

Cover Page

Order ID : Q2150

Project ID : South River WM Replacement

Client : CDM Smith

Lab Sample Number

Q2150-01
Q2150-02
Q2150-03
Q2150-04
Q2150-05
Q2150-06
Q2150-07
Q2150-08
Q2150-09
Q2150-10

Client Sample Number

TP-44
TP-42
TP-39
TP-48
TP-47
TP-50
TP-51
TP-52
TP-54
TP-53

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 6/5/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2150

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: PRATIK PATEL

Date: 06/05/2025

LAB CHRONICLE

OrderID:	Q2150	OrderDate:	5/28/2025 3:53:00 PM
Client:	CDM Smith	Project:	South River WM Replacement
Contact:	Marcie Ann Encinas	Location:	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2150-01	TP-44	SOIL			05/27/25			05/28/25
			Diesel Range Organics	8015D		06/04/25	06/04/25	
			Gasoline Range Organics	8015D			06/02/25	
			PCB	8082A		05/30/25	05/30/25	
			Pesticide-TCL	8081B		05/30/25	05/30/25	
Q2150-02	TP-42	SOIL			05/27/25			05/28/25
			Diesel Range Organics	8015D		06/04/25	06/04/25	
			Gasoline Range Organics	8015D			06/02/25	
			PCB	8082A		05/30/25	05/30/25	
			Pesticide-TCL	8081B		05/30/25	05/30/25	
Q2150-03	TP-39	SOIL			05/27/25			05/28/25
			Diesel Range Organics	8015D		06/04/25	06/04/25	
			Gasoline Range Organics	8015D			06/02/25	
			PCB	8082A		05/30/25	05/30/25	
			Pesticide-TCL	8081B		05/30/25	05/30/25	
Q2150-04	TP-48	SOIL			05/27/25			05/28/25
			Diesel Range Organics	8015D		06/04/25	06/04/25	
			Gasoline Range Organics	8015D			06/02/25	
			Gasoline Range Organics	8015D			06/03/25	
			PCB	8082A		05/30/25	05/30/25	
			Pesticide-TCL	8081B		05/30/25	05/30/25	
Q2150-05	TP-47	SOIL			05/27/25			05/28/25
			Diesel Range Organics	8015D		06/04/25	06/04/25	
			Gasoline Range Organics	8015D			06/02/25	
			PCB	8082A		05/30/25	05/30/25	
			Pesticide-TCL	8081B		05/30/25	05/30/25	
Q2150-06	TP-50	SOIL			05/27/25			05/28/25

LAB CHRONICLE

Q2150-07	TP-51	SOIL	Diesel Range Organics	8015D	06/04/25	06/04/25	05/27/25	05/28/25
			Gasoline Range Organics	8015D		06/02/25		
			PCB	8082A	05/30/25	05/30/25		
			Pesticide-TCL	8081B	05/30/25	05/30/25		
Q2150-08	TP-52	SOIL	Diesel Range Organics	8015D	06/04/25	06/04/25	05/28/25	05/28/25
			Gasoline Range Organics	8015D		06/02/25		
			PCB	8082A	05/30/25	05/30/25		
			Pesticide-TCL	8081B	05/30/25	05/30/25		
Q2150-09	TP-54	SOIL	Diesel Range Organics	8015D	06/04/25	06/04/25	05/28/25	05/28/25
			Gasoline Range Organics	8015D		06/02/25		
			PCB	8082A	05/30/25	05/30/25		
			Pesticide-TCL	8081B	05/30/25	05/30/25		
Q2150-10	TP-53	SOIL	Diesel Range Organics	8015D	06/04/25	06/04/25	05/28/25	05/28/25
			Gasoline Range Organics	8015D		06/03/25		
			PCB	8082A	05/30/25	05/30/25		
			Pesticide-TCL	8081B	05/30/25	05/30/25		



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: CDM Smith
Lab Code: CHEM Case No.: Q2150 SAS No.: Q2150 SDG No.: Q2150

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015894.D	60				0
PIBLK-FF015908.D	73				0
PIBLK-FG015909.D	71				0
PIBLK-FG015923.D	78				0
PB168274BL	78				0
PB168274BS	82				0
TP-44	68				0
TP-42	65				0
TP-39	55				0
TP-48	67				0
TP-47	52				0
TP-50	59				0
TP-51	53				0
TP-52	77				0
TP-54	80				0
TP-54MS	55				0
TP-54MSD	57				0
TP-53	54				0

QC LIMITS

TETRACOSANE-d50

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

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

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q2150 **SAS No :** Q2150 **SDG No:** Q2150
Client SampleID : TP-54MS **Datafile:** FF015898.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	7953	3240	12154	112%		68-131

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q2150 **SAS No :** Q2150 **SDG No:** Q2150
Client SampleID : TP-54MSD **Datafile:** FF015899.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
DRO	7967	3240	12817	120%		68-131

MS/MSD % Recovery RPD : 7

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

Lab Name: Chemtech **Client:** CDM Smith
Lab Code: CHEM **Cas No:** Q2150 **SAS No :** Q2150 **SDG No:** Q2150
Matrix Spike - EPA Sample No : PB168274BS **Datafile:** FG015913.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6662	0	5871	88	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168274BL

Lab Name: CHEMTECH

Contract: CAMP02

Lab Code: CHEM Case No.: Q2150

SAS No.: Q2150 SDG NO.: Q2150

Lab File ID: FG015912.D

Lab Sample ID: PB168274BL

Instrument ID: FG

Date Extracted: 06/04/2025

Matrix: (soil/water) Soil

Date Analyzed: 06/04/25

Level: (low/med) low

Time Analyzed: 12:48

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TP-54	Q2150-09	FF015897.D	06/04/25
TP-54MS	Q2150-09MS	FF015898.D	06/04/25
TP-54MSD	Q2150-09MSD	FF015899.D	06/04/25
PB168274BS	PB168274BS	FG015913.D	06/04/25
TP-44	Q2150-01	FG015914.D	06/04/25
TP-42	Q2150-02	FG015915.D	06/04/25
TP-39	Q2150-03	FG015916.D	06/04/25
TP-48	Q2150-04	FG015917.D	06/04/25
TP-47	Q2150-05	FG015918.D	06/04/25
TP-50	Q2150-06	FG015919.D	06/04/25
TP-51	Q2150-07	FG015920.D	06/04/25
TP-52	Q2150-08	FG015921.D	06/04/25
TP-53	Q2150-10	FG015922.D	06/04/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-44	SDG No.:	Q2150
Lab Sample ID:	Q2150-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	78.9
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
FG015914.D	1	06/04/25 08:30	06/04/25 13:47	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	22900		214	2110	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.7		37 - 130	68%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015914.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 13:47
Operator : YP\AJ
Sample : Q2150-01
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-44

Integration File: autoint1.e
Quant Time: Jun 05 05:35:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.979	1678448	13.695 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

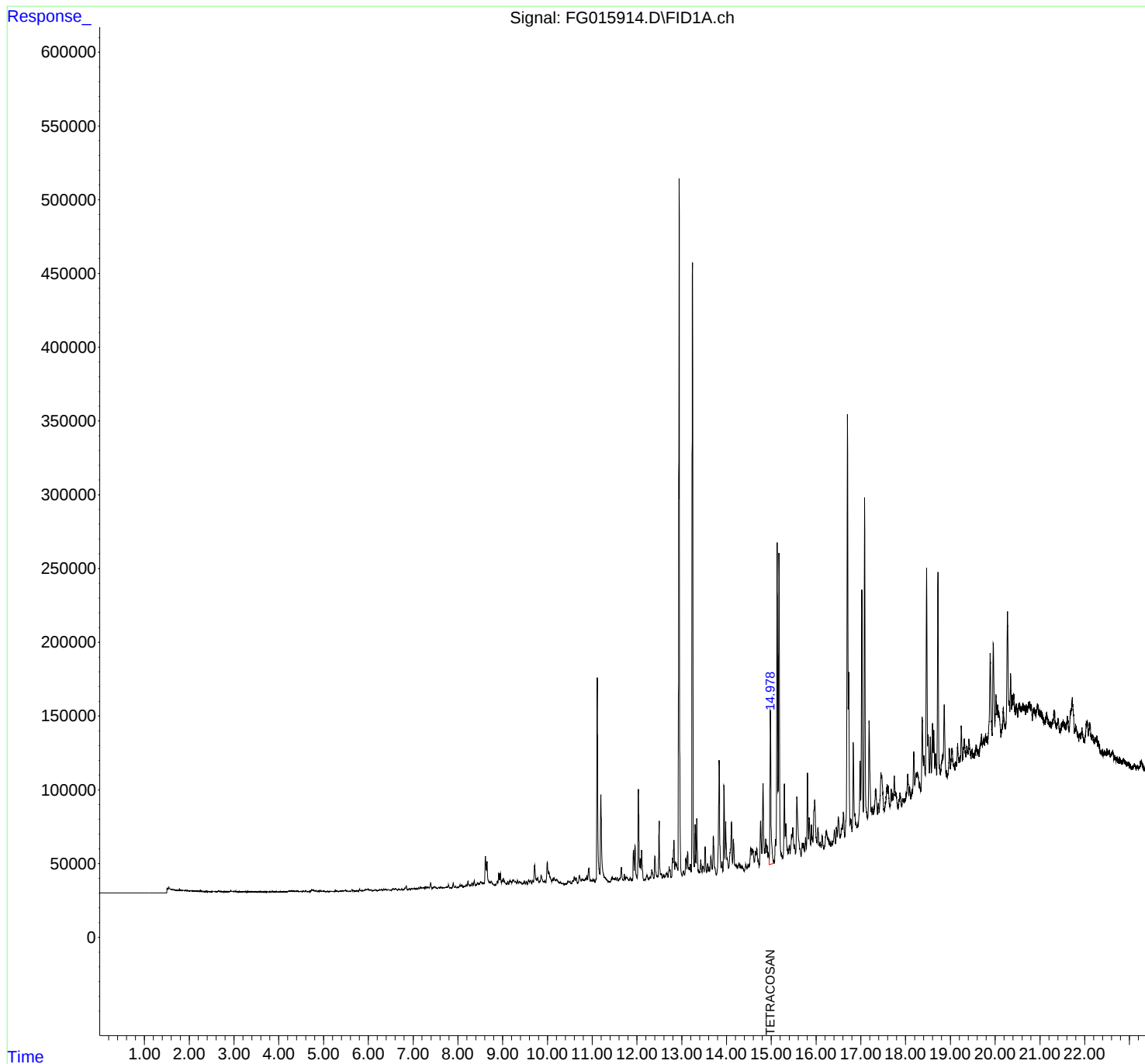
(m)=manual int.

