
252	12.778	12.772	12.786	VV	215	1430	0.06%	0.005%
253	12.816	12.786	12.851	VV	619	14026	0.58%	0.049%
254	12.890	12.851	12.935	VV	201307	2392479	98.58%	8.332%
255	12.967	12.935	13.006	VV	2433	54742	2.26%	0.191%
256	13.009	13.006	13.053	VV	525	9486	0.39%	0.033%
257	13.060	13.053	13.084	VV	217	2784	0.11%	0.010%
258	13.103	13.084	13.127	VV	287	5747	0.24%	0.020%
259	13.148	13.127	13.182	VV	372	7712	0.32%	0.027%
260	13.193	13.182	13.231	VV	219	3960	0.16%	0.014%
261	13.235	13.231	13.244	PV	114	601	0.02%	0.002%
262	13.299	13.244	13.362	VV	1555	50570	2.08%	0.176%
263	13.381	13.362	13.404	VV	482	8839	0.36%	0.031%
264	13.411	13.404	13.417	VV	415	2457	0.10%	0.009%
265	13.421	13.417	13.434	VV	288	2540	0.10%	0.009%
266	13.436	13.434	13.482	VV	261	5656	0.23%	0.020%
267	13.504	13.482	13.540	VV	744	13790	0.57%	0.048%
268	13.561	13.540	13.615	VV	382	10804	0.45%	0.038%
269	13.630	13.615	13.673	VV	406	7642	0.31%	0.027%
270	13.676	13.673	13.681	VV	156	582	0.02%	0.002%
271	13.719	13.681	13.731	VV	995	14651	0.60%	0.051%
272	13.744	13.731	13.767	VV	847	14819	0.61%	0.052%
273	13.787	13.767	13.814	VV	1394	20329	0.84%	0.071%
274	13.820	13.814	13.836	VV	214	1914	0.08%	0.007%
275	13.933	13.836	13.971	VV	853	29986	1.24%	0.104%
276	13.992	13.971	14.004	VV	363	5353	0.22%	0.019%
277	14.007	14.004	14.011	VV	306	1175	0.05%	0.004%
278	14.046	14.011	14.061	VV	2945	40828	1.68%	0.142%
279	14.092	14.061	14.168	VV	189531	2383805	98.22%	8.301%
280	14.205	14.168	14.251	VV	982	23507	0.97%	0.082%
281	14.254	14.251	14.265	VV	218	1548	0.06%	0.005%
282	14.315	14.265	14.347	VV	342	11629	0.48%	0.040%
283	14.378	14.347	14.406	VV	299	7999	0.33%	0.028%
284	14.409	14.406	14.422	VV	308	1634	0.07%	0.006%
285	14.454	14.422	14.466	VV	442	7452	0.31%	0.026%
286	14.495	14.466	14.554	VV	2406	54991	2.27%	0.191%
287	14.600	14.554	14.636	VV	394	14008	0.58%	0.049%
288	14.656	14.636	14.667	VV	1164	14690	0.61%	0.051%
289	14.685	14.667	14.699	VV	1152	18154	0.75%	0.063%
290	14.723	14.699	14.839	VV	6656	157218	6.48%	0.547%
291	14.856	14.839	14.866	VV	411	6024	0.25%	0.021%
292	14.889	14.866	14.956	VV	1273	32117	1.32%	0.112%
293	14.994	14.956	15.032	VV	103866	1396077	57.52%	4.862%
294	15.052	15.032	15.132	VV	1077	30911	1.27%	0.108%
295	15.199	15.132	15.229	VV	188084	2405198	99.10%	8.376%
296	15.243	15.229	15.370	VV	4948	79829	3.29%	0.278%
297	15.394	15.370	15.429	VV	387	6300	0.26%	0.022%
298	15.454	15.429	15.483	VV	133	2807	0.12%	0.010%
299	15.531	15.483	15.546	PV	241	4871	0.20%	0.017%

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300	15.582	15.546	15.664	VV	42321	829993	34.20%	2.890%
301	15.676	15.664	15.696	VV	1367	19118	0.79%	0.067%
302	15.719	15.696	15.756	VV	2607	44446	1.83%	0.155%
303	15.783	15.756	15.821	VV	1188	21910	0.90%	0.076%
304	15.851	15.821	15.875	VV	465	8240	0.34%	0.029%
305	15.898	15.875	15.929	VV	222	4795	0.20%	0.017%
306	15.938	15.929	15.957	VV	142	1403	0.06%	0.005%
307	15.976	15.957	15.984	VV	287	3167	0.13%	0.011%
308	16.020	15.984	16.073	VV	438	16625	0.69%	0.058%
309	16.105	16.073	16.149	VV	1743	39546	1.63%	0.138%
310	16.223	16.149	16.267	VV	175489	2370624	97.68%	8.255%
311	16.285	16.267	16.341	VV	3140	43330	1.79%	0.151%
312	16.356	16.341	16.381	VV	227	2961	0.12%	0.010%
313	16.432	16.381	16.461	PV	320	7515	0.31%	0.026%
314	16.468	16.461	16.484	VV	142	1456	0.06%	0.005%
315	16.521	16.484	16.546	VV	553	11972	0.49%	0.042%
316	16.602	16.546	16.644	VV	10323	208470	8.59%	0.726%
317	16.706	16.644	16.734	VV	3698	94735	3.90%	0.330%
318	16.781	16.734	16.829	VV	1372	35903	1.48%	0.125%
319	16.849	16.829	16.886	VV	306	7779	0.32%	0.027%
320	16.897	16.886	16.927	VV	217	2535	0.10%	0.009%
321	16.984	16.927	17.036	PV	941	28567	1.18%	0.099%
322	17.085	17.036	17.113	VV	1315	37100	1.53%	0.129%
323	17.175	17.113	17.212	VV	174615	2358240	97.17%	8.212%
324	17.222	17.212	17.236	VV	1019	13002	0.54%	0.045%
325	17.252	17.236	17.282	VV	2292	33235	1.37%	0.116%
326	17.298	17.282	17.332	VV	273	4441	0.18%	0.015%
				Sum of corrected areas:		28715910		

FG042425.M Wed May 14 05:36:39 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/02/25
Project:	South River WM Replacement	Date Received:	05/02/25
Client Sample ID:	SB2-4-5MSD	SDG No.:	Q1982
Lab Sample ID:	Q1956-04MSD	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	93.5
Sample Wt/Vol:	30.04	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
FG015829.D	1	05/13/25 10:05	05/13/25 18:50	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	7820		181	1780	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.9		37 - 130	60%	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\FG051325\
 Data File : FG015829.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 18:50
 Operator : YP\AJ
 Sample : Q1956-04MSD
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 SB2-4-5MSD

Integration File: autoint1.e
 Quant Time: May 14 03:56:16 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...	14.993	1406410	11.945 ug/ml
Target Compounds			
2) N-DECANE	4.496	1863836	16.741 ug/ml
3) N-DODECANE	6.678	2046373	17.856 ug/ml
4) N-TETRADECANE	8.514	2131192	17.588 ug/ml
5) N-HEXADECANE	10.127	2361126	18.807 ug/ml
6) N-OCTADECANE	11.576	2465513	18.813 ug/ml
7) N-EICOSANE	12.890	2438874	17.989 ug/ml
8) N-DOCOSANE	14.092	2427066	18.300 ug/ml
10) N-TETRACOSANE	15.198	2459726	18.510 ug/ml
11) N-HEXACOSANE	16.222	2413835	18.201 ug/ml
12) N-OCTACOSANE	17.175	2403412	18.231 ug/ml

(f)=RT Delta > 1/2 Window

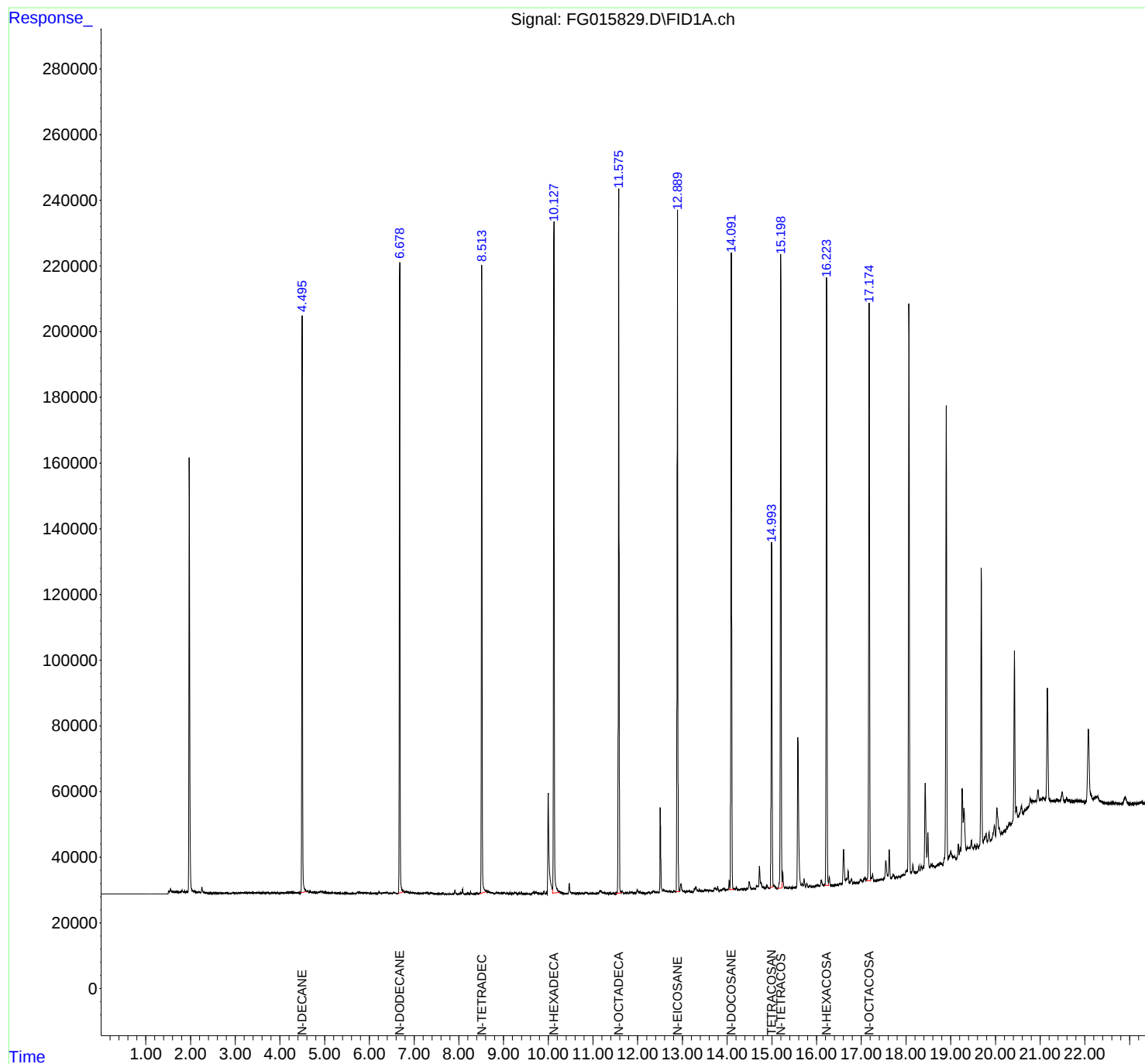
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015829.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 18:50
Operator : YP\AJ
Sample : Q1956-04MSD
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
SB2-4-5MSD

