

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:	Q2010	OrderDate:	5/9/2025 4:00:00 PM
Client:	CDM Smith	Project:	South River WM Replacement
Contact:	Marcie Ann Encinas	Location:	L51,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2010-01	TP-10	SOIL	Diesel Range Organics	8015D	05/08/25	05/13/25	05/13/25	05/09/25
			Gasoline Range Organics	8015D				
Q2010-02	TP-13	SOIL	Diesel Range Organics	8015D	05/08/25	05/13/25	05/13/25	05/09/25
Q2010-03	TP-14	SOIL	Diesel Range Organics	8015D	05/08/25	05/13/25	05/13/25	05/09/25
			Gasoline Range Organics	8015D				
Q2010-04	TP-17	SOIL	Diesel Range Organics	8015D	05/08/25	05/13/25	05/14/25	05/09/25
			Gasoline Range Organics	8015D				



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: CDM Smith
Lab Code: CHEM Case No.: Q2010 SAS No.: Q2010 SDG No.: Q2010

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FG015817.D	96				0
PIBLK-FG015824.D	85				0
PIBLK-FG015834.D	96				0
PIBLK-FG015840.D	94				0
PB167975BL	87				0
PB167975BS	93				0
SB2-4-5MS	58				0
SB2-4-5MSD	60				0
TP-10	47				0
TP-13	54				0
TP-14	90				0
TP-17	51				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:** Q2010 **SAS No :** Q2010 **SDG No:** Q2010
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:** Q2010 **SAS No :** Q2010 **SDG No:** Q2010
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:** Q2010 **SAS No :** Q2010 **SDG No:** Q2010
Matrix Spike - EPA Sample No : PB167975BS **Datafile:** FG015821.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6662	0	6321	95	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB167975BL

Lab Name: CHEMTECH

Contract: CAMP02

Lab Code: CHEM Case No.: Q2010

SAS No.: Q2010 SDG NO.: Q2010

Lab File ID: FG015820.D

Lab Sample ID: PB167975BL

Instrument ID: FG

Date Extracted: 05/13/2025

Matrix: (soil/water) Soil

Date Analyzed: 05/13/25

Level: (low/med) low

Time Analyzed: 13:22

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB167975BS	PB167975BS	FG015821.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-10	Q2010-01	FG015836.D	05/13/25
TP-13	Q2010-02	FG015837.D	05/13/25
TP-14	Q2010-03	FG015838.D	05/13/25
TP-17	Q2010-04	FG015839.D	05/14/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	05/08/25
Project:	South River WM Replacement	Date Received:	05/09/25
Client Sample ID:	TP-10	SDG No.:	Q2010
Lab Sample ID:	Q2010-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	93.3
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015836.D	1	05/13/25 10:05	05/13/25 22:44	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	3280		181	1780	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	9.37		37 - 130	47%	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 : FG015836.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 22:44
Operator : YP\AJ
Sample : Q2010-01
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-10

Integration File: autoint1.e
Quant Time: May 14 03:57:26 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...	14.992	1102742	9.366 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

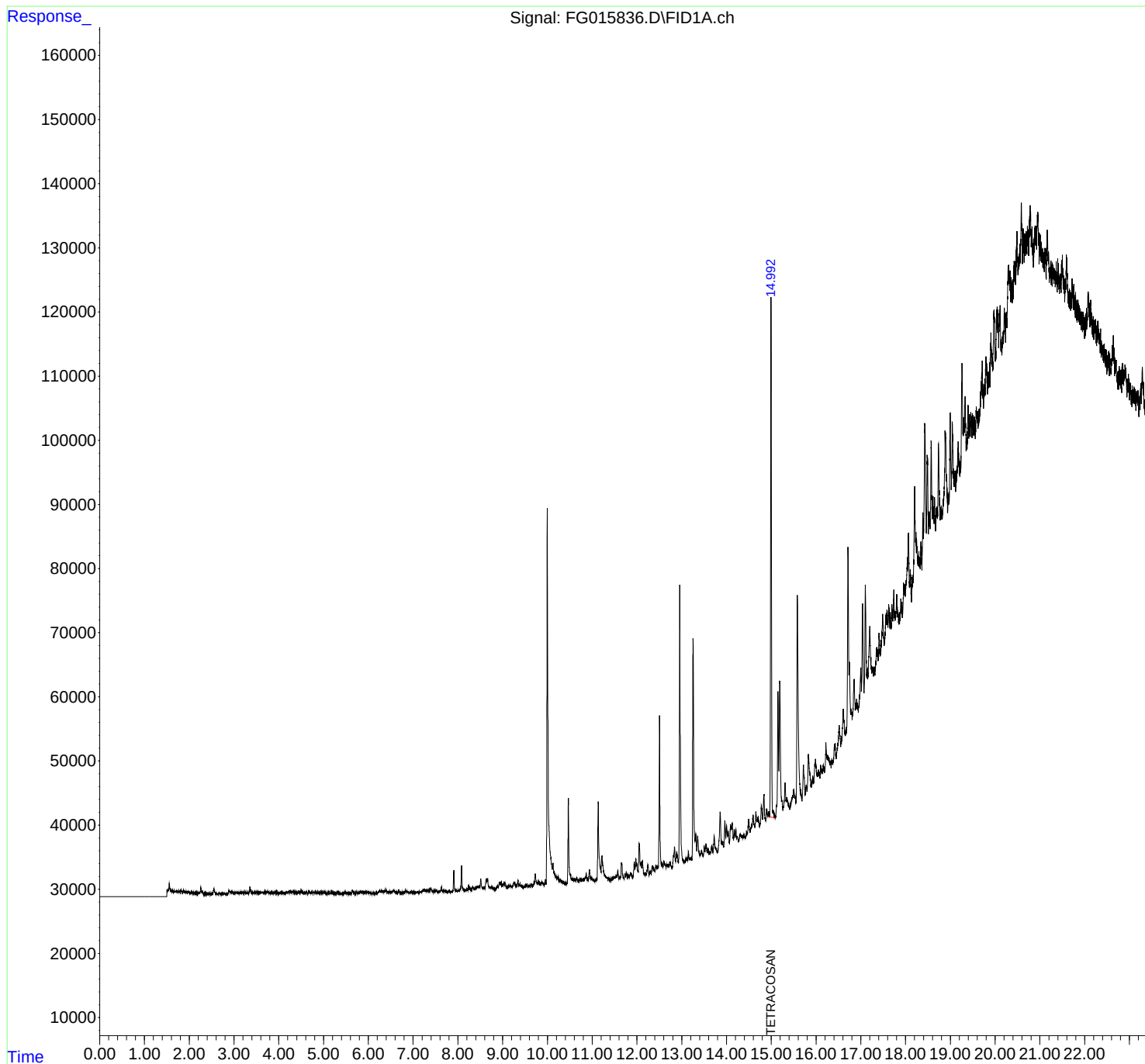
(m)=manual int.

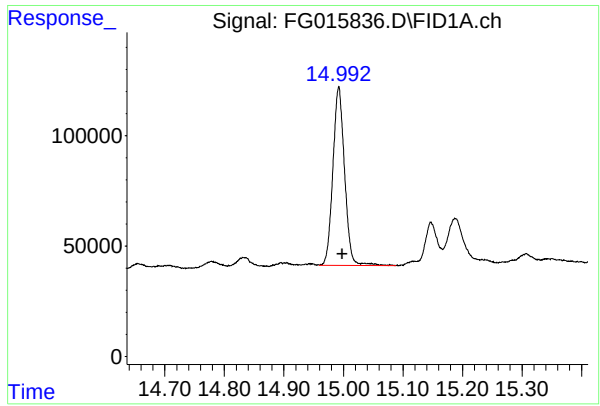
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015836.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 22:44
Operator : YP\AJ
Sample : Q2010-01
Misc :
ALS Vial : 33 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-10

Integration File: autoint1.e
Quant Time: May 14 03:57:26 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.: 14.992 min
Delta R.T.: -0.006 min
Response: 1102742
Conc: 9.37 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-10

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015836.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 22:44
 Sample : Q2010-01
 Misc :
 ALS Vial : 33 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.316	4.300	4.342	BV	157	1694	0.15%	0.013%
2	4.345	4.342	4.351	VV	119	288	0.03%	0.002%
3	4.366	4.351	4.406	PV	163	3092	0.28%	0.024%
4	4.410	4.406	4.423	PV	94	683	0.06%	0.005%
5	4.437	4.423	4.448	VV	152	1466	0.13%	0.011%
6	4.452	4.448	4.463	VV	143	725	0.07%	0.006%
7	4.470	4.463	4.475	VV	136	577	0.05%	0.005%
8	4.500	4.475	4.517	VV	411	6167	0.55%	0.048%
9	4.521	4.517	4.524	VV	156	616	0.06%	0.005%
10	4.539	4.524	4.544	VV	194	2052	0.18%	0.016%
11	4.551	4.544	4.566	VV	189	1719	0.15%	0.013%
12	4.574	4.566	4.582	VV	204	1300	0.12%	0.010%
13	4.586	4.582	4.597	VV	191	1019	0.09%	0.008%
14	4.625	4.597	4.649	VV	357	4878	0.44%	0.038%
15	4.673	4.649	4.704	PV	377	6169	0.55%	0.048%
16	4.706	4.704	4.721	VV	206	1439	0.13%	0.011%
17	4.733	4.721	4.743	VV	266	2345	0.21%	0.018%
18	4.748	4.743	4.771	VV	289	3117	0.28%	0.024%
19	4.781	4.771	4.799	VV	363	4124	0.37%	0.032%
20	4.803	4.799	4.817	VV	264	2186	0.20%	0.017%
21	4.822	4.817	4.839	VV	228	2567	0.23%	0.020%
22	4.848	4.839	4.862	VV	235	2461	0.22%	0.019%
23	4.867	4.862	4.878	VV	239	1425	0.13%	0.011%
24	4.882	4.878	4.901	VV	168	1892	0.17%	0.015%
25	4.903	4.901	4.917	VV	173	1183	0.11%	0.009%
26	4.940	4.917	4.950	VV	262	3946	0.35%	0.031%
27	4.967	4.950	4.987	VV	305	4956	0.44%	0.039%
28	5.007	4.987	5.023	VV	382	5478	0.49%	0.043%
29	5.031	5.023	5.051	VV	238	3155	0.28%	0.025%
30	5.059	5.051	5.070	VV	197	1551	0.14%	0.012%
31	5.089	5.070	5.093	VV	210	2184	0.20%	0.017%
32	5.101	5.093	5.120	VV	288	3382	0.30%	0.026%
33	5.124	5.120	5.136	VV	194	1001	0.09%	0.008%
34	5.161	5.136	5.166	VV	236	2299	0.21%	0.018%
35	5.174	5.166	5.199	VV	586	3288	0.30%	0.026%
36	5.215	5.199	5.245	VV	174	2960	0.27%	0.023%

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37	5.255	5.245	5.267	VV	153	1291	0.12%	0.010%
38	5.293	5.267	5.303	PV	248	3117	0.28%	0.024%
39	5.307	5.303	5.318	VV	254	1675	0.15%	0.013%
40	5.322	5.318	5.360	VV	231	3420	0.31%	0.027%
41	5.366	5.360	5.376	VV	133	796	0.07%	0.006%
42	5.385	5.376	5.405	VV	99	1392	0.12%	0.011%
43	5.413	5.405	5.447	VV	153	2445	0.22%	0.019%
44	5.479	5.447	5.513	VV	322	7879	0.71%	0.062%
45	5.517	5.513	5.546	VV	215	2832	0.25%	0.022%
46	5.548	5.546	5.551	VV	149	321	0.03%	0.003%
47	5.558	5.551	5.584	VV	168	1711	0.15%	0.013%
48	5.587	5.584	5.597	VV	125	479	0.04%	0.004%
49	5.602	5.597	5.617	VV	101	767	0.07%	0.006%
50	5.644	5.617	5.661	VV	675	8781	0.79%	0.069%
51	5.678	5.661	5.699	VV	397	5157	0.46%	0.040%
52	5.733	5.699	5.743	VV	238	3672	0.33%	0.029%
53	5.747	5.743	5.751	VV	174	759	0.07%	0.006%
54	5.756	5.751	5.759	VV	206	776	0.07%	0.006%
55	5.770	5.759	5.777	VV	221	1991	0.18%	0.016%
56	5.783	5.777	5.788	VV	192	1076	0.10%	0.008%
57	5.800	5.788	5.804	VV	240	1733	0.16%	0.014%
58	5.821	5.804	5.836	VV	372	5238	0.47%	0.041%
59	5.840	5.836	5.860	VV	336	3613	0.32%	0.028%
60	5.863	5.860	5.866	VV	250	761	0.07%	0.006%
61	5.876	5.866	5.890	VV	346	3343	0.30%	0.026%
62	5.894	5.890	5.899	VV	273	1098	0.10%	0.009%
63	5.906	5.899	5.923	VV	277	2947	0.26%	0.023%
64	5.938	5.923	5.982	VV	385	9709	0.87%	0.076%
65	5.989	5.982	6.002	VV	267	2675	0.24%	0.021%
66	6.005	6.002	6.012	VV	240	1245	0.11%	0.010%
67	6.016	6.012	6.024	VV	231	1351	0.12%	0.011%
68	6.028	6.024	6.061	VV	205	3562	0.32%	0.028%
69	6.066	6.061	6.081	VV	206	1324	0.12%	0.010%
70	6.086	6.081	6.090	VV	103	464	0.04%	0.004%
71	6.094	6.090	6.102	PV	119	437	0.04%	0.003%
72	6.123	6.102	6.138	VV	165	2365	0.21%	0.018%
73	6.143	6.138	6.155	VV	104	768	0.07%	0.006%
74	6.167	6.155	6.182	VV	208	2320	0.21%	0.018%
75	6.185	6.182	6.193	VV	188	931	0.08%	0.007%
76	6.211	6.193	6.217	VV	214	2048	0.18%	0.016%
77	6.222	6.217	6.228	VV	281	1516	0.14%	0.012%
78	6.252	6.228	6.263	VV	503	8508	0.76%	0.066%
79	6.268	6.263	6.275	VV	416	2771	0.25%	0.022%
80	6.285	6.275	6.292	VV	378	3433	0.31%	0.027%
81	6.301	6.292	6.338	VV	420	10158	0.91%	0.079%
82	6.362	6.338	6.372	VV	394	6792	0.61%	0.053%
83	6.391	6.372	6.420	VV	729	12978	1.16%	0.101%
84	6.424	6.420	6.430	VV	266	1405	0.13%	0.011%
85	6.455	6.430	6.460	VV	288	4440	0.40%	0.035%
86	6.472	6.460	6.479	VV	336	3021	0.27%	0.024%
87	6.489	6.479	6.514	VV	304	4568	0.41%	0.036%
88	6.549	6.514	6.555	VV	479	7877	0.71%	0.062%
89	6.567	6.555	6.577	VV	545	5806	0.52%	0.045%

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90	6.581	6.577	6.593	VV	322	2672	0.24%	0.021%
91	6.601	6.593	6.660	VV	322	7051	0.63%	0.055%
92	6.679	6.660	6.697	VV	543	6686	0.60%	0.052%
93	6.700	6.697	6.707	VV	248	1113	0.10%	0.009%
94	6.711	6.707	6.725	VV	163	1376	0.12%	0.011%
95	6.758	6.725	6.782	PV	245	4848	0.44%	0.038%
96	6.801	6.782	6.811	VV	184	2048	0.18%	0.016%
97	6.835	6.811	6.849	VV	451	6650	0.60%	0.052%
98	6.863	6.849	6.887	VV	326	5432	0.49%	0.042%
99	6.892	6.887	6.912	VV	252	2237	0.20%	0.017%
100	6.930	6.912	6.949	VV	265	3537	0.32%	0.028%
101	6.967	6.949	6.994	VV	264	4710	0.42%	0.037%
102	7.006	6.994	7.020	VV	204	2447	0.22%	0.019%
103	7.023	7.020	7.028	VV	162	688	0.06%	0.005%
104	7.038	7.028	7.058	VV	185	2224	0.20%	0.017%
105	7.088	7.058	7.116	PV	317	4344	0.39%	0.034%
106	7.137	7.116	7.162	VV	186	3232	0.29%	0.025%
107	7.172	7.162	7.181	VV	281	2248	0.20%	0.018%
108	7.213	7.181	7.224	VV	410	7749	0.70%	0.061%
109	7.256	7.224	7.287	VV	543	15297	1.37%	0.120%
110	7.304	7.287	7.322	VV	471	7813	0.70%	0.061%
111	7.334	7.322	7.360	VV	475	8694	0.78%	0.068%
112	7.361	7.360	7.376	VV	452	3450	0.31%	0.027%
113	7.402	7.376	7.433	VV	739	15385	1.38%	0.120%
114	7.440	7.433	7.446	VV	211	1286	0.12%	0.010%
115	7.462	7.446	7.487	VV	460	7295	0.65%	0.057%
116	7.504	7.487	7.515	VV	417	5161	0.46%	0.040%
117	7.519	7.515	7.542	VV	379	4234	0.38%	0.033%
118	7.548	7.542	7.560	VV	219	1913	0.17%	0.015%
119	7.576	7.560	7.596	VV	296	4421	0.40%	0.035%
120	7.632	7.596	7.648	VV	869	13432	1.21%	0.105%
121	7.653	7.648	7.658	VV	279	1519	0.14%	0.012%
122	7.661	7.658	7.667	VV	290	1364	0.12%	0.011%
123	7.672	7.667	7.677	VV	263	1484	0.13%	0.012%
124	7.686	7.677	7.703	VV	308	3988	0.36%	0.031%
125	7.707	7.703	7.734	VV	317	3319	0.30%	0.026%
126	7.742	7.734	7.750	VV	241	1759	0.16%	0.014%
127	7.757	7.750	7.766	VV	204	1611	0.14%	0.013%
128	7.769	7.766	7.785	VV	177	1621	0.15%	0.013%
129	7.807	7.785	7.828	VV	441	6246	0.56%	0.049%
130	7.855	7.828	7.862	VV	181	2326	0.21%	0.018%
131	7.870	7.862	7.874	VV	167	817	0.07%	0.006%
132	7.911	7.874	7.987	PV	3467	49711	4.46%	0.388%
133	8.000	7.987	8.015	VV	324	3927	0.35%	0.031%
134	8.024	8.015	8.028	VV	247	1533	0.14%	0.012%
135	8.084	8.028	8.134	VV	4094	63387	5.69%	0.495%
136	8.161	8.134	8.186	VV	304	7513	0.67%	0.059%
137	8.204	8.186	8.215	VV	424	5286	0.47%	0.041%
138	8.239	8.215	8.257	VV	1015	14912	1.34%	0.117%
139	8.262	8.257	8.288	VV	543	6868	0.62%	0.054%
140	8.331	8.288	8.364	VV	772	18364	1.65%	0.144%
141	8.382	8.364	8.404	VV	488	9398	0.84%	0.073%

					rteres			
142	8.422	8.404	8.427	VV	646	7101	0.64%	0.055%
143	8.444	8.427	8.463	VV	751	12923	1.16%	0.101%
144	8.483	8.463	8.493	VV	820	11751	1.05%	0.092%
145	8.514	8.493	8.567	VV	1901	36120	3.24%	0.282%
146	8.587	8.567	8.604	VV	468	9228	0.83%	0.072%
147	8.632	8.604	8.653	VV	1709	35056	3.15%	0.274%
148	8.665	8.653	8.716	VV	1786	34398	3.09%	0.269%
149	8.726	8.716	8.733	VV	437	4221	0.38%	0.033%
150	8.738	8.733	8.747	VV	408	3166	0.28%	0.025%
151	8.765	8.747	8.825	VV	507	12758	1.14%	0.100%
152	8.841	8.825	8.856	VV	243	3279	0.29%	0.026%
153	8.871	8.856	8.884	VV	465	5983	0.54%	0.047%
154	8.898	8.884	8.911	VV	530	7476	0.67%	0.058%
155	8.930	8.911	8.955	VV	1182	23287	2.09%	0.182%
156	8.966	8.955	8.985	VV	1125	14270	1.28%	0.112%
157	9.006	8.985	9.015	VV	850	12164	1.09%	0.095%
158	9.033	9.015	9.043	VV	1076	14439	1.30%	0.113%
159	9.056	9.043	9.095	VV	1011	16726	1.50%	0.131%
160	9.102	9.095	9.112	VV	346	2629	0.24%	0.021%
161	9.134	9.112	9.153	VV	612	9350	0.84%	0.073%
162	9.164	9.153	9.182	VV	501	7152	0.64%	0.056%
163	9.188	9.182	9.197	VV	414	3220	0.29%	0.025%
164	9.203	9.197	9.221	VV	422	4699	0.42%	0.037%
165	9.257	9.221	9.296	VV	960	29109	2.61%	0.227%
166	9.301	9.296	9.323	VV	493	6107	0.55%	0.048%
167	9.345	9.323	9.367	VV	1263	18761	1.68%	0.147%
168	9.388	9.367	9.413	VV	648	12606	1.13%	0.099%
169	9.422	9.413	9.457	VV	347	4691	0.42%	0.037%
170	9.466	9.457	9.473	PV	172	675	0.06%	0.005%
171	9.496	9.473	9.510	VV	402	4706	0.42%	0.037%
172	9.540	9.510	9.562	VV	557	9624	0.86%	0.075%
173	9.589	9.562	9.607	VV	252	4635	0.42%	0.036%
174	9.641	9.607	9.665	VV	513	10518	0.94%	0.082%
175	9.728	9.665	9.774	VV	2052	53677	4.82%	0.419%
176	9.798	9.774	9.828	VV	897	19869	1.78%	0.155%
177	9.842	9.828	9.861	VV	446	7275	0.65%	0.057%
178	9.874	9.861	9.892	VV	731	10314	0.93%	0.081%
179	9.898	9.892	9.917	VV	533	5555	0.50%	0.043%
180	9.958	9.917	9.973	VV	963	16313	1.46%	0.127%
181	9.997	9.973	10.111	VV	58486	1109682	99.58%	8.672%
182	10.124	10.111	10.217	VV	3470	120469	10.81%	0.941%
183	10.235	10.217	10.277	VV	1307	32252	2.89%	0.252%
184	10.282	10.277	10.348	VV	670	21181	1.90%	0.166%
185	10.361	10.348	10.389	VV	340	5624	0.50%	0.044%
186	10.399	10.389	10.414	VV	253	2247	0.20%	0.018%
187	10.422	10.414	10.431	VV	202	1253	0.11%	0.010%
188	10.469	10.431	10.505	VV	13327	182579	16.38%	1.427%
189	10.512	10.505	10.540	VV	1463	22975	2.06%	0.180%
190	10.546	10.540	10.562	VV	747	8711	0.78%	0.068%
191	10.578	10.562	10.595	VV	791	12635	1.13%	0.099%
192	10.612	10.595	10.633	VV	718	13404	1.20%	0.105%
193	10.658	10.633	10.685	VV	917	17899	1.61%	0.140%
194	10.689	10.685	10.702	VV	450	3513	0.32%	0.027%

					rteres			
195	10.728	10.702	10.739	VV	622	10650	0.96%	0.083%
196	10.750	10.739	10.771	VV	636	9980	0.90%	0.078%
197	10.794	10.771	10.812	VV	674	11987	1.08%	0.094%
198	10.830	10.812	10.842	VV	719	10436	0.94%	0.082%
199	10.868	10.842	10.912	VV	1473	32004	2.87%	0.250%
200	10.940	10.912	10.985	VV	2016	41341	3.71%	0.323%
201	10.997	10.985	11.019	VV	496	8488	0.76%	0.066%
202	11.035	11.019	11.044	VV	240	2863	0.26%	0.022%
203	11.081	11.044	11.085	VV	255	4187	0.38%	0.033%
204	11.133	11.085	11.195	VV	12462	251398	22.56%	1.965%
205	11.219	11.195	11.288	VV	3980	114393	10.26%	0.894%
206	11.297	11.288	11.320	VV	794	12440	1.12%	0.097%
207	11.323	11.320	11.366	VV	588	9893	0.89%	0.077%
208	11.373	11.366	11.385	VV	311	2464	0.22%	0.019%
209	11.391	11.385	11.422	VV	217	2505	0.22%	0.020%
210	11.443	11.422	11.455	PV	366	4411	0.40%	0.034%
211	11.460	11.455	11.470	VV	358	2492	0.22%	0.019%
212	11.502	11.470	11.523	VV	541	12152	1.09%	0.095%
213	11.535	11.523	11.540	VV	521	4264	0.38%	0.033%
214	11.573	11.540	11.605	VV	1439	24578	2.21%	0.192%
215	11.623	11.605	11.628	VV	331	3193	0.29%	0.025%
216	11.657	11.628	11.697	VV	2454	47701	4.28%	0.373%
217	11.699	11.697	11.717	VV	162	1216	0.11%	0.010%
218	11.732	11.717	11.747	VV	705	8333	0.75%	0.065%
219	11.766	11.747	11.788	VV	838	11806	1.06%	0.092%
220	11.805	11.788	11.832	VV	409	6857	0.62%	0.054%
221	11.861	11.832	11.889	VV	777	16205	1.45%	0.127%
222	11.894	11.889	11.903	VV	264	1494	0.13%	0.012%
223	11.906	11.903	11.911	VV	169	568	0.05%	0.004%
224	11.940	11.911	11.957	PV	2400	33665	3.02%	0.263%
225	11.974	11.957	12.024	VV	2812	73267	6.57%	0.573%
226	12.050	12.024	12.077	VV	5085	88485	7.94%	0.692%
227	12.087	12.077	12.103	VV	2162	28933	2.60%	0.226%
228	12.121	12.103	12.177	VV	2286	44843	4.02%	0.350%
229	12.183	12.177	12.204	VV	361	3228	0.29%	0.025%
230	12.245	12.204	12.272	VV	1620	27708	2.49%	0.217%
231	12.286	12.272	12.296	PV	402	3197	0.29%	0.025%
232	12.302	12.296	12.307	VV	291	1471	0.13%	0.011%
233	12.343	12.307	12.367	VV	1267	25591	2.30%	0.200%
234	12.370	12.367	12.402	VV	780	10951	0.98%	0.086%
235	12.419	12.402	12.439	VV	1184	19970	1.79%	0.156%
236	12.443	12.439	12.467	VV	985	13101	1.18%	0.102%
237	12.502	12.467	12.555	VV	24413	314157	28.19%	2.455%
238	12.565	12.555	12.582	VV	1197	16786	1.51%	0.131%
239	12.600	12.582	12.648	VV	1574	41379	3.71%	0.323%
240	12.664	12.648	12.679	VV	937	13676	1.23%	0.107%
241	12.691	12.679	12.714	VV	835	13541	1.22%	0.106%
242	12.732	12.714	12.782	VV	1197	25456	2.28%	0.199%
243	12.785	12.782	12.788	VV	154	301	0.03%	0.002%
244	12.814	12.788	12.823	PV	2050	26380	2.37%	0.206%
245	12.837	12.823	12.862	VV	3227	48838	4.38%	0.382%
246	12.888	12.862	12.927	VV	2338	59256	5.32%	0.463%

					rteres			
247	12.955	12.927	13.029	VV	43714	662719	59.47%	5.179%
248	13.032	13.029	13.067	VV	775	11276	1.01%	0.088%
249	13.100	13.067	13.117	VV	913	17386	1.56%	0.136%
250	13.122	13.117	13.131	VV	741	5253	0.47%	0.041%
251	13.147	13.131	13.167	VV	1826	24761	2.22%	0.194%
252	13.175	13.167	13.195	VV	773	9783	0.88%	0.076%
253	13.213	13.195	13.227	VV	739	10423	0.94%	0.081%
254	13.253	13.227	13.299	VV	34573	514237	46.14%	4.019%
255	13.314	13.299	13.335	VV	4182	66503	5.97%	0.520%
256	13.354	13.335	13.416	VV	3600	84534	7.59%	0.661%
257	13.441	13.416	13.480	VV	1235	27652	2.48%	0.216%
258	13.502	13.480	13.517	VV	1836	23035	2.07%	0.180%
259	13.539	13.517	13.572	VV	1991	42897	3.85%	0.335%
260	13.589	13.572	13.615	VV	1133	18950	1.70%	0.148%
261	13.631	13.615	13.641	VV	557	7023	0.63%	0.055%
262	13.667	13.641	13.691	VV	1302	25804	2.32%	0.202%
263	13.723	13.691	13.755	VV	2692	54717	4.91%	0.428%
264	13.760	13.755	13.795	VV	871	10429	0.94%	0.081%
265	13.856	13.795	13.904	PV	6178	140967	12.65%	1.102%
266	13.914	13.904	13.933	VV	1335	17406	1.56%	0.136%
267	13.961	13.933	13.984	VV	4303	70107	6.29%	0.548%
268	14.001	13.984	14.020	VV	3555	56051	5.03%	0.438%
269	14.036	14.020	14.067	VV	2410	45523	4.08%	0.356%
270	14.089	14.067	14.105	VV	3340	53442	4.80%	0.418%
271	14.127	14.105	14.154	VV	3465	69883	6.27%	0.546%
272	14.172	14.154	14.188	VV	2287	30147	2.71%	0.236%
273	14.203	14.188	14.258	VV	2100	46643	4.19%	0.365%
274	14.263	14.258	14.272	VV	355	1612	0.14%	0.013%
275	14.274	14.272	14.277	VV	157	306	0.03%	0.002%
276	14.300	14.277	14.312	PV	904	13355	1.20%	0.104%
277	14.319	14.312	14.343	VV	844	10618	0.95%	0.083%
278	14.347	14.343	14.351	VV	432	1723	0.15%	0.013%
279	14.356	14.351	14.376	VV	635	5514	0.49%	0.043%
280	14.389	14.376	14.416	VV	587	7278	0.65%	0.057%
281	14.451	14.416	14.467	PV	916	11684	1.05%	0.091%
282	14.491	14.467	14.528	VV	2579	52428	4.70%	0.410%
283	14.568	14.528	14.573	VV	1432	26948	2.42%	0.211%
284	14.594	14.573	14.630	VV	2745	54992	4.93%	0.430%
285	14.654	14.630	14.684	VV	3001	58701	5.27%	0.459%
286	14.706	14.684	14.738	VV	1942	43912	3.94%	0.343%
287	14.742	14.738	14.746	VV	626	2727	0.24%	0.021%
288	14.778	14.746	14.805	VV	3442	68343	6.13%	0.534%
289	14.832	14.805	14.876	VV	4879	100746	9.04%	0.787%
290	14.895	14.876	14.929	VV	2363	50103	4.50%	0.392%
291	14.944	14.929	14.955	VV	1765	21996	1.97%	0.172%
292	14.992	14.955	15.029	VV	81724	1114405	100.00%	8.709%
293	15.036	15.029	15.076	VV	1445	25184	2.26%	0.197%
294	15.079	15.076	15.093	VV	468	3158	0.28%	0.025%
295	15.118	15.093	15.123	VV	1928	20297	1.82%	0.159%
296	15.147	15.123	15.167	VV	19530	278852	25.02%	2.179%
297	15.188	15.167	15.260	VV	20942	425168	38.15%	3.323%
298	15.307	15.260	15.333	VV	4614	96679	8.68%	0.756%
299	15.351	15.333	15.414	VV	2091	52195	4.68%	0.408%