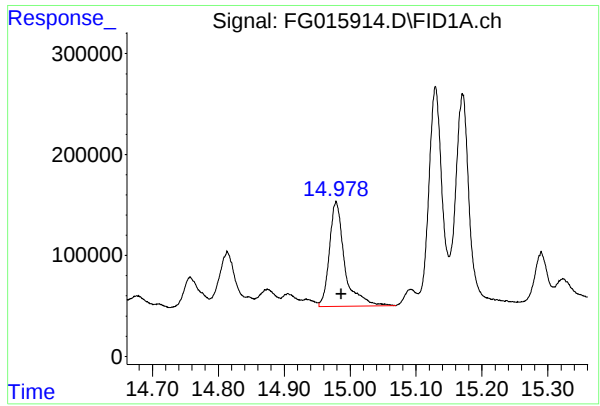
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015914.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 13:47
Operator : YP\AJ
Sample : Q2150-01
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-44

Integration File: autoint1.e
Quant Time: Jun 05 05:35:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.979 min

Delta R.T.: -0.008 min

Response: 1678448

Conc: 13.69 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-44

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015914.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 13:47
 Sample : Q2150-01
 Misc :
 ALS Vial : 23 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.332	4.312	4.353	BV	66	501	0.01%	0.001%
2	4.371	4.353	4.412	PV	211	3805	0.07%	0.005%
3	4.429	4.412	4.440	VV	197	2247	0.04%	0.003%
4	4.445	4.440	4.449	VV	189	579	0.01%	0.001%
5	4.459	4.449	4.476	PV	117	1219	0.02%	0.002%
6	4.493	4.476	4.508	VV	236	2807	0.05%	0.004%
7	4.513	4.508	4.519	VV	190	740	0.01%	0.001%
8	4.540	4.519	4.560	VV	346	4097	0.07%	0.006%
9	4.564	4.560	4.576	VV	195	1154	0.02%	0.002%
10	4.581	4.576	4.588	VV	68	366	0.01%	0.000%
11	4.607	4.588	4.629	PV	751	9431	0.16%	0.013%
12	4.631	4.629	4.651	VV	189	1060	0.02%	0.001%
13	4.660	4.651	4.678	VV	153	1606	0.03%	0.002%
14	4.692	4.678	4.702	VV	410	2440	0.04%	0.003%
15	4.705	4.702	4.711	VV	270	1024	0.02%	0.001%
16	4.743	4.711	4.759	VV	1300	25965	0.45%	0.035%
17	4.764	4.759	4.802	VV	1188	23057	0.40%	0.031%
18	4.810	4.802	4.826	VV	688	8733	0.15%	0.012%
19	4.829	4.826	4.865	VV	659	10995	0.19%	0.015%
20	4.866	4.865	4.870	VV	389	1117	0.02%	0.002%
21	4.878	4.870	4.884	VV	422	2986	0.05%	0.004%
22	4.888	4.884	4.900	VV	413	3466	0.06%	0.005%
23	4.922	4.900	4.944	VV	927	13917	0.24%	0.019%
24	4.949	4.944	4.973	VV	311	4588	0.08%	0.006%
25	4.993	4.973	5.037	VV	505	11216	0.19%	0.015%
26	5.072	5.037	5.089	VV	366	6376	0.11%	0.009%
27	5.097	5.089	5.119	VV	210	2045	0.04%	0.003%
28	5.139	5.119	5.142	PV	220	1972	0.03%	0.003%
29	5.167	5.142	5.190	VV	471	8253	0.14%	0.011%
30	5.193	5.190	5.219	VV	268	2947	0.05%	0.004%
31	5.242	5.219	5.247	VV	279	3381	0.06%	0.005%
32	5.264	5.247	5.277	VV	789	8867	0.15%	0.012%
33	5.284	5.277	5.302	VV	554	6588	0.11%	0.009%
34	5.321	5.302	5.341	VV	382	5725	0.10%	0.008%
35	5.382	5.341	5.386	PV	446	6706	0.12%	0.009%
36	5.403	5.386	5.422	VV	650	10220	0.18%	0.014%

					rteres			
37	5.427	5.422	5.437	VV	486	3947	0.07%	0.005%
38	5.453	5.437	5.472	VV	492	9430	0.16%	0.013%
39	5.489	5.472	5.510	VV	1029	15570	0.27%	0.021%
40	5.514	5.510	5.522	VV	426	2726	0.05%	0.004%
41	5.525	5.522	5.564	VV	506	6863	0.12%	0.009%
42	5.568	5.564	5.585	VV	204	1329	0.02%	0.002%
43	5.591	5.585	5.614	VV	153	1136	0.02%	0.002%
44	5.636	5.614	5.655	PV	1303	16967	0.29%	0.023%
45	5.670	5.655	5.693	VV	788	10131	0.17%	0.014%
46	5.703	5.693	5.725	VV	315	4676	0.08%	0.006%
47	5.753	5.725	5.779	VV	401	8197	0.14%	0.011%
48	5.807	5.779	5.848	VV	1479	23860	0.41%	0.032%
49	5.859	5.848	5.882	VV	685	9055	0.16%	0.012%
50	5.896	5.882	5.900	VV	376	3282	0.06%	0.004%
51	5.934	5.900	5.942	VV	928	16819	0.29%	0.023%
52	5.958	5.942	5.979	VV	1152	22190	0.38%	0.030%
53	5.996	5.979	6.024	VV	1272	26736	0.46%	0.036%
54	6.039	6.024	6.049	VV	773	10233	0.18%	0.014%
55	6.060	6.049	6.082	VV	762	9074	0.16%	0.012%
56	6.087	6.082	6.091	PV	147	438	0.01%	0.001%
57	6.111	6.091	6.123	VV	552	5930	0.10%	0.008%
58	6.156	6.123	6.185	VV	927	17233	0.30%	0.023%
59	6.255	6.185	6.276	VV	688	21375	0.37%	0.029%
60	6.294	6.276	6.329	VV	1129	19628	0.34%	0.027%
61	6.345	6.329	6.360	VV	1089	13485	0.23%	0.018%
62	6.382	6.360	6.410	VV	959	20708	0.36%	0.028%
63	6.417	6.410	6.429	VV	677	6154	0.11%	0.008%
64	6.448	6.429	6.479	VV	781	16122	0.28%	0.022%
65	6.499	6.479	6.514	VV	358	4701	0.08%	0.006%
66	6.541	6.514	6.552	VV	1080	15013	0.26%	0.020%
67	6.563	6.552	6.579	VV	948	13233	0.23%	0.018%
68	6.598	6.579	6.604	VV	972	12423	0.21%	0.017%
69	6.614	6.604	6.650	VV	988	16589	0.29%	0.023%
70	6.679	6.650	6.684	VV	694	8793	0.15%	0.012%
71	6.697	6.684	6.717	VV	939	10370	0.18%	0.014%
72	6.744	6.717	6.753	PV	763	8483	0.15%	0.012%
73	6.761	6.753	6.774	VV	617	6218	0.11%	0.008%
74	6.790	6.774	6.799	VV	712	6912	0.12%	0.009%
75	6.821	6.799	6.832	VV	1419	19392	0.33%	0.026%
76	6.848	6.832	6.883	VV	3152	41231	0.71%	0.056%
77	6.916	6.883	6.943	VV	842	17402	0.30%	0.024%
78	6.971	6.943	6.999	VV	1059	22914	0.39%	0.031%
79	7.025	6.999	7.043	VV	1115	19148	0.33%	0.026%
80	7.065	7.043	7.083	VV	882	16139	0.28%	0.022%
81	7.093	7.083	7.106	VV	738	7661	0.13%	0.010%
82	7.126	7.106	7.144	VV	1373	18673	0.32%	0.025%
83	7.164	7.144	7.179	VV	1948	25652	0.44%	0.035%
84	7.196	7.179	7.221	VV	1428	27980	0.48%	0.038%
85	7.237	7.221	7.260	VV	1472	25157	0.43%	0.034%
86	7.287	7.260	7.307	VV	1628	32985	0.57%	0.045%
87	7.324	7.307	7.341	VV	1742	28388	0.49%	0.039%
88	7.352	7.341	7.363	VV	1312	15236	0.26%	0.021%
89	7.395	7.363	7.422	VV	4135	76358	1.31%	0.104%