Integration File: autoint1.e
Quant Time: May 14 03:56:16 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\FG051325\
Data File : FG015829.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 18:50
Sample : Q1956-04
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	4.313	4.300	4.385	BV	100	2262	0.09%	0.008%
2	4.390	4.385	4.406	PV	118	732	0.03%	0.002%
3	4.412	4.406	4.421	VV	145	547	0.02%	0.002%
4	4.428	4.421	4.455	VV	96	1343	0.05%	0.005%
5	4.463	4.455	4.468	PV	144	623	0.03%	0.002%
6	4.496	4.468	4.595	VV	175326	1888750	76.10%	6.448%
7	4.598	4.595	4.604	VV	569	2949	0.12%	0.010%
8	4.621	4.604	4.657	VV	633	15031	0.61%	0.051%
9	4.668	4.657	4.695	VV	603	10032	0.40%	0.034%
10	4.698	4.695	4.705	VV	375	1666	0.07%	0.006%
11	4.707	4.705	4.721	VV	329	2582	0.10%	0.009%
12	4.728	4.721	4.741	VV	361	3569	0.14%	0.012%
13	4.755	4.741	4.794	VV	325	8643	0.35%	0.030%
14	4.805	4.794	4.852	VV	323	8729	0.35%	0.030%
15	4.890	4.852	4.894	VV	456	8422	0.34%	0.029%
16	4.919	4.894	4.981	VV	587	23250	0.94%	0.079%
17	5.012	4.981	5.045	VV	450	12375	0.50%	0.042%
18	5.047	5.045	5.081	VV	297	5166	0.21%	0.018%
19	5.083	5.081	5.089	VV	281	1076	0.04%	0.004%
20	5.090	5.089	5.125	VV	268	4557	0.18%	0.016%
21	5.128	5.125	5.141	VV	228	1762	0.07%	0.006%
22	5.161	5.141	5.190	VV	353	6282	0.25%	0.021%
23	5.196	5.190	5.212	VV	187	1937	0.08%	0.007%
24	5.218	5.212	5.224	VV	145	776	0.03%	0.003%
25	5.231	5.224	5.240	VV	127	1071	0.04%	0.004%
26	5.248	5.240	5.270	VV	165	1877	0.08%	0.006%
27	5.287	5.270	5.302	VV	183	2091	0.08%	0.007%
28	5.309	5.302	5.314	VV	155	854	0.03%	0.003%
29	5.319	5.314	5.322	VV	181	533	0.02%	0.002%
30	5.344	5.322	5.349	VV	189	2186	0.09%	0.007%
31	5.354	5.349	5.363	VV	149	843	0.03%	0.003%
32	5.367	5.363	5.404	VV	138	2288	0.09%	0.008%
33	5.410	5.404	5.415	VV	91	444	0.02%	0.002%
34	5.423	5.415	5.427	VV	143	619	0.02%	0.002%
35	5.440	5.427	5.445	VV	161	1163	0.05%	0.004%
36	5.482	5.445	5.500	VV	267	5087	0.20%	0.017%

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37	5.505	5.500	5.519	VV	140	919	0.04%	0.003%
38	5.522	5.519	5.554	VV	140	1714	0.07%	0.006%
39	5.560	5.554	5.568	VV	117	568	0.02%	0.002%
40	5.575	5.568	5.583	VV	161	613	0.02%	0.002%
41	5.588	5.583	5.607	VV	142	1124	0.05%	0.004%
42	5.612	5.607	5.625	VV	66	777	0.03%	0.003%
43	5.641	5.625	5.695	VV	209	4595	0.19%	0.016%
44	5.702	5.695	5.708	VV	97	401	0.02%	0.001%
45	5.741	5.708	5.772	PV	456	11850	0.48%	0.040%
46	5.776	5.772	5.792	VV	367	4059	0.16%	0.014%
47	5.794	5.792	5.805	VV	378	2518	0.10%	0.009%
48	5.807	5.805	5.858	VV	384	8420	0.34%	0.029%
49	5.878	5.858	5.891	VV	341	5105	0.21%	0.017%
50	5.895	5.891	5.901	VV	266	1437	0.06%	0.005%
51	5.908	5.901	5.935	VV	336	5498	0.22%	0.019%
52	5.940	5.935	5.962	VV	254	3293	0.13%	0.011%
53	5.974	5.962	6.000	VV	257	4697	0.19%	0.016%
54	6.027	6.000	6.032	VV	254	3826	0.15%	0.013%
55	6.035	6.032	6.049	VV	236	1851	0.07%	0.006%
56	6.056	6.049	6.068	VV	179	1598	0.06%	0.005%
57	6.073	6.068	6.086	VV	135	1399	0.06%	0.005%
58	6.097	6.086	6.101	VV	224	1584	0.06%	0.005%
59	6.106	6.101	6.117	VV	192	1598	0.06%	0.005%
60	6.125	6.117	6.142	VV	206	2249	0.09%	0.008%
61	6.148	6.142	6.160	VV	194	1189	0.05%	0.004%
62	6.163	6.160	6.175	VV	102	723	0.03%	0.002%
63	6.181	6.175	6.193	VV	149	1168	0.05%	0.004%
64	6.213	6.193	6.231	VV	614	8599	0.35%	0.029%
65	6.234	6.231	6.265	VV	279	4872	0.20%	0.017%
66	6.275	6.265	6.279	VV	267	2040	0.08%	0.007%
67	6.286	6.279	6.291	VV	290	1760	0.07%	0.006%
68	6.301	6.291	6.317	VV	311	4133	0.17%	0.014%
69	6.335	6.317	6.358	VV	369	7404	0.30%	0.025%
70	6.370	6.358	6.376	VV	363	3634	0.15%	0.012%
71	6.388	6.376	6.428	VV	544	11002	0.44%	0.038%
72	6.433	6.428	6.442	VV	275	1799	0.07%	0.006%
73	6.450	6.442	6.469	VV	282	3848	0.16%	0.013%
74	6.473	6.469	6.493	VV	257	3155	0.13%	0.011%
75	6.497	6.493	6.510	VV	252	2017	0.08%	0.007%
76	6.517	6.510	6.523	VV	260	1681	0.07%	0.006%
77	6.546	6.523	6.599	VV	542	15523	0.63%	0.053%
78	6.605	6.599	6.620	VV	250	2365	0.10%	0.008%
79	6.625	6.620	6.632	VV	205	1121	0.05%	0.004%
80	6.635	6.632	6.640	VV	198	732	0.03%	0.003%
81	6.678	6.640	6.800	VV	192602	2089797	84.20%	7.135%
82	6.804	6.800	6.810	VV	703	4133	0.17%	0.014%
83	6.811	6.810	6.824	VV	693	5359	0.22%	0.018%
84	6.833	6.824	6.881	VV	728	19600	0.79%	0.067%
85	6.896	6.881	6.904	VV	495	6137	0.25%	0.021%
86	6.907	6.904	6.919	VV	558	3967	0.16%	0.014%
87	6.920	6.919	6.934	VV	422	3420	0.14%	0.012%
88	6.938	6.934	6.956	VV	396	5076	0.20%	0.017%
89	6.961	6.956	6.983	VV	482	6104	0.25%	0.021%

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90	6.986	6.983	6.993	VV	365	1936	0.08%	0.007%
91	6.999	6.993	7.010	VV	373	3327	0.13%	0.011%
92	7.017	7.010	7.027	VV	356	3158	0.13%	0.011%
93	7.032	7.027	7.059	VV	298	4818	0.19%	0.016%
94	7.073	7.059	7.086	VV	277	3432	0.14%	0.012%
95	7.092	7.086	7.108	VV	298	2796	0.11%	0.010%
96	7.110	7.108	7.122	VV	243	1516	0.06%	0.005%
97	7.132	7.122	7.167	VV	233	4853	0.20%	0.017%
98	7.198	7.167	7.205	VV	276	4314	0.17%	0.015%
99	7.240	7.205	7.271	VV	397	12853	0.52%	0.044%
100	7.276	7.271	7.284	VV	335	2434	0.10%	0.008%
101	7.285	7.284	7.291	VV	344	1333	0.05%	0.005%
102	7.299	7.291	7.340	VV	368	7970	0.32%	0.027%
103	7.365	7.340	7.390	VV	497	10890	0.44%	0.037%
104	7.397	7.390	7.444	VV	399	8116	0.33%	0.028%
105	7.462	7.444	7.497	VV	220	4977	0.20%	0.017%
106	7.502	7.497	7.531	VV	153	2226	0.09%	0.008%
107	7.545	7.531	7.550	VV	160	1292	0.05%	0.004%
108	7.560	7.550	7.599	VV	155	2652	0.11%	0.009%
109	7.610	7.599	7.613	VV	131	714	0.03%	0.002%
110	7.631	7.613	7.686	VV	505	8635	0.35%	0.029%
111	7.697	7.686	7.717	PV	140	1206	0.05%	0.004%
112	7.728	7.717	7.738	VV	118	847	0.03%	0.003%
113	7.743	7.738	7.747	VV	133	497	0.02%	0.002%
114	7.752	7.747	7.779	VV	95	1381	0.06%	0.005%
115	7.784	7.779	7.790	VV	100	473	0.02%	0.002%
116	7.798	7.790	7.809	VV	148	912	0.04%	0.003%
117	7.831	7.809	7.837	VV	122	1541	0.06%	0.005%
118	7.839	7.837	7.843	VV	92	213	0.01%	0.001%
119	7.847	7.843	7.865	VV	98	1002	0.04%	0.003%
120	7.870	7.865	7.886	VV	104	1042	0.04%	0.004%
121	7.912	7.886	8.011	VV	1317	21023	0.85%	0.072%
122	8.084	8.011	8.110	VV	1547	24188	0.97%	0.083%
123	8.115	8.110	8.146	VV	147	2144	0.09%	0.007%
124	8.162	8.146	8.174	VV	202	1676	0.07%	0.006%
125	8.204	8.174	8.234	VV	602	7828	0.32%	0.027%
126	8.262	8.234	8.292	VV	741	10255	0.41%	0.035%
127	8.296	8.292	8.313	VV	151	1254	0.05%	0.004%
128	8.317	8.313	8.327	VV	122	563	0.02%	0.002%
129	8.333	8.327	8.355	VV	100	1225	0.05%	0.004%
130	8.368	8.355	8.384	VV	168	1971	0.08%	0.007%
131	8.420	8.384	8.439	VV	338	6396	0.26%	0.022%
132	8.514	8.439	8.640	VV	190922	2187877	88.15%	7.470%
133	8.652	8.640	8.687	VV	920	20589	0.83%	0.070%
134	8.696	8.687	8.702	VV	636	5328	0.21%	0.018%
135	8.704	8.702	8.708	VV	549	1754	0.07%	0.006%
136	8.711	8.708	8.739	VV	536	8733	0.35%	0.030%
137	8.748	8.739	8.766	VV	453	6214	0.25%	0.021%
138	8.772	8.766	8.787	VV	352	3811	0.15%	0.013%
139	8.793	8.787	8.799	VV	284	1741	0.07%	0.006%
140	8.802	8.799	8.815	VV	265	2257	0.09%	0.008%
141	8.848	8.815	8.864	VV	514	11648	0.47%	0.040%