					rteres			
300	15.475	15.414	15.480	PV	1793	38753	3.48%	0.303%
301	15.498	15.480	15.526	VV	2510	51803	4.65%	0.405%
302	15.530	15.526	15.551	VV	1434	13454	1.21%	0.105%
303	15.580	15.551	15.650	VV	32190	672005	60.30%	5.252%
304	15.657	15.650	15.686	VV	1838	19241	1.73%	0.150%
305	15.717	15.686	15.755	PV	5138	103672	9.30%	0.810%
306	15.779	15.755	15.797	VV	1629	26010	2.33%	0.203%
307	15.825	15.797	15.895	VV	5824	162683	14.60%	1.271%
308	15.916	15.895	15.922	VV	1498	16993	1.52%	0.133%
309	15.928	15.922	15.947	VV	1664	18750	1.68%	0.147%
310	15.987	15.947	16.022	VV	4073	110513	9.92%	0.864%
311	16.036	16.022	16.043	VV	1584	15219	1.37%	0.119%
312	16.054	16.043	16.066	VV	1892	18840	1.69%	0.147%
313	16.069	16.066	16.085	VV	1380	9066	0.81%	0.071%
314	16.101	16.085	16.144	VV	2243	44210	3.97%	0.345%
315	16.161	16.144	16.183	VV	1743	27427	2.46%	0.214%
316	16.220	16.183	16.248	VV	4775	89100	8.00%	0.696%
317	16.251	16.248	16.280	VV	2584	39712	3.56%	0.310%
318	16.284	16.280	16.312	VV	1978	26228	2.35%	0.205%
319	16.321	16.312	16.335	VV	1226	11141	1.00%	0.087%
320	16.344	16.335	16.351	PV	941	6693	0.60%	0.052%
321	16.355	16.351	16.375	VV	952	8688	0.78%	0.068%
322	16.406	16.375	16.411	VV	2425	25047	2.25%	0.196%
323	16.428	16.411	16.447	VV	2573	40031	3.59%	0.313%
324	16.516	16.447	16.550	PV	4218	117357	10.53%	0.917%
325	16.559	16.550	16.566	VV	1088	7650	0.69%	0.060%
326	16.605	16.566	16.662	VV	5437	149138	13.38%	1.165%
327	16.671	16.662	16.676	VV	1252	9483	0.85%	0.074%
328	16.713	16.676	16.733	VV	29070	436971	39.21%	3.415%
329	16.744	16.733	16.774	VV	10717	165505	14.85%	1.293%
330	16.780	16.774	16.804	VV	2923	39074	3.51%	0.305%
331	16.848	16.804	16.873	VV	6405	140868	12.64%	1.101%
332	16.883	16.873	16.893	VV	2253	22265	2.00%	0.174%
333	16.907	16.893	16.914	VV	2546	22608	2.03%	0.177%
334	16.920	16.914	16.934	VV	1843	15773	1.42%	0.123%
335	16.938	16.934	16.945	VV	782	4930	0.44%	0.039%
336	16.999	16.945	17.012	PV	6108	107367	9.63%	0.839%
337	17.037	17.012	17.073	VV	15465	264994	23.78%	2.071%
338	17.100	17.073	17.144	VV	17461	304900	27.36%	2.383%
339	17.148	17.144	17.154	VV	3377	17026	1.53%	0.133%
340	17.199	17.154	17.235	VV	9359	250945	22.52%	1.961%
341	17.239	17.235	17.245	VV	2696	12968	1.16%	0.101%
342	17.254	17.245	17.262	VV	2175	18421	1.65%	0.144%
343	17.265	17.262	17.285	VV	2052	19158	1.72%	0.150%
344	17.291	17.285	17.295	VV	1206	6390	0.57%	0.050%
345	17.303	17.295	17.314	VV	1406	10319	0.93%	0.081%
346	17.346	17.314	17.350	PV	3080	31880	2.86%	0.249%
347	17.360	17.350	17.367	VV	2960	21626	1.94%	0.169%
348	17.372	17.367	17.388	VV	2201	14414	1.29%	0.113%
Sum of corrected areas:					12796071			

Report of Analysis

Client:	CDM Smith	Date Collected:	05/08/25
Project:	South River WM Replacement	Date Received:	05/09/25
Client Sample ID:	TP-13	SDG No.:	Q2010
Lab Sample ID:	Q2010-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	84.4
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
FG015837.D	1	05/13/25 10:05	05/13/25 23:14	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1580	J	200	1970	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.9		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 : FG015837.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 23:14
Operator : YP\AJ
Sample : Q2010-02
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-13

Integration File: autoint1.e
Quant Time: May 14 03:57:36 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	1281687	10.886 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

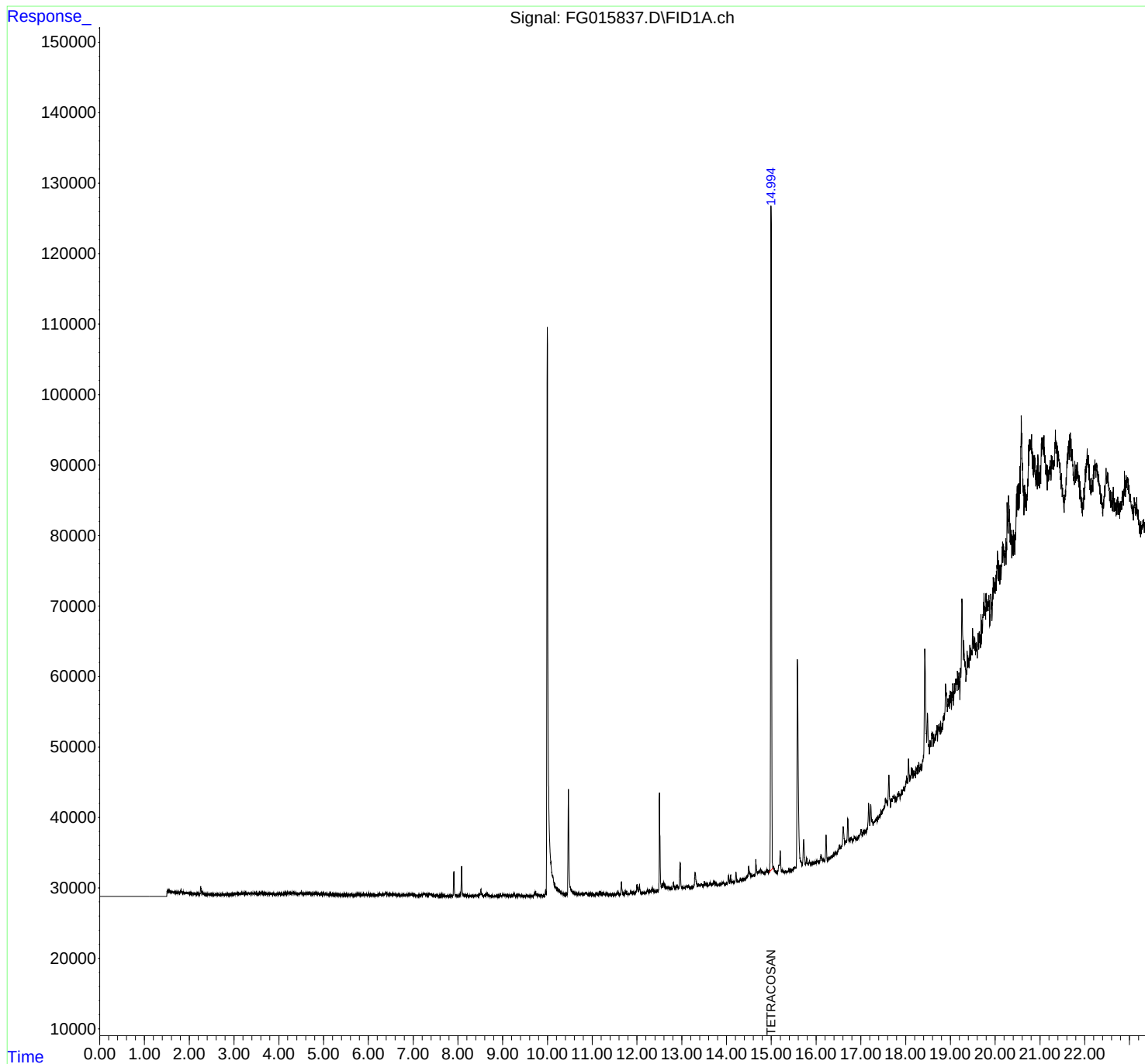
(m)=manual int.

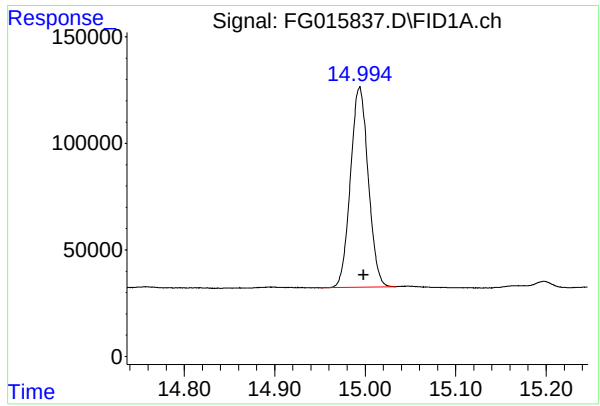
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015837.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 23:14
Operator : YP\AJ
Sample : Q2010-02
Misc :
ALS Vial : 34 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-13

Integration File: autoint1.e
Quant Time: May 14 03:57:36 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.: 14.994 min
Delta R.T.: -0.004 min
Response: 1281687
Conc: 10.89 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-13

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015837.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 23:14
 Sample : Q2010-02
 Misc :
 ALS Vial : 34 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.318	4.300	4.354	BV	198	2942	0.18%	0.046%
2	4.360	4.354	4.381	VV	124	801	0.05%	0.013%
3	4.387	4.381	4.404	VV	57	540	0.03%	0.008%
4	4.407	4.404	4.411	VV	86	211	0.01%	0.003%
5	4.418	4.411	4.433	PV	66	557	0.03%	0.009%
6	4.434	4.433	4.450	VV	80	473	0.03%	0.007%
7	4.456	4.450	4.463	VV	97	451	0.03%	0.007%
8	4.466	4.463	4.471	VV	83	283	0.02%	0.004%
9	4.475	4.471	4.480	PV	86	329	0.02%	0.005%
10	4.494	4.480	4.514	VV	297	3200	0.20%	0.050%
11	4.518	4.514	4.528	VV	141	899	0.06%	0.014%
12	4.532	4.528	4.540	VV	133	721	0.05%	0.011%
13	4.543	4.540	4.562	VV	141	1165	0.07%	0.018%
14	4.576	4.562	4.584	VV	153	1277	0.08%	0.020%
15	4.588	4.584	4.606	VV	194	1004	0.06%	0.016%
16	4.619	4.606	4.642	PV	234	3096	0.19%	0.049%
17	4.643	4.642	4.651	VV	196	376	0.02%	0.006%
18	4.671	4.651	4.692	VV	320	4742	0.30%	0.075%
19	4.695	4.692	4.703	VV	130	560	0.04%	0.009%
20	4.705	4.703	4.728	VV	149	1489	0.09%	0.023%
21	4.749	4.728	4.763	VV	149	1812	0.11%	0.028%
22	4.769	4.763	4.775	VV	153	656	0.04%	0.010%
23	4.781	4.775	4.817	VV	148	2561	0.16%	0.040%
24	4.830	4.817	4.836	VV	191	1607	0.10%	0.025%
25	4.843	4.836	4.887	VV	201	3982	0.25%	0.063%
26	4.899	4.887	4.914	VV	142	1730	0.11%	0.027%
27	4.919	4.914	4.928	VV	132	862	0.05%	0.014%
28	4.934	4.928	4.939	VV	168	813	0.05%	0.013%
29	4.943	4.939	4.949	VV	158	630	0.04%	0.010%
30	4.990	4.949	5.036	VV	172	5489	0.34%	0.086%
31	5.042	5.036	5.054	VV	140	907	0.06%	0.014%
32	5.057	5.054	5.061	VV	113	319	0.02%	0.005%
33	5.067	5.061	5.101	VV	134	1602	0.10%	0.025%
34	5.123	5.101	5.130	VV	141	1211	0.08%	0.019%
35	5.165	5.130	5.179	VV	258	3483	0.22%	0.055%
36	5.183	5.179	5.192	VV	155	734	0.05%	0.012%

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37	5.200	5.192	5.207	VV	129	761	0.05%	0.012%
38	5.210	5.207	5.219	VV	65	495	0.03%	0.008%
39	5.231	5.219	5.240	VV	107	883	0.06%	0.014%
40	5.242	5.240	5.255	VV	116	444	0.03%	0.007%
41	5.261	5.255	5.281	VV	92	693	0.04%	0.011%
42	5.287	5.281	5.295	VV	82	359	0.02%	0.006%
43	5.306	5.295	5.312	VV	68	344	0.02%	0.005%
44	5.331	5.312	5.354	PV	141	1792	0.11%	0.028%
45	5.356	5.354	5.359	VV	97	213	0.01%	0.003%
46	5.362	5.359	5.374	VV	101	577	0.04%	0.009%
47	5.376	5.374	5.378	VV	78	152	0.01%	0.002%
48	5.387	5.378	5.394	VV	96	602	0.04%	0.009%
49	5.395	5.394	5.419	VV	106	838	0.05%	0.013%
50	5.422	5.419	5.425	VV	71	229	0.01%	0.004%
51	5.429	5.425	5.447	VV	111	851	0.05%	0.013%
52	5.454	5.447	5.460	VV	126	726	0.05%	0.011%
53	5.464	5.460	5.504	VV	158	3011	0.19%	0.047%
54	5.512	5.504	5.552	VV	146	1767	0.11%	0.028%
55	5.556	5.552	5.564	VV	116	405	0.03%	0.006%
56	5.574	5.564	5.578	VV	150	620	0.04%	0.010%
57	5.583	5.578	5.603	VV	115	1169	0.07%	0.018%
58	5.607	5.603	5.611	VV	58	261	0.02%	0.004%
59	5.621	5.611	5.626	VV	104	520	0.03%	0.008%
60	5.640	5.626	5.648	VV	130	1134	0.07%	0.018%
61	5.661	5.648	5.669	VV	107	932	0.06%	0.015%
62	5.676	5.669	5.687	PV	105	478	0.03%	0.008%
63	5.690	5.687	5.713	VV	102	830	0.05%	0.013%
64	5.733	5.713	5.763	VV	179	4010	0.25%	0.063%
65	5.768	5.763	5.775	VV	175	984	0.06%	0.015%
66	5.791	5.775	5.820	VV	210	4426	0.28%	0.070%
67	5.826	5.820	5.835	VV	232	1609	0.10%	0.025%
68	5.844	5.835	5.860	VV	214	2314	0.14%	0.036%
69	5.876	5.860	5.880	VV	269	2052	0.13%	0.032%
70	5.886	5.880	5.914	VV	268	3465	0.22%	0.054%
71	5.919	5.914	5.934	VV	169	1662	0.10%	0.026%
72	5.940	5.934	5.960	VV	167	2030	0.13%	0.032%
73	5.977	5.960	5.989	VV	191	1854	0.12%	0.029%
74	5.993	5.989	6.000	VV	131	638	0.04%	0.010%
75	6.009	6.000	6.074	VV	225	4156	0.26%	0.065%
76	6.086	6.074	6.092	VV	148	1051	0.07%	0.017%
77	6.113	6.092	6.148	VV	159	3005	0.19%	0.047%
78	6.153	6.148	6.171	VV	120	1031	0.06%	0.016%
79	6.176	6.171	6.183	VV	123	681	0.04%	0.011%
80	6.188	6.183	6.197	VV	179	765	0.05%	0.012%
81	6.214	6.197	6.229	VV	242	2796	0.18%	0.044%
82	6.241	6.229	6.267	VV	237	3925	0.25%	0.062%
83	6.279	6.267	6.284	VV	284	1912	0.12%	0.030%
84	6.287	6.284	6.291	VV	199	665	0.04%	0.010%
85	6.301	6.291	6.305	VV	197	1494	0.09%	0.023%
86	6.318	6.305	6.348	VV	264	5451	0.34%	0.086%
87	6.394	6.348	6.416	VV	507	11932	0.75%	0.188%
88	6.421	6.416	6.464	VV	278	5867	0.37%	0.092%
89	6.468	6.464	6.473	VV	266	1243	0.08%	0.020%

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90	6.481	6.473	6.486	VV	252	1723	0.11%	0.027%
91	6.488	6.486	6.492	VV	193	752	0.05%	0.012%
92	6.495	6.492	6.504	VV	245	1418	0.09%	0.022%
93	6.535	6.504	6.559	VV	290	7136	0.45%	0.112%
94	6.564	6.559	6.587	VV	329	3878	0.24%	0.061%
95	6.591	6.587	6.603	VV	137	1290	0.08%	0.020%
96	6.612	6.603	6.629	VV	205	1864	0.12%	0.029%
97	6.632	6.629	6.659	VV	146	1889	0.12%	0.030%
98	6.676	6.659	6.687	VV	215	2354	0.15%	0.037%
99	6.690	6.687	6.724	VV	142	2129	0.13%	0.033%
100	6.749	6.724	6.762	VV	188	2205	0.14%	0.035%
101	6.767	6.762	6.790	VV	120	1748	0.11%	0.027%
102	6.796	6.790	6.804	VV	158	1022	0.06%	0.016%
103	6.820	6.804	6.834	VV	195	2558	0.16%	0.040%
104	6.855	6.834	6.866	VV	229	3427	0.21%	0.054%
105	6.871	6.866	6.882	VV	192	1646	0.10%	0.026%
106	6.894	6.882	6.902	VV	234	2293	0.14%	0.036%
107	6.911	6.902	6.939	VV	269	4290	0.27%	0.067%
108	6.957	6.939	7.002	VV	283	7281	0.46%	0.114%
109	7.012	7.002	7.054	VV	173	3964	0.25%	0.062%
110	7.059	7.054	7.092	VV	158	2325	0.15%	0.037%
111	7.097	7.092	7.103	VV	108	470	0.03%	0.007%
112	7.107	7.103	7.117	VV	133	676	0.04%	0.011%
113	7.119	7.117	7.124	VV	150	389	0.02%	0.006%
114	7.131	7.124	7.137	VV	107	756	0.05%	0.012%
115	7.143	7.137	7.155	VV	165	1262	0.08%	0.020%
116	7.165	7.155	7.174	VV	166	1445	0.09%	0.023%
117	7.234	7.174	7.244	VV	381	9396	0.59%	0.148%
118	7.257	7.244	7.287	VV	392	7891	0.49%	0.124%
119	7.291	7.287	7.312	VV	293	3909	0.24%	0.061%
120	7.316	7.312	7.332	VV	283	2518	0.16%	0.040%
121	7.363	7.332	7.380	VV	332	6639	0.42%	0.104%
122	7.405	7.380	7.442	VV	316	7860	0.49%	0.124%
123	7.452	7.442	7.463	VV	190	1744	0.11%	0.027%
124	7.467	7.463	7.477	VV	186	1102	0.07%	0.017%
125	7.480	7.477	7.500	VV	166	1188	0.07%	0.019%
126	7.522	7.500	7.542	VV	135	2463	0.15%	0.039%
127	7.546	7.542	7.570	VV	145	1872	0.12%	0.029%
128	7.577	7.570	7.593	VV	171	1321	0.08%	0.021%
129	7.609	7.593	7.617	VV	170	1282	0.08%	0.020%
130	7.631	7.617	7.644	VV	292	3181	0.20%	0.050%
131	7.649	7.644	7.653	VV	186	777	0.05%	0.012%
132	7.655	7.653	7.682	VV	209	1681	0.11%	0.026%
133	7.686	7.682	7.690	VV	88	355	0.02%	0.006%
134	7.702	7.690	7.723	VV	166	1816	0.11%	0.029%
135	7.734	7.723	7.739	VV	102	512	0.03%	0.008%
136	7.745	7.739	7.791	PV	74	1195	0.07%	0.019%
137	7.795	7.791	7.817	VV	94	1051	0.07%	0.017%
138	7.819	7.817	7.830	VV	118	521	0.03%	0.008%
139	7.837	7.830	7.859	VV	134	1285	0.08%	0.020%
140	7.911	7.859	7.963	VV	3572	44729	2.80%	0.703%
141	7.967	7.963	7.977	VV	191	1119	0.07%	0.018%

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142	7.985	7.977	7.991	VV	151	1039	0.07%	0.016%
143	7.996	7.991	8.023	VV	155	2136	0.13%	0.034%
144	8.036	8.023	8.040	VV	220	1607	0.10%	0.025%
145	8.084	8.040	8.149	VV	4293	56574	3.54%	0.889%
146	8.170	8.149	8.197	VV	183	3141	0.20%	0.049%
147	8.200	8.197	8.205	VV	130	464	0.03%	0.007%
148	8.209	8.205	8.215	VV	161	596	0.04%	0.009%
149	8.227	8.215	8.259	VV	184	2637	0.17%	0.041%
150	8.263	8.259	8.294	VV	121	1735	0.11%	0.027%
151	8.298	8.294	8.314	VV	116	942	0.06%	0.015%
152	8.327	8.314	8.334	VV	134	921	0.06%	0.014%
153	8.338	8.334	8.358	VV	119	1088	0.07%	0.017%
154	8.419	8.358	8.424	VV	158	3729	0.23%	0.059%
155	8.430	8.424	8.442	VV	169	1700	0.11%	0.027%
156	8.449	8.442	8.467	VV	185	2195	0.14%	0.035%
157	8.484	8.467	8.498	VV	424	5511	0.35%	0.087%
158	8.514	8.498	8.565	VV	1027	17098	1.07%	0.269%
159	8.574	8.565	8.584	VV	164	1148	0.07%	0.018%
160	8.658	8.584	8.699	VV	396	13776	0.86%	0.217%
161	8.708	8.699	8.713	VV	141	797	0.05%	0.013%
162	8.718	8.713	8.737	VV	129	1016	0.06%	0.016%
163	8.758	8.737	8.799	VV	173	3066	0.19%	0.048%
164	8.809	8.799	8.818	VV	93	517	0.03%	0.008%
165	8.845	8.818	8.858	PV	171	1852	0.12%	0.029%
166	8.873	8.858	8.926	VV	251	3869	0.24%	0.061%
167	8.950	8.926	8.979	VV	376	4996	0.31%	0.079%
168	9.006	8.979	9.030	VV	351	7034	0.44%	0.111%
169	9.036	9.030	9.047	VV	218	1959	0.12%	0.031%
170	9.056	9.047	9.074	VV	250	2936	0.18%	0.046%
171	9.078	9.074	9.099	VV	169	1750	0.11%	0.028%
172	9.147	9.099	9.158	VV	225	4641	0.29%	0.073%
173	9.169	9.158	9.189	VV	167	2059	0.13%	0.032%
174	9.205	9.189	9.223	VV	199	2184	0.14%	0.034%
175	9.250	9.223	9.264	VV	445	6979	0.44%	0.110%
176	9.265	9.264	9.302	VV	344	3705	0.23%	0.058%
177	9.308	9.302	9.325	VV	119	1160	0.07%	0.018%
178	9.345	9.325	9.373	VV	434	6959	0.44%	0.109%
179	9.384	9.373	9.424	VV	239	4937	0.31%	0.078%
180	9.434	9.424	9.440	VV	151	910	0.06%	0.014%
181	9.444	9.440	9.473	VV	195	1375	0.09%	0.022%
182	9.483	9.473	9.494	VV	112	723	0.05%	0.011%
183	9.534	9.494	9.565	VV	305	4908	0.31%	0.077%
184	9.582	9.565	9.635	VV	99	2275	0.14%	0.036%
185	9.639	9.635	9.644	VV	121	474	0.03%	0.007%
186	9.648	9.644	9.656	VV	93	452	0.03%	0.007%
187	9.660	9.656	9.676	VV	86	595	0.04%	0.009%
188	9.681	9.676	9.684	VV	62	196	0.01%	0.003%
189	9.730	9.684	9.798	VV	664	22952	1.44%	0.361%
190	9.807	9.798	9.819	VV	261	2508	0.16%	0.039%
191	9.825	9.819	9.832	VV	227	1313	0.08%	0.021%
192	9.849	9.832	9.871	VV	205	3545	0.22%	0.056%
193	9.879	9.871	9.894	VV	196	2000	0.13%	0.031%
194	9.905	9.894	9.921	VV	207	2196	0.14%	0.035%

195	9.925	9.921	9.930	PV	49	184	0.01%	0.003%
196	9.959	9.930	9.972	VV	917	10965	0.69%	0.172%
197	9.997	9.972	10.222	VV	80545	1596169	100.00%	25.095%
198	10.239	10.222	10.279	VV	1103	28913	1.81%	0.455%
199	10.282	10.279	10.327	VV	722	15348	0.96%	0.241%
200	10.331	10.327	10.334	VV	435	1771	0.11%	0.028%
201	10.338	10.334	10.359	VV	426	5499	0.34%	0.086%
202	10.363	10.359	10.385	VV	338	4590	0.29%	0.072%
203	10.390	10.385	10.393	VV	274	1161	0.07%	0.018%
204	10.407	10.393	10.416	VV	304	3570	0.22%	0.056%
205	10.422	10.416	10.440	VV	286	3487	0.22%	0.055%
206	10.470	10.440	10.571	VV	15078	243025	15.23%	3.821%
207	10.578	10.571	10.601	VV	568	8442	0.53%	0.133%
208	10.605	10.601	10.630	VV	418	5653	0.35%	0.089%
209	10.644	10.630	10.666	VV	439	6629	0.42%	0.104%
210	10.688	10.666	10.707	VV	409	6670	0.42%	0.105%
211	10.752	10.707	10.784	VV	378	11065	0.69%	0.174%
212	10.787	10.784	10.812	VV	267	3586	0.22%	0.056%
213	10.845	10.812	10.856	VV	369	7599	0.48%	0.119%
214	10.869	10.856	10.895	VV	458	7562	0.47%	0.119%
215	10.898	10.895	10.914	VV	214	1775	0.11%	0.028%
216	10.941	10.914	10.965	VV	360	6477	0.41%	0.102%
217	10.968	10.965	10.982	VV	234	2232	0.14%	0.035%
218	10.989	10.982	11.028	VV	317	4883	0.31%	0.077%
219	11.042	11.028	11.057	VV	155	1776	0.11%	0.028%
220	11.061	11.057	11.075	VV	172	1082	0.07%	0.017%
221	11.095	11.075	11.129	VV	319	5766	0.36%	0.091%
222	11.174	11.129	11.205	VV	507	13210	0.83%	0.208%
223	11.211	11.205	11.232	VV	280	3406	0.21%	0.054%
224	11.250	11.232	11.288	VV	371	7306	0.46%	0.115%
225	11.299	11.288	11.319	VV	266	3266	0.20%	0.051%
226	11.324	11.319	11.337	VV	199	1472	0.09%	0.023%
227	11.341	11.337	11.365	VV	151	1854	0.12%	0.029%
228	11.382	11.365	11.397	VV	166	2067	0.13%	0.032%
229	11.401	11.397	11.412	VV	159	752	0.05%	0.012%
230	11.427	11.412	11.442	VV	116	1089	0.07%	0.017%
231	11.444	11.442	11.450	VV	111	311	0.02%	0.005%
232	11.456	11.450	11.482	VV	94	1360	0.09%	0.021%
233	11.493	11.482	11.499	PV	119	766	0.05%	0.012%
234	11.505	11.499	11.516	VV	120	775	0.05%	0.012%
235	11.549	11.516	11.556	VV	211	2530	0.16%	0.040%
236	11.575	11.556	11.606	VV	452	6528	0.41%	0.103%
237	11.620	11.606	11.625	VV	125	1042	0.07%	0.016%
238	11.655	11.625	11.695	VV	1866	26328	1.65%	0.414%
239	11.699	11.695	11.712	VV	121	649	0.04%	0.010%
240	11.735	11.712	11.753	VV	530	6014	0.38%	0.095%
241	11.770	11.753	11.801	VV	510	6680	0.42%	0.105%
242	11.816	11.801	11.820	VV	95	446	0.03%	0.007%
243	11.826	11.820	11.832	PV	137	519	0.03%	0.008%
244	11.862	11.832	11.912	VV	391	10669	0.67%	0.168%
245	11.927	11.912	11.946	VV	270	2721	0.17%	0.043%
246	11.968	11.946	11.975	VV	277	3305	0.21%	0.052%