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90	7.463	7.422	7.471	VV	1212	28567	0.49%	0.039%
91	7.484	7.471	7.541	VV	1654	39643	0.68%	0.054%
92	7.569	7.541	7.595	VV	1178	24351	0.42%	0.033%
93	7.618	7.595	7.653	VV	1458	31773	0.55%	0.043%
94	7.668	7.653	7.687	VV	941	16002	0.28%	0.022%
95	7.700	7.687	7.712	VV	858	11336	0.19%	0.015%
96	7.719	7.712	7.732	VV	831	9174	0.16%	0.012%
97	7.748	7.732	7.769	VV	1130	21329	0.37%	0.029%
98	7.792	7.769	7.825	VV	2478	42274	0.73%	0.057%
99	7.835	7.825	7.849	VV	762	7558	0.13%	0.010%
100	7.898	7.849	7.928	VV	3653	62863	1.08%	0.085%
101	7.949	7.928	7.969	VV	1312	21051	0.36%	0.029%
102	7.989	7.969	8.007	VV	818	12316	0.21%	0.017%
103	8.046	8.007	8.059	VV	2283	35493	0.61%	0.048%
104	8.078	8.059	8.114	VV	2032	45948	0.79%	0.062%
105	8.150	8.114	8.159	VV	1243	24529	0.42%	0.033%
106	8.184	8.159	8.207	VV	1920	41244	0.71%	0.056%
107	8.226	8.207	8.245	VV	4519	69280	1.19%	0.094%
108	8.252	8.245	8.272	VV	2111	27622	0.47%	0.038%
109	8.290	8.272	8.304	VV	2015	29682	0.51%	0.040%
110	8.320	8.304	8.341	VV	3377	57404	0.99%	0.078%
111	8.368	8.341	8.396	VV	4751	93606	1.61%	0.127%
112	8.436	8.396	8.452	VV	3145	72555	1.25%	0.099%
113	8.464	8.452	8.486	VV	2650	50166	0.86%	0.068%
114	8.504	8.486	8.540	VV	3734	102699	1.77%	0.139%
115	8.549	8.540	8.566	VV	3114	44234	0.76%	0.060%
116	8.577	8.566	8.592	VV	2883	40757	0.70%	0.055%
117	8.616	8.592	8.637	VV	20910	344944	5.93%	0.468%
118	8.651	8.637	8.701	VV	17268	322767	5.55%	0.438%
119	8.715	8.701	8.727	VV	3442	49450	0.85%	0.067%
120	8.748	8.727	8.778	VV	3864	93879	1.61%	0.127%
121	8.783	8.778	8.815	VV	2179	34387	0.59%	0.047%
122	8.829	8.815	8.845	VV	1595	24933	0.43%	0.034%
123	8.882	8.845	8.896	VV	3858	80050	1.38%	0.109%
124	8.915	8.896	8.936	VV	9021	146712	2.52%	0.199%
125	8.951	8.936	8.974	VV	9292	134636	2.31%	0.183%
126	8.990	8.974	9.002	VV	4402	61242	1.05%	0.083%
127	9.016	9.002	9.033	VV	5708	81534	1.40%	0.111%
128	9.042	9.033	9.071	VV	3739	64426	1.11%	0.087%
129	9.073	9.071	9.099	VV	2037	30515	0.52%	0.041%
130	9.118	9.099	9.137	VV	3336	53161	0.91%	0.072%
131	9.160	9.137	9.179	VV	3547	70905	1.22%	0.096%
132	9.190	9.179	9.203	VV	3246	41256	0.71%	0.056%
133	9.243	9.203	9.276	VV	4323	150579	2.59%	0.205%
134	9.287	9.276	9.312	VV	3080	57919	1.00%	0.079%
135	9.334	9.312	9.356	VV	3895	73514	1.26%	0.100%
136	9.376	9.356	9.396	VV	3076	60475	1.04%	0.082%
137	9.412	9.396	9.439	VV	2742	49725	0.85%	0.068%
138	9.456	9.439	9.469	VV	2120	29810	0.51%	0.040%
139	9.485	9.469	9.509	VV	3492	57366	0.99%	0.078%
140	9.530	9.509	9.552	VV	2955	53270	0.92%	0.072%
141	9.580	9.552	9.606	VV	3997	89156	1.53%	0.121%

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142	9.627	9.606	9.652	VV	3567	74879	1.29%	0.102%
143	9.671	9.652	9.692	VV	3369	62337	1.07%	0.085%
144	9.714	9.692	9.759	VV	13803	298178	5.13%	0.405%
145	9.783	9.759	9.816	VV	4967	125933	2.16%	0.171%
146	9.829	9.816	9.839	VV	2629	33234	0.57%	0.045%
147	9.861	9.839	9.905	VV	6823	172219	2.96%	0.234%
148	9.916	9.905	9.929	VV	2598	35514	0.61%	0.048%
149	9.943	9.929	9.964	VV	2883	49303	0.85%	0.067%
150	9.997	9.964	10.022	VV	15505	296563	5.10%	0.403%
151	10.034	10.022	10.099	VV	8870	248510	4.27%	0.338%
152	10.115	10.099	10.129	VV	4044	60009	1.03%	0.081%
153	10.147	10.129	10.177	VV	4871	105698	1.82%	0.144%
154	10.196	10.177	10.268	VV	3388	133576	2.30%	0.181%
155	10.285	10.268	10.292	VV	1669	18578	0.32%	0.025%
156	10.297	10.292	10.334	VV	1362	23690	0.41%	0.032%
157	10.343	10.334	10.377	VV	792	10447	0.18%	0.014%
158	10.384	10.377	10.408	VV	291	3358	0.06%	0.005%
159	10.431	10.408	10.437	PV	574	6864	0.12%	0.009%
160	10.460	10.437	10.484	VV	2445	43591	0.75%	0.059%
161	10.499	10.484	10.526	VV	1958	33250	0.57%	0.045%
162	10.535	10.526	10.539	VV	596	3632	0.06%	0.005%
163	10.601	10.539	10.625	VV	4930	129993	2.23%	0.177%
164	10.644	10.625	10.677	VV	4223	75627	1.30%	0.103%
165	10.714	10.677	10.754	VV	5575	134846	2.32%	0.183%
166	10.771	10.754	10.792	VV	3167	56702	0.97%	0.077%
167	10.807	10.792	10.818	VV	2532	37241	0.64%	0.051%
168	10.853	10.818	10.865	VV	3642	78155	1.34%	0.106%
169	10.883	10.865	10.898	VV	5346	76435	1.31%	0.104%
170	10.925	10.898	10.966	VV	10072	216374	3.72%	0.294%
171	10.989	10.966	11.002	VV	1983	38959	0.67%	0.053%
172	11.020	11.002	11.038	VV	2883	43175	0.74%	0.059%
173	11.047	11.038	11.069	VV	1634	21851	0.38%	0.030%
174	11.114	11.069	11.172	VV	139271	1953905	33.59%	2.654%
175	11.195	11.172	11.283	VV	59733	1170645	20.12%	1.590%
176	11.290	11.283	11.324	VV	3488	65761	1.13%	0.089%
177	11.330	11.324	11.355	VV	1918	23173	0.40%	0.031%
178	11.361	11.355	11.381	VV	702	9033	0.16%	0.012%
179	11.385	11.381	11.405	VV	691	5184	0.09%	0.007%
180	11.444	11.405	11.477	PV	3418	88755	1.53%	0.121%
181	11.486	11.477	11.502	VV	2431	31529	0.54%	0.043%
182	11.520	11.502	11.538	VV	3031	47868	0.82%	0.065%
183	11.559	11.538	11.579	VV	3006	46587	0.80%	0.063%
184	11.609	11.579	11.615	VV	2210	31318	0.54%	0.043%
185	11.652	11.615	11.696	VV	9721	197375	3.39%	0.268%
186	11.720	11.696	11.741	VV	5006	72987	1.25%	0.099%
187	11.760	11.741	11.770	VV	2893	41436	0.71%	0.056%
188	11.779	11.770	11.828	VV	2846	55784	0.96%	0.076%
189	11.847	11.828	11.872	VV	2483	39997	0.69%	0.054%
190	11.875	11.872	11.894	VV	1201	10152	0.17%	0.014%
191	11.922	11.894	11.939	VV	21102	257948	4.43%	0.350%
192	11.955	11.939	12.007	VV	23874	388861	6.68%	0.528%
193	12.033	12.007	12.059	VV	61988	872340	15.00%	1.185%
194	12.073	12.059	12.086	VV	14831	195639	3.36%	0.266%

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195	12.104	12.086	12.158	VV	20778	367475	6.32%	0.499%
196	12.175	12.158	12.187	PV	744	9423	0.16%	0.013%
197	12.219	12.187	12.223	VV	3258	39114	0.67%	0.053%
198	12.229	12.223	12.256	VV	3361	38881	0.67%	0.053%
199	12.287	12.256	12.304	VV	1795	33736	0.58%	0.046%
200	12.333	12.304	12.377	VV	6917	161167	2.77%	0.219%
201	12.399	12.377	12.444	VV	15836	276652	4.76%	0.376%
202	12.462	12.444	12.472	VV	2400	35923	0.62%	0.049%
203	12.495	12.472	12.531	VV	39415	504913	8.68%	0.686%
204	12.541	12.531	12.567	VV	3609	55155	0.95%	0.075%
205	12.599	12.567	12.616	VV	2959	54051	0.93%	0.073%
206	12.624	12.616	12.634	VV	1737	15842	0.27%	0.022%
207	12.650	12.634	12.658	VV	3707	38034	0.65%	0.052%
208	12.670	12.658	12.696	VV	4212	63468	1.09%	0.086%
209	12.718	12.696	12.764	VV	8021	161520	2.78%	0.219%
210	12.795	12.764	12.807	VV	13595	178524	3.07%	0.242%
211	12.823	12.807	12.844	VV	25838	350705	6.03%	0.476%
212	12.860	12.844	12.876	VV	10665	172313	2.96%	0.234%
213	12.888	12.876	12.913	VV	9144	165098	2.84%	0.224%
214	12.942	12.913	13.009	VV	472003	5817014	100.00%	7.900%
215	13.041	13.009	13.066	VV	4037	93363	1.60%	0.127%
216	13.090	13.066	13.114	VV	12705	239950	4.12%	0.326%
217	13.132	13.114	13.153	VV	16916	245730	4.22%	0.334%
218	13.163	13.153	13.172	VV	6362	67451	1.16%	0.092%
219	13.190	13.172	13.210	VV	8595	145739	2.51%	0.198%
220	13.239	13.210	13.279	VV	415627	4829877	83.03%	6.560%
221	13.299	13.279	13.316	VV	35116	449405	7.73%	0.610%
222	13.333	13.316	13.394	VV	38672	666735	11.46%	0.906%
223	13.424	13.394	13.453	VV	11036	200651	3.45%	0.273%
224	13.476	13.453	13.500	VV	6377	138446	2.38%	0.188%
225	13.521	13.500	13.558	VV	19523	319325	5.49%	0.434%
226	13.577	13.558	13.594	VV	8028	115118	1.98%	0.156%
227	13.606	13.594	13.621	VV	5405	66302	1.14%	0.090%
228	13.650	13.621	13.683	VV	13005	267829	4.60%	0.364%
229	13.707	13.683	13.774	VV	26576	512188	8.80%	0.696%
230	13.835	13.774	13.883	PV	77205	1424704	24.49%	1.935%
231	13.899	13.883	13.919	VV	8458	116852	2.01%	0.159%
232	13.943	13.919	13.964	VV	58946	778084	13.38%	1.057%
233	13.982	13.964	14.009	VV	35031	552030	9.49%	0.750%
234	14.015	14.009	14.047	VV	10205	154748	2.66%	0.210%
235	14.110	14.047	14.135	VV	34098	813906	13.99%	1.105%
236	14.154	14.135	14.194	VV	22246	410012	7.05%	0.557%
237	14.198	14.194	14.209	VV	5146	42731	0.73%	0.058%
238	14.221	14.209	14.236	VV	4744	66962	1.15%	0.091%
239	14.244	14.236	14.257	VV	4005	43815	0.75%	0.060%
240	14.278	14.257	14.301	VV	5780	114974	1.98%	0.156%
241	14.317	14.301	14.334	VV	3683	61424	1.06%	0.083%
242	14.345	14.334	14.364	VV	3406	44927	0.77%	0.061%
243	14.371	14.364	14.391	VV	1839	17376	0.30%	0.024%
244	14.396	14.391	14.400	PV	262	741	0.01%	0.001%
245	14.427	14.400	14.459	PV	4101	75956	1.31%	0.103%
246	14.477	14.459	14.492	VV	3211	46417	0.80%	0.063%