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142	8.874	8.864	8.907	VV	463	9507	0.38%	0.032%
143	8.948	8.907	8.971	VV	494	11631	0.47%	0.040%
144	8.973	8.971	8.978	VV	254	1026	0.04%	0.004%
145	9.002	8.978	9.041	VV	476	12385	0.50%	0.042%
146	9.058	9.041	9.086	VV	335	6555	0.26%	0.022%
147	9.089	9.086	9.097	VV	182	1071	0.04%	0.004%
148	9.113	9.097	9.122	VV	182	2293	0.09%	0.008%
149	9.140	9.122	9.146	VV	234	2842	0.11%	0.010%
150	9.149	9.146	9.153	VV	235	900	0.04%	0.003%
151	9.161	9.153	9.194	VV	313	4480	0.18%	0.015%
152	9.199	9.194	9.206	VV	209	1245	0.05%	0.004%
153	9.211	9.206	9.225	VV	200	2146	0.09%	0.007%
154	9.247	9.225	9.288	VV	595	13421	0.54%	0.046%
155	9.292	9.288	9.306	VV	197	1271	0.05%	0.004%
156	9.314	9.306	9.325	VV	156	1369	0.06%	0.005%
157	9.345	9.325	9.371	VV	541	7975	0.32%	0.027%
158	9.398	9.371	9.423	VV	495	6250	0.25%	0.021%
159	9.428	9.423	9.444	VV	99	753	0.03%	0.003%
160	9.448	9.444	9.487	VB	90	962	0.04%	0.003%
161	9.532	9.497	9.569	BV	262	2937	0.12%	0.010%
162	9.582	9.569	9.591	PV	86	572	0.02%	0.002%
163	9.596	9.591	9.601	VV	89	287	0.01%	0.001%
164	9.607	9.601	9.628	VV	66	713	0.03%	0.002%
165	9.652	9.628	9.662	PV	565	6809	0.27%	0.023%
166	9.674	9.662	9.689	VV	775	8765	0.35%	0.030%
167	9.728	9.689	9.750	VV	612	16941	0.68%	0.058%
168	9.762	9.750	9.804	VV	346	7408	0.30%	0.025%
169	9.808	9.804	9.832	VV	234	2664	0.11%	0.009%
170	9.841	9.832	9.845	VV	190	1050	0.04%	0.004%
171	9.860	9.845	9.872	VV	237	2886	0.12%	0.010%
172	9.878	9.872	9.884	VV	172	1098	0.04%	0.004%
173	9.905	9.884	9.929	VV	939	11492	0.46%	0.039%
174	9.961	9.929	9.975	VV	792	9874	0.40%	0.034%
175	10.000	9.975	10.097	VV	30635	601238	24.22%	2.053%
176	10.127	10.097	10.224	VV	204163	2385129	96.09%	8.143%
177	10.231	10.224	10.286	VV	958	24891	1.00%	0.085%
178	10.294	10.286	10.324	VV	447	7945	0.32%	0.027%
179	10.329	10.324	10.339	VV	263	1837	0.07%	0.006%
180	10.352	10.339	10.373	VV	218	3543	0.14%	0.012%
181	10.378	10.373	10.384	VV	167	979	0.04%	0.003%
182	10.390	10.384	10.402	VV	161	1482	0.06%	0.005%
183	10.407	10.402	10.424	VV	149	1367	0.06%	0.005%
184	10.470	10.424	10.538	VV	3178	55876	2.25%	0.191%
185	10.547	10.538	10.567	VV	330	4967	0.20%	0.017%
186	10.574	10.567	10.589	VV	342	3129	0.13%	0.011%
187	10.594	10.589	10.598	VV	209	1099	0.04%	0.004%
188	10.614	10.598	10.628	VV	249	3454	0.14%	0.012%
189	10.645	10.628	10.666	VV	473	5476	0.22%	0.019%
190	10.687	10.666	10.716	VV	401	6887	0.28%	0.024%
191	10.720	10.716	10.736	VV	175	1375	0.06%	0.005%
192	10.754	10.736	10.779	VV	298	4957	0.20%	0.017%
193	10.795	10.779	10.811	VV	174	2771	0.11%	0.009%
194	10.834	10.811	10.855	VV	535	10398	0.42%	0.035%

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195	10.868	10.855	10.906	VV	511	8095	0.33%	0.028%
196	10.929	10.906	10.934	VV	173	2202	0.09%	0.008%
197	10.942	10.934	10.957	VV	247	2261	0.09%	0.008%
198	10.971	10.957	10.993	VV	300	4520	0.18%	0.015%
199	10.997	10.993	11.031	VV	227	3059	0.12%	0.010%
200	11.053	11.031	11.070	VV	155	2075	0.08%	0.007%
201	11.095	11.070	11.119	VV	410	7080	0.29%	0.024%
202	11.162	11.119	11.178	VV	1067	23596	0.95%	0.081%
203	11.185	11.178	11.232	VV	784	15659	0.63%	0.053%
204	11.246	11.232	11.281	VV	539	10319	0.42%	0.035%
205	11.293	11.281	11.314	VV	279	5119	0.21%	0.017%
206	11.321	11.314	11.356	VV	308	5100	0.21%	0.017%
207	11.360	11.356	11.369	VV	100	684	0.03%	0.002%
208	11.400	11.369	11.417	VV	337	5322	0.21%	0.018%
209	11.423	11.417	11.426	PV	99	415	0.02%	0.001%
210	11.434	11.426	11.440	VV	221	1420	0.06%	0.005%
211	11.446	11.440	11.449	VV	224	1035	0.04%	0.004%
212	11.455	11.449	11.482	VV	297	3509	0.14%	0.012%
213	11.505	11.482	11.527	VV	232	4061	0.16%	0.014%
214	11.531	11.527	11.534	VV	161	597	0.02%	0.002%
215	11.576	11.534	11.634	VV	214676	2482060	100.00%	8.474%
216	11.653	11.634	11.696	VV	871	16616	0.67%	0.057%
217	11.701	11.696	11.704	VV	124	557	0.02%	0.002%
218	11.735	11.704	11.752	VV	514	7890	0.32%	0.027%
219	11.769	11.752	11.796	VV	609	7226	0.29%	0.025%
220	11.821	11.796	11.836	PV	633	8111	0.33%	0.028%
221	11.864	11.836	11.919	VV	522	15860	0.64%	0.054%
222	11.924	11.919	11.946	VV	209	2510	0.10%	0.009%
223	11.990	11.946	12.039	VV	1281	31503	1.27%	0.108%
224	12.057	12.039	12.079	VV	610	9427	0.38%	0.032%
225	12.101	12.079	12.120	VV	310	5089	0.21%	0.017%
226	12.124	12.120	12.128	VV	226	830	0.03%	0.003%
227	12.131	12.128	12.184	VV	189	2446	0.10%	0.008%
228	12.195	12.184	12.207	VV	104	957	0.04%	0.003%
229	12.250	12.207	12.274	PV	511	10156	0.41%	0.035%
230	12.304	12.274	12.324	VV	393	6009	0.24%	0.021%
231	12.350	12.324	12.411	VV	802	23460	0.95%	0.080%
232	12.425	12.411	12.430	VV	338	3056	0.12%	0.010%
233	12.439	12.430	12.444	VV	281	2045	0.08%	0.007%
234	12.459	12.444	12.475	VV	316	4641	0.19%	0.016%
235	12.505	12.475	12.555	VV	26018	315619	12.72%	1.078%
236	12.572	12.555	12.588	VV	1045	16984	0.68%	0.058%
237	12.603	12.588	12.631	VV	865	16792	0.68%	0.057%
238	12.634	12.631	12.645	VV	545	4347	0.18%	0.015%
239	12.659	12.645	12.682	VV	582	11237	0.45%	0.038%
240	12.688	12.682	12.691	VV	393	2055	0.08%	0.007%
241	12.714	12.691	12.731	VV	556	10413	0.42%	0.036%
242	12.748	12.731	12.779	VV	595	9980	0.40%	0.034%
243	12.813	12.779	12.856	VV	618	16210	0.65%	0.055%
244	12.890	12.856	12.936	VV	206145	2452110	98.79%	8.372%
245	12.967	12.936	13.076	VV	2668	69532	2.80%	0.237%
246	13.097	13.076	13.122	VV	329	6449	0.26%	0.022%

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247	13.145	13.122	13.151	VV	395	5451	0.22%	0.019%
248	13.154	13.151	13.184	VV	340	4181	0.17%	0.014%
249	13.195	13.184	13.198	VV	215	1513	0.06%	0.005%
250	13.201	13.198	13.224	VV	199	2153	0.09%	0.007%
251	13.231	13.224	13.234	VV	97	405	0.02%	0.001%
252	13.301	13.234	13.361	PV	1578	55710	2.24%	0.190%
253	13.383	13.361	13.411	VV	641	12190	0.49%	0.042%
254	13.415	13.411	13.482	VV	380	10315	0.42%	0.035%
255	13.502	13.482	13.539	VV	783	14727	0.59%	0.050%
256	13.562	13.539	13.596	VV	432	10282	0.41%	0.035%
257	13.602	13.596	13.609	VV	241	1778	0.07%	0.006%
258	13.630	13.609	13.653	VV	425	7274	0.29%	0.025%
259	13.663	13.653	13.691	VV	205	3679	0.15%	0.013%
260	13.720	13.691	13.730	VV	963	14855	0.60%	0.051%
261	13.743	13.730	13.766	VV	868	14369	0.58%	0.049%
262	13.786	13.766	13.816	VV	1476	20695	0.83%	0.071%
263	13.821	13.816	13.837	VV	162	1660	0.07%	0.006%
264	13.913	13.837	13.919	VV	609	16651	0.67%	0.057%
265	13.931	13.919	13.972	VV	902	16505	0.66%	0.056%
266	13.989	13.972	14.001	VV	365	5305	0.21%	0.018%
267	14.010	14.001	14.014	VV	358	2628	0.11%	0.009%
268	14.044	14.014	14.060	VV	3035	40888	1.65%	0.140%
269	14.092	14.060	14.171	VV	193799	2448890	98.66%	8.361%
270	14.206	14.171	14.237	VV	1017	21311	0.86%	0.073%
271	14.241	14.237	14.270	VV	237	3951	0.16%	0.013%
272	14.275	14.270	14.281	VV	237	1206	0.05%	0.004%
273	14.303	14.281	14.323	VV	380	7221	0.29%	0.025%
274	14.329	14.323	14.339	VV	336	2970	0.12%	0.010%
275	14.343	14.339	14.357	VV	351	3310	0.13%	0.011%
276	14.360	14.357	14.393	VV	360	5916	0.24%	0.020%
277	14.401	14.393	14.434	VV	302	5467	0.22%	0.019%
278	14.456	14.434	14.462	VV	502	6349	0.26%	0.022%
279	14.492	14.462	14.556	VV	2487	58497	2.36%	0.200%
280	14.594	14.556	14.626	VV	468	13295	0.54%	0.045%
281	14.654	14.626	14.667	VV	1246	17320	0.70%	0.059%
282	14.679	14.667	14.697	VV	1181	18365	0.74%	0.063%
283	14.721	14.697	14.749	VV	7067	114107	4.60%	0.390%
284	14.756	14.749	14.796	VV	2229	36550	1.47%	0.125%
285	14.808	14.796	14.836	VV	734	13217	0.53%	0.045%
286	14.852	14.836	14.859	VV	424	5014	0.20%	0.017%
287	14.888	14.859	14.956	VV	1363	33383	1.34%	0.114%
288	14.993	14.956	15.031	VV	105247	1431105	57.66%	4.886%
289	15.051	15.031	15.095	VV	1154	27068	1.09%	0.092%
290	15.098	15.095	15.128	VV	338	3518	0.14%	0.012%
291	15.198	15.128	15.228	VV	191874	2469844	99.51%	8.432%
292	15.243	15.228	15.307	VV	4925	73784	2.97%	0.252%
293	15.311	15.307	15.315	VV	304	1128	0.05%	0.004%
294	15.322	15.315	15.327	VV	235	1593	0.06%	0.005%
295	15.332	15.327	15.337	VV	262	964	0.04%	0.003%
296	15.345	15.337	15.367	VV	186	1904	0.08%	0.007%
297	15.394	15.367	15.420	PV	376	5947	0.24%	0.020%
298	15.428	15.420	15.432	VV	114	622	0.03%	0.002%
299	15.456	15.432	15.474	VV	200	2205	0.09%	0.008%