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247	12.000	11.975	12.037	VV	1284	27058	1.70%	0.425%
248	12.058	12.037	12.086	VV	1205	17540	1.10%	0.276%
249	12.089	12.086	12.117	VV	170	1548	0.10%	0.024%
250	12.132	12.117	12.159	VV	140	1616	0.10%	0.025%
251	12.181	12.159	12.185	PV	140	1086	0.07%	0.017%
252	12.191	12.185	12.200	VV	63	480	0.03%	0.008%
253	12.229	12.200	12.233	VV	320	3306	0.21%	0.052%
254	12.250	12.233	12.276	VV	463	6350	0.40%	0.100%
255	12.282	12.276	12.310	VV	391	5083	0.32%	0.080%
256	12.312	12.310	12.319	VV	282	1213	0.08%	0.019%
257	12.340	12.319	12.364	VV	756	11342	0.71%	0.178%
258	12.367	12.364	12.425	VV	282	6367	0.40%	0.100%
259	12.451	12.425	12.471	PV	383	4971	0.31%	0.078%
260	12.503	12.471	12.549	VV	13966	172882	10.83%	2.718%
261	12.570	12.549	12.584	VV	1192	18721	1.17%	0.294%
262	12.599	12.584	12.626	VV	1388	23510	1.47%	0.370%
263	12.630	12.626	12.655	VV	781	9767	0.61%	0.154%
264	12.671	12.655	12.689	VV	620	9779	0.61%	0.154%
265	12.714	12.689	12.747	VV	557	14773	0.93%	0.232%
266	12.761	12.747	12.784	VV	424	6179	0.39%	0.097%
267	12.812	12.784	12.857	VV	1124	22950	1.44%	0.361%
268	12.887	12.857	12.931	VV	665	19039	1.19%	0.299%
269	12.965	12.931	12.997	VV	3816	66048	4.14%	1.038%
270	13.007	12.997	13.011	VV	300	2171	0.14%	0.034%
271	13.016	13.011	13.020	VV	259	1334	0.08%	0.021%
272	13.032	13.020	13.059	VV	314	5115	0.32%	0.080%
273	13.065	13.059	13.072	VV	227	1452	0.09%	0.023%
274	13.094	13.072	13.117	VV	478	8376	0.52%	0.132%
275	13.142	13.117	13.185	VV	528	11246	0.70%	0.177%
276	13.202	13.185	13.235	VV	233	3969	0.25%	0.062%
277	13.259	13.235	13.264	VV	264	3101	0.19%	0.049%
278	13.298	13.264	13.363	VV	2202	53043	3.32%	0.834%
279	13.374	13.363	13.400	VV	397	7901	0.49%	0.124%
280	13.406	13.400	13.414	VV	330	2430	0.15%	0.038%
281	13.419	13.414	13.424	VV	360	1965	0.12%	0.031%
282	13.435	13.424	13.480	VV	460	10162	0.64%	0.160%
283	13.501	13.480	13.532	VV	763	13302	0.83%	0.209%
284	13.537	13.532	13.540	VV	313	1311	0.08%	0.021%
285	13.544	13.540	13.548	VV	334	1198	0.08%	0.019%
286	13.552	13.548	13.594	VV	340	6407	0.40%	0.101%
287	13.633	13.594	13.655	VV	557	10196	0.64%	0.160%
288	13.677	13.655	13.692	VV	285	4396	0.28%	0.069%
289	13.724	13.692	13.760	VV	635	15413	0.97%	0.242%
290	13.778	13.760	13.798	VV	241	3156	0.20%	0.050%
291	13.821	13.798	13.828	PV	71	628	0.04%	0.010%
292	13.857	13.828	13.876	VV	171	2625	0.16%	0.041%
293	13.915	13.876	13.955	PV	358	10366	0.65%	0.163%
294	13.958	13.955	13.974	VV	143	753	0.05%	0.012%
295	14.045	13.974	14.067	PV	1235	18551	1.16%	0.292%
296	14.091	14.067	14.119	VV	1212	16419	1.03%	0.258%
297	14.124	14.119	14.128	VV	167	797	0.05%	0.013%
298	14.135	14.128	14.166	VV	198	2960	0.19%	0.047%
299	14.209	14.166	14.268	PV	1530	23915	1.50%	0.376%

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300	14.277	14.268	14.282	PV	148	650	0.04%	0.010%
301	14.291	14.282	14.295	VV	191	1228	0.08%	0.019%
302	14.322	14.295	14.327	VV	305	5147	0.32%	0.081%
303	14.331	14.327	14.357	VV	334	4365	0.27%	0.069%
304	14.368	14.357	14.372	VV	246	1668	0.10%	0.026%
305	14.392	14.372	14.415	VV	291	6259	0.39%	0.098%
306	14.457	14.415	14.464	VV	585	10939	0.69%	0.172%
307	14.492	14.464	14.557	VV	1916	54254	3.40%	0.853%
308	14.563	14.557	14.565	VV	513	2211	0.14%	0.035%
309	14.581	14.565	14.613	VV	564	14610	0.92%	0.230%
310	14.619	14.613	14.629	VV	448	4014	0.25%	0.063%
311	14.655	14.629	14.681	VV	2737	43570	2.73%	0.685%
312	14.689	14.681	14.709	VV	955	13858	0.87%	0.218%
313	14.738	14.709	14.742	VV	943	17343	1.09%	0.273%
314	14.759	14.742	14.809	VV	1261	35443	2.22%	0.557%
315	14.812	14.809	14.841	VV	767	11210	0.70%	0.176%
316	14.849	14.841	14.854	VV	576	3970	0.25%	0.062%
317	14.864	14.854	14.870	VV	557	5217	0.33%	0.082%
318	14.894	14.870	14.924	VV	950	24223	1.52%	0.381%
319	14.929	14.924	14.952	VV	664	9750	0.61%	0.153%
320	14.994	14.952	15.033	VV	94618	1317755	82.56%	20.718%
321	15.048	15.033	15.102	VV	1189	31119	1.95%	0.489%
322	15.107	15.102	15.112	VV	332	1845	0.12%	0.029%
323	15.116	15.112	15.139	VV	324	4409	0.28%	0.069%
324	15.171	15.139	15.179	VV	1227	21015	1.32%	0.330%
325	15.198	15.179	15.227	VV	3276	47287	2.96%	0.743%
326	15.245	15.227	15.280	VV	497	9217	0.58%	0.145%
327	15.285	15.280	15.300	VV	196	1505	0.09%	0.024%
328	15.320	15.300	15.330	VV	147	1385	0.09%	0.022%
329	15.340	15.330	15.364	VV	108	1291	0.08%	0.020%
330	15.369	15.364	15.373	VV	75	281	0.02%	0.004%
331	15.394	15.373	15.424	VV	394	5382	0.34%	0.085%
332	15.460	15.424	15.466	PV	197	2821	0.18%	0.044%
333	15.476	15.466	15.493	VV	192	2705	0.17%	0.043%
334	15.525	15.493	15.551	VV	438	11242	0.70%	0.177%
335	15.582	15.551	15.692	VV	29706	603499	37.81%	9.488%
336	15.720	15.692	15.762	VV	3947	79739	5.00%	1.254%
337	15.786	15.762	15.817	VV	1278	22430	1.41%	0.353%
338	15.847	15.817	15.884	VV	571	15176	0.95%	0.239%
339	15.893	15.884	15.919	VV	319	4617	0.29%	0.073%
340	15.938	15.919	15.942	VV	249	2878	0.18%	0.045%
341	15.949	15.942	15.954	VV	221	1404	0.09%	0.022%
342	15.978	15.954	15.984	VV	342	4457	0.28%	0.070%
343	15.988	15.984	15.999	VV	333	2135	0.13%	0.034%
344	16.014	15.999	16.034	VV	362	5685	0.36%	0.089%
345	16.046	16.034	16.065	VV	315	3901	0.24%	0.061%
346	16.108	16.065	16.162	VV	1085	27880	1.75%	0.438%
347	16.168	16.162	16.189	VV	203	2079	0.13%	0.033%
348	16.222	16.189	16.264	VV	3687	51685	3.24%	0.813%
349	16.298	16.264	16.312	PV	230	3721	0.23%	0.059%
350	16.373	16.312	16.381	VV	121	4728	0.30%	0.074%
351	16.420	16.381	16.425	VV	364	6062	0.38%	0.095%

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352	16.433	16.425	16.460	VV	368	4748	0.30%	0.075%	
353	16.515	16.460	16.550	VV	959	28130	1.76%	0.442%	
354	16.606	16.550	16.642	VV	3293	80873	5.07%	1.272%	
355	16.672	16.642	16.681	VV	985	20202	1.27%	0.318%	
356	16.708	16.681	16.732	VV	3917	63561	3.98%	0.999%	
357	16.782	16.732	16.809	VV	963	32339	2.03%	0.508%	
358	16.852	16.809	16.890	VV	807	22117	1.39%	0.348%	
359	16.898	16.890	16.920	VV	297	2858	0.18%	0.045%	
360	17.004	16.920	17.030	PV	1000	25929	1.62%	0.408%	
361	17.057	17.030	17.075	VV	659	8355	0.52%	0.131%	
362	17.088	17.075	17.110	VV	377	4976	0.31%	0.078%	
363	17.174	17.110	17.197	PV	3827	65283	4.09%	1.026%	
364	17.221	17.197	17.247	VV	3351	53940	3.38%	0.848%	
365	17.254	17.247	17.274	VV	1015	9789	0.61%	0.154%	
366	17.353	17.274	17.366	VV	702	22635	1.42%	0.356%	
367	17.380	17.366	17.390	PV	584	4132	0.26%	0.065%	
					Sum of corrected areas:		6360438		

FG042425.M Wed May 14 05:40:58 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/08/25
Project:	South River WM Replacement	Date Received:	05/09/25
Client Sample ID:	TP-14	SDG No.:	Q2010
Lab Sample ID:	Q2010-03	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	80.7
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015838.D	1	05/13/25 10:05	05/13/25 23:43	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	3490		209	2060	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	17.9		37 - 130	90%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015838.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 23:43
Operator : YP\AJ
Sample : Q2010-03
Misc :
ALS Vial : 35 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-14

Integration File: autoint1.e
Quant Time: May 14 03:57:45 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	2110594	17.926 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

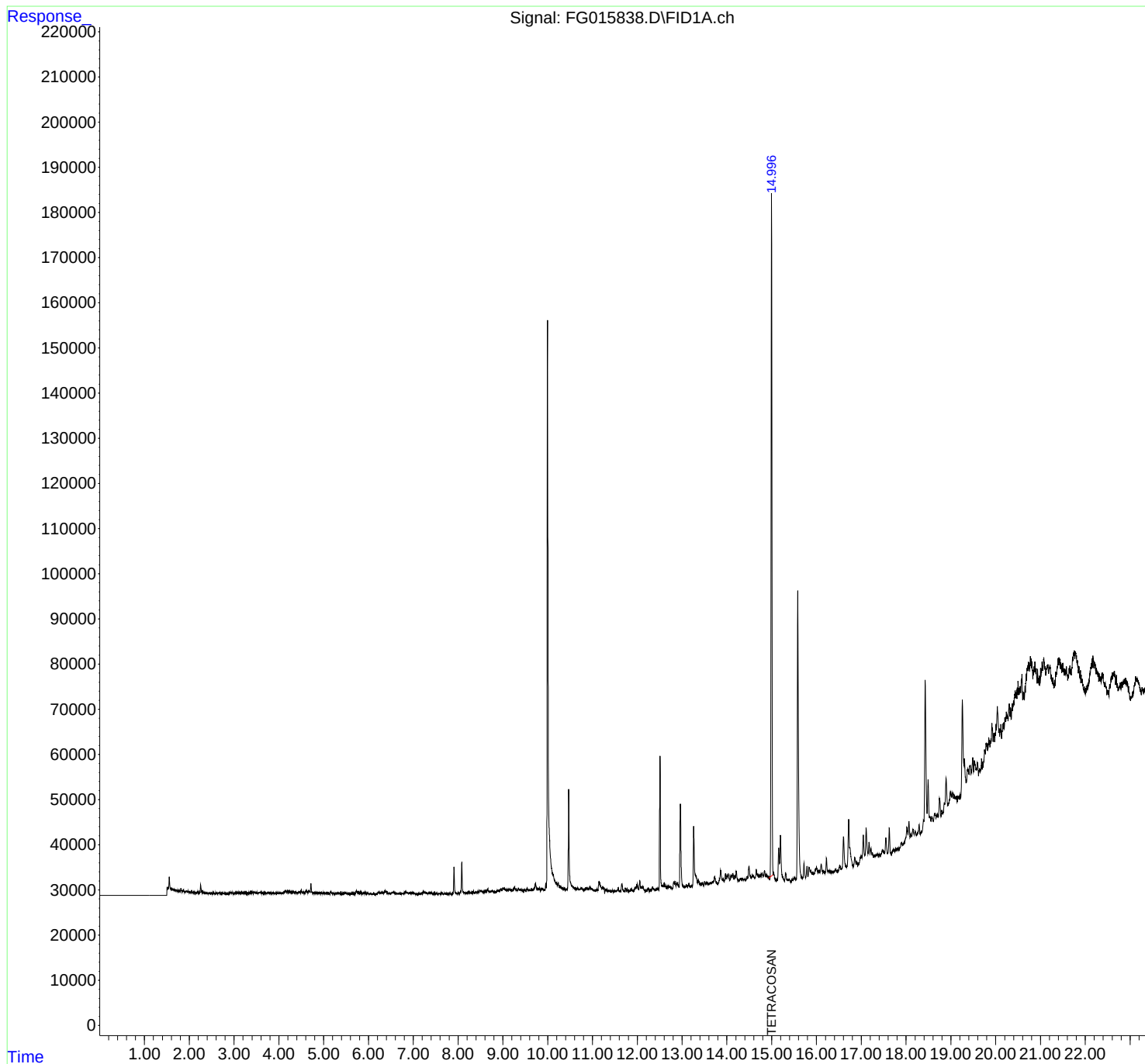
(m)=manual int.

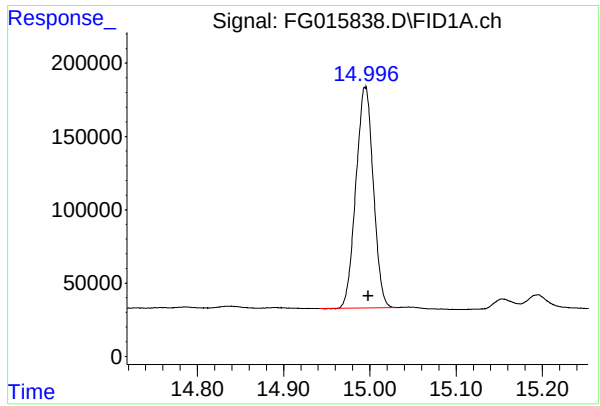
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015838.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 23:43
Operator : YP\AJ
Sample : Q2010-03
Misc :
ALS Vial : 35 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-14

Integration File: autoint1.e
Quant Time: May 14 03:57:45 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: 2110594

Conc: 17.93 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-14

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015838.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 23:43
 Sample : Q2010-03
 Misc :
 ALS Vial : 35 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.318	4.300	4.343	BV	250	3131	0.14%	0.024%
2	4.347	4.343	4.352	VV	106	404	0.02%	0.003%
3	4.371	4.352	4.382	PV	122	1066	0.05%	0.008%
4	4.386	4.382	4.390	VV	74	289	0.01%	0.002%
5	4.394	4.390	4.408	VV	96	724	0.03%	0.006%
6	4.417	4.408	4.424	VV	127	822	0.04%	0.006%
7	4.441	4.424	4.456	PV	286	3494	0.16%	0.027%
8	4.458	4.456	4.479	VV	212	1884	0.09%	0.015%
9	4.499	4.479	4.527	VV	467	6573	0.30%	0.051%
10	4.539	4.527	4.557	VV	184	2561	0.12%	0.020%
11	4.560	4.557	4.564	VV	133	587	0.03%	0.005%
12	4.568	4.564	4.578	VV	154	998	0.05%	0.008%
13	4.581	4.578	4.588	VV	153	707	0.03%	0.006%
14	4.610	4.588	4.651	VV	678	13479	0.62%	0.105%
15	4.670	4.651	4.682	VV	509	7102	0.33%	0.055%
16	4.685	4.682	4.698	VV	470	3789	0.17%	0.030%
17	4.716	4.698	4.764	VV	2118	29198	1.34%	0.227%
18	4.769	4.764	4.773	VV	136	691	0.03%	0.005%
19	4.778	4.773	4.794	VV	123	1421	0.07%	0.011%
20	4.806	4.794	4.811	VV	171	1186	0.05%	0.009%
21	4.815	4.811	4.821	VV	134	771	0.04%	0.006%
22	4.829	4.821	4.851	VV	192	2414	0.11%	0.019%
23	4.854	4.851	4.865	VV	91	999	0.05%	0.008%
24	4.868	4.865	4.879	VV	198	1005	0.05%	0.008%
25	4.884	4.879	4.905	VV	264	2071	0.09%	0.016%
26	4.916	4.905	4.935	VV	197	3235	0.15%	0.025%
27	4.941	4.935	4.956	VV	178	1725	0.08%	0.013%
28	4.973	4.956	4.991	VV	205	3312	0.15%	0.026%
29	5.004	4.991	5.034	VV	271	3987	0.18%	0.031%
30	5.038	5.034	5.043	VV	138	503	0.02%	0.004%
31	5.048	5.043	5.052	VV	90	518	0.02%	0.004%
32	5.055	5.052	5.064	VV	138	704	0.03%	0.005%
33	5.074	5.064	5.109	VV	171	2725	0.12%	0.021%
34	5.121	5.109	5.126	VV	69	501	0.02%	0.004%
35	5.129	5.126	5.140	VV	61	247	0.01%	0.002%
36	5.160	5.140	5.186	VV	596	7608	0.35%	0.059%

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37	5.196	5.186	5.200	VV	151	737	0.03%	0.006%
38	5.206	5.200	5.225	VV	146	1845	0.08%	0.014%
39	5.229	5.225	5.251	VV	142	1087	0.05%	0.008%
40	5.293	5.251	5.305	VV	214	4622	0.21%	0.036%
41	5.312	5.305	5.317	VV	224	1315	0.06%	0.010%
42	5.323	5.317	5.401	VV	183	5439	0.25%	0.042%
43	5.405	5.401	5.426	VV	110	1146	0.05%	0.009%
44	5.480	5.426	5.511	PV	427	10563	0.48%	0.082%
45	5.514	5.511	5.538	VV	144	1686	0.08%	0.013%
46	5.546	5.538	5.551	VV	112	537	0.02%	0.004%
47	5.555	5.551	5.566	VV	89	602	0.03%	0.005%
48	5.570	5.566	5.606	VV	140	1490	0.07%	0.012%
49	5.611	5.606	5.615	VV	53	234	0.01%	0.002%
50	5.641	5.615	5.653	VV	312	3809	0.17%	0.030%
51	5.658	5.653	5.672	VV	154	1793	0.08%	0.014%
52	5.676	5.672	5.699	VV	256	1806	0.08%	0.014%
53	5.730	5.699	5.782	VV	694	19456	0.89%	0.151%
54	5.788	5.782	5.795	VV	393	2593	0.12%	0.020%
55	5.801	5.795	5.805	VV	436	2066	0.09%	0.016%
56	5.813	5.805	5.826	VV	378	3826	0.18%	0.030%
57	5.832	5.826	5.861	VV	400	5783	0.26%	0.045%
58	5.876	5.861	5.881	VV	330	3123	0.14%	0.024%
59	5.885	5.881	5.909	VV	323	3926	0.18%	0.031%
60	5.914	5.909	5.931	VV	321	3533	0.16%	0.028%
61	5.937	5.931	5.979	VV	291	5413	0.25%	0.042%
62	5.984	5.979	5.988	VV	215	1049	0.05%	0.008%
63	5.992	5.988	6.013	VV	246	2328	0.11%	0.018%
64	6.024	6.013	6.031	VV	213	1740	0.08%	0.014%
65	6.034	6.031	6.048	VV	240	1650	0.08%	0.013%
66	6.053	6.048	6.060	VV	152	935	0.04%	0.007%
67	6.065	6.060	6.079	VV	167	1244	0.06%	0.010%
68	6.091	6.079	6.103	VV	191	1479	0.07%	0.012%
69	6.121	6.103	6.151	VV	205	3245	0.15%	0.025%
70	6.171	6.151	6.179	PV	151	1522	0.07%	0.012%
71	6.182	6.179	6.191	VV	206	831	0.04%	0.006%
72	6.211	6.191	6.227	VV	472	6478	0.30%	0.050%
73	6.237	6.227	6.267	VV	427	8591	0.39%	0.067%
74	6.276	6.267	6.283	VV	394	3053	0.14%	0.024%
75	6.287	6.283	6.302	VV	354	3764	0.17%	0.029%
76	6.310	6.302	6.319	VV	355	3233	0.15%	0.025%
77	6.325	6.319	6.336	VV	365	3179	0.15%	0.025%
78	6.366	6.336	6.379	VV	866	13943	0.64%	0.109%
79	6.391	6.379	6.434	VV	624	14039	0.64%	0.109%
80	6.439	6.434	6.444	VV	269	1486	0.07%	0.012%
81	6.448	6.444	6.458	VV	306	2196	0.10%	0.017%
82	6.462	6.458	6.467	VV	275	1349	0.06%	0.011%
83	6.477	6.467	6.507	VV	290	5549	0.25%	0.043%
84	6.537	6.507	6.545	VV	467	8353	0.38%	0.065%
85	6.566	6.545	6.619	VV	658	15224	0.70%	0.119%
86	6.623	6.619	6.632	VV	192	1231	0.06%	0.010%
87	6.635	6.632	6.666	VV	200	2872	0.13%	0.022%
88	6.678	6.666	6.706	VV	283	4380	0.20%	0.034%
89	6.713	6.706	6.717	VV	199	884	0.04%	0.007%

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90	6.724	6.717	6.728	VV	164	661	0.03%	0.005%
91	6.752	6.728	6.761	VV	223	3035	0.14%	0.024%
92	6.765	6.761	6.770	VV	164	740	0.03%	0.006%
93	6.827	6.770	6.832	VV	530	11725	0.54%	0.091%
94	6.839	6.832	6.849	VV	454	3917	0.18%	0.030%
95	6.858	6.849	6.874	VV	390	5119	0.23%	0.040%
96	6.877	6.874	6.890	VV	373	2802	0.13%	0.022%
97	6.897	6.890	6.927	VV	359	6540	0.30%	0.051%
98	6.933	6.927	6.937	VV	302	1673	0.08%	0.013%
99	6.957	6.937	6.990	VV	383	9319	0.43%	0.073%
100	6.995	6.990	7.005	VV	234	1727	0.08%	0.013%
101	7.012	7.005	7.017	VV	229	1383	0.06%	0.011%
102	7.024	7.017	7.037	VV	237	1854	0.08%	0.014%
103	7.044	7.037	7.052	VV	149	1001	0.05%	0.008%
104	7.059	7.052	7.071	VV	135	1095	0.05%	0.009%
105	7.075	7.071	7.091	VV	109	1172	0.05%	0.009%
106	7.094	7.091	7.106	VV	99	518	0.02%	0.004%
107	7.109	7.106	7.116	VV	111	455	0.02%	0.004%
108	7.119	7.116	7.122	VV	73	164	0.01%	0.001%
109	7.145	7.122	7.168	VV	164	2978	0.14%	0.023%
110	7.231	7.168	7.247	VV	503	15418	0.71%	0.120%
111	7.256	7.247	7.268	VV	517	5517	0.25%	0.043%
112	7.272	7.268	7.290	VV	411	4611	0.21%	0.036%
113	7.296	7.290	7.352	VV	357	10428	0.48%	0.081%
114	7.372	7.352	7.380	VV	411	5826	0.27%	0.045%
115	7.398	7.380	7.442	VV	518	10642	0.49%	0.083%
116	7.464	7.442	7.484	VV	313	5169	0.24%	0.040%
117	7.503	7.484	7.516	VV	238	3445	0.16%	0.027%
118	7.530	7.516	7.551	VV	231	3095	0.14%	0.024%
119	7.573	7.551	7.590	VV	267	3446	0.16%	0.027%
120	7.630	7.590	7.640	VV	362	5867	0.27%	0.046%
121	7.644	7.640	7.679	VV	236	3169	0.15%	0.025%
122	7.699	7.679	7.713	PV	215	2207	0.10%	0.017%
123	7.717	7.713	7.741	VV	143	1600	0.07%	0.012%
124	7.749	7.741	7.764	VV	149	1400	0.06%	0.011%
125	7.767	7.764	7.782	VV	124	876	0.04%	0.007%
126	7.786	7.782	7.792	VV	149	536	0.02%	0.004%
127	7.806	7.792	7.828	VV	214	3052	0.14%	0.024%
128	7.832	7.828	7.855	VV	96	916	0.04%	0.007%
129	7.863	7.855	7.871	VV	63	479	0.02%	0.004%
130	7.911	7.871	7.978	VV	6001	72563	3.32%	0.565%
131	8.005	7.978	8.024	VV	261	4257	0.19%	0.033%
132	8.084	8.024	8.181	VV	7105	103413	4.74%	0.805%
133	8.201	8.181	8.216	VV	304	4886	0.22%	0.038%
134	8.220	8.216	8.226	VV	276	1537	0.07%	0.012%
135	8.238	8.226	8.260	VV	391	6387	0.29%	0.050%
136	8.266	8.260	8.282	VV	310	3042	0.14%	0.024%
137	8.306	8.282	8.316	VV	301	5056	0.23%	0.039%
138	8.344	8.316	8.367	VV	463	9509	0.44%	0.074%
139	8.381	8.367	8.402	VV	399	6289	0.29%	0.049%
140	8.416	8.402	8.422	VV	406	4238	0.19%	0.033%
141	8.434	8.422	8.441	VV	398	3721	0.17%	0.029%

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142	8.448	8.441	8.465	VV	421	5338	0.24%	0.042%
143	8.484	8.465	8.497	VV	778	12370	0.57%	0.096%
144	8.512	8.497	8.557	VV	770	19273	0.88%	0.150%
145	8.597	8.557	8.609	VV	545	13576	0.62%	0.106%
146	8.665	8.609	8.689	VV	1129	32721	1.50%	0.255%
147	8.697	8.689	8.714	VV	535	7103	0.33%	0.055%
148	8.728	8.714	8.740	VV	564	7599	0.35%	0.059%
149	8.754	8.740	8.826	VV	630	22565	1.03%	0.176%
150	8.851	8.826	8.857	VV	513	7622	0.35%	0.059%
151	8.872	8.857	8.892	VV	606	11029	0.51%	0.086%
152	8.905	8.892	8.917	VV	608	8187	0.38%	0.064%
153	8.947	8.917	8.962	VV	984	21190	0.97%	0.165%
154	8.966	8.962	8.982	VV	980	9690	0.44%	0.075%
155	9.004	8.982	9.021	VV	1248	23330	1.07%	0.182%
156	9.031	9.021	9.054	VV	1165	19893	0.91%	0.155%
157	9.058	9.054	9.087	VV	872	14272	0.65%	0.111%
158	9.103	9.087	9.119	VV	809	13920	0.64%	0.108%
159	9.134	9.119	9.153	VV	960	17155	0.79%	0.134%
160	9.167	9.153	9.192	VV	845	17490	0.80%	0.136%
161	9.205	9.192	9.220	VV	773	11856	0.54%	0.092%
162	9.226	9.220	9.229	VV	682	3342	0.15%	0.026%
163	9.263	9.229	9.304	VV	1278	43663	2.00%	0.340%
164	9.308	9.304	9.321	VV	812	7172	0.33%	0.056%
165	9.346	9.321	9.372	VV	1125	26840	1.23%	0.209%
166	9.389	9.372	9.417	VV	914	19950	0.91%	0.155%
167	9.428	9.417	9.469	VV	740	19083	0.87%	0.149%
168	9.489	9.469	9.495	VV	740	10016	0.46%	0.078%
169	9.498	9.495	9.514	VV	726	7117	0.33%	0.055%
170	9.539	9.514	9.560	VV	969	21342	0.98%	0.166%
171	9.579	9.560	9.588	VV	714	11096	0.51%	0.086%
172	9.592	9.588	9.597	VV	694	3722	0.17%	0.029%
173	9.646	9.597	9.663	VV	790	27022	1.24%	0.210%
174	9.680	9.663	9.687	VV	842	10599	0.49%	0.083%
175	9.730	9.687	9.765	VV	2182	61746	2.83%	0.481%
176	9.769	9.765	9.784	VV	901	9596	0.44%	0.075%
177	9.806	9.784	9.832	VV	1034	25409	1.16%	0.198%
178	9.846	9.832	9.869	VV	830	16450	0.75%	0.128%
179	9.875	9.869	9.878	VV	831	4506	0.21%	0.035%
180	9.883	9.878	9.902	VV	880	11334	0.52%	0.088%
181	9.905	9.902	9.922	VV	787	8202	0.38%	0.064%
182	9.959	9.922	9.972	VV	2117	34341	1.57%	0.267%
183	9.997	9.972	10.116	VV	126655	2095871	96.00%	16.319%
184	10.127	10.116	10.216	VV	3983	159568	7.31%	1.242%
185	10.237	10.216	10.287	VV	1932	65576	3.00%	0.511%
186	10.291	10.287	10.342	VV	1245	33759	1.55%	0.263%
187	10.346	10.342	10.389	VV	906	22362	1.02%	0.174%
188	10.393	10.389	10.429	VV	737	16677	0.76%	0.130%
189	10.434	10.429	10.441	VV	696	5008	0.23%	0.039%
190	10.470	10.441	10.537	VV	22891	357299	16.37%	2.782%
191	10.546	10.537	10.566	VV	1524	23461	1.07%	0.183%
192	10.569	10.566	10.602	VV	1179	23586	1.08%	0.184%
193	10.605	10.602	10.636	VV	1004	16597	0.76%	0.129%
194	10.661	10.636	10.676	VV	926	19425	0.89%	0.151%