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247	14.505	14.492	14.514	VV	3530	37405	0.64%	0.051%
248	14.545	14.514	14.562	VV	14247	298773	5.14%	0.406%
249	14.579	14.562	14.591	VV	12793	203806	3.50%	0.277%
250	14.595	14.591	14.618	VV	12025	125562	2.16%	0.171%
251	14.644	14.618	14.663	VV	11139	227640	3.91%	0.309%
252	14.677	14.663	14.702	VV	12710	214940	3.70%	0.292%
253	14.709	14.702	14.727	VV	4582	46122	0.79%	0.063%
254	14.757	14.727	14.787	VV	30928	530563	9.12%	0.721%
255	14.814	14.787	14.842	VV	55891	945549	16.25%	1.284%
256	14.846	14.842	14.855	VV	10646	73995	1.27%	0.100%
257	14.875	14.855	14.894	VV	17964	310749	5.34%	0.422%
258	14.906	14.894	14.929	VV	13315	204343	3.51%	0.278%
259	14.934	14.929	14.953	VV	7441	85910	1.48%	0.117%
260	14.979	14.953	15.041	VV	104248	1656843	28.48%	2.250%
261	15.046	15.041	15.068	VV	1990	22240	0.38%	0.030%
262	15.092	15.068	15.104	VV	16019	199445	3.43%	0.271%
263	15.130	15.104	15.150	VV	216644	2974922	51.14%	4.040%
264	15.171	15.150	15.258	VV	207787	3077492	52.91%	4.180%
265	15.290	15.258	15.309	VV	52093	716212	12.31%	0.973%
266	15.323	15.309	15.384	VV	24934	547882	9.42%	0.744%
267	15.401	15.384	15.420	VV	10144	157188	2.70%	0.213%
268	15.456	15.420	15.461	VV	16184	272331	4.68%	0.370%
269	15.478	15.461	15.507	VV	21016	415128	7.14%	0.564%
270	15.520	15.507	15.543	VV	8694	138041	2.37%	0.187%
271	15.569	15.543	15.664	VV	41306	1080477	18.57%	1.467%
272	15.688	15.664	15.711	PV	8895	160947	2.77%	0.219%
273	15.720	15.711	15.741	VV	8349	105167	1.81%	0.143%
274	15.764	15.741	15.781	VV	11989	174447	3.00%	0.237%
275	15.807	15.781	15.830	VV	55095	786015	13.51%	1.068%
276	15.846	15.830	15.879	VV	24573	435898	7.49%	0.592%
277	15.895	15.879	15.928	VV	19443	352573	6.06%	0.479%
278	15.970	15.928	16.023	VV	35628	1071639	18.42%	1.455%
279	16.040	16.023	16.079	VV	15809	312338	5.37%	0.424%
280	16.091	16.079	16.116	VV	5855	86678	1.49%	0.118%
281	16.135	16.116	16.175	VV	9665	159803	2.75%	0.217%
282	16.227	16.175	16.266	PV	11502	355159	6.11%	0.482%
283	16.272	16.266	16.301	VV	6194	84368	1.45%	0.115%
284	16.312	16.301	16.333	VV	3435	38461	0.66%	0.052%
285	16.349	16.333	16.368	PV	2451	27899	0.48%	0.038%
286	16.410	16.368	16.435	VV	9789	176499	3.03%	0.240%
287	16.454	16.435	16.472	PV	10225	138334	2.38%	0.188%
288	16.496	16.472	16.532	VV	17476	354996	6.10%	0.482%
289	16.579	16.532	16.588	VV	9034	197324	3.39%	0.268%
290	16.610	16.588	16.641	VV	17926	329975	5.67%	0.448%
291	16.700	16.641	16.717	VV	285630	4112091	70.69%	5.585%
292	16.727	16.717	16.758	VV	110919	1430164	24.59%	1.942%
293	16.773	16.758	16.802	VV	10736	198691	3.42%	0.270%
294	16.831	16.802	16.856	VV	61825	881561	15.15%	1.197%
295	16.865	16.856	16.911	VV	13315	247553	4.26%	0.336%
296	16.915	16.911	16.920	VV	3940	17556	0.30%	0.024%
297	16.929	16.920	16.934	VV	4940	31194	0.54%	0.042%
298	16.982	16.934	16.997	VV	46652	751683	12.92%	1.021%
299	17.022	16.997	17.056	VV	159507	2405776	41.36%	3.267%

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300	17.083	17.056	17.151	VV	221503	3231128	55.55%	4.388%
301	17.183	17.151	17.229	VV	70287	1384310	23.80%	1.880%
302	17.234	17.229	17.244	VV	10752	79542	1.37%	0.108%
303	17.254	17.244	17.279	VV	11048	174887	3.01%	0.238%
304	17.331	17.279	17.372	VV	21983	704068	12.10%	0.956%
305	17.390	17.372	17.408	VV	11423	177232	3.05%	0.241%
306	17.448	17.408	17.460	VV	31268	603656	10.38%	0.820%
307	17.467	17.460	17.528	VV	29036	598604	10.29%	0.813%
308	17.585	17.528	17.598	VV	20848	513127	8.82%	0.697%
309	17.611	17.598	17.654	VV	19529	365327	6.28%	0.496%
310	17.675	17.654	17.694	VV	16254	257201	4.42%	0.349%
311	17.712	17.694	17.725	VV	11873	190639	3.28%	0.259%
312	17.746	17.725	17.774	VV	23602	450006	7.74%	0.611%
313	17.783	17.774	17.829	VV	12024	215555	3.71%	0.293%
314	17.877	17.829	17.911	PV	9929	228076	3.92%	0.310%
315	17.936	17.911	17.945	PV	4568	53474	0.92%	0.073%
316	17.948	17.945	17.966	VV	3367	28975	0.50%	0.039%
317	17.977	17.966	17.984	VV	1905	17158	0.29%	0.023%
318	17.990	17.984	17.995	VV	1909	9505	0.16%	0.013%
					Sum of corrected areas:	73631193		

FG052225.M Thu Jun 05 06:08:06 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-42	SDG No.:	Q2150
Lab Sample ID:	Q2150-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	86.2
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015915.D	1	06/04/25 08:30	06/04/25 14:16	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2410		196	1930	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.1		37 - 130	65%	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\FG060425\
Data File : FG015915.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:16
Operator : YP\AJ
Sample : Q2150-02
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-42

Integration File: autoint1.e
Quant Time: Jun 05 05:35:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.979	1604585	13.092 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

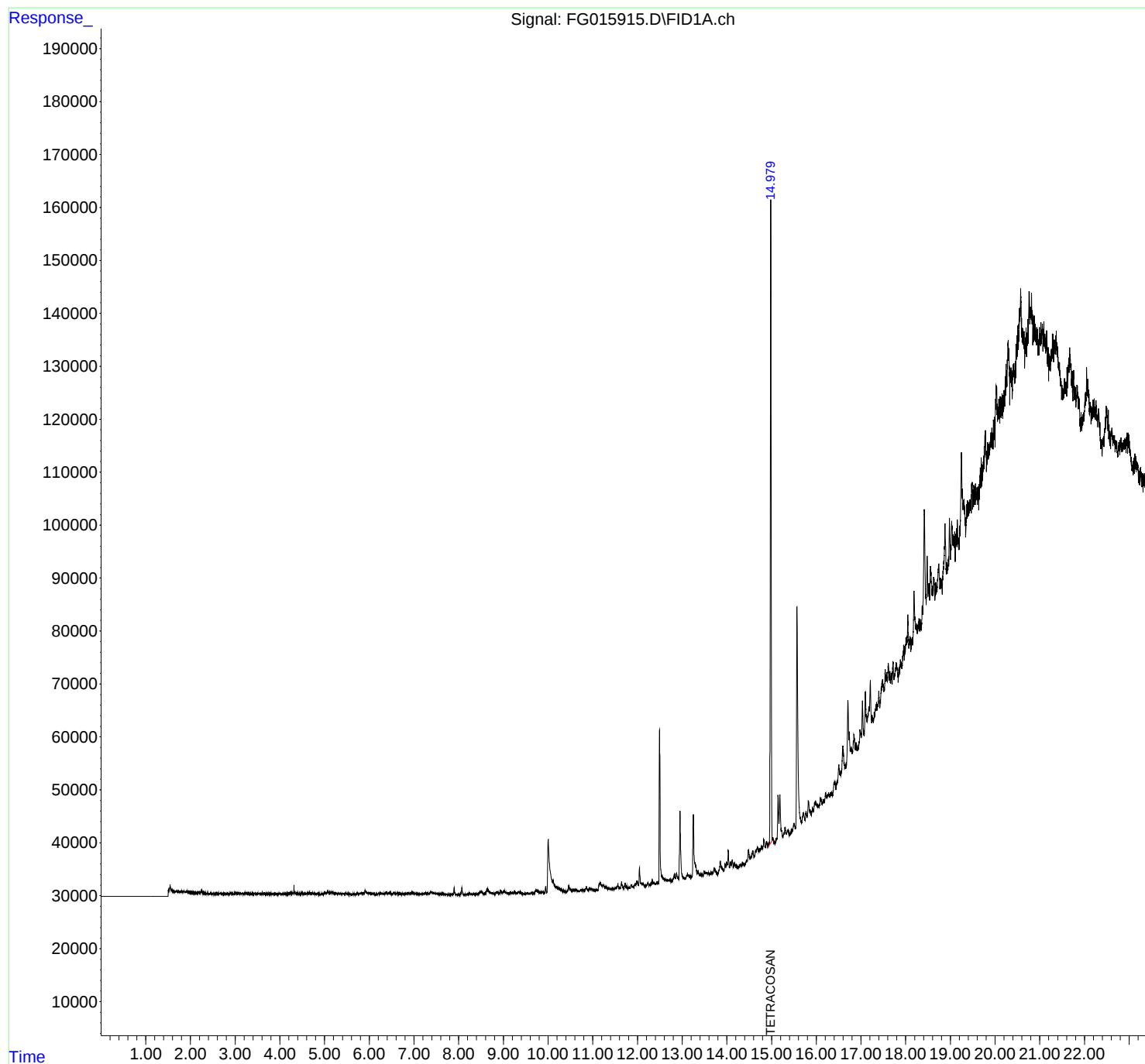
(m)=manual int.