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300	15.510	15.474	15.516	VV	203	2190	0.09%	0.007%
301	15.529	15.516	15.533	VV	161	1411	0.06%	0.005%
302	15.536	15.533	15.547	VV	199	1059	0.04%	0.004%
303	15.580	15.547	15.656	VV	45695	852467	34.35%	2.910%
304	15.675	15.656	15.696	VV	1366	22108	0.89%	0.075%
305	15.719	15.696	15.756	VV	2732	44895	1.81%	0.153%
306	15.782	15.756	15.812	VV	1152	20620	0.83%	0.070%
307	15.819	15.812	15.824	VV	168	925	0.04%	0.003%
308	15.850	15.824	15.879	VV	460	8640	0.35%	0.029%
309	15.900	15.879	15.921	VV	293	4102	0.17%	0.014%
310	15.941	15.921	15.951	PV	139	1539	0.06%	0.005%
311	16.013	15.951	16.034	VV	568	16966	0.68%	0.058%
312	16.039	16.034	16.071	VV	441	6059	0.24%	0.021%
313	16.105	16.071	16.156	VV	1979	43820	1.77%	0.150%
314	16.222	16.156	16.264	VV	184900	2433053	98.03%	8.307%
315	16.283	16.264	16.322	VV	2876	43081	1.74%	0.147%
316	16.325	16.322	16.343	VV	163	1466	0.06%	0.005%
317	16.359	16.343	16.381	VV	252	3775	0.15%	0.013%
318	16.427	16.381	16.443	PV	345	7329	0.30%	0.025%
319	16.447	16.443	16.459	VV	212	1570	0.06%	0.005%
320	16.463	16.459	16.488	VV	210	2162	0.09%	0.007%
321	16.519	16.488	16.528	VV	584	8749	0.35%	0.030%
322	16.532	16.528	16.554	VV	507	6476	0.26%	0.022%
323	16.560	16.554	16.567	VV	365	2769	0.11%	0.009%
324	16.601	16.567	16.645	VV	10789	212922	8.58%	0.727%
325	16.658	16.645	16.667	VV	1614	20768	0.84%	0.071%
326	16.682	16.667	16.686	VV	1671	17550	0.71%	0.060%
327	16.705	16.686	16.731	VV	4048	59859	2.41%	0.204%
328	16.781	16.731	16.819	VV	1454	38136	1.54%	0.130%
329	16.821	16.819	16.824	VV	184	535	0.02%	0.002%
330	16.844	16.824	16.861	VV	448	6178	0.25%	0.021%
331	16.865	16.861	16.889	VV	368	4171	0.17%	0.014%
332	16.894	16.889	16.898	VV	206	875	0.04%	0.003%
333	16.903	16.898	16.910	VV	200	1112	0.04%	0.004%
334	16.924	16.910	16.931	VV	114	1240	0.05%	0.004%
335	16.979	16.931	17.030	PV	1139	33088	1.33%	0.113%
336	17.082	17.030	17.114	VV	1365	44850	1.81%	0.153%
337	17.175	17.114	17.209	VV	176001	2428896	97.86%	8.292%
338	17.219	17.209	17.231	VV	1096	12580	0.51%	0.043%
339	17.251	17.231	17.284	VV	2328	36395	1.47%	0.124%
340	17.298	17.284	17.314	VV	306	3502	0.14%	0.012%
341	17.322	17.314	17.327	VV	54	554	0.02%	0.002%
342	17.331	17.327	17.335	VV	96	273	0.01%	0.001%
343	17.343	17.335	17.349	VV	122	384	0.02%	0.001%
344	17.356	17.349	17.362	PV	108	522	0.02%	0.002%
345	17.388	17.362	17.401	PBA	125	3016	0.12%	0.010%

Sum of corrected areas: 29290555

FG042425.M Wed May 14 05:37:13 2025

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
5 TRPH STD		FF015790.D	FF042225	N-TETRACONTANE	mohammad	4/24/2025 6:33:56 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q1872-14		FF015846.D	FF051325	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
Q1872-14		FG015822.D	FG051325	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q1872-14		FG015823.D	FG051325	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF042225

Review By	yogesh	Review On	4/22/2025 1:28:06 PM
Supervise By	mohammad	Supervise On	4/24/2025 6:33:56 AM
SubDirectory	FF042225	HP Acquire Method	HP Processing Method FF042225
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	FF015784.D	22 Apr 2025 08:12	YP\AJ	Ok
2	I.BLK	FF015785.D	22 Apr 2025 08:42	YP\AJ	Ok
3	100 TRPH STD	FF015786.D	22 Apr 2025 09:11	YP\AJ	Ok
4	50 TRPH STD	FF015787.D	22 Apr 2025 09:40	YP\AJ	Ok
5	20 TRPH STD	FF015788.D	22 Apr 2025 10:09	YP\AJ	Ok
6	10 TRPH STD	FF015789.D	22 Apr 2025 10:39	YP\AJ	Ok
7	5 TRPH STD	FF015790.D	22 Apr 2025 11:08	YP\AJ	Ok,M
8	FF042225ICV	FF015791.D	22 Apr 2025 11:39	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051325

Review By	yogesh	Review On	5/13/2025 1:15:36 PM
Supervise By		Supervise On	
SubDirectory	FF051325	HP Acquire Method	HP Processing Method FF042225
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	FF015826.D	13 May 2025 10:42	YP\AJ	Ok
2	I.BLK	FF015827.D	13 May 2025 11:11	YP\AJ	Ok
3	50 PPM TRPH STD	FF015828.D	13 May 2025 11:40	YP\AJ	Ok
4	RT MARKER	FF015829.D	13 May 2025 12:13	YP\AJ	Ok
5	PB167981BL	FF015830.D	13 May 2025 13:22	YP\AJ	Ok
6	PB167981BS	FF015831.D	13 May 2025 13:51	YP\AJ	Ok
7	PB167981BSD	FF015832.D	13 May 2025 15:25	YP\AJ	Ok
8	Q2008-01	FF015833.D	13 May 2025 15:54	YP\AJ	Ok
9	I.BLK	FF015834.D	13 May 2025 16:24	YP\AJ	Ok
10	50 PPM TRPH STD	FF015835.D	13 May 2025 16:53	YP\AJ	Ok
11	Q1982-04	FF015836.D	13 May 2025 17:22	YP\AJ	Ok
12	Q1982-05	FF015837.D	13 May 2025 17:51	YP\AJ	Ok
13	Q1982-06	FF015838.D	13 May 2025 18:21	YP\AJ	Ok
14	Q1982-07	FF015839.D	13 May 2025 18:50	YP\AJ	Ok
15	Q1982-08	FF015840.D	13 May 2025 19:19	YP\AJ	Ok
16	I.BLK	FF015841.D	13 May 2025 19:49	YP\AJ	Ok
17	50 PPM TRPH STD	FF015842.D	13 May 2025 20:18	YP\AJ	Ok
18	PB167975BL	FF015843.D	13 May 2025 21:16	YP\AJ	Ok
19	PB167975BS	FF015844.D	13 May 2025 21:46	YP\AJ	Ok
20	Q1872-14	FF015845.D	13 May 2025 22:15	YP\AJ	Not Ok
21	Q1872-14	FF015846.D	13 May 2025 22:44	YP\AJ	Not Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051325

Review By	yogesh	Review On	5/13/2025 1:15:36 PM
Supervise By		Supervise On	
SubDirectory	FF051325	HP Acquire Method	HP Processing Method FF042225
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		

22	I.BLK	FF015847.D	13 May 2025 23:14	YP\AJ	Ok
23	50 PPM TRPH STD	FF015848.D	14 May 2025 00:12	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 # FG051325

Review By	yogesh	Review On	5/13/2025 11:25:05 AM
Supervise By		Supervise On	
SubDirectory	FG051325	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		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FG015816.D	13 May 2025 10:42	YP\AJ	Ok
2	I.BLK	FG015817.D	13 May 2025 11:11	YP\AJ	Ok
3	50 PPM TRPH STD	FG015818.D	13 May 2025 11:40	YP\AJ	Ok
4	RT MARKER	FG015819.D	13 May 2025 12:13	YP\AJ	Ok
5	PB167975BL	FG015820.D	13 May 2025 13:22	YP\AJ	Ok
6	PB167975BS	FG015821.D	13 May 2025 13:51	YP\AJ	Ok
7	Q1872-14	FG015822.D	13 May 2025 14:38	YP\AJ	Dilution
8	Q1872-14	FG015823.D	13 May 2025 15:25	YP\AJ	Ok,NS
9	I.BLK	FG015824.D	13 May 2025 15:54	YP\AJ	Ok
10	50 PPM TRPH STD	FG015825.D	13 May 2025 16:53	YP\AJ	Ok
11	Q1956-01	FG015826.D	13 May 2025 17:22	YP\AJ	Ok
12	Q1956-02	FG015827.D	13 May 2025 17:51	YP\AJ	Ok
13	Q1956-03MS	FG015828.D	13 May 2025 18:21	YP\AJ	Ok
14	Q1956-04MSD	FG015829.D	13 May 2025 18:50	YP\AJ	Ok
15	Q1956-06	FG015830.D	13 May 2025 19:19	YP\AJ	Ok
16	Q1982-01	FG015831.D	13 May 2025 19:49	YP\AJ	Ok
17	Q1982-02	FG015832.D	13 May 2025 20:18	YP\AJ	Ok
18	Q1982-03	FG015833.D	13 May 2025 20:47	YP\AJ	Ok
19	I.BLK	FG015834.D	13 May 2025 21:16	YP\AJ	Ok
20	50 PPM TRPH STD	FG015835.D	13 May 2025 21:46	YP\AJ	Ok
21	Q2010-01	FG015836.D	13 May 2025 22:44	YP\AJ	Ok