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195	10.681	10.676	10.713	VV	770	15441	0.71%	0.120%
196	10.754	10.713	10.779	VV	975	32009	1.47%	0.249%
197	10.782	10.779	10.788	VV	702	3397	0.16%	0.026%
198	10.792	10.788	10.814	VV	646	8955	0.41%	0.070%
199	10.868	10.814	10.896	VV	1071	37975	1.74%	0.296%
200	10.897	10.896	10.914	VV	743	7432	0.34%	0.058%
201	10.941	10.914	10.967	VV	1266	28980	1.33%	0.226%
202	10.972	10.967	10.983	VV	751	6444	0.30%	0.050%
203	10.987	10.983	11.047	VV	708	19639	0.90%	0.153%
204	11.067	11.047	11.073	VV	477	6249	0.29%	0.049%
205	11.076	11.073	11.082	VV	428	2287	0.10%	0.018%
206	11.093	11.082	11.116	VV	574	10046	0.46%	0.078%
207	11.147	11.116	11.210	VV	2376	76638	3.51%	0.597%
208	11.216	11.210	11.222	VV	885	6405	0.29%	0.050%
209	11.244	11.222	11.273	VV	1040	25038	1.15%	0.195%
210	11.301	11.273	11.361	PV	556	21615	0.99%	0.168%
211	11.383	11.361	11.425	VV	296	7877	0.36%	0.061%
212	11.448	11.425	11.481	VV	293	6045	0.28%	0.047%
213	11.501	11.481	11.508	VV	253	3097	0.14%	0.024%
214	11.516	11.508	11.522	VV	248	1665	0.08%	0.013%
215	11.574	11.522	11.599	VV	898	16746	0.77%	0.130%
216	11.620	11.599	11.634	VV	264	3074	0.14%	0.024%
217	11.656	11.634	11.709	VV	1721	31015	1.42%	0.241%
218	11.733	11.709	11.754	VV	749	10181	0.47%	0.079%
219	11.769	11.754	11.802	VV	659	8083	0.37%	0.063%
220	11.812	11.802	11.817	PV	154	933	0.04%	0.007%
221	11.822	11.817	11.833	VV	130	1154	0.05%	0.009%
222	11.862	11.833	11.885	VV	529	10936	0.50%	0.085%
223	11.890	11.885	11.913	VV	287	2488	0.11%	0.019%
224	11.951	11.913	11.956	VV	742	10608	0.49%	0.083%
225	11.995	11.956	12.036	VV	1564	45176	2.07%	0.352%
226	12.056	12.036	12.077	VV	2354	34638	1.59%	0.270%
227	12.093	12.077	12.111	VV	1068	16891	0.77%	0.132%
228	12.124	12.111	12.177	VV	1042	19766	0.91%	0.154%
229	12.190	12.177	12.207	VV	123	1250	0.06%	0.010%
230	12.246	12.207	12.267	PV	747	12121	0.56%	0.094%
231	12.271	12.267	12.274	VV	92	251	0.01%	0.002%
232	12.301	12.274	12.316	PV	459	5503	0.25%	0.043%
233	12.343	12.316	12.409	VV	882	20931	0.96%	0.163%
234	12.449	12.409	12.464	VV	443	9558	0.44%	0.074%
235	12.470	12.464	12.478	VV	235	1679	0.08%	0.013%
236	12.506	12.478	12.554	VV	29588	351458	16.10%	2.737%
237	12.567	12.554	12.581	VV	1152	15721	0.72%	0.122%
238	12.600	12.581	12.651	VV	1597	40936	1.88%	0.319%
239	12.669	12.651	12.707	VV	865	21808	1.00%	0.170%
240	12.714	12.707	12.727	VV	658	7518	0.34%	0.059%
241	12.736	12.727	12.750	VV	650	7911	0.36%	0.062%
242	12.758	12.750	12.788	VV	580	7948	0.36%	0.062%
243	12.813	12.788	12.827	VV	1645	25191	1.15%	0.196%
244	12.842	12.827	12.859	VV	1800	25395	1.16%	0.198%
245	12.886	12.859	12.931	VV	1546	43226	1.98%	0.337%
246	12.960	12.931	13.029	VV	18891	326532	14.96%	2.542%

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247	13.034	13.029	13.048	VV	632	5587	0.26%	0.044%
248	13.063	13.048	13.079	VV	523	8186	0.37%	0.064%
249	13.096	13.079	13.116	VV	870	14249	0.65%	0.111%
250	13.148	13.116	13.177	VV	1142	26175	1.20%	0.204%
251	13.183	13.177	13.196	VV	437	4686	0.21%	0.036%
252	13.216	13.196	13.228	VV	570	9549	0.44%	0.074%
253	13.257	13.228	13.304	VV	13681	242138	11.09%	1.885%
254	13.314	13.304	13.341	VV	2796	45747	2.10%	0.356%
255	13.361	13.341	13.407	VV	1608	48645	2.23%	0.379%
256	13.419	13.407	13.430	VV	879	11086	0.51%	0.086%
257	13.450	13.430	13.482	VV	1088	25466	1.17%	0.198%
258	13.502	13.482	13.521	VV	1311	21065	0.96%	0.164%
259	13.552	13.521	13.586	VV	1177	35844	1.64%	0.279%
260	13.599	13.586	13.614	VV	858	13463	0.62%	0.105%
261	13.631	13.614	13.649	VV	1036	18434	0.84%	0.144%
262	13.677	13.649	13.694	VV	1223	27614	1.26%	0.215%
263	13.726	13.694	13.800	VV	2256	82870	3.80%	0.645%
264	13.859	13.800	13.901	VV	3611	111618	5.11%	0.869%
265	13.920	13.901	13.944	VV	1552	36435	1.67%	0.284%
266	13.967	13.944	13.987	VV	2803	53383	2.45%	0.416%
267	14.006	13.987	14.022	VV	2470	44423	2.03%	0.346%
268	14.039	14.022	14.067	VV	2653	56149	2.57%	0.437%
269	14.090	14.067	14.108	VV	2408	47515	2.18%	0.370%
270	14.132	14.108	14.156	VV	2675	61773	2.83%	0.481%
271	14.178	14.156	14.191	VV	2126	39596	1.81%	0.308%
272	14.209	14.191	14.241	VV	3156	64265	2.94%	0.500%
273	14.245	14.241	14.274	VV	1292	22910	1.05%	0.178%
274	14.301	14.274	14.305	VV	1451	24064	1.10%	0.187%
275	14.314	14.305	14.367	VV	1529	50748	2.32%	0.395%
276	14.392	14.367	14.426	VV	1311	41154	1.88%	0.320%
277	14.451	14.426	14.466	VV	1744	34668	1.59%	0.270%
278	14.489	14.466	14.540	VV	4054	111015	5.08%	0.864%
279	14.569	14.540	14.581	VV	1900	43055	1.97%	0.335%
280	14.587	14.581	14.622	VV	1933	40217	1.84%	0.313%
281	14.655	14.622	14.677	VV	3298	74581	3.42%	0.581%
282	14.682	14.677	14.709	VV	2133	37309	1.71%	0.291%
283	14.715	14.709	14.722	VV	1816	13145	0.60%	0.102%
284	14.732	14.722	14.745	VV	1884	23862	1.09%	0.186%
285	14.757	14.745	14.768	VV	2009	25454	1.17%	0.198%
286	14.787	14.768	14.813	VV	2408	55012	2.52%	0.428%
287	14.839	14.813	14.872	VV	2908	76824	3.52%	0.598%
288	14.890	14.872	14.938	VV	1973	61531	2.82%	0.479%
289	14.944	14.938	14.961	VV	1231	16010	0.73%	0.125%
290	14.995	14.961	15.034	VV	152416	2183258	100.00%	17.000%
291	15.045	15.034	15.100	VV	2211	50180	2.30%	0.391%
292	15.154	15.100	15.174	VV	7726	137152	6.28%	1.068%
293	15.195	15.174	15.284	VV	10576	226355	10.37%	1.762%
294	15.309	15.284	15.342	VV	2112	40083	1.84%	0.312%
295	15.347	15.342	15.375	VV	735	11504	0.53%	0.090%
296	15.389	15.375	15.426	VV	781	12418	0.57%	0.097%
297	15.464	15.426	15.476	PV	491	8608	0.39%	0.067%
298	15.502	15.476	15.546	VV	908	22706	1.04%	0.177%
299	15.580	15.546	15.687	VV	63940	1126412	51.59%	8.771%

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300	15.719	15.687	15.761	VV	3567	59721	2.74%	0.465%
301	15.786	15.761	15.808	VV	2732	38943	1.78%	0.303%
302	15.833	15.808	15.859	VV	2363	48186	2.21%	0.375%
303	15.865	15.859	15.869	VV	1473	8773	0.40%	0.068%
304	15.871	15.869	15.901	VV	1495	20375	0.93%	0.159%
305	15.924	15.901	15.947	VV	965	22916	1.05%	0.178%
306	15.996	15.947	16.031	VV	1845	67373	3.09%	0.525%
307	16.035	16.031	16.042	VV	909	6423	0.29%	0.050%
308	16.060	16.042	16.074	VV	1009	16720	0.77%	0.130%
309	16.105	16.074	16.147	VV	2457	59942	2.75%	0.467%
310	16.158	16.147	16.176	VV	657	9881	0.45%	0.077%
311	16.181	16.176	16.184	VV	474	2121	0.10%	0.017%
312	16.193	16.184	16.196	VV	450	3062	0.14%	0.024%
313	16.221	16.196	16.251	VV	3518	53716	2.46%	0.418%
314	16.253	16.251	16.270	VV	613	6338	0.29%	0.049%
315	16.287	16.270	16.321	VV	568	11799	0.54%	0.092%
316	16.357	16.321	16.382	VV	281	7894	0.36%	0.061%
317	16.386	16.382	16.389	VV	154	480	0.02%	0.004%
318	16.432	16.389	16.459	VV	506	12022	0.55%	0.094%
319	16.478	16.459	16.489	PV	142	1108	0.05%	0.009%
320	16.518	16.489	16.549	PV	1250	24279	1.11%	0.189%
321	16.601	16.549	16.658	VV	7306	154874	7.09%	1.206%
322	16.668	16.658	16.681	VV	623	7130	0.33%	0.056%
323	16.718	16.681	16.818	VV	10801	291161	13.34%	2.267%
324	16.853	16.818	16.922	PV	1956	46543	2.13%	0.362%
325	16.927	16.922	16.932	VV	203	975	0.04%	0.008%
326	16.990	16.932	16.996	VV	1473	30494	1.40%	0.237%
327	17.001	16.996	17.015	VV	1470	15243	0.70%	0.119%
328	17.043	17.015	17.082	VV	6069	122478	5.61%	0.954%
329	17.108	17.082	17.152	VV	7387	153215	7.02%	1.193%
330	17.172	17.152	17.193	VV	3897	62787	2.88%	0.489%
331	17.214	17.193	17.237	VV	2383	45302	2.07%	0.353%
332	17.250	17.237	17.274	VV	1203	16554	0.76%	0.129%
333	17.292	17.274	17.326	VV	431	9943	0.46%	0.077%
334	17.372	17.326	17.392	VV	352	9088	0.42%	0.071%
Sum of corrected areas:						12842995		

FG042425.M Wed May 14 05:41:33 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/08/25
Project:	South River WM Replacement	Date Received:	05/09/25
Client Sample ID:	TP-17	SDG No.:	Q2010
Lab Sample ID:	Q2010-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	77.4
Sample Wt/Vol:	30.08	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
FG015839.D	1	05/13/25 10:05	05/14/25 0:12	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1830	J	218	2150	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 : FG015839.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 00:12
Operator : YP\AJ
Sample : Q2010-04
Misc :
ALS Vial : 36 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-17

Integration File: autoint1.e
Quant Time: May 14 03:57:54 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	1198530	10.180 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

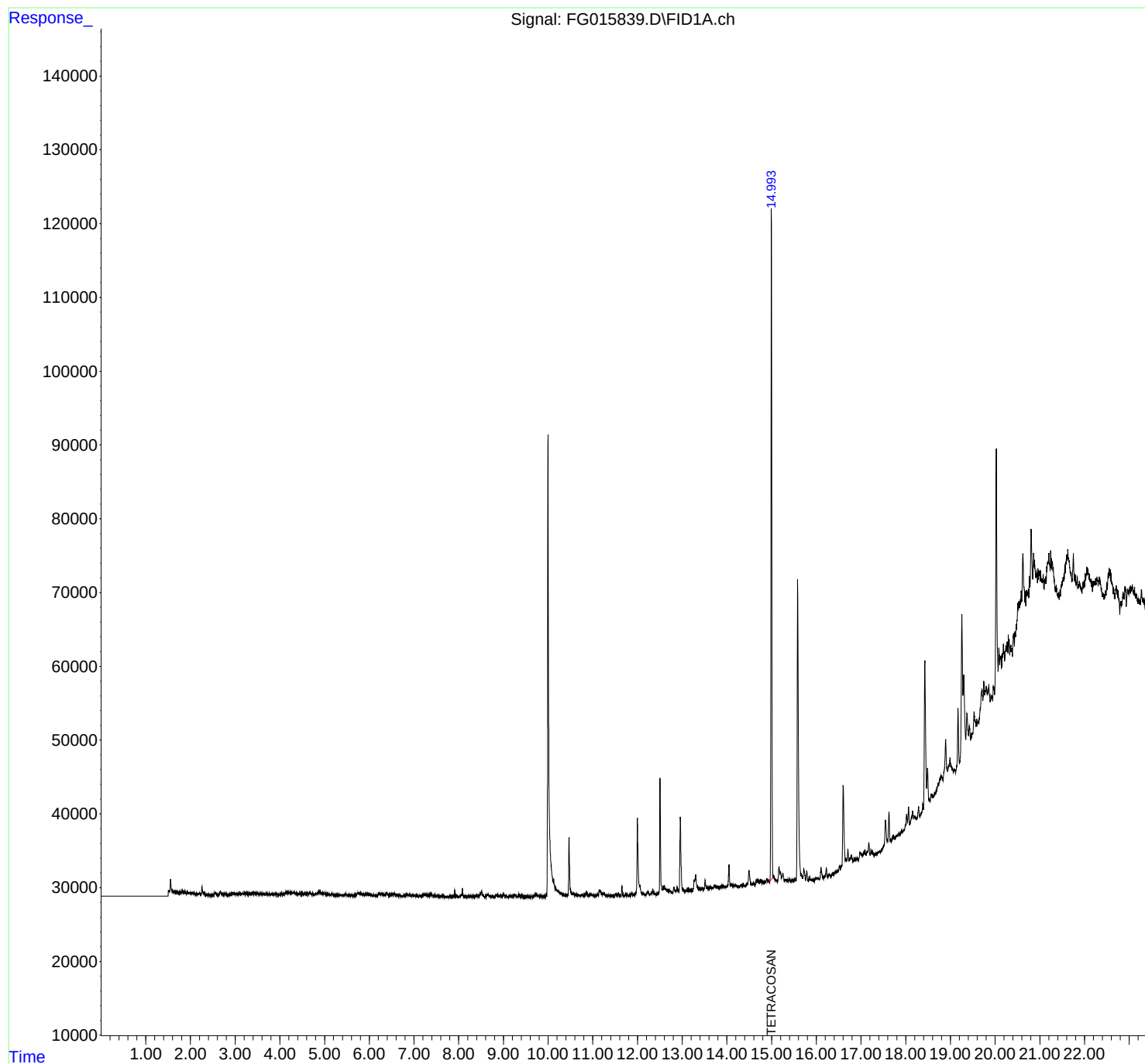
(m)=manual int.

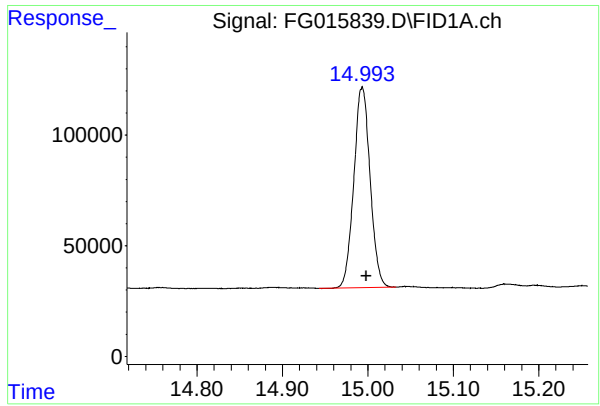
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015839.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 00:12
Operator : YP\AJ
Sample : Q2010-04
Misc :
ALS Vial : 36 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-17

Integration File: autoint1.e
Quant Time: May 14 03:57:54 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: 1198530
Conc: 10.18 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-17

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015839.D
 Signal(s) : FID1A.ch
 Acq On : 14 May 2025 00:12
 Sample : Q2010-04
 Misc :
 ALS Vial : 36 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	4.308	4.300	4.314	BV	55	346	0.03%	0.005%
2	4.322	4.314	4.341	VV	129	1209	0.10%	0.018%
3	4.344	4.341	4.356	VV	104	530	0.04%	0.008%
4	4.363	4.356	4.368	VV	131	514	0.04%	0.008%
5	4.371	4.368	4.392	PV	109	824	0.07%	0.012%
6	4.398	4.392	4.415	VV	113	791	0.06%	0.012%
7	4.420	4.415	4.426	PV	49	345	0.03%	0.005%
8	4.430	4.426	4.441	VV	107	589	0.05%	0.009%
9	4.446	4.441	4.463	VV	76	913	0.07%	0.014%
10	4.465	4.463	4.469	VV	82	213	0.02%	0.003%
11	4.499	4.469	4.534	PV	224	5133	0.42%	0.078%
12	4.538	4.534	4.549	VV	127	866	0.07%	0.013%
13	4.552	4.549	4.558	VV	139	418	0.03%	0.006%
14	4.561	4.558	4.568	VV	122	490	0.04%	0.007%
15	4.572	4.568	4.577	VV	101	492	0.04%	0.007%
16	4.583	4.577	4.591	VV	137	575	0.05%	0.009%
17	4.627	4.591	4.646	PV	239	3860	0.31%	0.059%
18	4.672	4.646	4.701	VV	444	7097	0.58%	0.108%
19	4.705	4.701	4.721	VV	120	851	0.07%	0.013%
20	4.731	4.721	4.736	VV	189	1276	0.10%	0.019%
21	4.738	4.736	4.758	VV	223	1824	0.15%	0.028%
22	4.763	4.758	4.769	VV	123	496	0.04%	0.008%
23	4.779	4.769	4.786	VV	144	902	0.07%	0.014%
24	4.809	4.786	4.815	VV	229	2585	0.21%	0.039%
25	4.824	4.815	4.828	VV	246	1666	0.14%	0.025%
26	4.838	4.828	4.845	VV	310	2665	0.22%	0.040%
27	4.892	4.845	4.899	VV	455	12260	1.00%	0.186%
28	4.902	4.899	4.913	VV	452	2993	0.24%	0.045%
29	4.917	4.913	4.927	VV	425	2723	0.22%	0.041%
30	4.930	4.927	4.934	VV	282	1129	0.09%	0.017%
31	4.946	4.934	4.956	VV	311	3317	0.27%	0.050%
32	4.963	4.956	4.980	VV	270	3547	0.29%	0.054%
33	4.985	4.980	5.021	VV	254	5080	0.41%	0.077%
34	5.026	5.021	5.047	VV	232	2375	0.19%	0.036%
35	5.052	5.047	5.061	VV	192	1181	0.10%	0.018%
36	5.078	5.061	5.095	VV	229	3029	0.25%	0.046%

					rteres			
37	5.097	5.095	5.102	VV	183	562	0.05%	0.009%
38	5.110	5.102	5.136	VV	249	2201	0.18%	0.033%
39	5.162	5.136	5.198	VV	293	5688	0.46%	0.086%
40	5.201	5.198	5.225	VV	104	1628	0.13%	0.025%
41	5.231	5.225	5.246	VV	127	1126	0.09%	0.017%
42	5.250	5.246	5.259	VV	108	655	0.05%	0.010%
43	5.265	5.259	5.269	VV	173	624	0.05%	0.009%
44	5.272	5.269	5.283	VV	128	736	0.06%	0.011%
45	5.286	5.283	5.303	VV	154	1175	0.10%	0.018%
46	5.308	5.303	5.326	VV	112	986	0.08%	0.015%
47	5.333	5.326	5.345	VV	154	976	0.08%	0.015%
48	5.350	5.345	5.361	VV	110	716	0.06%	0.011%
49	5.381	5.361	5.395	VV	151	1309	0.11%	0.020%
50	5.401	5.395	5.409	PV	107	402	0.03%	0.006%
51	5.417	5.409	5.429	VV	148	809	0.07%	0.012%
52	5.474	5.429	5.480	VV	322	5398	0.44%	0.082%
53	5.486	5.480	5.501	VV	301	2510	0.20%	0.038%
54	5.507	5.501	5.526	VV	215	1703	0.14%	0.026%
55	5.530	5.526	5.550	VV	208	1533	0.12%	0.023%
56	5.560	5.550	5.573	VV	86	913	0.07%	0.014%
57	5.579	5.573	5.597	VV	166	1015	0.08%	0.015%
58	5.602	5.597	5.614	VV	135	659	0.05%	0.010%
59	5.618	5.614	5.633	VV	89	631	0.05%	0.010%
60	5.638	5.633	5.650	PV	160	1097	0.09%	0.017%
61	5.652	5.650	5.679	VV	130	1314	0.11%	0.020%
62	5.681	5.679	5.697	VV	389	810	0.07%	0.012%
63	5.749	5.697	5.772	PV	443	13778	1.12%	0.209%
64	5.776	5.772	5.797	VV	391	5170	0.42%	0.078%
65	5.805	5.797	5.819	VV	400	4105	0.33%	0.062%
66	5.826	5.819	5.843	VV	435	4263	0.35%	0.065%
67	5.848	5.843	5.854	VV	264	1756	0.14%	0.027%
68	5.859	5.854	5.867	VV	259	1689	0.14%	0.026%
69	5.872	5.867	5.880	VV	286	1959	0.16%	0.030%
70	5.883	5.880	5.891	VV	240	1555	0.13%	0.024%
71	5.910	5.891	5.915	VV	352	4187	0.34%	0.063%
72	5.921	5.915	5.937	VV	391	4029	0.33%	0.061%
73	5.940	5.937	5.967	VV	272	4482	0.36%	0.068%
74	5.970	5.967	5.990	VV	347	3735	0.30%	0.057%
75	6.001	5.990	6.005	VV	307	2537	0.21%	0.038%
76	6.019	6.005	6.069	VV	315	7643	0.62%	0.116%
77	6.074	6.069	6.080	VV	147	880	0.07%	0.013%
78	6.085	6.080	6.092	VV	167	812	0.07%	0.012%
79	6.096	6.092	6.110	VV	201	1264	0.10%	0.019%
80	6.118	6.110	6.132	VV	226	1752	0.14%	0.027%
81	6.135	6.132	6.148	VV	174	1068	0.09%	0.016%
82	6.212	6.148	6.232	VV	545	12521	1.02%	0.190%
83	6.243	6.232	6.263	VV	388	6491	0.53%	0.098%
84	6.269	6.263	6.278	VV	371	2769	0.22%	0.042%
85	6.284	6.278	6.311	VV	380	6174	0.50%	0.094%
86	6.318	6.311	6.352	VV	327	6911	0.56%	0.105%
87	6.362	6.352	6.369	VV	371	3186	0.26%	0.048%
88	6.392	6.369	6.436	VV	608	13918	1.13%	0.211%
89	6.450	6.436	6.456	VV	310	2789	0.23%	0.042%

					rteres			
90	6.461	6.456	6.473	VV	283	2589	0.21%	0.039%
91	6.480	6.473	6.508	VV	248	4246	0.34%	0.064%
92	6.535	6.508	6.539	VV	368	5605	0.45%	0.085%
93	6.554	6.539	6.599	VV	445	11309	0.92%	0.171%
94	6.603	6.599	6.606	VV	218	733	0.06%	0.011%
95	6.610	6.606	6.619	VV	174	1437	0.12%	0.022%
96	6.621	6.619	6.624	VV	221	616	0.05%	0.009%
97	6.628	6.624	6.657	VV	210	2944	0.24%	0.045%
98	6.675	6.657	6.682	VV	258	2669	0.22%	0.040%
99	6.685	6.682	6.714	VV	260	2850	0.23%	0.043%
100	6.719	6.714	6.731	VV	140	1064	0.09%	0.016%
101	6.741	6.731	6.746	VV	184	1125	0.09%	0.017%
102	6.762	6.746	6.766	VV	194	1643	0.13%	0.025%
103	6.771	6.766	6.782	VV	210	1412	0.11%	0.021%
104	6.790	6.782	6.797	VV	181	1614	0.13%	0.024%
105	6.800	6.797	6.804	VV	203	810	0.07%	0.012%
106	6.814	6.804	6.818	VV	276	1792	0.15%	0.027%
107	6.836	6.818	6.842	VV	321	3982	0.32%	0.060%
108	6.855	6.842	6.869	VV	362	4514	0.37%	0.068%
109	6.878	6.869	6.893	VV	311	3770	0.31%	0.057%
110	6.897	6.893	6.923	VV	332	4487	0.36%	0.068%
111	6.925	6.923	6.933	VV	257	1283	0.10%	0.019%
112	6.941	6.933	6.946	VV	279	1847	0.15%	0.028%
113	6.954	6.946	6.974	VV	314	3999	0.32%	0.061%
114	6.977	6.974	7.002	VV	303	3453	0.28%	0.052%
115	7.004	7.002	7.009	VV	210	732	0.06%	0.011%
116	7.012	7.009	7.041	VV	248	2999	0.24%	0.045%
117	7.045	7.041	7.054	VV	156	846	0.07%	0.013%
118	7.057	7.054	7.070	VV	179	1293	0.10%	0.020%
119	7.074	7.070	7.079	VV	179	626	0.05%	0.009%
120	7.083	7.079	7.099	VV	186	1449	0.12%	0.022%
121	7.103	7.099	7.109	VV	148	644	0.05%	0.010%
122	7.114	7.109	7.120	VV	167	975	0.08%	0.015%
123	7.140	7.120	7.143	VV	176	2083	0.17%	0.032%
124	7.150	7.143	7.155	VV	185	1080	0.09%	0.016%
125	7.159	7.155	7.164	VV	173	800	0.06%	0.012%
126	7.166	7.164	7.170	VV	203	518	0.04%	0.008%
127	7.176	7.170	7.189	VV	337	2085	0.17%	0.032%
128	7.201	7.189	7.207	VV	308	2432	0.20%	0.037%
129	7.209	7.207	7.220	VV	322	1921	0.16%	0.029%
130	7.245	7.220	7.251	VV	397	6119	0.50%	0.093%
131	7.257	7.251	7.261	VV	377	2079	0.17%	0.032%
132	7.266	7.261	7.274	VV	347	2190	0.18%	0.033%
133	7.283	7.274	7.342	VV	318	11013	0.89%	0.167%
134	7.366	7.342	7.379	VV	504	7931	0.64%	0.120%
135	7.382	7.379	7.389	VV	405	2508	0.20%	0.038%
136	7.393	7.389	7.412	VV	477	4998	0.41%	0.076%
137	7.417	7.412	7.425	VV	299	1918	0.16%	0.029%
138	7.428	7.425	7.446	VV	270	2511	0.20%	0.038%
139	7.461	7.446	7.466	VV	302	2600	0.21%	0.039%
140	7.469	7.466	7.477	VV	234	1362	0.11%	0.021%
141	7.479	7.477	7.489	VV	176	1290	0.10%	0.020%

					rteres			
142	7.495	7.489	7.499	VV	215	995	0.08%	0.015%
143	7.506	7.499	7.514	VV	227	1615	0.13%	0.024%
144	7.517	7.514	7.537	VV	207	2189	0.18%	0.033%
145	7.548	7.537	7.552	VV	192	1333	0.11%	0.020%
146	7.570	7.552	7.600	VV	242	4360	0.35%	0.066%
147	7.632	7.600	7.641	VV	325	4796	0.39%	0.073%
148	7.647	7.641	7.652	VV	249	1204	0.10%	0.018%
149	7.655	7.652	7.685	VV	196	2538	0.21%	0.038%
150	7.690	7.685	7.701	VV	173	1066	0.09%	0.016%
151	7.714	7.701	7.731	VV	125	1914	0.16%	0.029%
152	7.735	7.731	7.745	VV	202	855	0.07%	0.013%
153	7.748	7.745	7.754	VV	127	528	0.04%	0.008%
154	7.759	7.754	7.763	VV	125	484	0.04%	0.007%
155	7.768	7.763	7.777	VV	166	826	0.07%	0.013%
156	7.782	7.777	7.797	VV	146	1045	0.08%	0.016%
157	7.801	7.797	7.809	VV	132	800	0.06%	0.012%
158	7.836	7.809	7.852	VV	168	2670	0.22%	0.040%
159	7.857	7.852	7.864	PV	156	766	0.06%	0.012%
160	7.866	7.864	7.869	VV	145	345	0.03%	0.005%
161	7.873	7.869	7.882	VV	130	982	0.08%	0.015%
162	7.911	7.882	7.937	VV	1016	14034	1.14%	0.213%
163	7.941	7.937	7.955	VV	244	1838	0.15%	0.028%
164	7.962	7.955	7.979	VV	196	2026	0.16%	0.031%
165	7.984	7.979	7.991	VV	158	871	0.07%	0.013%
166	8.010	7.991	8.016	VV	183	1980	0.16%	0.030%
167	8.021	8.016	8.024	VV	155	685	0.06%	0.010%
168	8.028	8.024	8.032	VV	150	635	0.05%	0.010%
169	8.057	8.032	8.065	VV	435	5680	0.46%	0.086%
170	8.084	8.065	8.114	VV	1152	16170	1.31%	0.245%
171	8.116	8.114	8.130	VV	202	1557	0.13%	0.024%
172	8.137	8.130	8.151	VV	177	1877	0.15%	0.028%
173	8.164	8.151	8.175	VV	195	2216	0.18%	0.034%
174	8.189	8.175	8.193	VV	152	1357	0.11%	0.021%
175	8.199	8.193	8.213	VV	194	1925	0.16%	0.029%
176	8.221	8.213	8.232	VV	185	1734	0.14%	0.026%
177	8.239	8.232	8.244	VV	206	1096	0.09%	0.017%
178	8.258	8.244	8.276	VV	234	3463	0.28%	0.052%
179	8.283	8.276	8.321	VV	173	3442	0.28%	0.052%
180	8.326	8.321	8.329	VV	158	641	0.05%	0.010%
181	8.341	8.329	8.347	VV	218	1999	0.16%	0.030%
182	8.349	8.347	8.375	VV	212	2202	0.18%	0.033%
183	8.421	8.375	8.438	VV	255	6968	0.57%	0.106%
184	8.445	8.438	8.462	VV	251	2636	0.21%	0.040%
185	8.481	8.462	8.497	VV	710	10182	0.83%	0.154%
186	8.513	8.497	8.573	VV	931	19067	1.55%	0.289%
187	8.577	8.573	8.582	VV	157	775	0.06%	0.012%
188	8.589	8.582	8.613	VV	167	2760	0.22%	0.042%
189	8.655	8.613	8.691	VV	453	13689	1.11%	0.207%
190	8.694	8.691	8.721	VV	237	2740	0.22%	0.042%
191	8.724	8.721	8.781	VV	159	3930	0.32%	0.060%
192	8.783	8.781	8.794	VV	98	545	0.04%	0.008%
193	8.803	8.794	8.815	VV	82	918	0.07%	0.014%
194	8.840	8.815	8.861	VV	402	7535	0.61%	0.114%