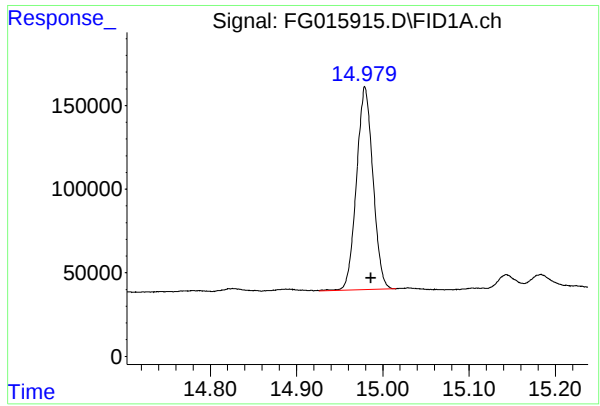
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015915.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:16
Operator : YP\AJ
Sample : Q2150-02
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-42

Integration File: autoint1.e
Quant Time: Jun 05 05:35:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.979 min
Delta R.T.: -0.007 min
Response: 1604585
Conc: 13.09 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-42

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015915.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:16
Sample : Q2150-02
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.314	4.300	4.325	BV	1417	2173	0.13%	0.022%
2	4.330	4.325	4.353	VV	185	1376	0.08%	0.014%
3	4.355	4.353	4.364	VV	164	483	0.03%	0.005%
4	4.370	4.364	4.395	PV	152	1708	0.10%	0.017%
5	4.399	4.395	4.407	VV	164	759	0.05%	0.008%
6	4.419	4.407	4.434	PV	171	1723	0.10%	0.017%
7	4.437	4.434	4.456	VV	109	930	0.06%	0.009%
8	4.470	4.456	4.474	VV	151	917	0.06%	0.009%
9	4.487	4.474	4.498	VV	205	2409	0.15%	0.024%
10	4.503	4.498	4.510	VV	184	984	0.06%	0.010%
11	4.513	4.510	4.547	VV	174	2162	0.13%	0.022%
12	4.554	4.547	4.564	PV	109	743	0.05%	0.008%
13	4.569	4.564	4.588	VV	124	991	0.06%	0.010%
14	4.603	4.588	4.610	VV	210	1454	0.09%	0.015%
15	4.613	4.610	4.619	VV	215	686	0.04%	0.007%
16	4.623	4.619	4.630	VV	205	810	0.05%	0.008%
17	4.635	4.630	4.643	VV	184	964	0.06%	0.010%
18	4.665	4.643	4.689	VV	382	5590	0.34%	0.057%
19	4.692	4.689	4.717	VV	354	2289	0.14%	0.023%
20	4.722	4.717	4.726	VV	250	841	0.05%	0.009%
21	4.731	4.726	4.741	VV	195	1376	0.08%	0.014%
22	4.744	4.741	4.765	VV	173	1791	0.11%	0.018%
23	4.772	4.765	4.785	VV	150	1082	0.07%	0.011%
24	4.793	4.785	4.811	VV	150	1436	0.09%	0.015%
25	4.830	4.811	4.835	VV	191	1508	0.09%	0.015%
26	4.838	4.835	4.850	VV	194	1131	0.07%	0.011%
27	4.854	4.850	4.872	VV	175	1269	0.08%	0.013%
28	4.877	4.872	4.898	VV	182	1407	0.09%	0.014%
29	4.910	4.898	4.918	PV	108	903	0.05%	0.009%
30	4.921	4.918	4.932	VV	152	1072	0.07%	0.011%
31	4.936	4.932	4.944	VV	146	774	0.05%	0.008%
32	4.949	4.944	4.961	VV	171	1370	0.08%	0.014%
33	4.974	4.961	4.984	VV	215	2099	0.13%	0.021%
34	4.995	4.984	4.999	VV	259	1808	0.11%	0.018%
35	5.006	4.999	5.013	VV	254	2112	0.13%	0.021%
36	5.022	5.013	5.050	VV	500	7105	0.43%	0.072%

					rt	er		
37	5.065	5.050	5.122	VV	592	17929	1.09%	0.181%
38	5.125	5.122	5.130	VV	329	1510	0.09%	0.015%
39	5.150	5.130	5.181	VV	432	10555	0.64%	0.107%
40	5.188	5.181	5.215	VV	340	5290	0.32%	0.054%
41	5.220	5.215	5.231	VV	240	1892	0.12%	0.019%
42	5.240	5.231	5.265	VV	274	4155	0.25%	0.042%
43	5.270	5.265	5.274	VV	185	1088	0.07%	0.011%
44	5.281	5.274	5.287	VV	250	1385	0.08%	0.014%
45	5.290	5.287	5.303	VV	192	1662	0.10%	0.017%
46	5.311	5.303	5.319	VV	208	1586	0.10%	0.016%
47	5.321	5.319	5.340	VV	230	1972	0.12%	0.020%
48	5.347	5.340	5.363	VV	179	1874	0.11%	0.019%
49	5.371	5.363	5.384	VV	155	1714	0.10%	0.017%
50	5.388	5.384	5.394	VV	221	900	0.05%	0.009%
51	5.412	5.394	5.420	VV	173	2148	0.13%	0.022%
52	5.432	5.420	5.437	VV	183	1319	0.08%	0.013%
53	5.469	5.437	5.484	VV	282	4871	0.30%	0.049%
54	5.488	5.484	5.504	VV	255	2067	0.13%	0.021%
55	5.508	5.504	5.518	VV	191	972	0.06%	0.010%
56	5.527	5.518	5.546	VV	174	2073	0.13%	0.021%
57	5.551	5.546	5.562	VV	171	995	0.06%	0.010%
58	5.565	5.562	5.574	VV	149	657	0.04%	0.007%
59	5.581	5.574	5.594	VV	141	873	0.05%	0.009%
60	5.636	5.594	5.656	VV	226	4374	0.27%	0.044%
61	5.660	5.656	5.670	VV	134	742	0.05%	0.008%
62	5.674	5.670	5.680	VV	155	578	0.04%	0.006%
63	5.685	5.680	5.699	VV	124	825	0.05%	0.008%
64	5.703	5.699	5.710	VV	122	551	0.03%	0.006%
65	5.736	5.710	5.750	VV	329	4891	0.30%	0.049%
66	5.754	5.750	5.775	VV	267	3083	0.19%	0.031%
67	5.786	5.775	5.812	VV	318	5394	0.33%	0.055%
68	5.818	5.812	5.823	VV	243	1559	0.09%	0.016%
69	5.828	5.823	5.849	VV	292	3459	0.21%	0.035%
70	5.908	5.849	5.950	VV	829	23917	1.46%	0.242%
71	5.963	5.950	6.004	VV	398	9900	0.60%	0.100%
72	6.015	6.004	6.038	VV	399	6560	0.40%	0.066%
73	6.041	6.038	6.075	VV	322	4950	0.30%	0.050%
74	6.078	6.075	6.090	VV	199	1606	0.10%	0.016%
75	6.101	6.090	6.132	VV	240	4611	0.28%	0.047%
76	6.138	6.132	6.147	VV	189	1219	0.07%	0.012%
77	6.156	6.147	6.169	VV	230	1907	0.12%	0.019%
78	6.178	6.169	6.190	VV	170	1615	0.10%	0.016%
79	6.204	6.190	6.216	VV	270	3020	0.18%	0.031%
80	6.222	6.216	6.235	VV	257	2491	0.15%	0.025%
81	6.249	6.235	6.261	VV	326	4320	0.26%	0.044%
82	6.268	6.261	6.274	VV	316	2085	0.13%	0.021%
83	6.278	6.274	6.290	VV	298	2365	0.14%	0.024%
84	6.293	6.290	6.305	VV	238	2043	0.12%	0.021%
85	6.312	6.305	6.321	VV	273	2202	0.13%	0.022%
86	6.328	6.321	6.332	VV	256	1612	0.10%	0.016%
87	6.335	6.332	6.339	VV	287	952	0.06%	0.010%
88	6.378	6.339	6.418	VV	513	16011	0.97%	0.162%
89	6.429	6.418	6.435	VV	358	3004	0.18%	0.030%