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG051325

Review By	yogesh	Review On	5/13/2025 11:25:05 AM
Supervise By		Supervise On	
SubDirectory	FG051325	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		

22	Q2010-02	FG015837.D	13 May 2025 23:14	YP\AJ	Ok
23	Q2010-03	FG015838.D	13 May 2025 23:43	YP\AJ	Ok
24	Q2010-04	FG015839.D	14 May 2025 00:12	YP\AJ	Ok
25	I.BLK	FG015840.D	14 May 2025 00:41	YP\AJ	Ok
26	50 PPM TRPH STD	FG015841.D	14 May 2025 01:10	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF042225

Review By	yogesh	Review On	4/22/2025 1:28:06 PM
Supervise By	mohammad	Supervise On	4/24/2025 6:33:56 AM
SubDirectory	FF042225	HP Acquire Method	HP Processing Method FF042225

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		FF015784.D	22 Apr 2025 08:12		YP\AJ	Ok
2	I.BLK		FF015785.D	22 Apr 2025 08:42		YP\AJ	Ok
3	100 TRPH STD		FF015786.D	22 Apr 2025 09:11		YP\AJ	Ok
4	50 TRPH STD		FF015787.D	22 Apr 2025 09:40		YP\AJ	Ok
5	20 TRPH STD		FF015788.D	22 Apr 2025 10:09		YP\AJ	Ok
6	10 TRPH STD		FF015789.D	22 Apr 2025 10:39		YP\AJ	Ok
7	5 TRPH STD		FF015790.D	22 Apr 2025 11:08		YP\AJ	Ok,M
8	FF042225ICV		FF015791.D	22 Apr 2025 11:39		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051325

Review By	yogesh	Review On	5/13/2025 1:15:36 PM
Supervise By		Supervise On	
SubDirectory	FF051325	HP Acquire Method	HP Processing Method FF042225

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

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015826.D	13 May 2025 10:42		YPIAJ	Ok
2	I.BLK		FF015827.D	13 May 2025 11:11		YPIAJ	Ok
3	50 PPM TRPH STD		FF015828.D	13 May 2025 11:40		YPIAJ	Ok
4	RT MARKER		FF015829.D	13 May 2025 12:13		YPIAJ	Ok
5	PB167981BL		FF015830.D	13 May 2025 13:22		YPIAJ	Ok
6	PB167981BS		FF015831.D	13 May 2025 13:51		YPIAJ	Ok
7	PB167981BSD		FF015832.D	13 May 2025 15:25		YPIAJ	Ok
8	Q2008-01		FF015833.D	13 May 2025 15:54		YPIAJ	Ok
9	I.BLK		FF015834.D	13 May 2025 16:24		YPIAJ	Ok
10	50 PPM TRPH STD		FF015835.D	13 May 2025 16:53		YPIAJ	Ok
11	Q1982-04		FF015836.D	13 May 2025 17:22		YPIAJ	Ok
12	Q1982-05		FF015837.D	13 May 2025 17:51		YPIAJ	Ok
13	Q1982-06		FF015838.D	13 May 2025 18:21		YPIAJ	Ok
14	Q1982-07		FF015839.D	13 May 2025 18:50		YPIAJ	Ok
15	Q1982-08		FF015840.D	13 May 2025 19:19		YPIAJ	Ok
16	I.BLK		FF015841.D	13 May 2025 19:49		YPIAJ	Ok
17	50 PPM TRPH STD		FF015842.D	13 May 2025 20:18		YPIAJ	Ok
18	PB167975BL		FF015843.D	13 May 2025 21:16		YPIAJ	Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051325

Review By	yogesh	Review On	5/13/2025 1:15:36 PM
Supervise By		Supervise On	
SubDirectory	FF051325	HP Acquire Method	HP Processing Method FF042225
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			

19	PB167975BS		FF015844.D	13 May 2025 21:46		YP\AJ	Ok
20	Q1872-14		FF015845.D	13 May 2025 22:15	need 5x dilution	YP\AJ	Not Ok
21	Q1872-14		FF015846.D	13 May 2025 22:44		YP\AJ	Not Ok
22	I.BLK		FF015847.D	13 May 2025 23:14		YP\AJ	Ok
23	50 PPM TRPH STD		FF015848.D	14 May 2025 00:12		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	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 # FG051325

Review By	yogesh	Review On	5/13/2025 11:25:05 AM
Supervise By		Supervise On	
SubDirectory	FG051325	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		FG015816.D	13 May 2025 10:42		YPIAJ	Ok
2	I.BLK		FG015817.D	13 May 2025 11:11		YPIAJ	Ok
3	50 PPM TRPH STD		FG015818.D	13 May 2025 11:40		YPIAJ	Ok
4	RT MARKER		FG015819.D	13 May 2025 12:13		YPIAJ	Ok
5	PB167975BL		FG015820.D	13 May 2025 13:22		YPIAJ	Ok
6	PB167975BS		FG015821.D	13 May 2025 13:51		YPIAJ	Ok
7	Q1872-14		FG015822.D	13 May 2025 14:38	need 5x dilution	YPIAJ	Dilution
8	Q1872-14		FG015823.D	13 May 2025 15:25		YPIAJ	Ok,NS
9	I.BLK		FG015824.D	13 May 2025 15:54		YPIAJ	Ok
10	50 PPM TRPH STD		FG015825.D	13 May 2025 16:53		YPIAJ	Ok
11	Q1956-01		FG015826.D	13 May 2025 17:22		YPIAJ	Ok
12	Q1956-02		FG015827.D	13 May 2025 17:51		YPIAJ	Ok
13	Q1956-03MS		FG015828.D	13 May 2025 18:21		YPIAJ	Ok
14	Q1956-04MSD		FG015829.D	13 May 2025 18:50		YPIAJ	Ok
15	Q1956-06		FG015830.D	13 May 2025 19:19		YPIAJ	Ok
16	Q1982-01		FG015831.D	13 May 2025 19:49		YPIAJ	Ok
17	Q1982-02		FG015832.D	13 May 2025 20:18		YPIAJ	Ok
18	Q1982-03		FG015833.D	13 May 2025 20:47		YPIAJ	Ok

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG051325

Review By	yogesh	Review On	5/13/2025 11:25:05 AM
Supervise By		Supervise On	
SubDirectory	FG051325	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			

19	I.BLK		FG015834.D	13 May 2025 21:16		YP\AJ	Ok
20	50 PPM TRPH STD		FG015835.D	13 May 2025 21:46		YP\AJ	Ok
21	Q2010-01		FG015836.D	13 May 2025 22:44		YP\AJ	Ok
22	Q2010-02		FG015837.D	13 May 2025 23:14		YP\AJ	Ok
23	Q2010-03		FG015838.D	13 May 2025 23:43		YP\AJ	Ok
24	Q2010-04		FG015839.D	14 May 2025 00:12		YP\AJ	Ok
25	I.BLK		FG015840.D	14 May 2025 00:41		YP\AJ	Ok
26	50 PPM TRPH STD		FG015841.D	14 May 2025 01:10		YP\AJ	Ok

M : Manual Integration

PERCENT SOLID

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

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

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

QC:LB135705

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



PERCENT SOLID

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

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

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

QC:LB135705

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

PERCENT SOLID

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

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

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

QC:LB135705

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

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

WORKLIST(Hardcopy Internal Chain)

135865

WorkList Name : %1-050825

WorkList ID : 139376

Department : Wet-Chemistry

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

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

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

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

WORKLIST(Hardcopy Internal Chain)

135403

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

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

Date/Time 05/08/25 15:00 Date/Time 05/08/25 17:30
 Raw Sample Received by: JB WOC Raw Sample Received by: CR
 Raw Sample Relinquished by: CR Raw Sample Relinquished by: SP

WORKLIST(Hardcopy Internal Chain)

9135405

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

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

Date/Time 05/08/25 15:00
 Raw Sample Received by: CP 5
 Raw Sample Relinquished by: CP 5

17735705

WORKLIST(Hardcopy Internal Chain)

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

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

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

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

SOP ID: M3541-ASE Extraction-14

Clean Up SOP #: N/A

Matrix : Solid

Weigh By: EH

Balance check: RJ

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date : 05/13/2025

Extraction Start Time : 10:05

Extraction End Date : 05/13/2025

Extraction End Time : 13:10

Concentration By: EH

Supervisor By : RUPESH

Extraction Method: ☐ Separatory 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	EP2611
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

KD Bath Temperature: N/A

Envap ID: NEVAP-02

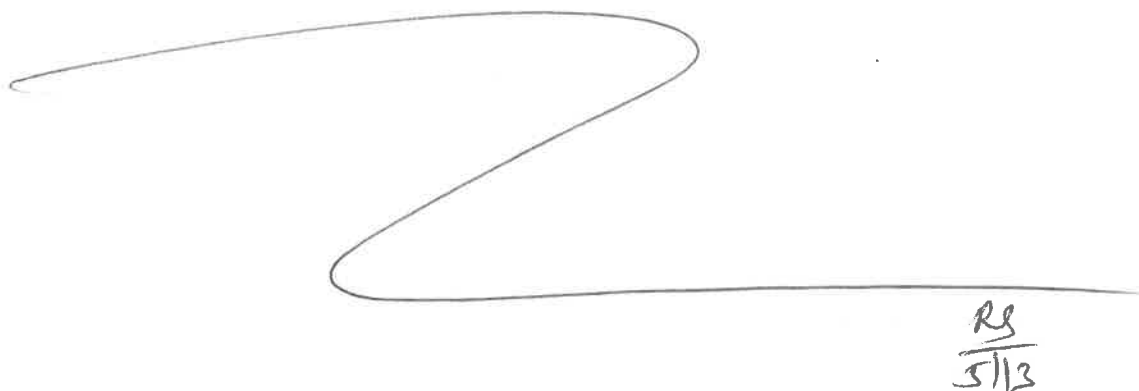
Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
5/13/25	RS (Ext 666)	Y.P. Pestipco
13:15	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-14

Concentration Date: 05/13/2025

Sample ID	Client Sample ID	Test	g/mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB167975BL	PB167975BL	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1			U1-1
PB167975BS	PB167975BS	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1			2
Q1872-14	HW0425-PT-DIES-SOIL	Diesel Range Organics	20.24	N/A	ritesh	Evelyn	1			3
Q1956-01	SB1-3-4	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	M		4
Q1956-02	SB2-4-5	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	M		5
Q1956-03	Q1956-02MS	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	M		6
Q1956-04	Q1956-02MSD	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	M		U2-1
Q1956-06	SB91-3-4	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	M		2
Q1982-01	TP-1	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		3
Q1982-02	TP-2B	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		4
Q1982-03	TP-3	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		5
Q1982-04	TP-4	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		6
Q1982-05	TP-5	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		U3-1
Q1982-06	TP-6	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		2
Q1982-07	TP-7	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		3
Q1982-08	TP-8	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		4
Q2010-01	TP-10	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		5
Q2010-02	TP-13	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		6
Q2010-03	TP-14	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		U6-1
Q2010-04	TP-17	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		2



WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1982D WorkList ID : 189483 Department : Extraction Date : 05-13-2025 08:56:47