					rteres			
195	8.872	8.861	8.913	VV	373	7374	0.60%	0.112%
196	8.947	8.913	8.975	VV	311	7415	0.60%	0.112%
197	8.998	8.975	9.041	VV	413	10796	0.88%	0.164%
198	9.056	9.041	9.073	VV	263	3732	0.30%	0.057%
199	9.078	9.073	9.082	VV	162	644	0.05%	0.010%
200	9.087	9.082	9.100	VV	131	1130	0.09%	0.017%
201	9.104	9.100	9.112	VV	101	656	0.05%	0.010%
202	9.134	9.112	9.152	VV	212	3366	0.27%	0.051%
203	9.158	9.152	9.191	VV	195	3091	0.25%	0.047%
204	9.197	9.191	9.218	VV	131	1960	0.16%	0.030%
205	9.246	9.218	9.300	VV	500	12011	0.97%	0.182%
206	9.304	9.300	9.327	VV	136	1621	0.13%	0.025%
207	9.342	9.327	9.367	VV	458	6632	0.54%	0.101%
208	9.389	9.367	9.419	VV	321	5616	0.46%	0.085%
209	9.423	9.419	9.431	VV	167	828	0.07%	0.013%
210	9.447	9.431	9.459	VV	134	1383	0.11%	0.021%
211	9.466	9.459	9.483	VV	112	798	0.06%	0.012%
212	9.490	9.483	9.510	VV	159	1445	0.12%	0.022%
213	9.536	9.510	9.548	VV	255	3732	0.30%	0.057%
214	9.554	9.548	9.571	VV	168	1239	0.10%	0.019%
215	9.575	9.571	9.604	VV	159	1269	0.10%	0.019%
216	9.620	9.604	9.642	PV	106	1629	0.13%	0.025%
217	9.647	9.642	9.658	VV	140	889	0.07%	0.013%
218	9.675	9.658	9.691	VV	271	3109	0.25%	0.047%
219	9.731	9.691	9.797	VV	529	18154	1.47%	0.275%
220	9.801	9.797	9.806	VV	206	918	0.07%	0.014%
221	9.809	9.806	9.841	VV	228	2874	0.23%	0.044%
222	9.845	9.841	9.870	VV	181	2020	0.16%	0.031%
223	9.875	9.870	9.896	VV	161	1923	0.16%	0.029%
224	9.911	9.896	9.921	VV	148	1362	0.11%	0.021%
225	9.928	9.921	9.941	VV	102	578	0.05%	0.009%
226	9.959	9.941	9.972	VV	520	5926	0.48%	0.090%
227	9.998	9.972	10.112	VV	62568	1133719	92.03%	17.184%
228	10.127	10.112	10.183	VV	2461	68736	5.58%	1.042%
229	10.188	10.183	10.214	VV	1025	16895	1.37%	0.256%
230	10.240	10.214	10.265	VV	861	21856	1.77%	0.331%
231	10.274	10.265	10.345	VV	615	20268	1.65%	0.307%
232	10.366	10.345	10.381	VV	322	5712	0.46%	0.087%
233	10.402	10.381	10.408	VV	293	3662	0.30%	0.056%
234	10.411	10.408	10.422	VV	200	1657	0.13%	0.025%
235	10.429	10.422	10.436	VV	232	1560	0.13%	0.024%
236	10.470	10.436	10.542	VV	8061	126328	10.25%	1.915%
237	10.548	10.542	10.560	VV	458	4414	0.36%	0.067%
238	10.566	10.560	10.572	VV	465	2858	0.23%	0.043%
239	10.575	10.572	10.602	VV	404	6075	0.49%	0.092%
240	10.607	10.602	10.631	VV	379	4657	0.38%	0.071%
241	10.645	10.631	10.669	VV	445	6289	0.51%	0.095%
242	10.685	10.669	10.702	VV	326	5156	0.42%	0.078%
243	10.706	10.702	10.710	VV	218	866	0.07%	0.013%
244	10.713	10.710	10.727	VV	222	1859	0.15%	0.028%
245	10.731	10.727	10.735	VV	242	843	0.07%	0.013%
246	10.762	10.735	10.781	VV	312	6559	0.53%	0.099%

					rteres			
247	10.797	10.781	10.814	VV	249	3968	0.32%	0.060%
248	10.831	10.814	10.837	VV	378	4415	0.36%	0.067%
249	10.868	10.837	10.911	VV	563	14299	1.16%	0.217%
250	10.933	10.911	10.964	VV	401	9062	0.74%	0.137%
251	10.977	10.964	11.006	VV	418	7500	0.61%	0.114%
252	11.013	11.006	11.027	VV	225	2315	0.19%	0.035%
253	11.039	11.027	11.055	VV	217	2780	0.23%	0.042%
254	11.060	11.055	11.074	VV	206	1882	0.15%	0.029%
255	11.092	11.074	11.125	VV	369	7291	0.59%	0.111%
256	11.150	11.125	11.221	VV	914	33390	2.71%	0.506%
257	11.227	11.221	11.234	VV	402	3006	0.24%	0.046%
258	11.246	11.234	11.281	VV	468	9245	0.75%	0.140%
259	11.286	11.281	11.291	VV	247	1250	0.10%	0.019%
260	11.305	11.291	11.317	VV	278	3413	0.28%	0.052%
261	11.321	11.317	11.336	VV	239	2093	0.17%	0.032%
262	11.344	11.336	11.365	VV	197	2530	0.21%	0.038%
263	11.373	11.365	11.377	VV	180	792	0.06%	0.012%
264	11.389	11.377	11.428	VV	200	3732	0.30%	0.057%
265	11.438	11.428	11.461	VV	143	2086	0.17%	0.032%
266	11.464	11.461	11.487	VV	102	1205	0.10%	0.018%
267	11.516	11.487	11.534	VV	411	6896	0.56%	0.105%
268	11.549	11.534	11.559	VV	307	3472	0.28%	0.053%
269	11.575	11.559	11.608	VV	496	7527	0.61%	0.114%
270	11.616	11.608	11.622	VV	135	829	0.07%	0.013%
271	11.624	11.622	11.628	VV	108	307	0.02%	0.005%
272	11.652	11.628	11.697	VV	1410	20509	1.66%	0.311%
273	11.699	11.697	11.709	VV	122	378	0.03%	0.006%
274	11.731	11.709	11.752	PV	471	6002	0.49%	0.091%
275	11.770	11.752	11.799	VV	482	5298	0.43%	0.080%
276	11.814	11.799	11.834	VV	166	2089	0.17%	0.032%
277	11.861	11.834	11.917	VV	352	11724	0.95%	0.178%
278	11.923	11.917	11.926	VV	218	1087	0.09%	0.016%
279	11.939	11.926	11.949	VV	250	2934	0.24%	0.044%
280	11.996	11.949	12.044	VV	10505	186259	15.12%	2.823%
281	12.057	12.044	12.088	VV	1425	23856	1.94%	0.362%
282	12.092	12.088	12.117	VV	431	5582	0.45%	0.085%
283	12.122	12.117	12.129	VV	323	1928	0.16%	0.029%
284	12.130	12.129	12.138	VV	318	1270	0.10%	0.019%
285	12.143	12.138	12.172	VV	223	2551	0.21%	0.039%
286	12.178	12.172	12.184	VV	136	759	0.06%	0.012%
287	12.219	12.184	12.239	VV	494	8958	0.73%	0.136%
288	12.248	12.239	12.271	VV	429	5135	0.42%	0.078%
289	12.301	12.271	12.307	VV	291	3820	0.31%	0.058%
290	12.310	12.307	12.322	VV	347	1976	0.16%	0.030%
291	12.340	12.322	12.392	VV	809	14742	1.20%	0.223%
292	12.399	12.392	12.426	VV	215	2039	0.17%	0.031%
293	12.454	12.426	12.470	PV	338	4944	0.40%	0.075%
294	12.503	12.470	12.551	VV	15681	193777	15.73%	2.937%
295	12.571	12.551	12.584	VV	1158	16806	1.36%	0.255%
296	12.599	12.584	12.652	VV	1200	31202	2.53%	0.473%
297	12.669	12.652	12.694	VV	538	11277	0.92%	0.171%
298	12.715	12.694	12.727	VV	518	8714	0.71%	0.132%
299	12.733	12.727	12.766	VV	312	4923	0.40%	0.075%

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300	12.769	12.766	12.779	VV	191	1079	0.09%	0.016%
301	12.812	12.779	12.864	VV	857	20516	1.67%	0.311%
302	12.886	12.864	12.916	VV	721	15158	1.23%	0.230%
303	12.922	12.916	12.927	VV	273	1629	0.13%	0.025%
304	12.956	12.927	13.038	VV	10251	184346	14.96%	2.794%
305	13.041	13.038	13.050	VV	284	1617	0.13%	0.025%
306	13.057	13.050	13.077	VV	222	2779	0.23%	0.042%
307	13.099	13.077	13.114	VV	352	5451	0.44%	0.083%
308	13.144	13.114	13.181	VV	441	10274	0.83%	0.156%
309	13.214	13.181	13.226	VV	210	4622	0.38%	0.070%
310	13.265	13.226	13.277	VV	1621	23618	1.92%	0.358%
311	13.297	13.277	13.371	VV	2274	60693	4.93%	0.920%
312	13.377	13.371	13.384	VV	444	2990	0.24%	0.045%
313	13.388	13.384	13.396	VV	416	2518	0.20%	0.038%
314	13.405	13.396	13.436	VV	339	6825	0.55%	0.103%
315	13.457	13.436	13.489	VV	398	8280	0.67%	0.126%
316	13.511	13.489	13.548	VV	1415	26158	2.12%	0.396%
317	13.559	13.548	13.581	VV	468	7078	0.57%	0.107%
318	13.583	13.581	13.589	VV	304	1388	0.11%	0.021%
319	13.632	13.589	13.662	VV	538	14052	1.14%	0.213%
320	13.681	13.662	13.697	VV	359	5567	0.45%	0.084%
321	13.716	13.697	13.760	VV	573	16081	1.31%	0.244%
322	13.769	13.760	13.792	VV	547	7171	0.58%	0.109%
323	13.808	13.792	13.831	VV	436	7109	0.58%	0.108%
324	13.841	13.831	13.850	VV	295	2959	0.24%	0.045%
325	13.904	13.850	13.945	VV	461	20542	1.67%	0.311%
326	13.951	13.945	13.963	VV	327	2930	0.24%	0.044%
327	13.985	13.963	13.992	VV	313	4228	0.34%	0.064%
328	14.045	13.992	14.071	VV	3213	51778	4.20%	0.785%
329	14.090	14.071	14.109	VV	597	10134	0.82%	0.154%
330	14.146	14.109	14.169	VV	442	12389	1.01%	0.188%
331	14.207	14.169	14.279	VV	354	14991	1.22%	0.227%
332	14.308	14.279	14.344	VV	344	8391	0.68%	0.127%
333	14.358	14.344	14.382	VV	267	4378	0.36%	0.066%
334	14.388	14.382	14.427	VV	248	3915	0.32%	0.059%
335	14.455	14.427	14.462	VV	411	6022	0.49%	0.091%
336	14.492	14.462	14.554	VV	2194	53427	4.34%	0.810%
337	14.583	14.554	14.627	VV	341	12891	1.05%	0.195%
338	14.656	14.627	14.671	VV	839	13896	1.13%	0.211%
339	14.691	14.671	14.711	VV	746	15315	1.24%	0.232%
340	14.719	14.711	14.727	VV	610	5492	0.45%	0.083%
341	14.757	14.727	14.797	VV	856	23594	1.92%	0.358%
342	14.812	14.797	14.832	VV	493	8592	0.70%	0.130%
343	14.853	14.832	14.866	VV	519	8933	0.73%	0.135%
344	14.889	14.866	14.916	VV	845	19347	1.57%	0.293%
345	14.924	14.916	14.949	VV	600	10007	0.81%	0.152%
346	14.993	14.949	15.033	VV	91417	1231963	100.00%	18.673%
347	15.046	15.033	15.089	VV	1129	28622	2.32%	0.434%
348	15.097	15.089	15.134	VV	594	12933	1.05%	0.196%
349	15.162	15.134	15.185	VV	2116	44843	3.64%	0.680%
350	15.196	15.185	15.223	VV	1617	29403	2.39%	0.446%
351	15.251	15.223	15.299	VV	1381	38278	3.11%	0.580%

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352	15.327	15.299	15.337	VV	494	9754	0.79%	0.148%
353	15.349	15.337	15.372	VV	416	7360	0.60%	0.112%
354	15.392	15.372	15.424	VV	566	12068	0.98%	0.183%
355	15.458	15.424	15.472	VV	342	7773	0.63%	0.118%
356	15.486	15.472	15.501	VV	344	5003	0.41%	0.076%
357	15.531	15.501	15.546	VV	373	8404	0.68%	0.127%
358	15.580	15.546	15.692	VV	40909	798738	64.83%	12.106%
359	15.720	15.692	15.761	VV	1739	39518	3.21%	0.599%
360	15.786	15.761	15.819	VV	1385	22133	1.80%	0.335%
361	15.848	15.819	15.872	VV	521	9619	0.78%	0.146%
362	15.896	15.872	15.951	VV	281	5304	0.43%	0.080%
363	16.004	15.951	16.024	PV	367	9224	0.75%	0.140%
364	16.039	16.024	16.074	VV	292	4557	0.37%	0.069%
365	16.105	16.074	16.159	PV	1561	31043	2.52%	0.471%
366	16.185	16.159	16.196	VV	317	3924	0.32%	0.059%
367	16.222	16.196	16.259	VV	1248	18876	1.53%	0.286%
368	16.286	16.259	16.317	VV	375	5424	0.44%	0.082%
369	16.356	16.317	16.376	PV	270	4245	0.34%	0.064%
370	16.466	16.376	16.489	VV	270	14144	1.15%	0.214%
371	16.517	16.489	16.541	VV	782	16799	1.36%	0.255%
372	16.600	16.541	16.657	VV	11342	258742	21.00%	3.922%
373	16.665	16.657	16.684	VV	1285	19591	1.59%	0.297%
374	16.706	16.684	16.727	VV	2531	43142	3.50%	0.654%
375	16.741	16.727	16.753	VV	1148	16410	1.33%	0.249%
376	16.784	16.753	16.822	VV	1451	45375	3.68%	0.688%
377	16.859	16.822	16.886	VV	786	27413	2.23%	0.415%
378	16.907	16.886	16.942	VV	721	20529	1.67%	0.311%
379	16.979	16.942	17.037	VV	1390	52851	4.29%	0.801%
380	17.083	17.037	17.112	VV	1189	42753	3.47%	0.648%
381	17.136	17.112	17.151	VV	1014	20293	1.65%	0.308%
382	17.174	17.151	17.204	VV	2129	38015	3.09%	0.576%
383	17.223	17.204	17.237	VV	853	12706	1.03%	0.193%
384	17.255	17.237	17.321	VV	681	13790	1.12%	0.209%
					Sum of corrected areas:	6597612		

FG042425.M Wed May 14 05:42:06 2025



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q2010 SAS No.: Q2010 SDG No.: Q2010

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.: Q2010 SAS No.: Q2010 SDG No.: Q2010
DataFile: FG015818.D Analyst Name: YP\AJ Analyst Date: 05-13-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	60476877	120954	126925	4.704

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015818.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 11:40
 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 03:54:24 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	5482459	46.565 ug/ml
Target Compounds			
2) N-DECANE	4.499	5351365	48.066 ug/ml
3) N-DODECANE	6.681	5643937	49.248 ug/ml
4) N-TETRADECANE	8.517	5889484	48.604 ug/ml
5) N-HEXADECANE	10.131	6050592	48.196 ug/ml
6) N-OCTADECANE	11.579	6240717	47.620 ug/ml
7) N-EICOSANE	12.895	6359506	46.907 ug/ml
8) N-DOCOSANE	14.097	6209146	46.816 ug/ml
10) N-TETRACOSANE	15.204	6232751	46.903 ug/ml
11) N-HEXACOSANE	16.228	6221359	46.911 ug/ml
12) N-OCTACOSANE	17.181	6278020	47.621 ug/ml

(f)=RT Delta > 1/2 Window

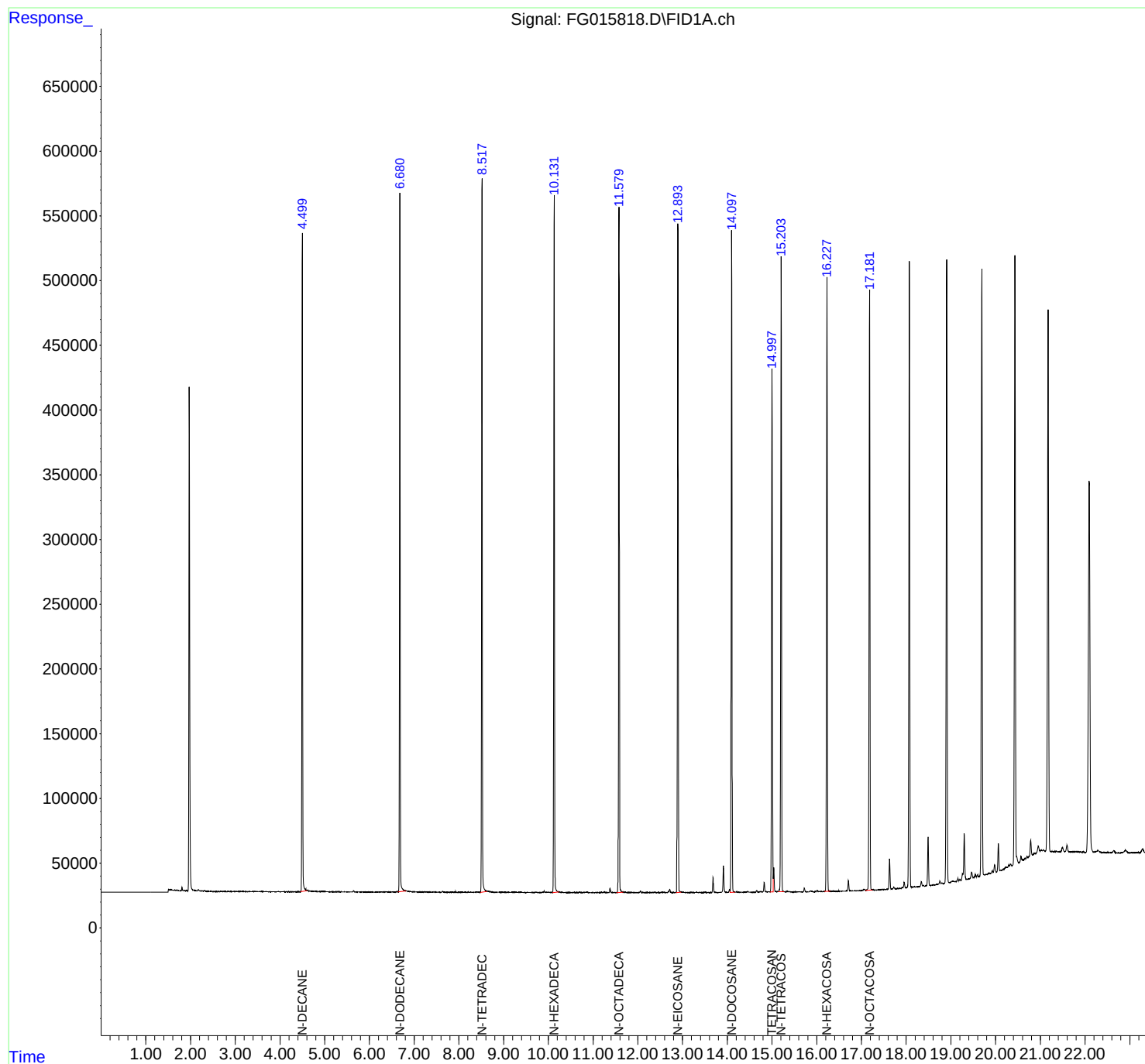
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015818.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 11:40
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 03:54:24 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 : FG015818.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 11:40
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	4.499	4.458	4.609	BB	508368	5351365	84.15%	8.113%
2	6.681	6.637	6.817	BB	538048	5643937	88.75%	8.557%
3	8.517	8.476	8.631	BV	550429	5889484	92.61%	8.929%
4	10.131	10.089	10.239	BB	536692	6050592	95.14%	9.173%
5	11.579	11.530	11.671	BB	529210	6240717	98.13%	9.461%
6	12.895	12.854	12.973	BB	514140	6359506	100.00%	9.642%
7	14.097	14.061	14.172	VB	510628	6209146	97.64%	9.414%
8	14.998	14.956	15.026	BV	398999	5482459	86.21%	8.312%
9	15.204	15.135	15.272	BB	489489	6232751	98.01%	9.449%
10	16.228	16.167	16.295	BB	472998	6221359	97.83%	9.432%
11	17.181	17.096	17.250	BB	462352	6278020	98.72%	9.518%
Sum of corrected areas:						65959334		

FG042425.M Wed May 14 05:05:25 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.: Q2010 SAS No.: Q2010 SDG No.: Q2010
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

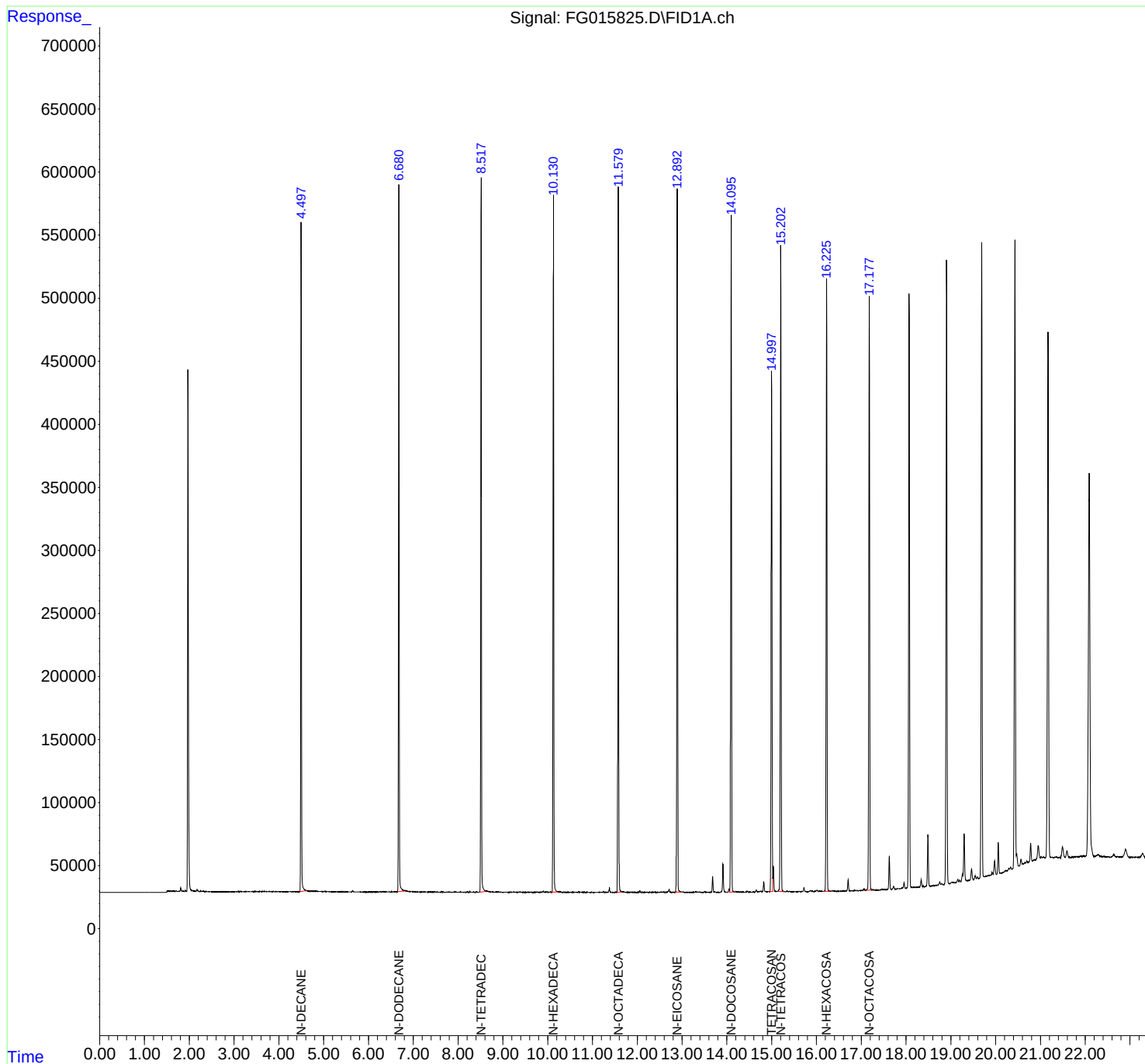
(m)=manual int.

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.: Q2010 SAS No.: Q2010 SDG No.: Q2010
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

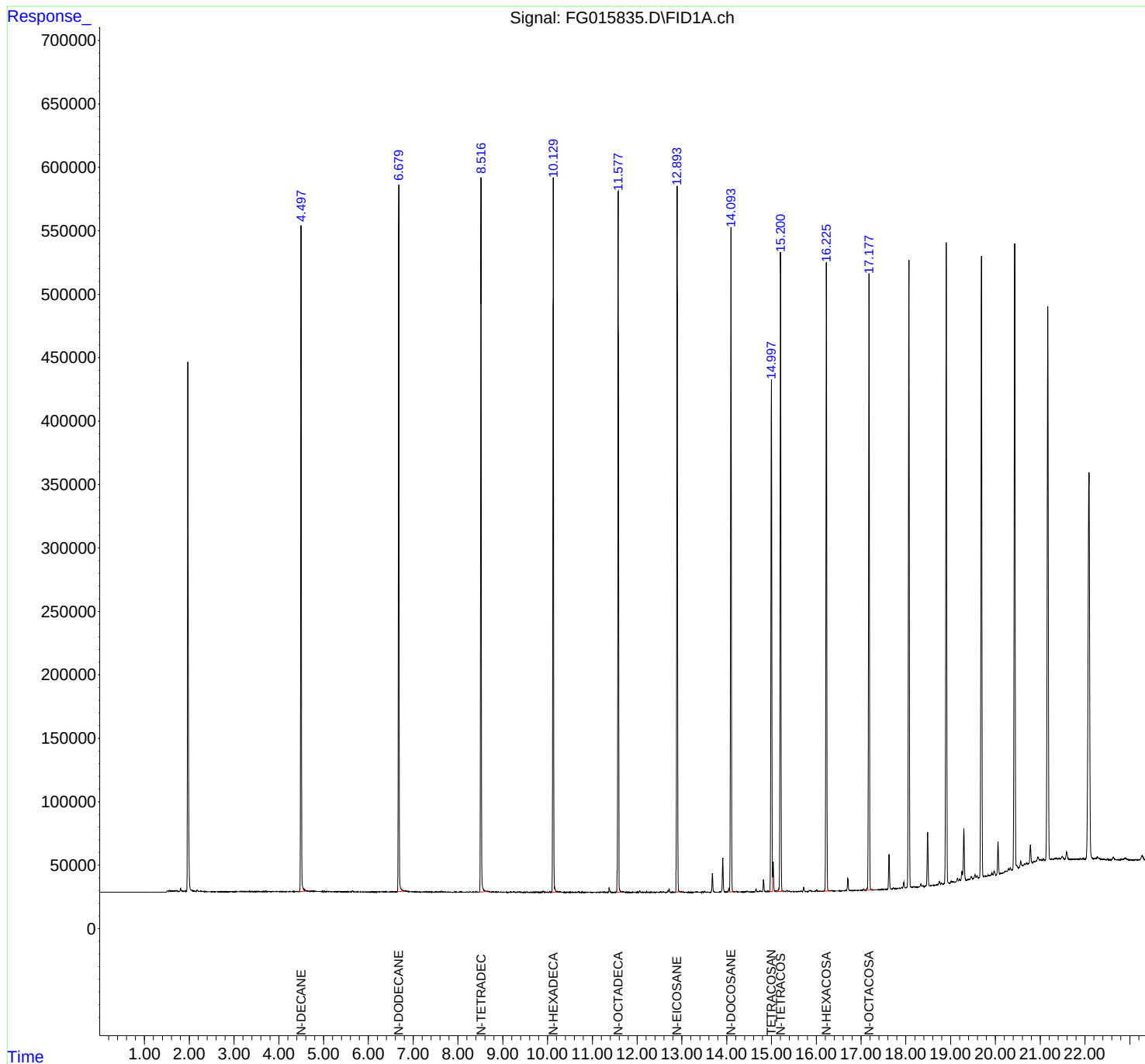
(m)=manual int.