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90	6.440	6.435	6.448	VV	347	2223	0.14%	0.022%
91	6.452	6.448	6.456	VV	342	1431	0.09%	0.014%
92	6.462	6.456	6.485	VV	354	4804	0.29%	0.049%
93	6.488	6.485	6.507	VV	290	3026	0.18%	0.031%
94	6.512	6.507	6.515	VV	245	1094	0.07%	0.011%
95	6.527	6.515	6.535	VV	339	2848	0.17%	0.029%
96	6.554	6.535	6.579	VV	532	8867	0.54%	0.090%
97	6.587	6.579	6.599	VV	284	2678	0.16%	0.027%
98	6.619	6.599	6.639	VV	331	5946	0.36%	0.060%
99	6.643	6.639	6.654	VV	240	1599	0.10%	0.016%
100	6.673	6.654	6.691	VV	329	5202	0.32%	0.053%
101	6.697	6.691	6.725	VV	262	3098	0.19%	0.031%
102	6.757	6.725	6.763	VV	271	4952	0.30%	0.050%
103	6.770	6.763	6.781	VV	282	2467	0.15%	0.025%
104	6.787	6.781	6.805	VV	280	2942	0.18%	0.030%
105	6.819	6.805	6.836	VV	344	5114	0.31%	0.052%
106	6.840	6.836	6.843	VV	294	1170	0.07%	0.012%
107	6.850	6.843	6.857	VV	280	2349	0.14%	0.024%
108	6.859	6.857	6.868	VV	328	1737	0.11%	0.018%
109	6.872	6.868	6.879	VV	301	1795	0.11%	0.018%
110	6.883	6.879	6.910	VV	343	5721	0.35%	0.058%
111	6.914	6.910	6.925	VV	395	2764	0.17%	0.028%
112	6.957	6.925	6.980	VV	555	13087	0.80%	0.132%
113	6.989	6.980	6.996	VV	354	3050	0.19%	0.031%
114	6.999	6.996	7.015	VV	291	2941	0.18%	0.030%
115	7.025	7.015	7.044	VV	331	4525	0.28%	0.046%
116	7.047	7.044	7.051	VV	272	1019	0.06%	0.010%
117	7.061	7.051	7.077	VV	254	3431	0.21%	0.035%
118	7.083	7.077	7.090	VV	227	1515	0.09%	0.015%
119	7.094	7.090	7.103	VV	223	1421	0.09%	0.014%
120	7.118	7.103	7.129	VV	225	2991	0.18%	0.030%
121	7.135	7.129	7.145	VV	225	1685	0.10%	0.017%
122	7.153	7.145	7.194	VV	276	5862	0.36%	0.059%
123	7.202	7.194	7.210	VV	199	2027	0.12%	0.021%
124	7.238	7.210	7.247	VV	354	5656	0.34%	0.057%
125	7.268	7.247	7.280	VV	353	5887	0.36%	0.060%
126	7.289	7.280	7.300	VV	420	4240	0.26%	0.043%
127	7.303	7.300	7.314	VV	384	2376	0.14%	0.024%
128	7.321	7.314	7.327	VV	314	2143	0.13%	0.022%
129	7.389	7.327	7.432	VV	678	27392	1.67%	0.277%
130	7.451	7.432	7.467	VV	402	7364	0.45%	0.075%
131	7.469	7.467	7.483	VV	360	2607	0.16%	0.026%
132	7.486	7.483	7.505	VV	293	3445	0.21%	0.035%
133	7.507	7.505	7.514	VV	286	1240	0.08%	0.013%
134	7.531	7.514	7.540	VV	296	4004	0.24%	0.041%
135	7.544	7.540	7.556	VV	280	2269	0.14%	0.023%
136	7.569	7.556	7.579	VV	280	3053	0.19%	0.031%
137	7.581	7.579	7.587	VV	214	1022	0.06%	0.010%
138	7.595	7.587	7.605	VV	233	2092	0.13%	0.021%
139	7.622	7.605	7.633	VV	316	3678	0.22%	0.037%
140	7.643	7.633	7.647	VV	280	1804	0.11%	0.018%
141	7.651	7.647	7.668	VV	204	2087	0.13%	0.021%

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142	7.696	7.668	7.718	VV	260	5086	0.31%	0.051%
143	7.724	7.718	7.732	VV	155	1169	0.07%	0.012%
144	7.740	7.732	7.763	VV	150	2338	0.14%	0.024%
145	7.770	7.763	7.775	VV	196	974	0.06%	0.010%
146	7.780	7.775	7.806	VV	184	2467	0.15%	0.025%
147	7.810	7.806	7.819	VV	109	590	0.04%	0.006%
148	7.836	7.819	7.848	PV	178	1930	0.12%	0.020%
149	7.862	7.848	7.874	VV	177	1749	0.11%	0.018%
150	7.900	7.874	7.938	VV	1402	20055	1.22%	0.203%
151	7.943	7.938	7.951	VV	144	753	0.05%	0.008%
152	7.955	7.951	7.974	VV	105	988	0.06%	0.010%
153	7.981	7.974	7.998	VV	121	937	0.06%	0.009%
154	8.003	7.998	8.023	VV	188	1126	0.07%	0.011%
155	8.044	8.023	8.056	VV	374	4237	0.26%	0.043%
156	8.073	8.056	8.110	VV	1426	18766	1.14%	0.190%
157	8.138	8.110	8.144	VV	149	2093	0.13%	0.021%
158	8.155	8.144	8.173	VV	196	2119	0.13%	0.021%
159	8.193	8.173	8.209	VV	197	3261	0.20%	0.033%
160	8.246	8.209	8.280	VV	377	9783	0.60%	0.099%
161	8.286	8.280	8.292	VV	210	1169	0.07%	0.012%
162	8.296	8.292	8.303	VV	173	906	0.06%	0.009%
163	8.321	8.303	8.353	VV	238	4561	0.28%	0.046%
164	8.376	8.353	8.388	VV	246	3163	0.19%	0.032%
165	8.412	8.388	8.424	VV	213	3632	0.22%	0.037%
166	8.428	8.424	8.433	VV	184	967	0.06%	0.010%
167	8.441	8.433	8.449	VV	296	2123	0.13%	0.021%
168	8.473	8.449	8.493	VV	609	11612	0.71%	0.117%
169	8.503	8.493	8.528	VV	614	10427	0.63%	0.105%
170	8.532	8.528	8.538	VV	348	2008	0.12%	0.020%
171	8.543	8.538	8.551	VV	306	2093	0.13%	0.021%
172	8.554	8.551	8.586	VV	299	4352	0.26%	0.044%
173	8.632	8.586	8.637	VV	971	16250	0.99%	0.164%
174	8.647	8.637	8.709	VV	1067	27854	1.69%	0.282%
175	8.716	8.709	8.719	VV	368	1982	0.12%	0.020%
176	8.725	8.719	8.735	VV	360	2838	0.17%	0.029%
177	8.741	8.735	8.750	VV	324	2850	0.17%	0.029%
178	8.753	8.750	8.773	VV	355	3523	0.21%	0.036%
179	8.775	8.773	8.784	VV	239	1252	0.08%	0.013%
180	8.788	8.784	8.810	VV	190	2314	0.14%	0.023%
181	8.834	8.810	8.850	VV	472	7450	0.45%	0.075%
182	8.865	8.850	8.899	VV	532	10045	0.61%	0.102%
183	8.934	8.899	8.971	VV	893	20491	1.25%	0.207%
184	9.018	8.971	9.044	VV	711	21249	1.29%	0.215%
185	9.048	9.044	9.081	VV	444	7178	0.44%	0.073%
186	9.086	9.081	9.096	VV	266	2182	0.13%	0.022%
187	9.100	9.096	9.105	VV	202	1068	0.06%	0.011%
188	9.117	9.105	9.124	VV	270	2344	0.14%	0.024%
189	9.157	9.124	9.183	VV	423	11383	0.69%	0.115%
190	9.188	9.183	9.209	VV	316	4305	0.26%	0.044%
191	9.240	9.209	9.262	VV	636	12208	0.74%	0.124%
192	9.273	9.262	9.307	VV	449	7812	0.48%	0.079%
193	9.311	9.307	9.315	VV	250	974	0.06%	0.010%
194	9.334	9.315	9.363	VV	506	9759	0.59%	0.099%

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195	9.380	9.363	9.410	VV	438	7223	0.44%	0.073%
196	9.421	9.410	9.431	VV	165	1497	0.09%	0.015%
197	9.436	9.431	9.449	PV	68	643	0.04%	0.007%
198	9.452	9.449	9.463	VV	112	557	0.03%	0.006%
199	9.521	9.463	9.548	VV	230	5090	0.31%	0.051%
200	9.557	9.548	9.564	VV	135	854	0.05%	0.009%
201	9.569	9.564	9.585	PV	135	1234	0.08%	0.012%
202	9.611	9.585	9.628	VV	222	3414	0.21%	0.035%
203	9.631	9.628	9.643	VV	199	1152	0.07%	0.012%
204	9.646	9.643	9.656	VV	161	773	0.05%	0.008%
205	9.662	9.656	9.674	VV	162	1183	0.07%	0.012%
206	9.679	9.674	9.686	VV	112	637	0.04%	0.006%
207	9.731	9.686	9.788	VV	716	25869	1.57%	0.262%
208	9.793	9.788	9.817	VV	388	4825	0.29%	0.049%
209	9.822	9.817	9.831	VV	256	1620	0.10%	0.016%
210	9.840	9.831	9.851	VV	206	2271	0.14%	0.023%
211	9.860	9.851	9.895	VV	232	5205	0.32%	0.053%
212	9.897	9.895	9.917	VV	202	1254	0.08%	0.013%
213	9.946	9.917	9.969	PV	1320	15767	0.96%	0.160%
214	10.003	9.969	10.101	PV	10115	348576	21.21%	3.527%
215	10.115	10.101	10.171	VV	2276	67020	4.08%	0.678%
216	10.180	10.171	10.209	VV	1263	24186	1.47%	0.245%
217	10.224	10.209	10.251	VV	1003	21406	1.30%	0.217%
218	10.260	10.251	10.339	VV	688	23505	1.43%	0.238%
219	10.344	10.339	10.366	VV	345	3815	0.23%	0.039%
220	10.371	10.366	10.382	VV	193	1642	0.10%	0.017%
221	10.385	10.382	10.408	VV	178	2076	0.13%	0.021%
222	10.462	10.408	10.482	VV	1259	23563	1.43%	0.238%
223	10.486	10.482	10.498	VV	600	4856	0.30%	0.049%
224	10.503	10.498	10.530	VV	534	6542	0.40%	0.066%
225	10.537	10.530	10.552	VV	328	3373	0.21%	0.034%
226	10.580	10.552	10.612	VV	411	11281	0.69%	0.114%
227	10.633	10.612	10.667	VV	404	7623	0.46%	0.077%
228	10.672	10.667	10.696	VV	239	2207	0.13%	0.022%
229	10.742	10.696	10.755	VV	299	5938	0.36%	0.060%
230	10.760	10.755	10.778	VV	268	2933	0.18%	0.030%
231	10.781	10.778	10.802	VV	289	2432	0.15%	0.025%
232	10.857	10.802	10.902	VV	918	21818	1.33%	0.221%
233	10.927	10.902	10.953	VV	642	10998	0.67%	0.111%
234	10.969	10.953	11.025	VV	378	9869	0.60%	0.100%
235	11.050	11.025	11.062	VV	153	2173	0.13%	0.022%
236	11.078	11.062	11.088	VV	233	2112	0.13%	0.021%
237	11.092	11.088	11.111	VV	203	1425	0.09%	0.014%
238	11.143	11.111	11.151	VV	1309	17283	1.05%	0.175%
239	11.172	11.151	11.219	VV	1390	43011	2.62%	0.435%
240	11.230	11.219	11.276	VV	998	26148	1.59%	0.265%
241	11.286	11.276	11.291	VV	540	4502	0.27%	0.046%
242	11.295	11.291	11.350	VV	542	13188	0.80%	0.133%
243	11.369	11.350	11.391	VV	327	5688	0.35%	0.058%
244	11.396	11.391	11.426	VV	267	3897	0.24%	0.039%
245	11.436	11.426	11.440	VV	170	1171	0.07%	0.012%
246	11.452	11.440	11.461	VV	186	1743	0.11%	0.018%