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1872-14	HW0425-PT-DIES-SOIL	Solid	Diesel Range Organics	Cool 4 deg C	ALLI03	QA Of	04/25/2025	8015D
Q1956-01	SB1-3-4	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/01/2025	8015D
Q1956-02	SB2-4-5	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/02/2025	8015D
Q1956-03	Q1956-02MS	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/02/2025	8015D
Q1956-04	Q1956-02MSD	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/02/2025	8015D
Q1956-06	SB91-3-4	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L31	05/01/2025	8015D
Q1982-01	TP-1	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-02	TP-2B	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-03	TP-3	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-04	TP-4	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-05	TP-5	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-06	TP-6	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-07	TP-7	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q1982-08	TP-8	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/07/2025	8015D
Q2010-01	TP-10	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L51	05/08/2025	8015D
Q2010-02	TP-13	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L51	05/08/2025	8015D
Q2010-03	TP-14	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L51	05/08/2025	8015D
Q2010-04	TP-17	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L51	05/08/2025	8015D

Date/Time 05/13/25 10:00
 Raw Sample Received by: RJ (EXT-100)
 Raw Sample Relinquished by: CJ Sm

Date/Time 05/13/25 10:30
 Raw Sample Received by: CJ Sm
 Raw Sample Relinquished by: RJ (EXT-100)

Prep Standard - Chemical Standard Summary

Order ID : Q1982

Test : Diesel Range Organics

Prepbatch ID : PB167975,

Sequence ID/Qc Batch ID: FF051325,FG051325,

Standard ID :

EP2611,EP2612,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,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2611	05/09/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 05/09/2025
<u>FROM</u> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>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
<u>FROM</u> 8000.00000ml of E3930 + 8000.00000ml of E3932 = Final Quantity: 16000.000 ml								

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

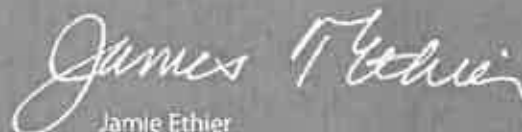
Certificate of Analysis

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



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

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

CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3

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

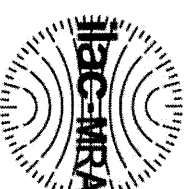
Bellefonte, PA 16823-8812

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 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:

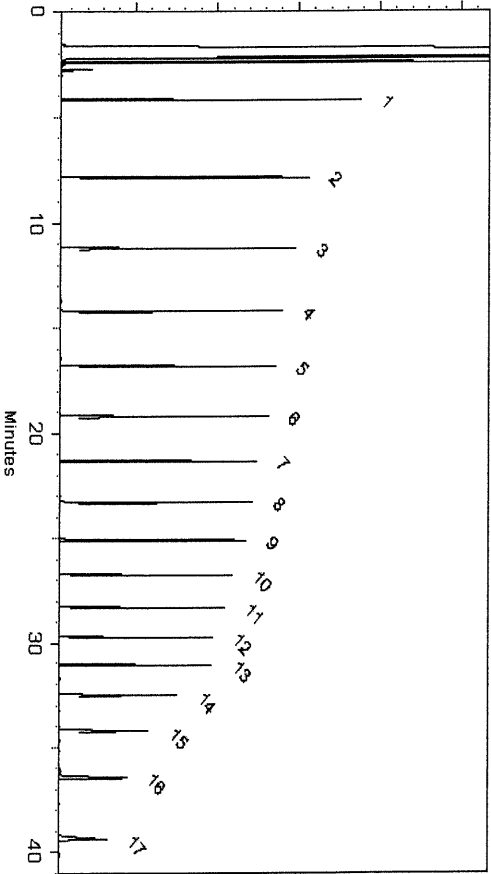
250°C

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.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

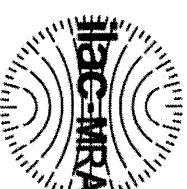
Bellefonte, PA 16823-8812

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:

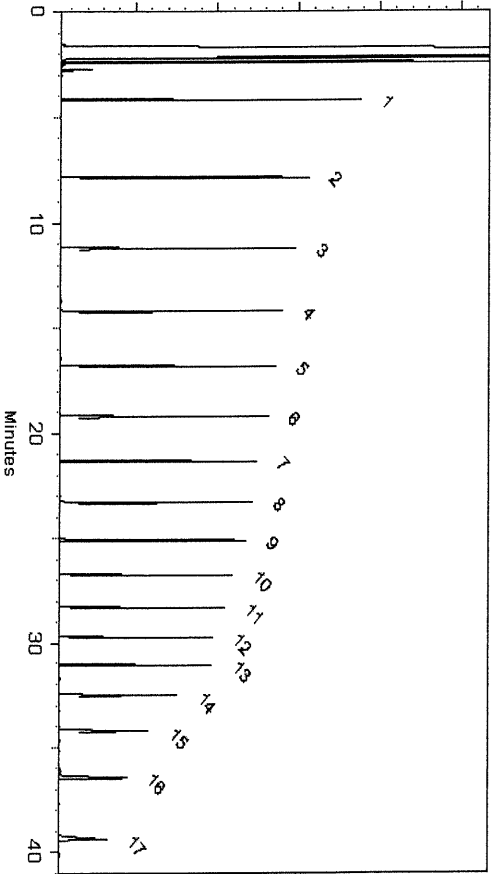
250°C

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

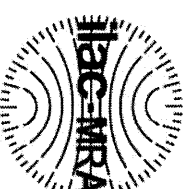
Bellefonte, PA 16823-8812

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:

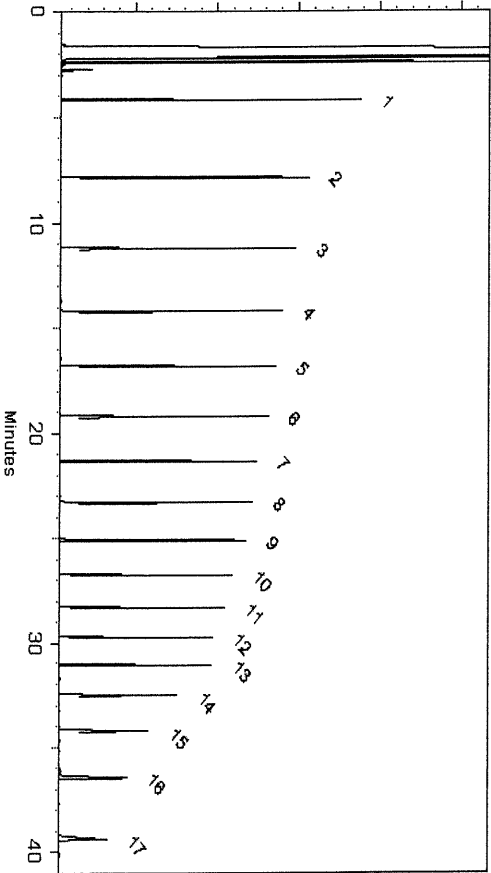
250°C

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:

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- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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- 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
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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

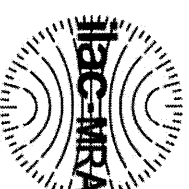
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Certificate of Analysis



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 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:

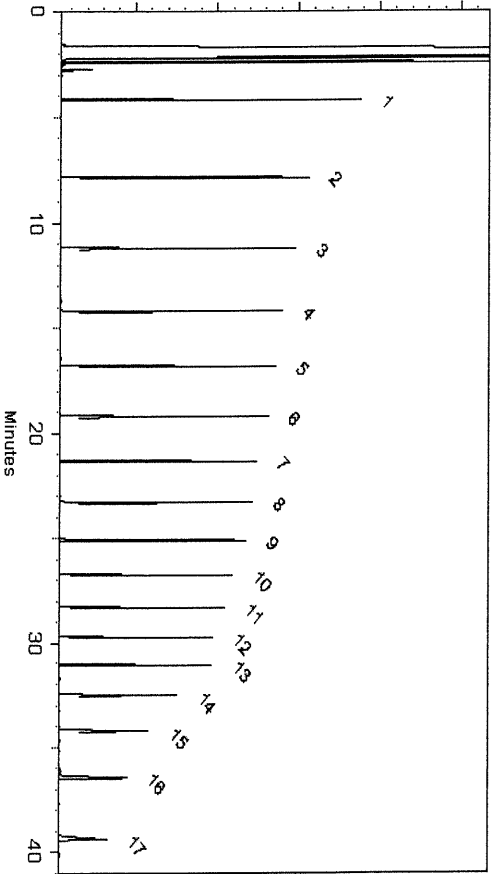
250°C

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.



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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.)

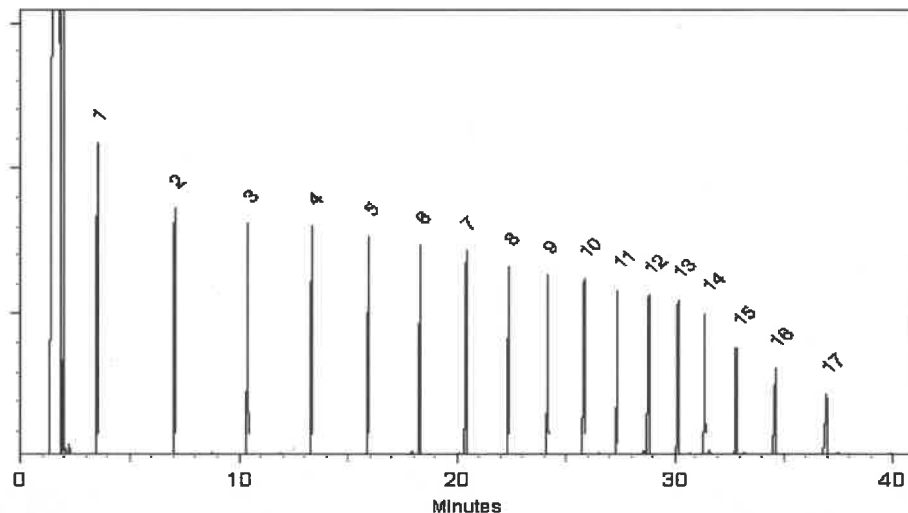
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

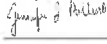


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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Tel: 1-814-353-1300
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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	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.)