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

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.: Q2010 SAS No.: Q2010 SDG No.: Q2010
DataFile: FG015841.D Analyst Name: YP\AJ Analyst Date: 05-14-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	65024093	130048	126925	2.461

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
 Data File : FG015841.D
 Signal(s) : FID1A.ch
 Acq On : 14 May 2025 01:10
 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 03:58:16 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...	14.998	5775038	49.050 ug/ml
Target Compounds			
2) N-DECANE	4.497	5930891	53.271 ug/ml
3) N-DODECANE	6.680	6246377	54.505 ug/ml
4) N-TETRADECANE	8.516	6473684	53.425 ug/ml
5) N-HEXADECANE	10.130	6600869	52.579 ug/ml
6) N-OCTADECANE	11.579	6742988	51.453 ug/ml
7) N-EICOSANE	12.893	6802526	50.175 ug/ml
8) N-DOCOSANE	14.095	6596774	49.739 ug/ml
10) N-TETRACOSANE	15.202	6588813	49.582 ug/ml
11) N-HEXACOSANE	16.226	6510996	49.095 ug/ml
12) N-OCTACOSANE	17.178	6530175	49.533 ug/ml

(f)=RT Delta > 1/2 Window

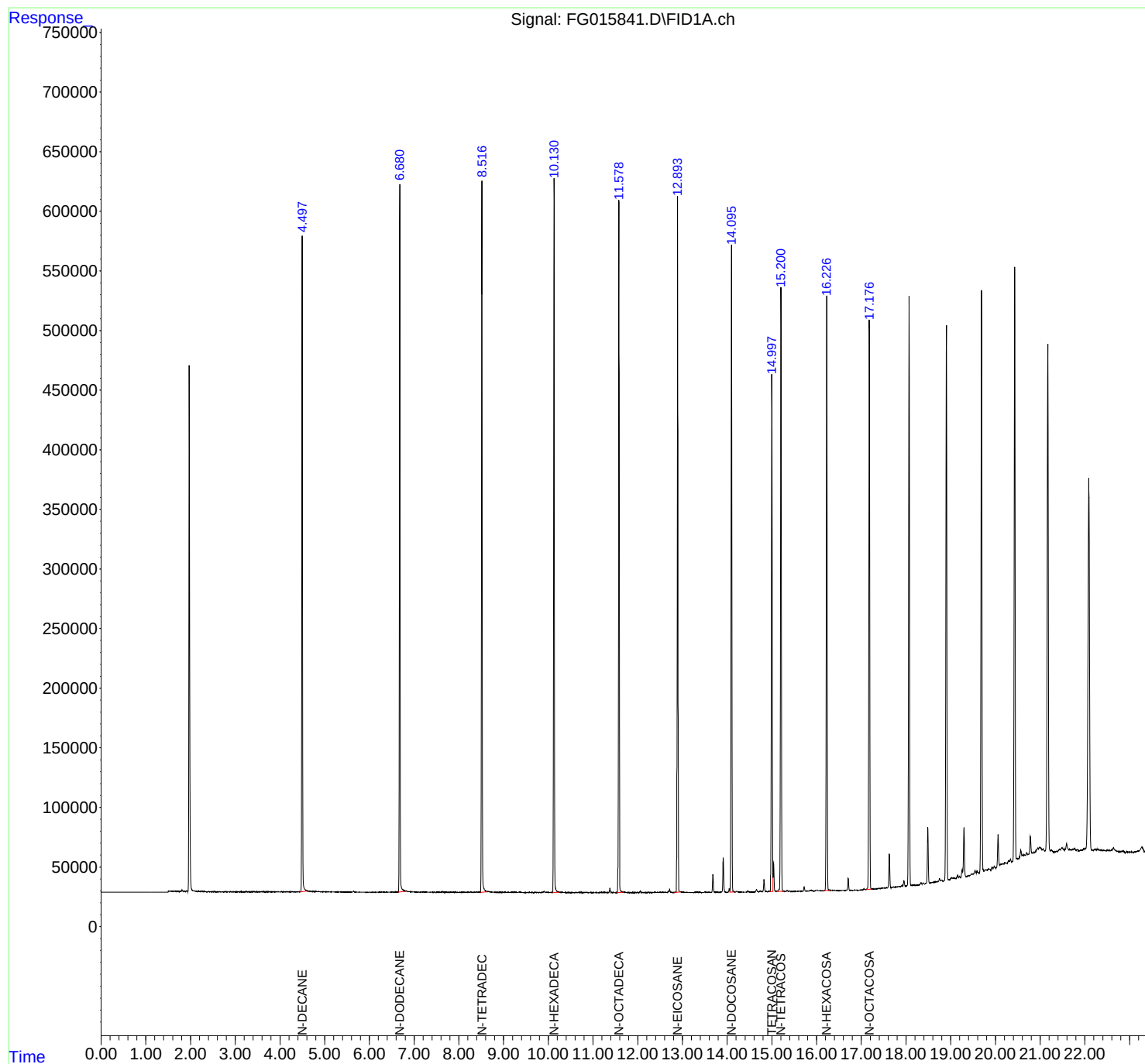
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015841.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 01:10
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 03:58:16 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 : FG015841.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 01:10
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	4.453	4.618	BB	549722	5930891	87.19%	8.377%
2	6.680	6.639	6.813	BB	593742	6246377	91.82%	8.823%
3	8.516	8.482	8.633	BB	596398	6473684	95.17%	9.144%
4	10.130	10.093	10.244	BB	598175	6600869	97.04%	9.323%
5	11.579	11.529	11.668	BB	578484	6742988	99.12%	9.524%
6	12.893	12.816	12.963	BB	583480	6802526	100.00%	9.608%
7	14.095	14.060	14.166	VB	540953	6596774	96.98%	9.318%
8	14.998	14.944	15.024	BV	432470	5775038	84.90%	8.157%
9	15.202	15.097	15.277	BB	500991	6588813	96.86%	9.306%
10	16.226	16.151	16.297	BB	497032	6510996	95.71%	9.196%
11	17.178	17.090	17.240	BB	474015	6530175	96.00%	9.224%
Sum of corrected areas:						70799130		

FG042425.M Wed May 14 05:12:35 2025

Analytical Sequence

Client: CDM Smith

SDG No.: Q2010

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 15.0012					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	13 May 2025 11:11	FG015817.D	14.996	
50 PPM TRPH STD	50 PPM TRPH STD	13 May 2025 11:40	FG015818.D	14.998	
PB167975BL	PB167975BL	13 May 2025 13:22	FG015820.D	14.998	
PB167975BS	PB167975BS	13 May 2025 13:51	FG015821.D	14.995	
PIBLK02	LBLK02	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	
PIBLK03	LBLK03	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	
TP-10	Q2010-01	13 May 2025 22:44	FG015836.D	14.992	
TP-13	Q2010-02	13 May 2025 23:14	FG015837.D	14.994	
TP-14	Q2010-03	13 May 2025 23:43	FG015838.D	14.995	
TP-17	Q2010-04	14 May 2025 00:12	FG015839.D	14.993	
PIBLK04	LBLK04	14 May 2025 00:41	FG015840.D	14.995	
50 PPM TRPH STD	50 PPM TRPH STD	14 May 2025 01:10	FG015841.D	14.998	



QC SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB167975BL	SDG No.:	Q2010
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
FG015820.D	1	05/13/25 10:05	05/13/25 13:22	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	17.4		37 - 130	87%	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 : FG015820.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:22
Operator : YP\AJ
Sample : PB167975BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB167975BL

Integration File: autoint1.e
Quant Time: May 14 03:54:45 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	2046304	17.380 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

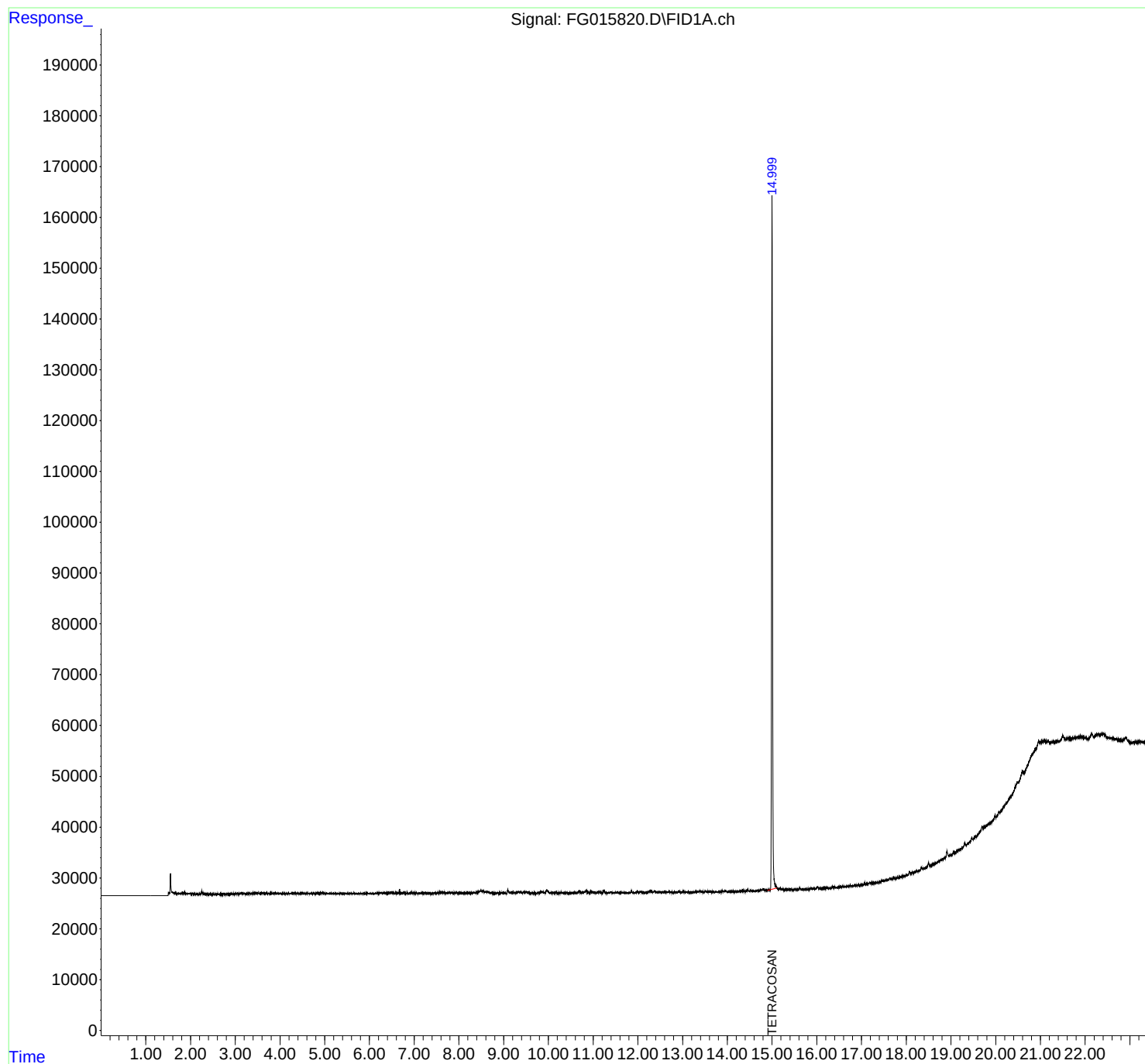
(m)=manual int.

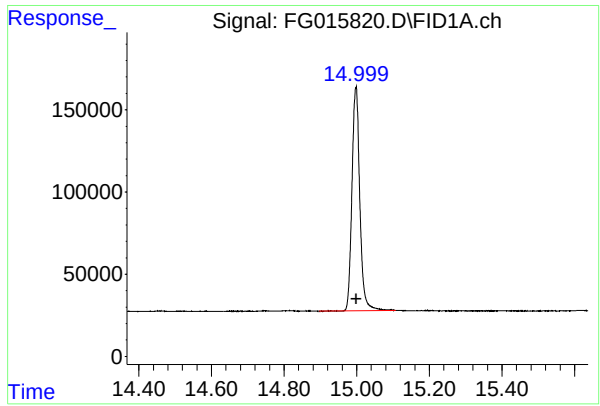
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015820.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:22
Operator : YP\AJ
Sample : PB167975BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB167975BL

Integration File: autoint1.e
Quant Time: May 14 03:54:45 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.: 14.998 min
Delta R.T.: 0.000 min
Response: 2046304
Conc: 17.38 ug/ml

Instrument :
FID_G
ClientSampleId :
PB167975BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015820.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:22
Sample : PB167975BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.998	14.896	15.108	BB	135194	2046304	100.00%	100.000%
Sum of corrected areas:						2046304		

FG042425.M Wed May 14 05:06:17 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-FG015817.D	SDG No.:	Q2010
Lab Sample ID:	I.BLK-FG015817.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
FG015817.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 : FG015817.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 11:11
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 03:54:15 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	2260251	19.197 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

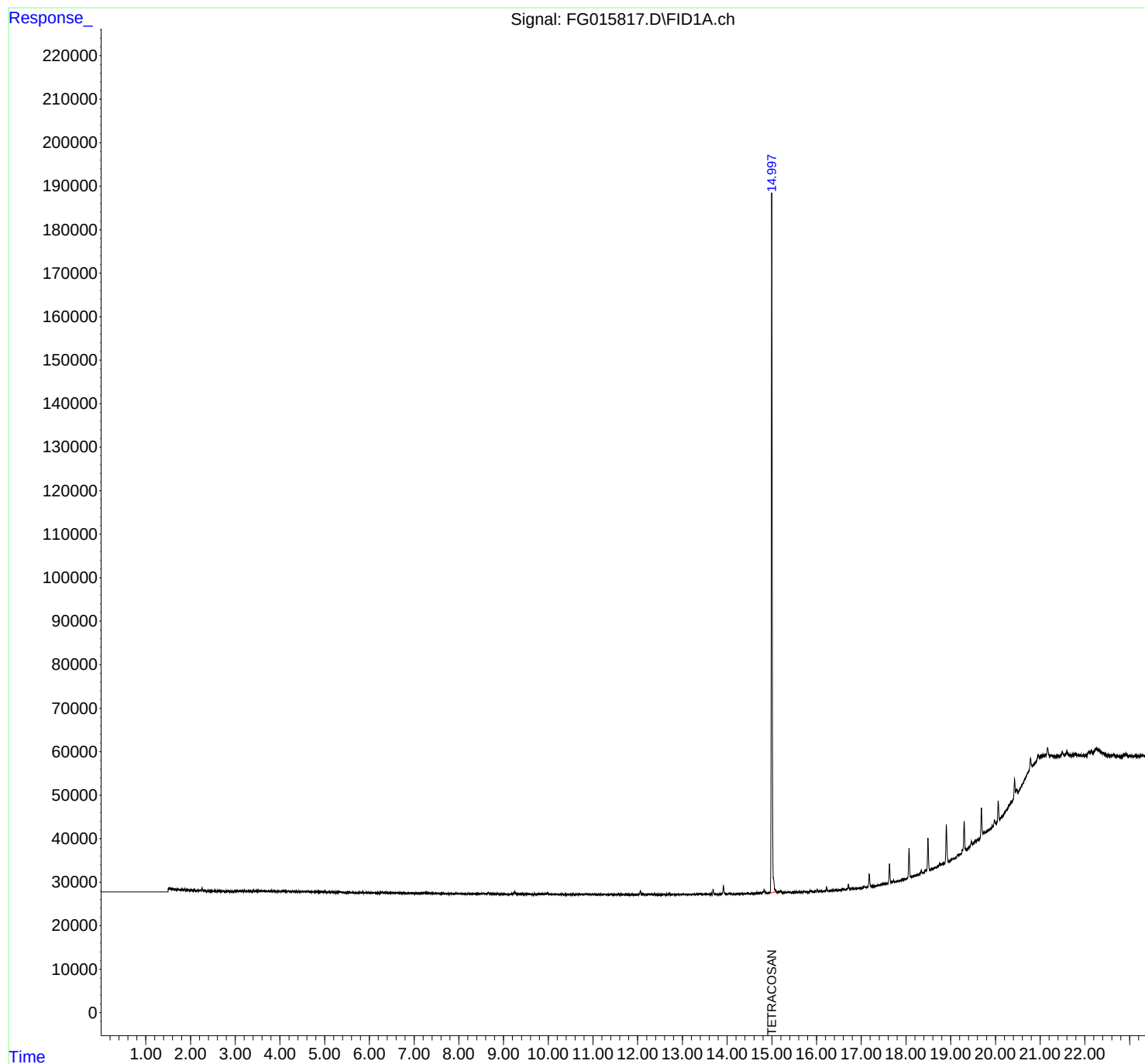
(m)=manual int.

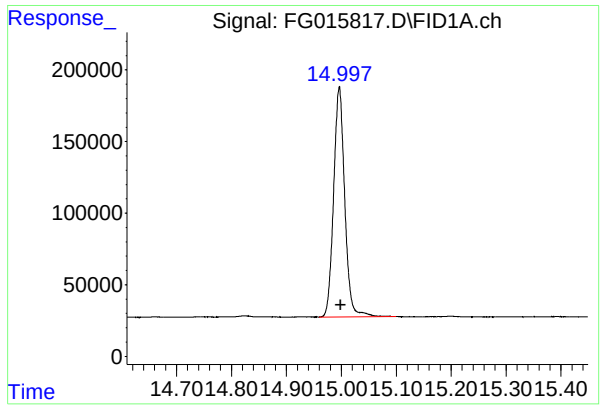
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015817.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 11:11
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 03:54:15 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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.996 min
Delta R.T.: -0.002 min
Response: 2260251
Conc: 19.20 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015817.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 11:11
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	14.996	14.960	15.100	BB	160540	2260251	100.00%	100.000%
Sum of corrected areas:						2260251		

FG042425.M Wed May 14 05:03:26 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.:	Q2010
Lab Sample ID:	I.BLK-FG015824.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
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

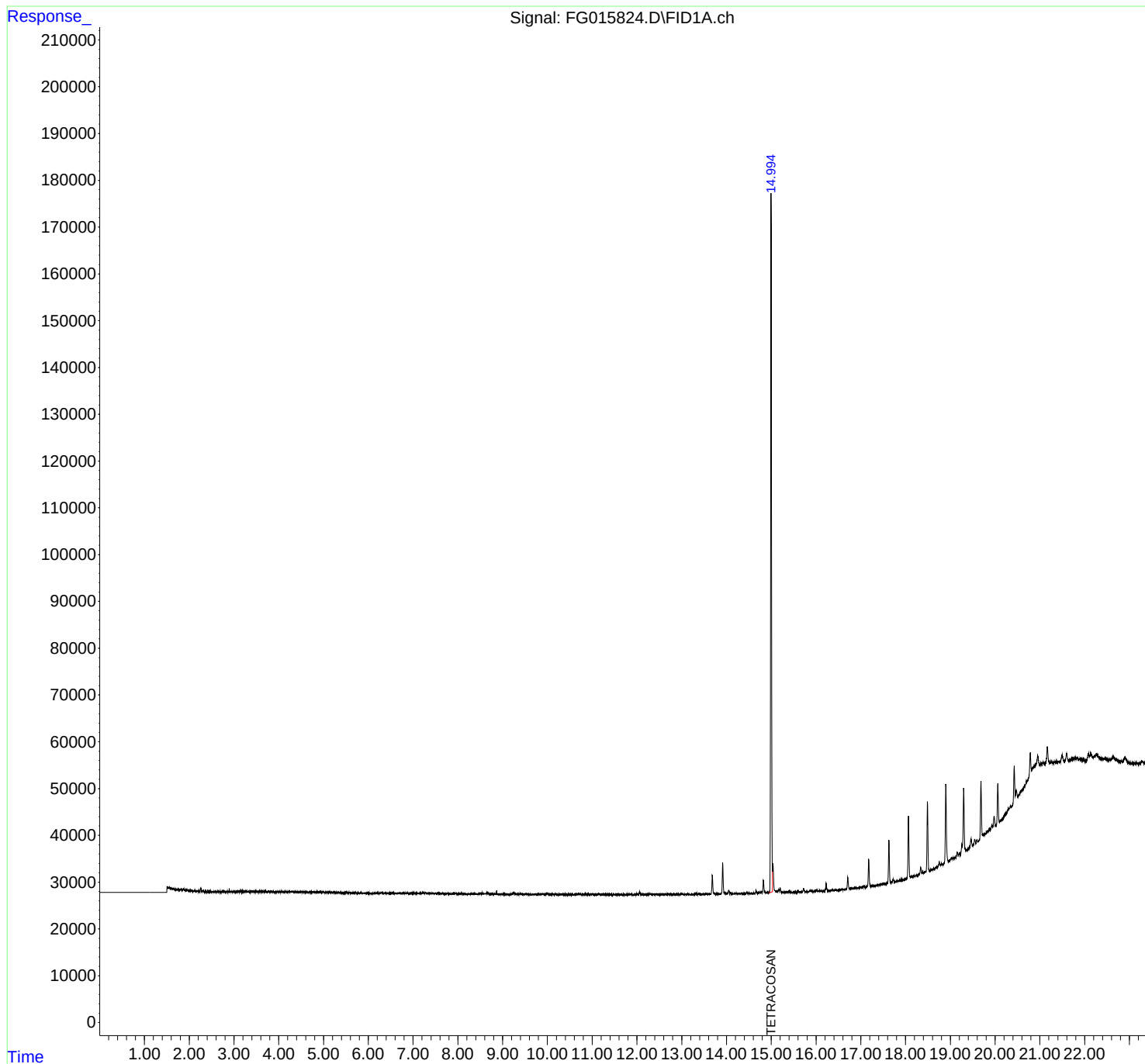
(m)=manual int.

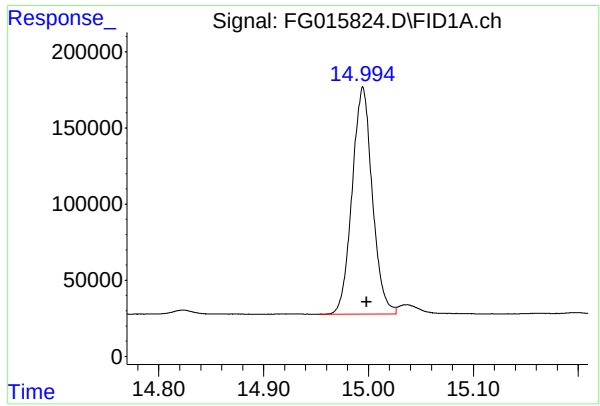
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015824.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 15:54
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

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.:	Q2010
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

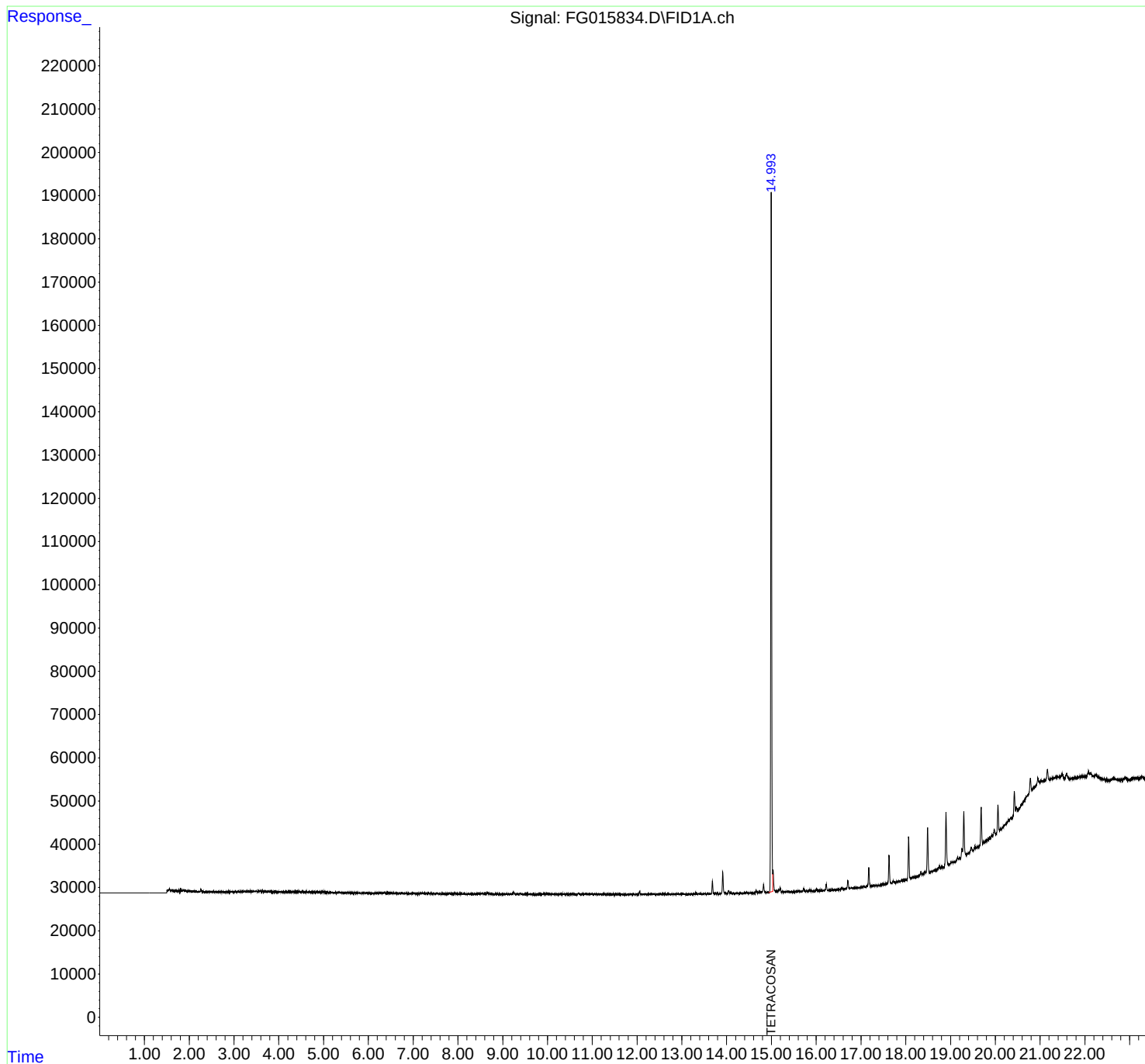
(m)=manual int.

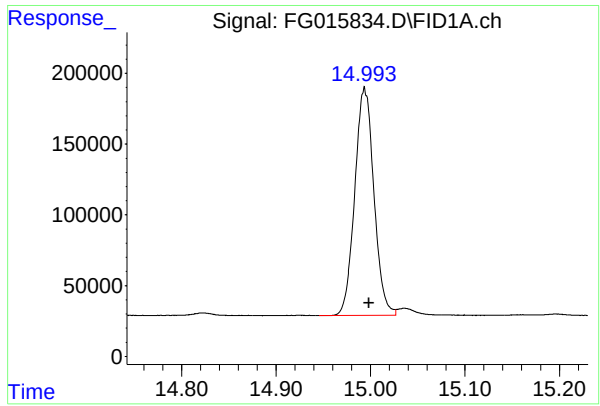
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015834.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 21:16
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

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:	05/14/25
Project:	South River WM Replacement	Date Received:	05/14/25
Client Sample ID:	PIBLK-FG015840.D	SDG No.:	Q2010
Lab Sample ID:	I.BLK-FG015840.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
FG015840.D	1		05/14/25	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	18.9		29 - 130	94%	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 : FG015840.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 00:41
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 03:58:05 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...	14.995	2224311	18.892 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

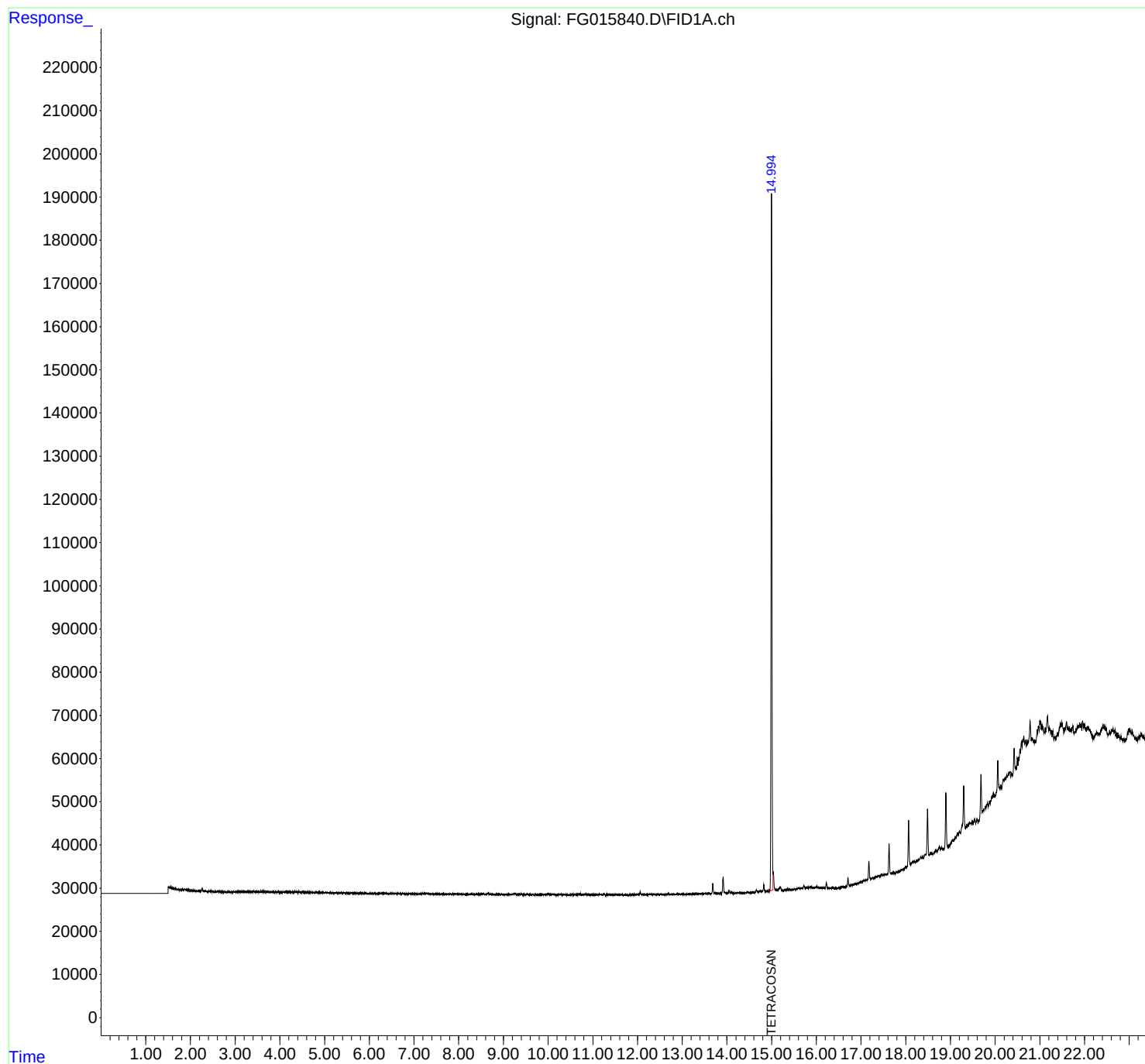
(m)=manual int.