					rteres			
247	11.465	11.461	11.470	VV	107	410	0.02%	0.004%
248	11.498	11.470	11.514	PV	359	5538	0.34%	0.056%
249	11.562	11.514	11.598	VV	1065	21713	1.32%	0.220%
250	11.606	11.598	11.611	VV	239	1319	0.08%	0.013%
251	11.615	11.611	11.620	VV	179	748	0.05%	0.008%
252	11.643	11.620	11.686	VV	1354	23130	1.41%	0.234%
253	11.691	11.686	11.697	VV	170	816	0.05%	0.008%
254	11.722	11.697	11.740	VV	1077	13741	0.84%	0.139%
255	11.757	11.740	11.786	VV	567	7637	0.46%	0.077%
256	11.796	11.786	11.805	VV	175	1247	0.08%	0.013%
257	11.811	11.805	11.815	VV	182	846	0.05%	0.009%
258	11.817	11.815	11.836	VV	159	707	0.04%	0.007%
259	11.859	11.836	11.896	PV	634	12355	0.75%	0.125%
260	11.900	11.896	11.904	VV	235	950	0.06%	0.010%
261	11.908	11.904	11.912	VV	254	930	0.06%	0.009%
262	11.949	11.912	11.962	VV	682	13257	0.81%	0.134%
263	11.987	11.962	12.018	VV	1204	28121	1.71%	0.285%
264	12.046	12.018	12.073	VV	3665	53575	3.26%	0.542%
265	12.088	12.073	12.104	VV	747	11429	0.70%	0.116%
266	12.117	12.104	12.157	VV	712	13530	0.82%	0.137%
267	12.166	12.157	12.189	VV	205	1993	0.12%	0.020%
268	12.235	12.189	12.261	PV	783	14145	0.86%	0.143%
269	12.291	12.261	12.307	VV	340	5296	0.32%	0.054%
270	12.330	12.307	12.354	VV	1170	16649	1.01%	0.168%
271	12.361	12.354	12.376	VV	495	5250	0.32%	0.053%
272	12.379	12.376	12.404	VV	308	3538	0.22%	0.036%
273	12.437	12.404	12.466	VV	448	10008	0.61%	0.101%
274	12.495	12.466	12.574	VV	29167	392540	23.88%	3.972%
275	12.583	12.574	12.624	VV	988	23117	1.41%	0.234%
276	12.630	12.624	12.670	VV	683	13666	0.83%	0.138%
277	12.685	12.670	12.694	VV	523	6553	0.40%	0.066%
278	12.699	12.694	12.711	VV	462	4318	0.26%	0.044%
279	12.729	12.711	12.769	VV	523	11169	0.68%	0.113%
280	12.798	12.769	12.804	VV	635	7027	0.43%	0.071%
281	12.830	12.804	12.852	VV	1497	28490	1.73%	0.288%
282	12.873	12.852	12.922	VV	1485	34774	2.12%	0.352%
283	12.949	12.922	13.039	VV	13158	239179	14.55%	2.420%
284	13.052	13.039	13.057	VV	348	3320	0.20%	0.034%
285	13.062	13.057	13.080	VV	290	3209	0.20%	0.032%
286	13.098	13.080	13.103	VV	728	6731	0.41%	0.068%
287	13.107	13.103	13.123	VV	755	8562	0.52%	0.087%
288	13.139	13.123	13.168	VV	850	16068	0.98%	0.163%
289	13.175	13.168	13.187	VV	400	3992	0.24%	0.040%
290	13.201	13.187	13.217	VV	483	6454	0.39%	0.065%
291	13.247	13.217	13.336	VV	12071	258332	15.72%	2.614%
292	13.351	13.336	13.399	VV	1240	29724	1.81%	0.301%
293	13.405	13.399	13.409	VV	341	1995	0.12%	0.020%
294	13.414	13.409	13.419	VV	408	2173	0.13%	0.022%
295	13.429	13.419	13.433	VV	420	3216	0.20%	0.033%
296	13.443	13.433	13.469	VV	560	7770	0.47%	0.079%
297	13.491	13.469	13.507	PV	1013	13755	0.84%	0.139%
298	13.524	13.507	13.559	VV	753	19028	1.16%	0.193%
299	13.566	13.559	13.570	VV	510	3170	0.19%	0.032%

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300	13.582	13.570	13.630	VV	586	12692	0.77%	0.128%
301	13.667	13.630	13.688	VV	532	13078	0.80%	0.132%
302	13.716	13.688	13.787	VV	1317	35744	2.17%	0.362%
303	13.792	13.787	13.799	VV	221	592	0.04%	0.006%
304	13.850	13.799	13.890	PV	2211	59514	3.62%	0.602%
305	13.899	13.890	13.934	VV	829	13993	0.85%	0.142%
306	13.957	13.934	13.977	VV	1558	25335	1.54%	0.256%
307	13.995	13.977	14.007	VV	1715	24778	1.51%	0.251%
308	14.030	14.007	14.055	VV	3817	59025	3.59%	0.597%
309	14.075	14.055	14.094	VV	1476	25045	1.52%	0.253%
310	14.119	14.094	14.145	VV	1897	36705	2.23%	0.371%
311	14.164	14.145	14.207	VV	1140	26512	1.61%	0.268%
312	14.218	14.207	14.226	VV	374	3809	0.23%	0.039%
313	14.232	14.226	14.246	VV	396	2973	0.18%	0.030%
314	14.254	14.246	14.262	VV	209	1265	0.08%	0.013%
315	14.288	14.262	14.294	PV	444	4702	0.29%	0.048%
316	14.299	14.294	14.332	VV	426	7104	0.43%	0.072%
317	14.356	14.332	14.368	VV	427	7395	0.45%	0.075%
318	14.382	14.368	14.408	VV	411	5854	0.36%	0.059%
319	14.445	14.408	14.457	PV	679	13643	0.83%	0.138%
320	14.481	14.457	14.528	VV	2471	58477	3.56%	0.592%
321	14.581	14.528	14.610	VV	1769	50414	3.07%	0.510%
322	14.643	14.610	14.654	VV	1532	26244	1.60%	0.266%
323	14.693	14.654	14.717	VV	1735	54343	3.31%	0.550%
324	14.743	14.717	14.748	VV	1136	18538	1.13%	0.188%
325	14.780	14.748	14.802	VV	1573	39213	2.39%	0.397%
326	14.827	14.802	14.859	VV	2409	54264	3.30%	0.549%
327	14.888	14.859	14.921	VV	1769	44736	2.72%	0.453%
328	14.936	14.921	14.942	VV	1129	11708	0.71%	0.118%
329	14.979	14.942	15.016	VV	122508	1643781	100.00%	16.631%
330	15.030	15.016	15.058	VV	1689	30981	1.88%	0.313%
331	15.062	15.058	15.082	VV	606	6777	0.41%	0.069%
332	15.104	15.082	15.120	VV	1237	19393	1.18%	0.196%
333	15.143	15.120	15.164	VV	9011	136044	8.28%	1.376%
334	15.183	15.164	15.221	VV	8957	172167	10.47%	1.742%
335	15.224	15.221	15.249	VV	1970	21210	1.29%	0.215%
336	15.300	15.249	15.329	VV	2106	58643	3.57%	0.593%
337	15.350	15.329	15.355	VV	1194	15163	0.92%	0.153%
338	15.360	15.355	15.366	VV	1203	6863	0.42%	0.069%
339	15.377	15.366	15.403	VV	1102	14201	0.86%	0.144%
340	15.456	15.403	15.466	PV	823	15345	0.93%	0.155%
341	15.496	15.466	15.531	VV	1459	38017	2.31%	0.385%
342	15.567	15.531	15.674	VV	41567	849680	51.69%	8.597%
343	15.702	15.674	15.744	VV	1996	48932	2.98%	0.495%
344	15.772	15.744	15.791	VV	1538	23472	1.43%	0.237%
345	15.825	15.791	15.882	VV	3260	81190	4.94%	0.821%
346	15.915	15.882	15.937	VV	1140	21507	1.31%	0.218%
347	15.977	15.937	16.026	VV	1888	64463	3.92%	0.652%
348	16.036	16.026	16.062	VV	764	12509	0.76%	0.127%
349	16.096	16.062	16.129	VV	1588	38308	2.33%	0.388%
350	16.162	16.129	16.179	VV	812	12790	0.78%	0.129%
351	16.207	16.179	16.227	PV	1582	25904	1.58%	0.262%