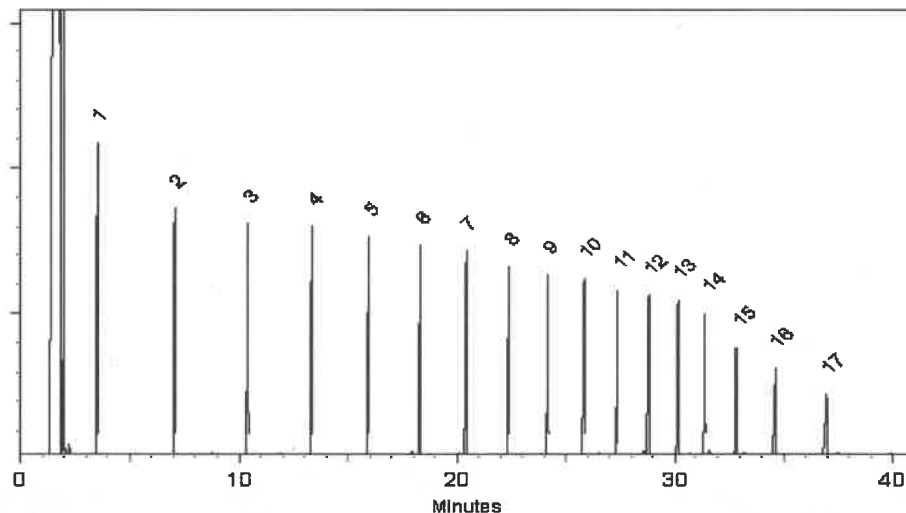
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

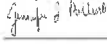


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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 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	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

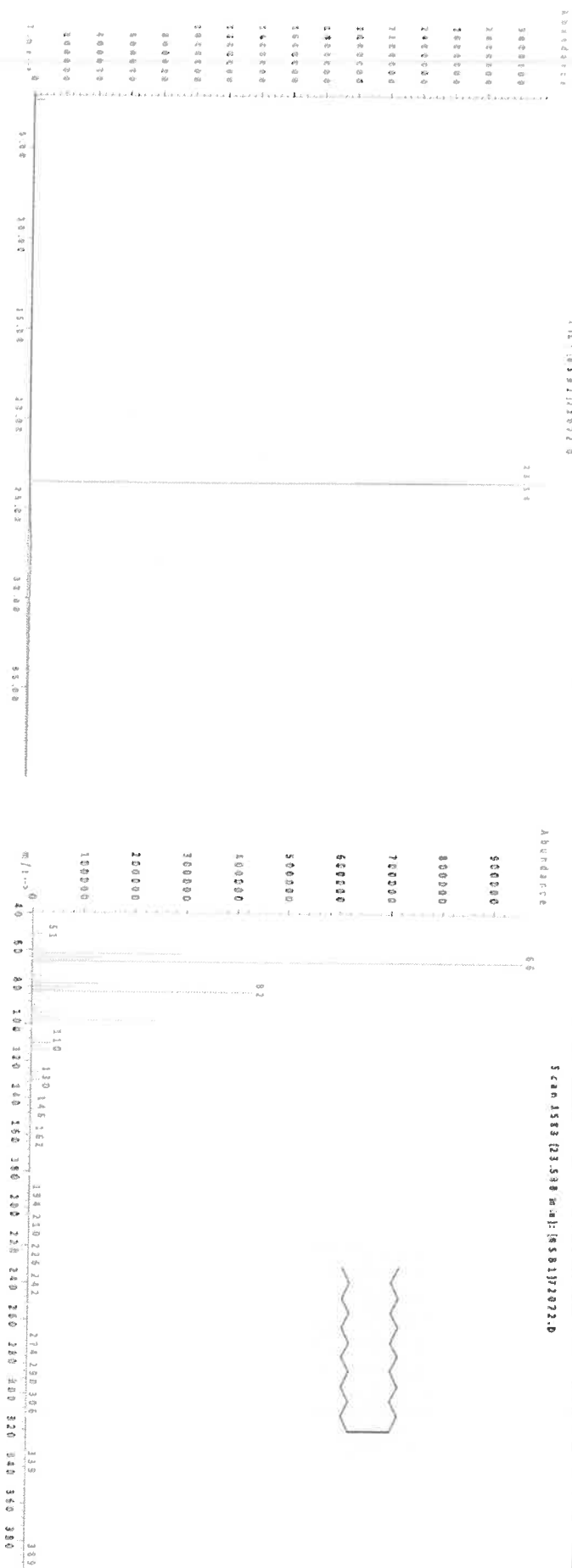
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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, (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	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

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

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

Peak No. Name FID RT (min)

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

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

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

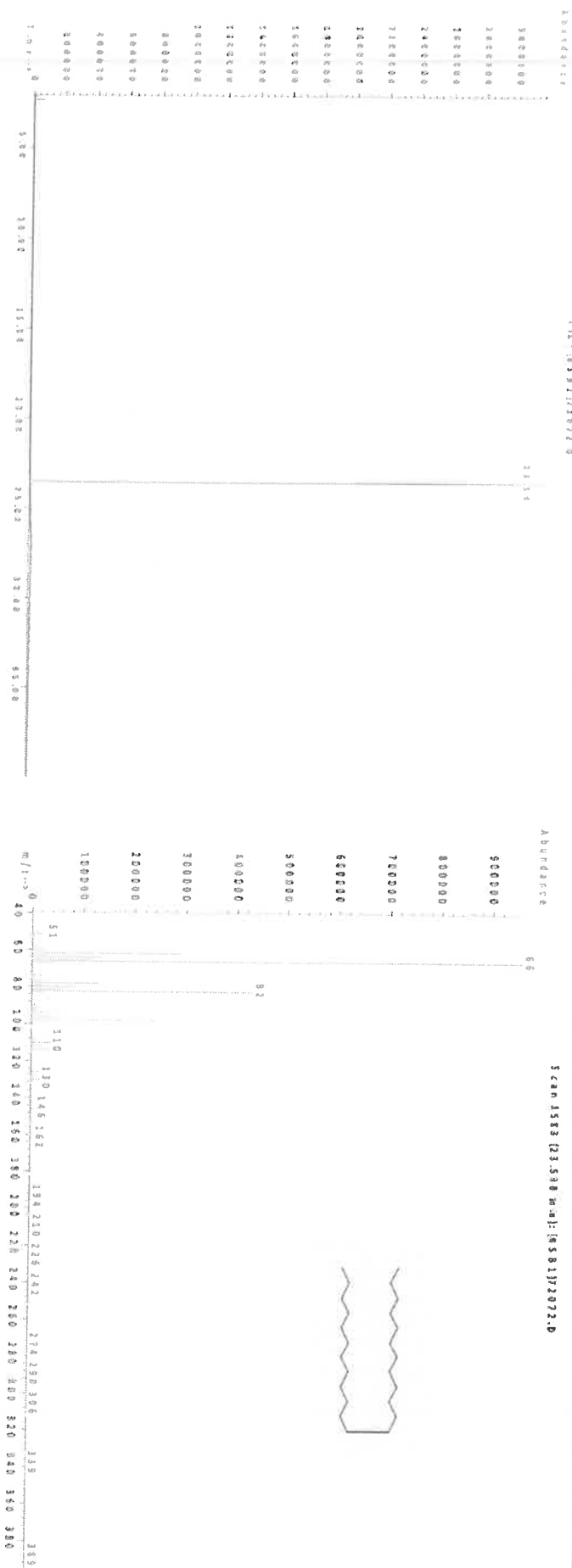
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
DATE		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#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

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

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

Peak No. Name FID RT (min)

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

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

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

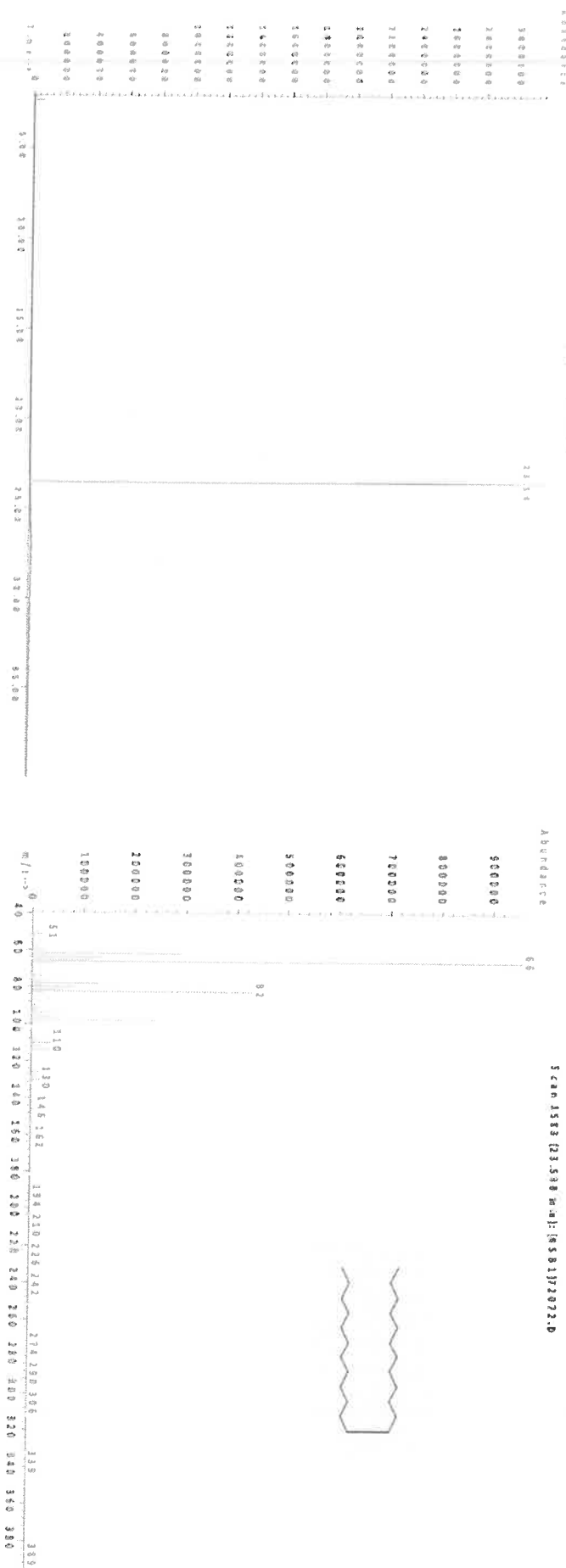
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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



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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
070721
Expiration Date:
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11
Weight(s) shown below were combined and diluted to (mL): 500.0

Solvent(s): Methylene chloride
Lot# 78782

5E-05 Balance Uncertainty
0.058 Peak Uncertainty

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

070716
070716

MSDS Information
(Solvent Safety Info. On Attached pg.)

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty (%)	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-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)(H)	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	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
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/MS2", Method "GC-MS2".
Analyzed using Method "GC-MS2".