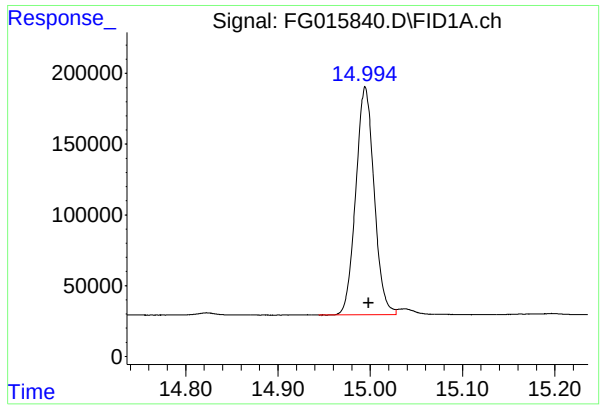
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015840.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 00:41
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 14 03:58:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.995 min
Delta R.T.: -0.004 min
Response: 2224311
Conc: 18.89 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015840.D
Signal(s) : FID1A.ch
Acq On : 14 May 2025 00:41
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	14.995	14.945	15.028	BV	161199	2224311	100.00%	100.000%
Sum of corrected areas:						2224311		

FG042425.M Wed May 14 05:11:37 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB167975BS	SDG No.:	Q2010
Lab Sample ID:	PB167975BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100 Decanted:
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015821.D	1	05/13/25 10:05	05/13/25 13:51	PB167975

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	6320		169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	18.6		37 - 130	93%	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 : FG015821.D
 Signal(s) : FID1A.ch
 Acq On : 13 May 2025 13:51
 Operator : YP\AJ
 Sample : PB167975BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB167975BS

Integration File: autoint1.e
 Quant Time: May 14 03:54:53 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
 Quant Title :
 QLast Update : Thu Apr 24 12:54:09 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.995	2185648	18.564 ug/ml
Target Compounds			
2) N-DECANE	4.496	2017520	18.121 ug/ml
3) N-DODECANE	6.678	2165188	18.893 ug/ml
4) N-TETRADECANE	8.514	2240728	18.492 ug/ml
5) N-HEXADECANE	10.128	2388319	19.024 ug/ml
6) N-OCTADECANE	11.576	2548747	19.448 ug/ml
7) N-EICOSANE	12.891	2541732	18.748 ug/ml
8) N-DOCOSANE	14.093	2547744	19.210 ug/ml
10) N-TETRACOSANE	15.200	2567239	19.319 ug/ml
11) N-HEXACOSANE	16.223	2544712	19.188 ug/ml
12) N-OCTACOSANE	17.176	2522495	19.134 ug/ml

(f)=RT Delta > 1/2 Window

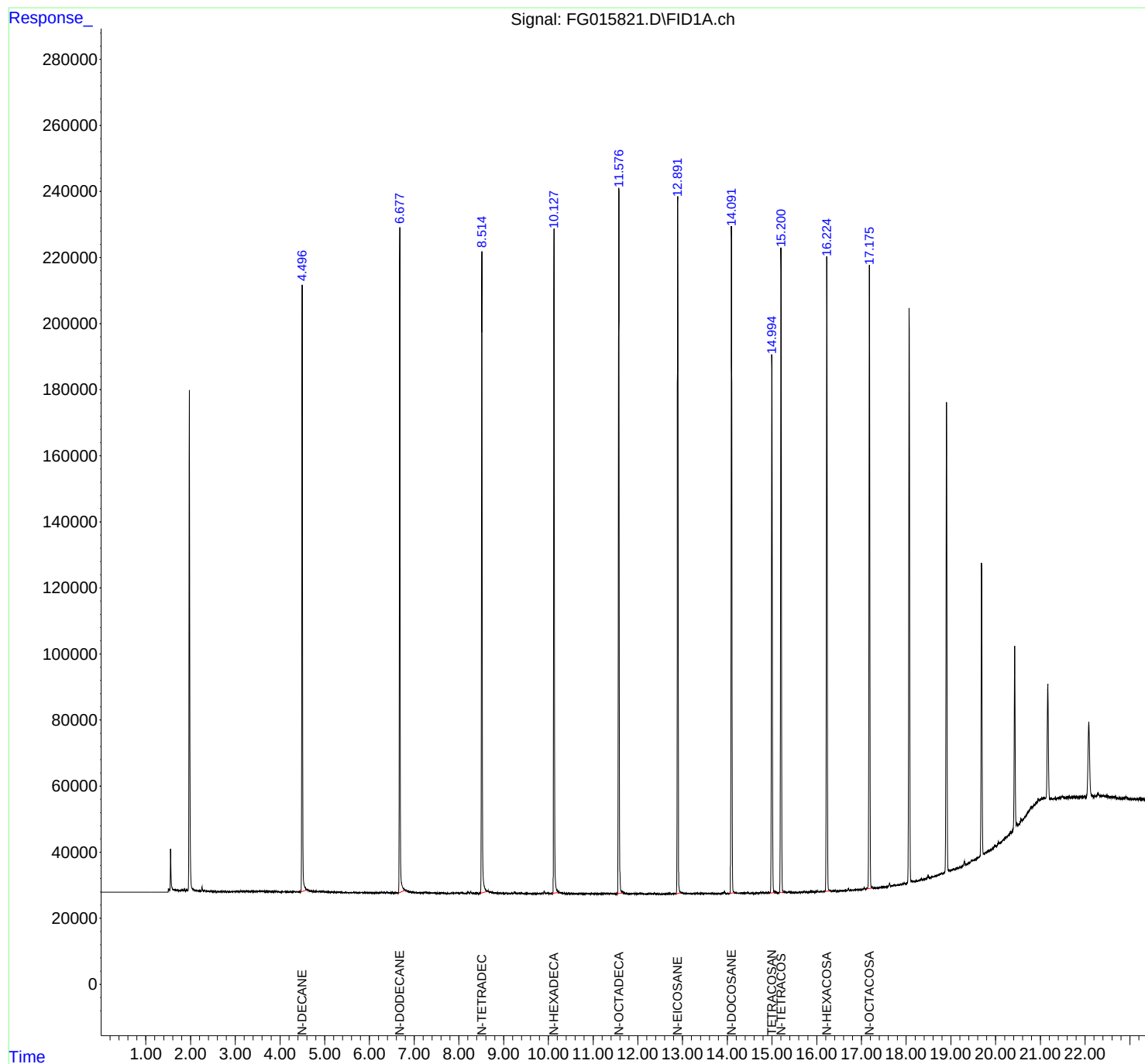
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015821.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:51
Operator : YP\AJ
Sample : PB167975BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB167975BS

Integration File: autoint1.e
Quant Time: May 14 03:54:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG042425.M
Quant Title :
QLast Update : Thu Apr 24 12:54:09 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG051325\
Data File : FG015821.D
Signal(s) : FID1A.ch
Acq On : 13 May 2025 13:51
Sample : PB167975BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.496	4.465	4.603	BB	183477	2017520	78.59%	7.680%
2	6.678	6.645	6.796	BB	201370	2165188	84.34%	8.242%
3	8.514	8.471	8.630	BB	193715	2240728	87.28%	8.530%
4	10.128	10.083	10.230	BB	200023	2388319	93.03%	9.091%
5	11.576	11.530	11.662	BB	213270	2548747	99.28%	9.702%
6	12.891	12.840	12.965	BB	210536	2541732	99.01%	9.675%
7	14.093	14.045	14.160	BB	197124	2547744	99.24%	9.698%
8	14.995	14.954	15.068	BB	162783	2185648	85.14%	8.320%
9	15.200	15.160	15.267	BB	194682	2567239	100.00%	9.772%
10	16.223	16.186	16.296	BB	189926	2544712	99.12%	9.687%
11	17.176	17.110	17.247	BB	186993	2522495	98.26%	9.602%
Sum of corrected areas:						26270071		

FG042425.M Wed May 14 05:06:52 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:	SB2-4-5MS	SDG No.:	Q2010
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

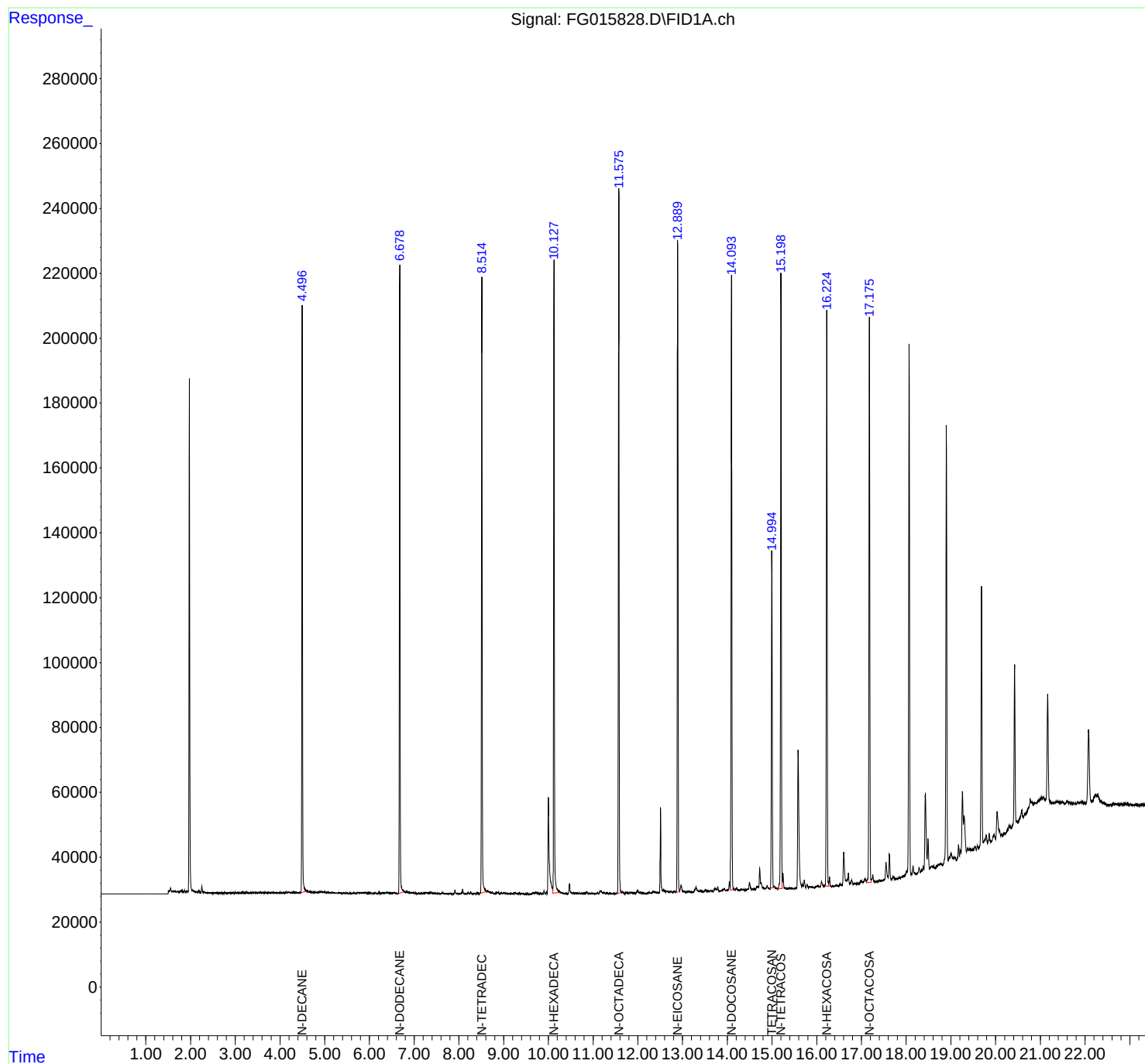
(m)=manual int.

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%

					rteres			
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%

					rteres			
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%

					rteres			
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.:	Q2010
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:		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
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

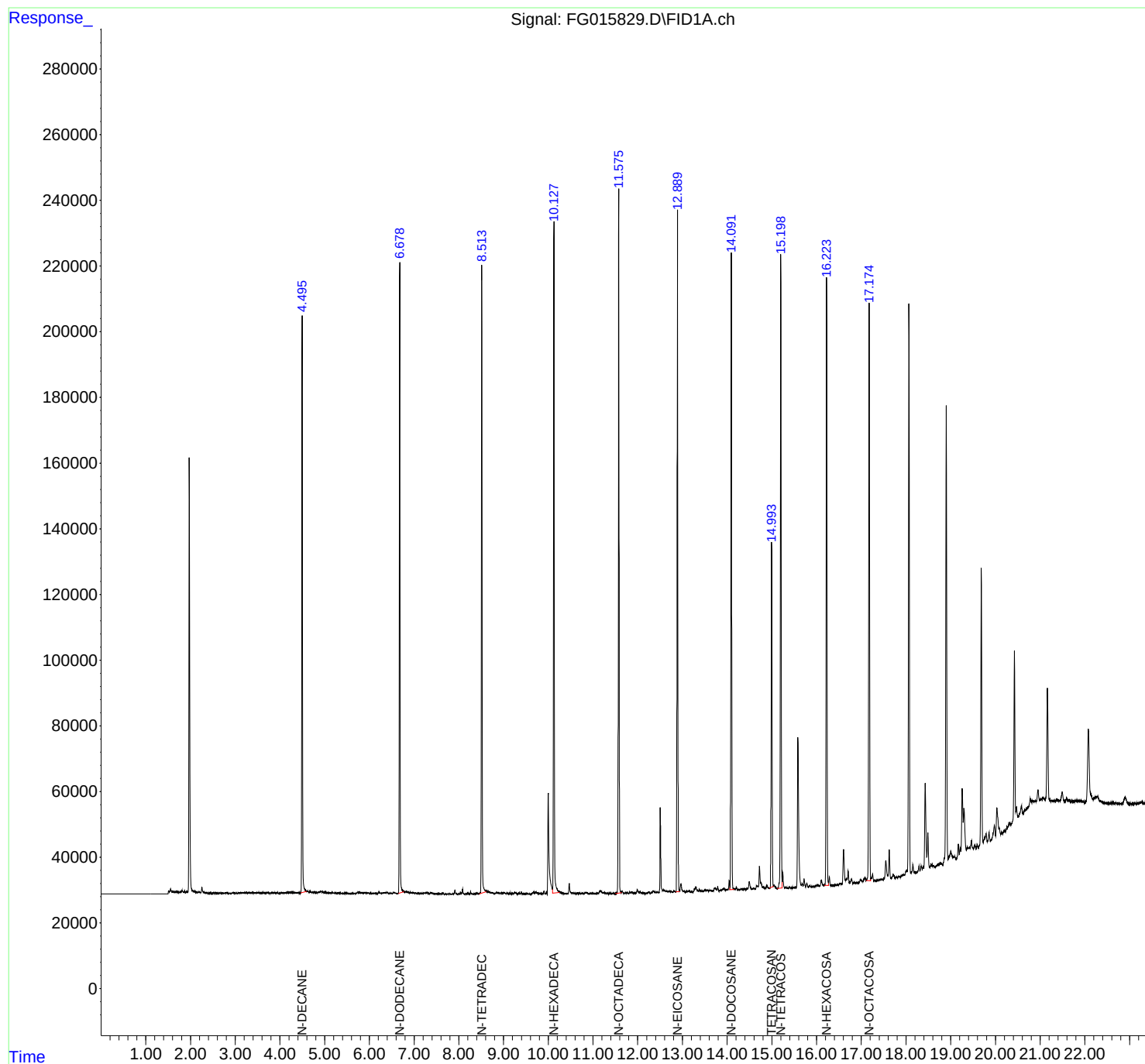
(m)=manual int.

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
Q1872-14		FG015822.D	FG051325	TETRACOSANE-d50 (SURROGA	mohammad	5/15/2025 3:42:38 AM	Peak Integrated by Software incorrectly
Q1872-14		FG015823.D	FG051325	TETRACOSANE-d50 (SURROGA	mohammad	5/15/2025 3:42:38 AM	Peak Integrated by Software incorrectly

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	mohammad	Supervise On	5/15/2025 3:42:38 AM
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 ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24469 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,M
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	mohammad	Supervise On	5/15/2025 3:42:38 AM
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_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	mohammad	Supervise On	5/15/2025 3:42:38 AM
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 ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24469 PP24468,PP24473

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,M
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	mohammad	Supervise On	5/15/2025 3:42:38 AM
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	PP24468,PP24473		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

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

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/13/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 05/12/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:25
Out Date: 05/13/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135730

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
Q2001-02	WC-A4-03-C	31	1.15	10.09	11.24	9.13	79.1	
Q2001-06	WC-A1-05-C	32	1.15	10.00	11.15	9.16	80.1	
Q2001-10	WC-A1-06-C	33	1.16	10.23	11.39	9.58	82.3	
Q2001-14	WC-A1-07-C	34	1.18	10.28	11.46	9.56	81.5	
Q2007-01	OR-636-COMP-10	1	1.15	10.52	11.67	10.25	86.5	
Q2007-02	OR-636-VOC-10	2	1.14	10.54	11.68	9.57	80.0	
Q2007-03	OR-636-28	3	1.19	10.56	11.75	10.3	86.3	
Q2007-04	OR-636-29	4	1.16	10.61	11.77	9.7	80.5	
Q2007-05	OR-636-30	5	1.13	10.16	11.29	10.42	91.4	
Q2007-07	OR-636-COMP-11	6	1.16	9.92	11.08	9.87	87.8	
Q2007-08	OR-636-VOC-11	7	1.12	11.24	12.36	10.96	87.5	
Q2007-09	OR-636-31	8	1.13	10.43	11.56	11.02	94.8	
Q2007-10	OR-636-32	9	1.18	10.36	11.54	10.33	88.3	
Q2007-11	OR-636-33	10	1.19	10.66	11.85	10.34	85.8	
Q2007-13	OR-636-COMP-12	11	1.16	10.06	11.22	11.2	99.8	
Q2007-14	OR-636-VOC-12	12	1.12	10.07	11.19	10.3	91.2	
Q2007-15	OR-636-34	13	1.13	10.72	11.85	11.00	92.1	
Q2007-16	OR-636-35	14	1.19	10.74	11.93	10.72	88.7	
Q2007-17	OR-636-36	15	1.19	10.53	11.72	10.92	92.4	
Q2007-19	OR-636-COMP-13	16	1.16	10.73	11.89	10.85	90.3	
Q2007-20	OR-636-VOC-13	17	1.13	10.05	11.18	10.16	89.9	
Q2007-21	OR-636-37	18	1.13	10.13	11.26	10.6	93.5	
Q2007-22	OR-636-38	19	1.17	10.08	11.25	10.47	92.3	
Q2007-23	OR-636-39	20	1.18	9.72	10.9	9.88	89.5	
Q2007-25	OR-636-COMP-14	21	1.13	9.93	11.06	10.31	92.4	
Q2007-26	OR-636-VOC-14	22	1.19	10.04	11.23	10.58	93.5	
Q2007-27	OR-636-40	23	1.18	10.40	11.58	10.9	93.5	
Q2007-28	OR-636-41	24	1.19	9.98	11.17	10.2	90.3	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/13/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 05/12/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:25
Out Date: 05/13/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135730

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
Q2007-29	OR-636-42	25	1.12	10.00	11.12	10.02	89.0	
Q2007-31	OR-636-COMP-15	26	1.15	9.45	10.6	9.81	91.6	
Q2007-32	OR-636-VOC-15	27	1.15	10.02	11.17	10.38	92.1	
Q2007-33	OR-636-43	28	1.16	9.80	10.96	9.96	89.8	
Q2007-34	OR-636-44	29	1.13	10.05	11.18	9.98	88.1	
Q2007-35	OR-636-45	30	1.13	10.62	11.75	10.62	89.4	
Q2010-01	TP-10	35	1.19	9.95	11.14	10.47	93.3	
Q2010-02	TP-13	36	1.19	9.93	11.12	9.57	84.4	
Q2010-03	TP-14	37	1.18	10.15	11.33	9.37	80.7	
Q2010-04	TP-17	38	1.16	10.80	11.96	9.52	77.4	
Q2014-01	MOO-25-0134	39	1.14	10.18	11.32	10.36	90.6	
Q2014-02	MOO-25-0134-E2	40	1.13	10.84	11.97	10.86	89.8	
Q2014-03	MOO-25-0145	41	1.19	9.98	11.17	10.88	97.1	
Q2014-04	MOO-25-0145-E2	42	1.13	9.96	11.09	10.9	98.1	
Q2014-05	MOO-25-0148	43	1.18	10.07	11.25	10.16	89.2	
Q2014-06	MOO-25-0148-E2	44	1.17	10.25	11.42	10.35	89.6	
Q2015-01	BC216248-1-1	45	1.00	1.00	2.00	2.00	100.0	pilc
Q2015-02	BC216248-1-2	46	1.00	1.00	2.00	2.00	100.0	pilc
Q2015-03	BC226007-1-1	47	1.00	1.00	2.00	2.00	100.0	pilc
Q2015-04	BC226007-1-2	48	1.00	1.00	2.00	2.00	100.0	pilc
Q2017-01	MH-I	49	1.18	10.30	11.48	9.84	84.1	
Q2017-02	MH-I-EPH	50	1.17	10.30	11.47	9.72	83.0	
Q2017-03	MH-I-VOC	51	1.16	10.41	11.57	9.76	82.6	
Q2017-05	MH-J	52	1.18	10.09	11.27	9.54	82.9	
Q2017-06	MH-J-EPH	53	1.12	10.86	11.98	10.47	86.1	
Q2017-07	MH-J-VOC	54	1.19	10.30	11.49	10.3	88.4	

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

WORKLIST(Hardcopy Internal Chain)

135730

WorkList Name : %1-051225

WorkList ID : 189428

Department : Wet-Chemistry

Date : 05-12-2025 08:00:16

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2001-02	WC-A4-03-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L61	05/06/2025	Chemtech -SO
Q2001-06	WC-A1-05-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L61	05/07/2025	Chemtech -SO
Q2001-10	WC-A1-06-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L61	05/08/2025	Chemtech -SO
Q2001-14	WC-A1-07-C	Solid	Percent Solids	Cool 4 deg C	ENTA05	L61	05/08/2025	Chemtech -SO
Q2007-01	OR-636-COMP-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-02	OR-636-VOC-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-03	OR-636-28	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-04	OR-636-29	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-05	OR-636-30	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-07	OR-636-COMP-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-08	OR-636-VOC-11	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-09	OR-636-31	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-10	OR-636-32	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-11	OR-636-33	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-13	OR-636-COMP-12	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-14	OR-636-VOC-12	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-15	OR-636-34	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-16	OR-636-35	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-17	OR-636-36	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-19	OR-636-COMP-13	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-20	OR-636-VOC-13	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO

Date/Time 05/12/25 15:10

Raw Sample Received by: 80 wgh

Raw Sample Relinquished by: 80 wgh

Date/Time 05/12/25

Raw Sample Received by: 80 wgh

Raw Sample Relinquished by: 80 wgh

WORKLIST(Hardcopy Internal Chain)

135730

WorkList Name : %1-051225

WorkList ID : 189428

Department : Wet-Chemistry

Date : 05-12-2025 08:00:16

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2007-21	OR-636-37	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-22	OR-636-38	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-23	OR-636-39	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-25	OR-636-COMP-14	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-26	OR-636-VOC-14	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-27	OR-636-40	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-28	OR-636-41	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-29	OR-636-42	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-31	OR-636-COMP-15	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-32	OR-636-VOC-15	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-33	OR-636-43	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-34	OR-636-44	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2007-35	OR-636-45	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2010-01	TP-10	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2010-02	TP-13	Solid	Percent Solids	Cool 4 deg C	CAMP02	L51	05/08/2025	Chemtech -SO
Q2010-03	TP-14	Solid	Percent Solids	Cool 4 deg C	CAMP02	L51	05/08/2025	Chemtech -SO
Q2010-04	TP-17	Solid	Percent Solids	Cool 4 deg C	CAMP02	L51	05/08/2025	Chemtech -SO
Q2014-01	MOO-25-0134	Solid	Percent Solids	Cool 4 deg C	CAMP02	L51	05/08/2025	Chemtech -SO
Q2014-02	MOO-25-0134-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2014-03	MOO-25-0145	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2014-04	MOO-25-0145-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO

Date/Time 05/12/25 15:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 05/12/25 17:15

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

WORKLIST(Hardcopy Internal Chain)

7795730

WorkList Name : %1-051225

WorkList ID : 189428

Department : Wet-Chemistry

Date : 05-12-2025 08:00:16

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2014-05	MOO-25-0148	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2014-06	MOO-25-0148-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2015-01	BC216248-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/12/2025	Chemtech -SO
Q2015-02	BC216248-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/12/2025	Chemtech -SO
Q2015-03	BC226007-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/12/2025	Chemtech -SO
Q2015-04	BC226007-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/12/2025	Chemtech -SO
Q2017-01	MH-I	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2017-02	MH-I-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2017-03	MH-I-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2017-05	MH-J	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2017-06	MH-J-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO
Q2017-07	MH-J-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/12/2025	Chemtech -SO

Date/Time 05/12/25 15:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 05/12/25

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

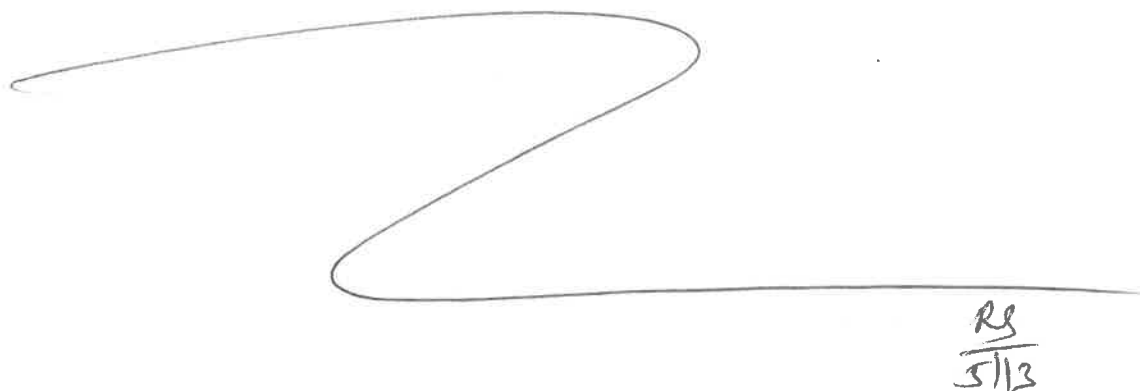
Envap Temperature: 40 °C

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 01	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 : Q2010
Test : Diesel Range Organics
Prepbatch ID : PB167975,
Sequence ID/Qc Batch ID: 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_SC ALE_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

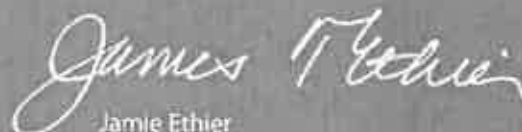
Certificate of Analysis

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



**PRODUCTOS
QUÍMICOS
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
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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 3926

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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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

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Avantor Performance Materials, LLC

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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

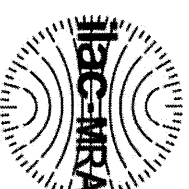
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

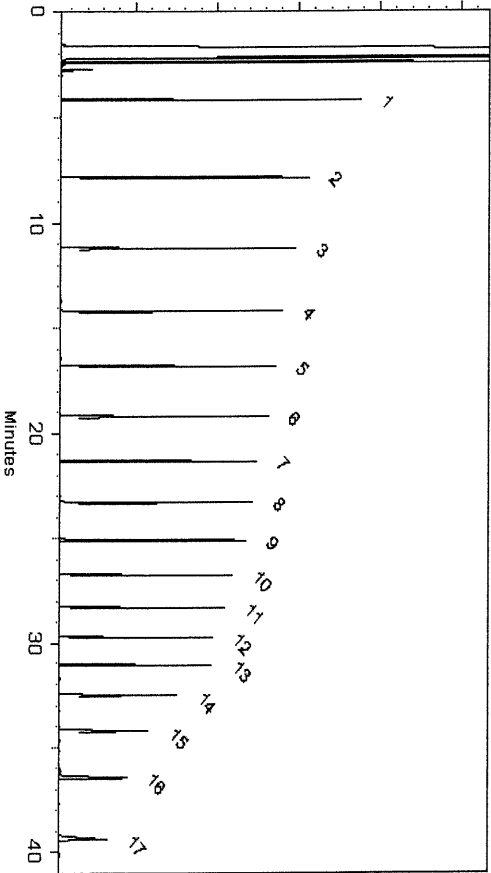
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

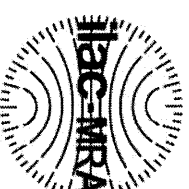
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

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Certificate of Analysis



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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
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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
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13	n-Dotriacontane (C32) CAS # 544-85-4 Purity 99%	(Lot BCBW0661)	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	n-Tetratriacontane (C34) CAS # 14167-59-0 Purity 99%	(Lot OML4N)	504.5 µg/mL	+/- 2.9966 +/- 12.5340 +/- 15.0241	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	n-Hexatriacontane (C36) CAS # 630-06-8 Purity 99%	(Lot U25B014)	504.0 µg/mL	+/- 2.9936 +/- 12.5216 +/- 15.0093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	n-Octatriacontane (C38) CAS # 7194-85-6 Purity 97%	(Lot 0000127235)	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	n-Tetracontane (C40) CAS # 4181-95-7 Purity 98%	(Lot PADGI)	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

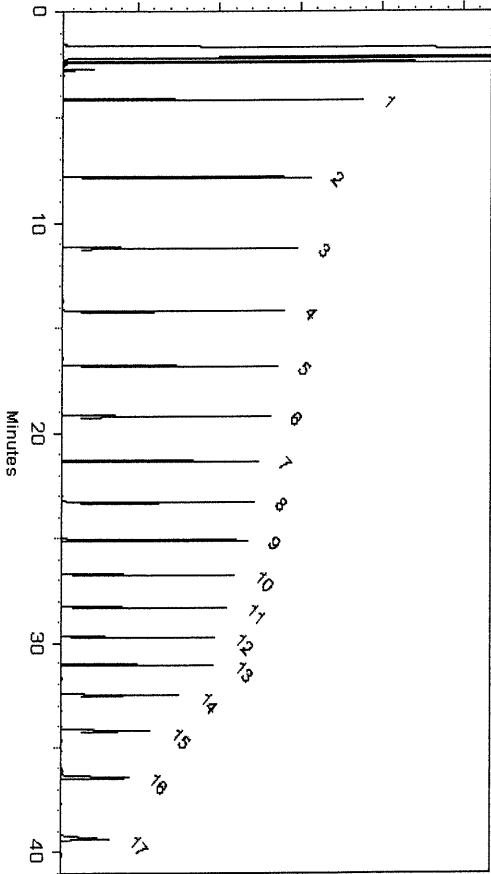
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-US for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
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Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

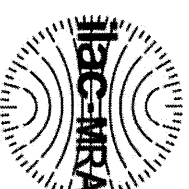
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

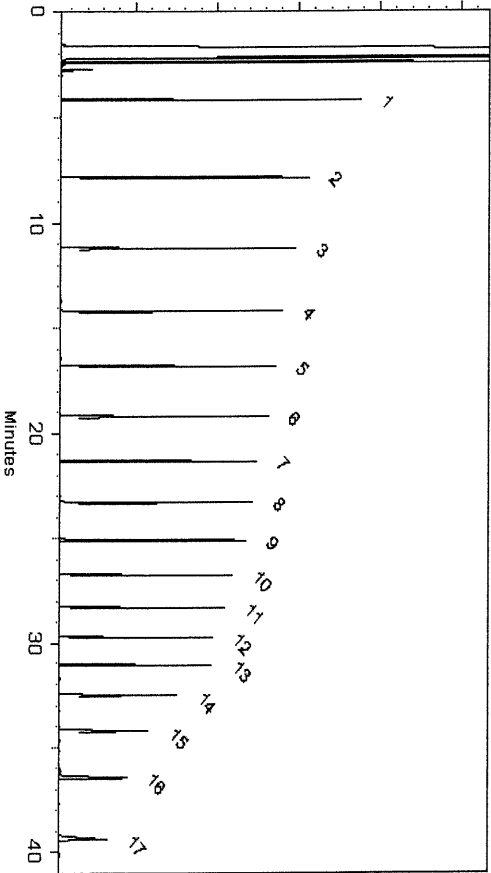
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills
Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

- 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

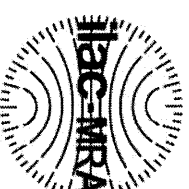
Bellefonte, PA 16823-8812

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 +/- 12.5465 +/- 15.0390	Gravimetric Unstressed Stressed
2	n-Decane (C10) CAS # 124-18-5 Purity 99%	503.0 µg/mL	+/- 2.9877 +/- 12.4968 +/- 14.9795	Gravimetric Unstressed Stressed
3	n-Dodecane (C12) CAS # 112-40-3 Purity 99%	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	Gravimetric Unstressed Stressed
4	n-Tetradecane (C14) CAS # 629-59-4 Purity 99%	505.0 µg/mL	+/- 2.9995 +/- 12.5465 +/- 15.0390	Gravimetric Unstressed Stressed
5	n-Hexadecane (C16) CAS # 544-76-3 Purity 98%	504.7 µg/mL	+/- 2.9978 +/- 12.5390 +/- 15.0301	Gravimetric Unstressed Stressed
6	n-Octadecane (C18) CAS # 593-45-3 Purity 97%	504.4 µg/mL	+/- 2.9960 +/- 12.5316 +/- 15.0212	Gravimetric Unstressed Stressed
7	n-Eicosane (C20) CAS # 112-95-8 Purity 99%	503.5 µg/mL	+/- 2.9906 +/- 12.5092 +/- 14.9944	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:

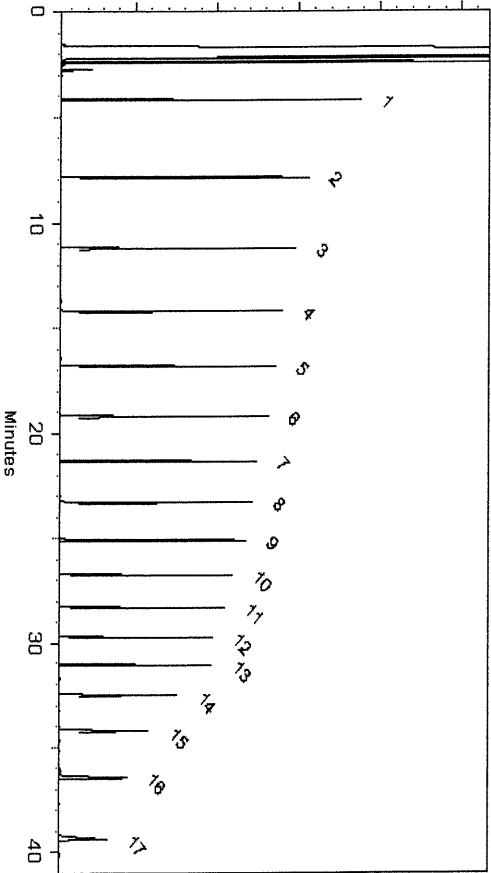
250°C

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.



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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.)

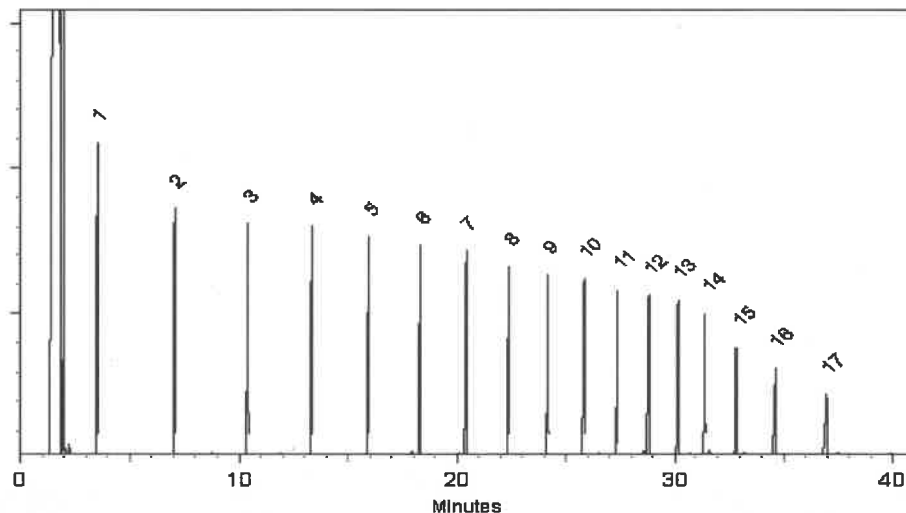
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

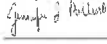


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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.



110 Benner Circle
Bellefonte, PA 16823-8812
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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.)

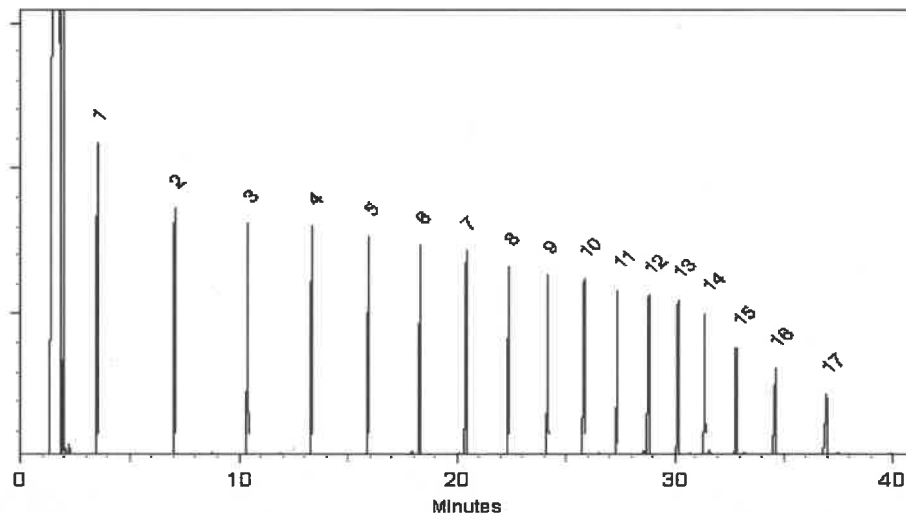
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

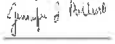


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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	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

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

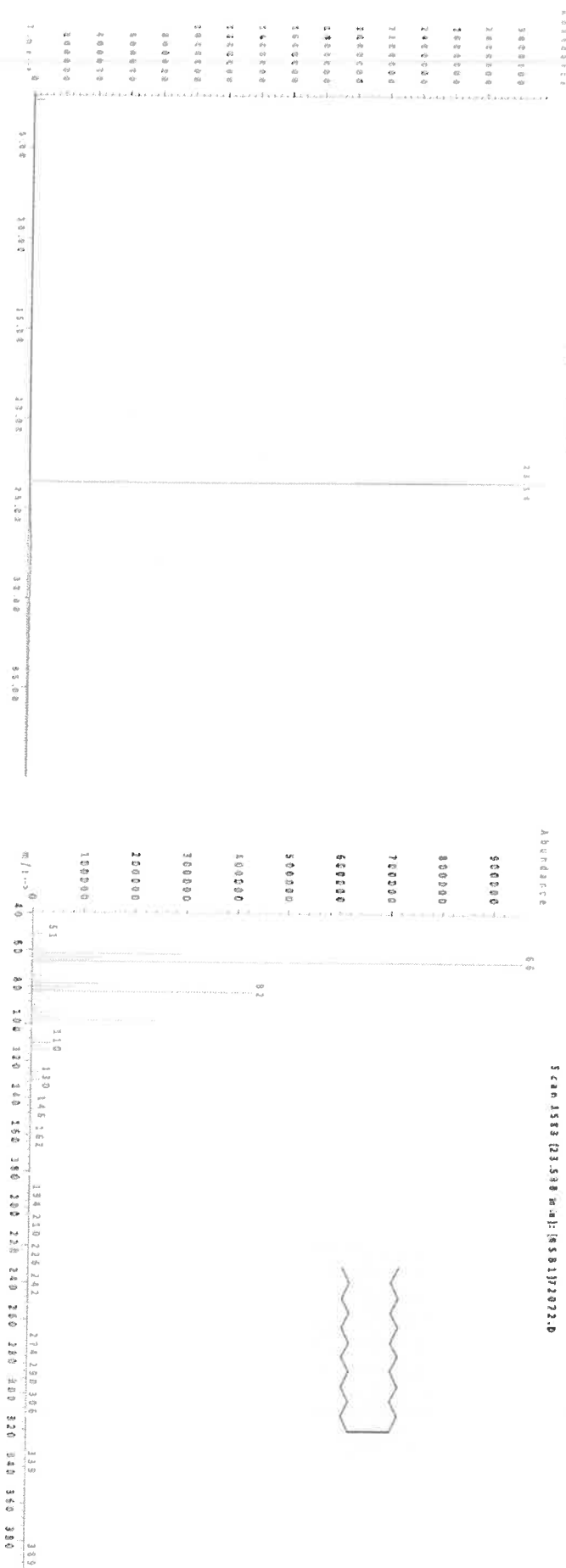
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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



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)H	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

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

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

Peak No. Name FID RT (min)

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

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

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

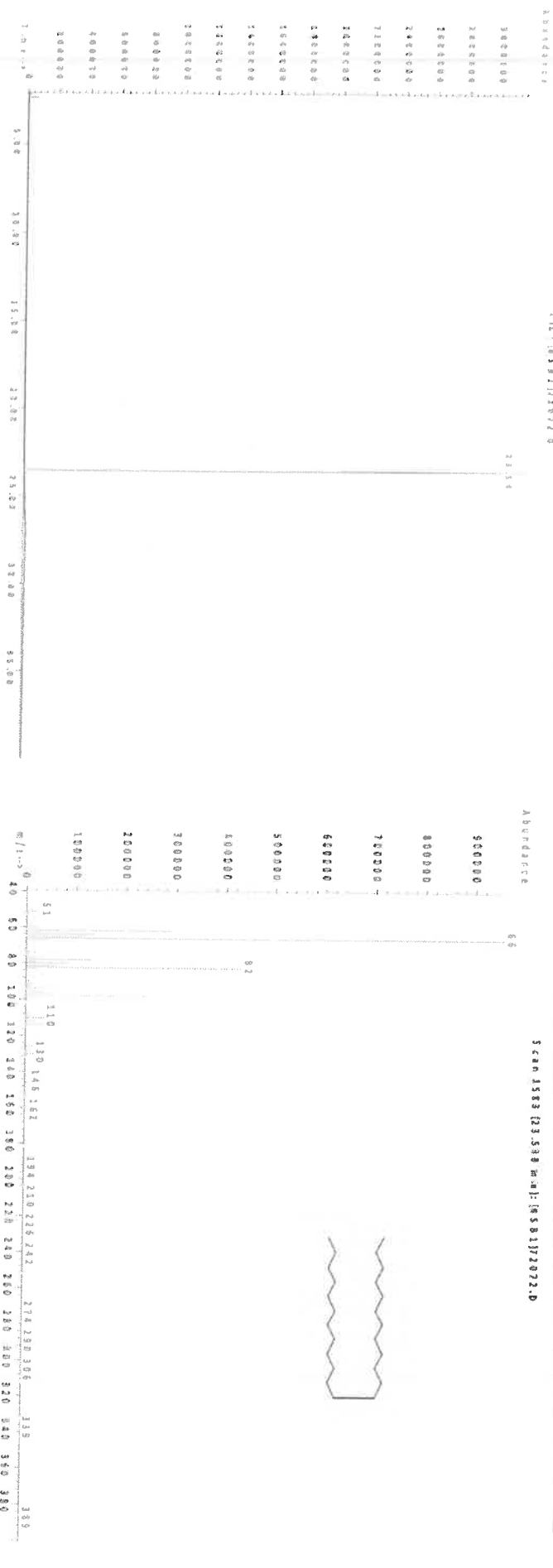
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

Compound	Lot	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%D)	Assay (%D)	SDS Information			
						Target Weight(g)	Actual Weight(g)	Expanded Uncertainty (Solvent Safety Info. On Attached pg.)	RM#
	Number								

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:
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
Balance Uncertainty: 0.058
Peak 1 uncertainty

Solvent(s): Methylene chloride
Lot# 78782

Formulated By: Paul Barron
Reviewed By: Pedro L. Rentes
DATE: 070716
DATE: 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-1848M07287CB1	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-19280	4000	98	0.2	2.04093	2.04159	4001.3	15.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04158	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 "070816-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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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

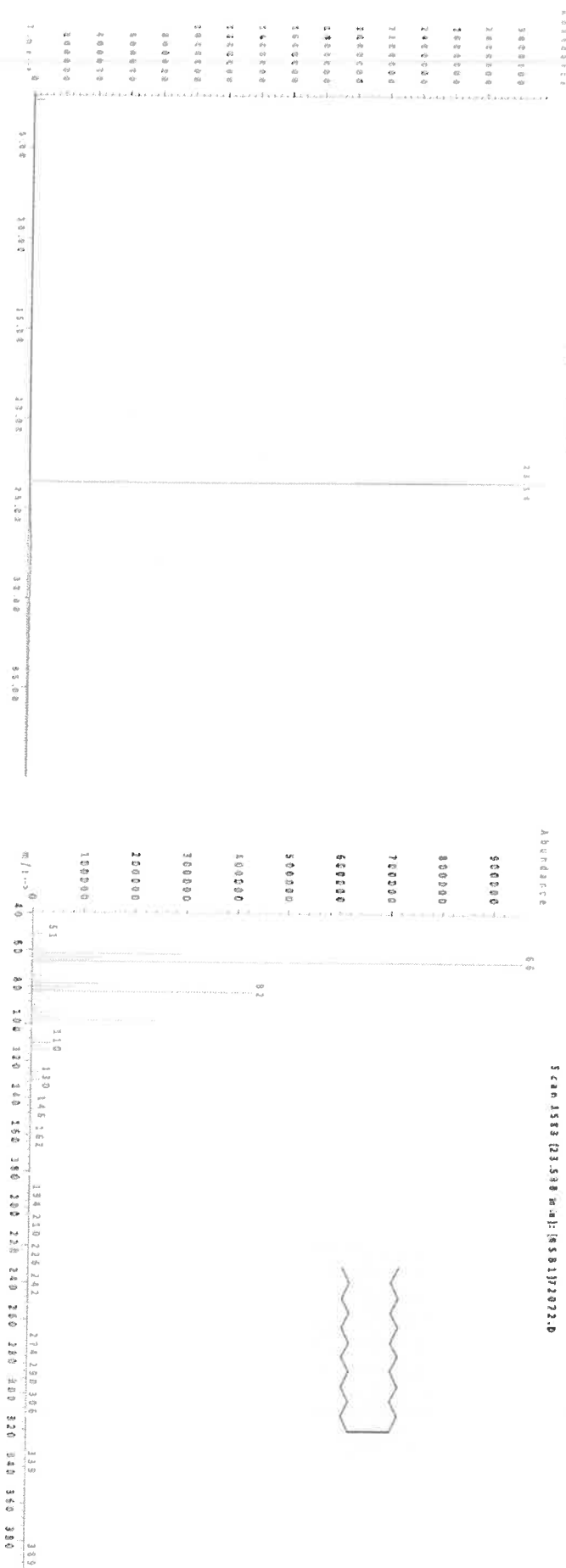
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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
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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)H	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

Run 35, "P10009R L070716 [4000µg/mL in MeCl2]"
Run Length: 40.00 min, 23900 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070716-GC/MS2", Method "GC-MS2".
Analyzed using Method "GC-MS2".

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

Peak No. Name FID RT (min)

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

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

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

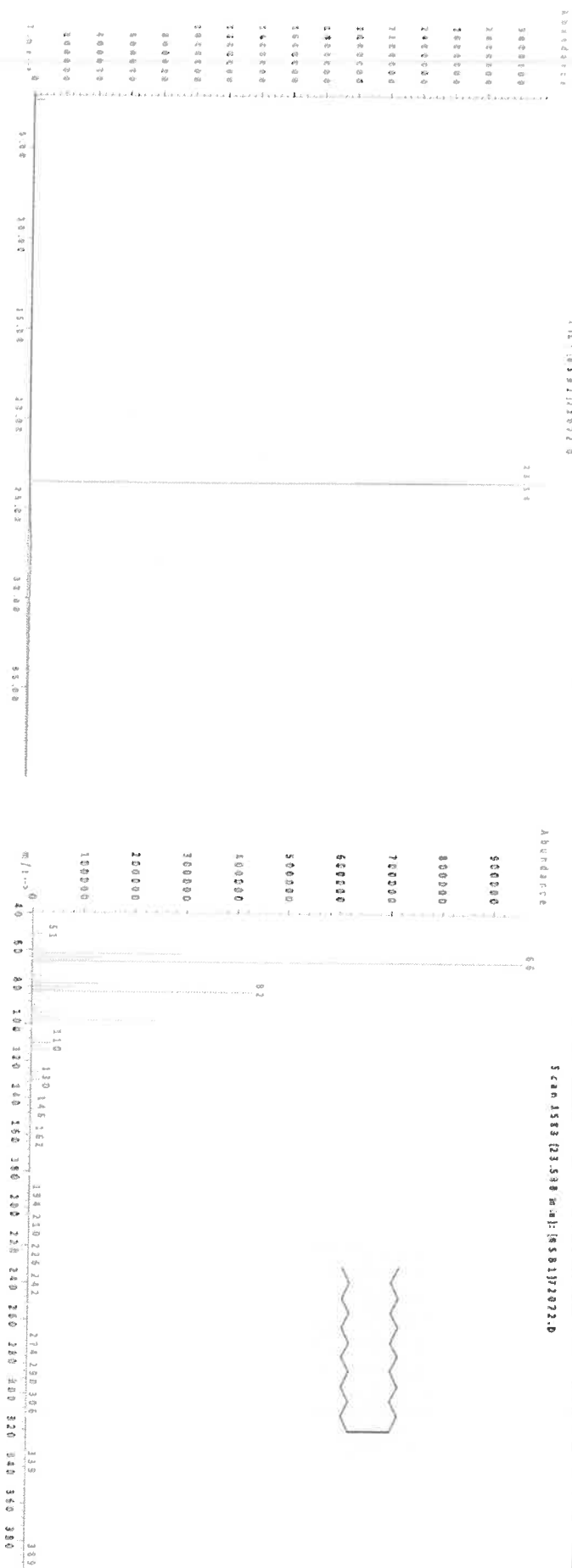
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N., and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1996).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

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

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	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

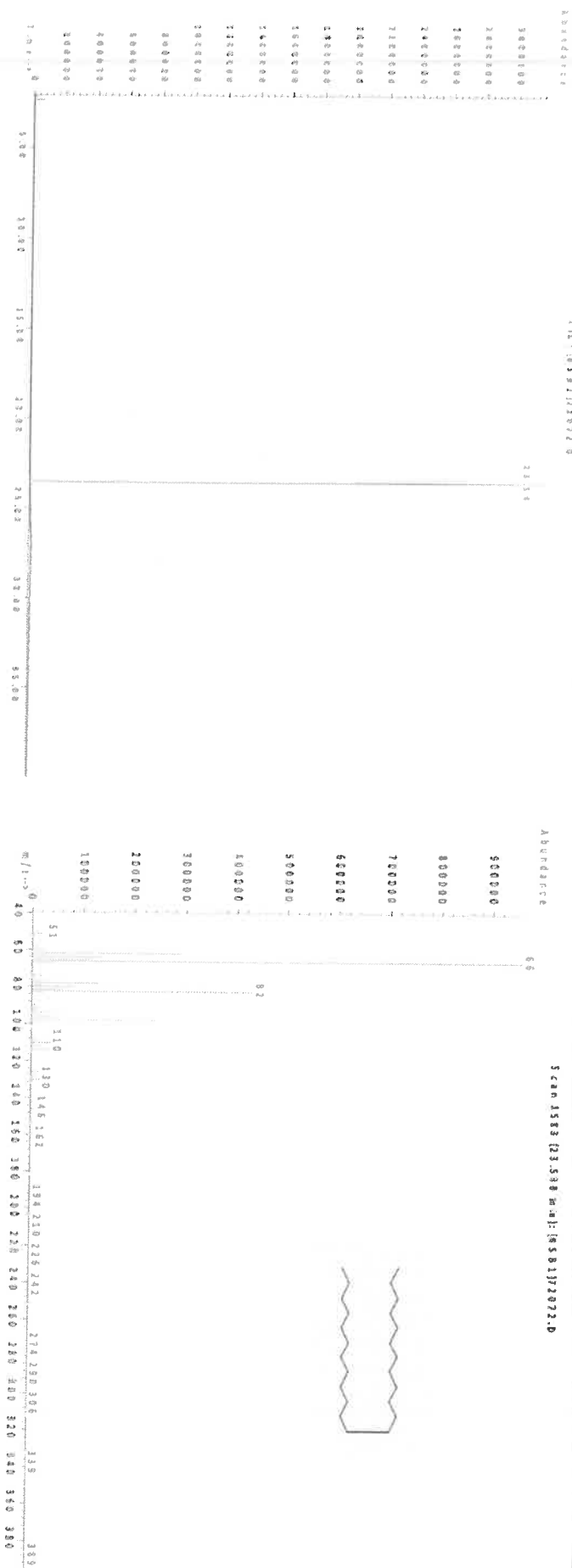
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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 070716

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards
GC/MS Calibration - 6 components
Expiration Date: 070721
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

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

DATE: 070716
DATE: 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-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	2.04136	4000.8	15.4	1517-25-2	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04159	4001.3	15.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04156	4001.2	15.4	1503-58-3	N/A	N/A

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

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

Peak Data

Peak No.	Name	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	-0.56

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

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

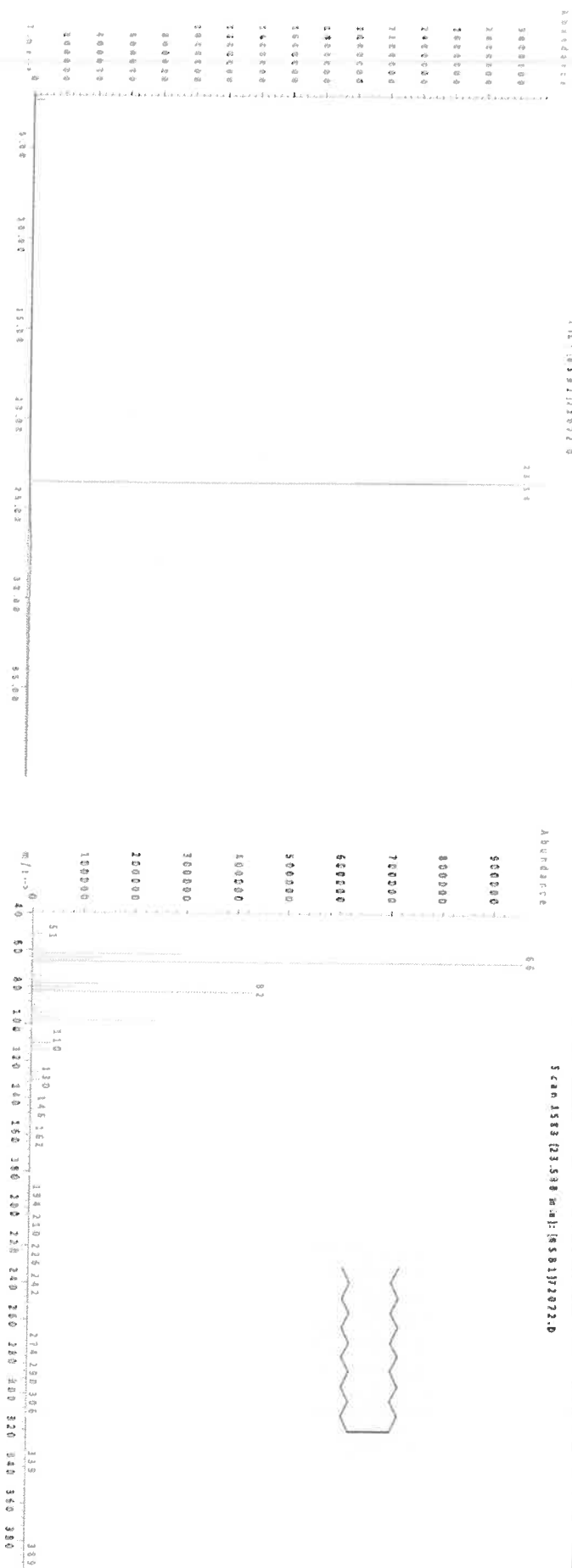
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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 (%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

REPORT TO BE SENT TO:

COMPANY: CDM SMITH
ADDRESS: 110 FIELDCREST AVE #8 6TH FLOOR
CITY EDISON STATE: NJ ZIP: 08837
ATTENTION: MARCIE ENCINAS
PHONE: 732 590 4679 FAX: 732 225 7851

CLIENT PROJECT INFORMATION

PROJECT NAME: SOUTH RIVER Wm REPLACEMENT
PROJECT NO.: 302781 LOCATION: SOUTH RIVER, NJ
PROJECT MANAGER: MARCIE ENCINAS
e-mail: ENCINASMA@CDMSMITH.COM
PHONE: 732 590 4679 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: 732 590 4679

ANALYSIS

DATA TURNAROUND INFORMATION

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

*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

TEL VOC
FCL SVOC
TAL METALS
PCB's
PESTICIDES
HERBICIDES
DDT / GDO

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	TP-10	SOIL		X	5/8/25	0820	6	X	X	X	X	X	X	X			E
2.	TP-13	SOIL		X	5/8/25	1015	6	X	X	X	X	X	X	X			E
3.	TP-14	SOIL		X	5/8/25	1135	6	X	X	X	X	X	X	X			E
4.	TP-17	SOIL		X	5/8/25	1305	6	X	X	X	X	X	X	X			E
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1. *[Signature]* DATE/TIME: 5/8/25 RECEIVED BY: 1. *[Signature]* 5-4-25
RELINQUISHED BY SAMPLER: 2. *[Signature]* DATE/TIME: 5/8/25 RECEIVED BY: 2. *[Signature]*
RELINQUISHED BY SAMPLER: 3. *[Signature]* DATE/TIME: 5/8/25 RECEIVED BY: 3. *[Signature]*

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.2 °C

Temp 3.2°C Adjustment Factor TD IR Gun #1.

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 : Q2010	CAMP02	Order Date : 5/9/2025 4:00:00 PM	Project Mgr : Yazmeen
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level 1
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/9/2025 4:50:00 PM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order :	Hard Copy Date :
Invoice Contact : Marcie Ann Encinas			Date Signoff : 5/12/2025 10:55:21 AM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2010-01	TP-10	Solid	05/08/2025	08:20					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2010-02	TP-13	Solid	05/08/2025	10:15					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2010-03	TP-14	Solid	05/08/2025	11:35					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2010-04	TP-17	Solid	05/08/2025	13:05					
					VOC-TCLVOA-10		8260D	10 Bus. Days	

Relinquished By :

Date / Time :


5/12/25 1110

Received By :

Date / Time :


05/12/25 11:10 AM

Storage Area : VOA Refridgerator Room

11:10 AM
FZ 2