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 Data

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

Qualitative Quantitative

3rd Party Comparison

Analyte	Sup/Abs Dev (%)
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	2.74
Phenanthrene-d10	0.65
Chrysene-d12	1.93
Perylene-d12	-1.72
Total	-0.55

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

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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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





CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

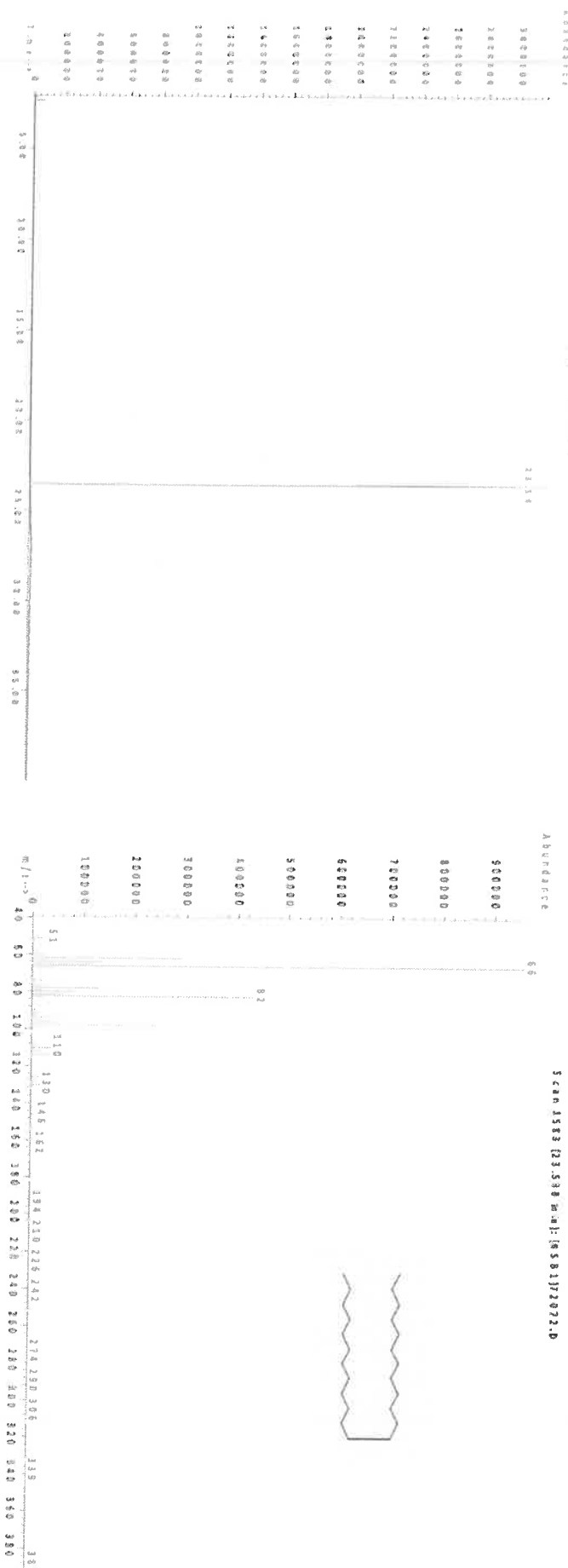
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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, (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



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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
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

MSDS Information (Solvent Safety Info. On Attached pg.)

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

Qualitative Quantitative

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

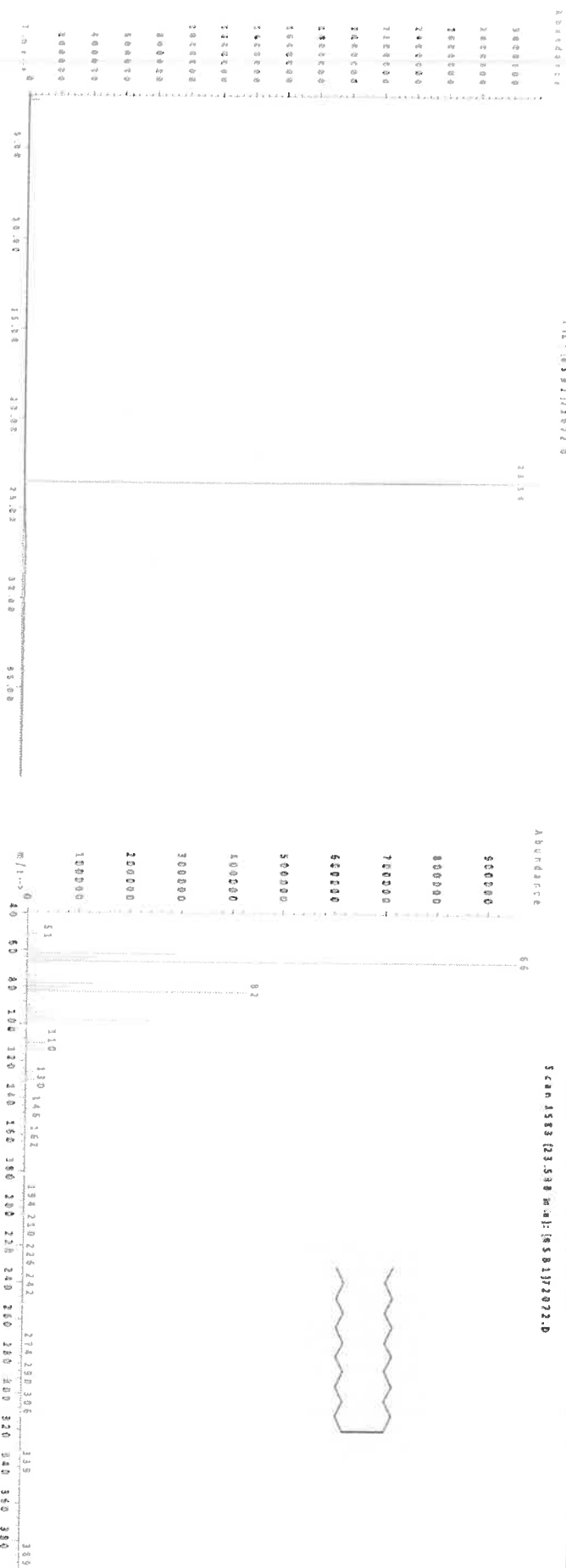
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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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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.

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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	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

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CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

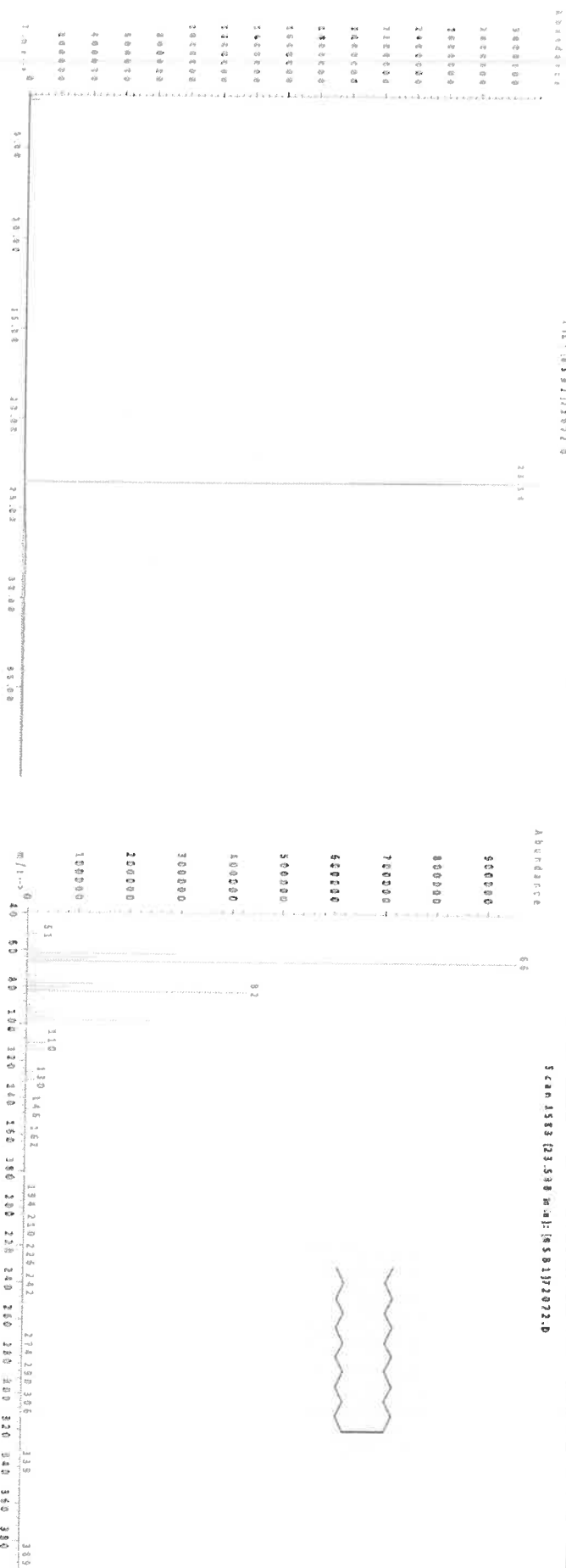
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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).



SHIPPING DOCUMENTS

CLIENT INFORMATION

COMPANY: CDM SMITH
ADDRESS: 110 FIELDCREST AVE #8 6TH FLOOR
CITY EDISON STATE: NJ ZIP: 08837
ATTENTION: MARCIE ENCINAS
PHONE: 732-5904679 FAX: 732-225-7851

CLIENT PROJECT INFORMATION

PROJECT NAME: SOUTH RIVER WA REPLACEMENT
PROJECT NO.: 302781 LOCATION: SOUTH RIVER
PROJECT MANAGER: MARCIE ENCINAS
e-mail: ENCINASMA@CDMSMITH.COM
PHONE: 732-5904679 FAX: 732-225-7851

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: 732-5904679

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 WCL
TCL SVOC
TAL METALS
PCBS
PESTICIDE
HERBICIDE
DRO/GRS

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← 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-1	SOIL		X	5/6/25	0837	6	X	X	X	X	X	X	X			E
2.	TP-2B	SOIL		X	5/6/25	1116	6	X	X	X	X	X	X	X			E
3.	TP-3	SOIL		X	5/6/25	1310	6	X	X	X	X	X	X	X			E
4.	TP-4	SOIL		X	5/7/25	0815	6	X	X	X	X	X	X	X			E
5.	TP-5	SOIL		X	5/7/25	1047	6	X	X	X	X	X	X	X			E
6.	TP-6	SOIL		X	5/7/25	1150	6	X	X	X	X	X	X	X			E
7.	TP-8	SOIL		X	5/7/25	1245	6	X	X	X	X	X	X	X			E
8.	TP-9	SOIL		X	5/7/25	1330	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: 1. [Signature]	DATE/TIME: 5/7/25 1455	RECEIVED BY: 1. [Signature]	1455	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.1 °C
RELINQUISHED BY SAMPLER: 2. [Signature]	DATE/TIME:	RECEIVED BY: 2. [Signature]	5-7-25	Comments: Temp 3.1 °C Adjustment Factor + DIR Gun #1
RELINQUISHED BY SAMPLER: 3. [Signature]	DATE/TIME: 5-7-25	RECEIVED BY: 3. [Signature]		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 : Q1982	CAMP02	Order Date : 5/7/2025 3:20:42 PM	Project Mgr :
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level 1 <i>NO Reduce</i>
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/7/2025 12:00:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 16:02	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
Q1982-01	TP-1	Solid	05/07/2025 05/06/2025	08:37	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-02	TP-2B	Solid	05/07/2025 05/06/2025	11:16	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-03	TP-3	Solid	05/07/2025 05/06/2025	13:10	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-04	TP-4	Solid	05/07/2025	08:15	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-05	TP-5	Solid	05/07/2025	10:47	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-06	TP-6	Solid	05/07/2025	11:50	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-07	TP-7 TP-8	Solid	05/07/2025	12:45	VOC-TCLVOA-10		8260D		10 Bus. Days
Q1982-08	TP-8 TP-9	Solid	05/07/2025	13:30					

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1982 **CAMP02**
Client Name : CDM Smith
Client Contact : Marcie Ann Encinas
Invoice Name : CDM Smith
Invoice Contact : Marcie Ann Encinas

Order Date : 5/7/2025 3:20:42 PM
Project Name : South River WM Replacem
Receive DateTime : 5/7/2025 12:00:00 AM
Purchase Order : 16102

Project Mgr :
Report Type : Level 1 *NO Reduce*
EDD Type : EXCEL NOCLEANUP
Hard Copy Date :
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 : 5/8/25 0850

Received By : 
Date / Time : 5/6/25 08:10 *1226*
Storage Area : VOA Refridgerator Room