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352	16.274	16.227	16.296	VV	1254	34603	2.11%	0.350%
353	16.321	16.296	16.367	VV	802	19304	1.17%	0.195%
354	16.405	16.367	16.439	PV	1985	48362	2.94%	0.489%
355	16.503	16.439	16.545	VV	3682	108792	6.62%	1.101%
356	16.590	16.545	16.636	VV	5989	167938	10.22%	1.699%
357	16.655	16.636	16.663	VV	1306	20321	1.24%	0.206%
358	16.707	16.663	16.727	VV	12750	234393	14.26%	2.372%
359	16.736	16.727	16.772	VV	6408	110399	6.72%	1.117%
360	16.778	16.772	16.807	VV	3116	45481	2.77%	0.460%
361	16.842	16.807	16.876	VV	4400	109207	6.64%	1.105%
362	16.891	16.876	16.929	VV	2034	38025	2.31%	0.385%
363	16.981	16.929	17.007	VV	3033	79541	4.84%	0.805%
364	17.031	17.007	17.074	VV	8093	137457	8.36%	1.391%
365	17.095	17.074	17.137	VV	8398	183835	11.18%	1.860%
366	17.175	17.137	17.184	VV	4830	105019	6.39%	1.063%
367	17.207	17.184	17.237	VV	9149	165117	10.04%	1.671%
368	17.247	17.237	17.279	VV	2164	31361	1.91%	0.317%
369	17.345	17.279	17.355	VV	3178	82782	5.04%	0.838%
370	17.397	17.355	17.421	VV	4257	95152	5.79%	0.963%
371	17.480	17.421	17.519	VV	5118	214200	13.03%	2.167%
372	17.540	17.519	17.554	VV	6441	98396	5.99%	0.996%
373	17.571	17.554	17.592	VV	5200	103540	6.30%	1.048%
374	17.612	17.592	17.632	VV	6520	118989	7.24%	1.204%
375	17.645	17.632	17.664	VV	4480	62211	3.78%	0.629%
376	17.675	17.664	17.696	VV	3773	55925	3.40%	0.566%
377	17.717	17.696	17.738	VV	5186	88216	5.37%	0.893%
378	17.784	17.738	17.831	VV	4119	148441	9.03%	1.502%
379	17.853	17.831	17.867	PV	1944	24472	1.49%	0.248%
380	17.882	17.867	17.891	VV	1908	22805	1.39%	0.231%
381	17.897	17.891	17.914	VV	1573	11821	0.72%	0.120%
382	17.954	17.914	17.971	PV	2822	42097	2.56%	0.426%
					Sum of corrected areas:		9883573	

FG052225.M Thu Jun 05 06:11:43 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-39	SDG No.:	Q2150
Lab Sample ID:	Q2150-03	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.7
Sample Wt/Vol:	30.08	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015916.D	1	06/04/25 08:30	06/04/25 14:46	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2210		201	1990	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.1		37 - 130	55%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015916.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:46
Operator : YP\AJ
Sample : Q2150-03
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-39

Integration File: autoint1.e
Quant Time: Jun 05 05:35:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.979	1360691	11.102 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

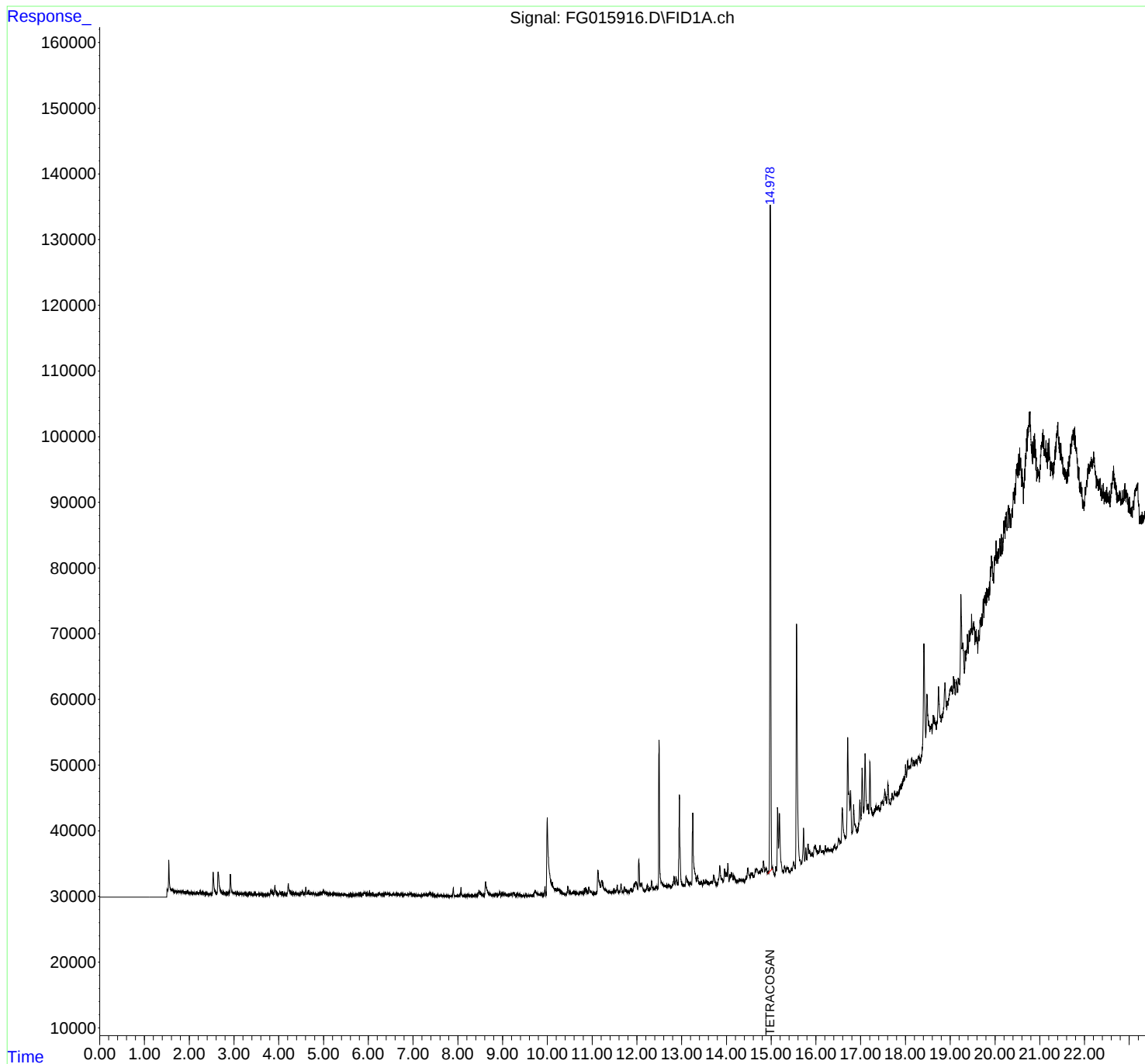
(m)=manual int.

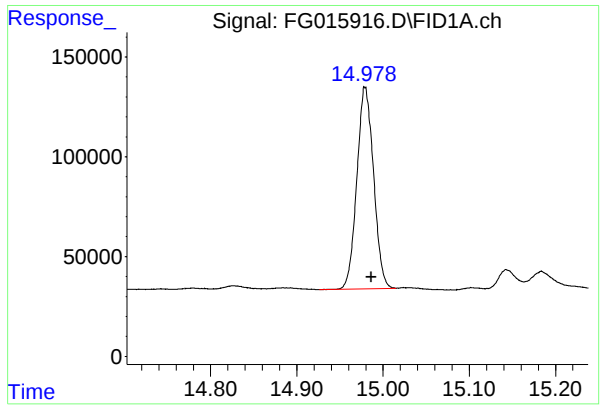
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015916.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:46
Operator : YP\AJ
Sample : Q2150-03
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-39

Integration File: autoint1.e
Quant Time: Jun 05 05:35:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.979 min

Delta R.T.: -0.007 min

Response: 1360691

Conc: 11.10 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-39

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015916.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 14:46
Sample : Q2150-03
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.319	4.300	4.333	BV	148	720	0.05%	0.008%
2	4.341	4.333	4.348	PV	189	947	0.07%	0.011%
3	4.369	4.348	4.385	VV	193	2360	0.16%	0.027%
4	4.386	4.385	4.403	VV	235	1137	0.08%	0.013%
5	4.407	4.403	4.420	VV	149	693	0.05%	0.008%
6	4.425	4.420	4.433	VV	158	634	0.04%	0.007%
7	4.444	4.433	4.458	VV	120	1074	0.08%	0.012%
8	4.491	4.458	4.506	PV	311	3703	0.26%	0.042%
9	4.525	4.506	4.568	VV	583	9512	0.66%	0.109%
10	4.574	4.568	4.580	VV	132	627	0.04%	0.007%
11	4.605	4.580	4.632	VV	1166	13806	0.96%	0.158%
12	4.658	4.632	4.668	VV	372	5644	0.39%	0.065%
13	4.670	4.668	4.690	VV	730	2884	0.20%	0.033%
14	4.696	4.690	4.702	VV	169	921	0.06%	0.011%
15	4.723	4.702	4.728	VV	317	3186	0.22%	0.036%
16	4.732	4.728	4.760	VV	350	4786	0.33%	0.055%
17	4.770	4.760	4.777	VV	302	2345	0.16%	0.027%
18	4.781	4.777	4.815	VV	324	3249	0.23%	0.037%
19	4.820	4.815	4.835	VV	185	1406	0.10%	0.016%
20	4.847	4.835	4.861	VV	218	1559	0.11%	0.018%
21	4.922	4.861	4.926	PV	292	6012	0.42%	0.069%
22	4.949	4.926	4.953	VV	341	4325	0.30%	0.049%
23	4.995	4.953	5.040	VV	684	22499	1.57%	0.257%
24	5.047	5.040	5.063	VV	335	4726	0.33%	0.054%
25	5.069	5.063	5.075	VV	331	2082	0.15%	0.024%
26	5.081	5.075	5.132	VV	312	7672	0.54%	0.088%
27	5.151	5.132	5.178	VV	349	6683	0.47%	0.076%
28	5.197	5.178	5.205	VV	323	3576	0.25%	0.041%
29	5.208	5.205	5.234	VV	235	3363	0.23%	0.038%
30	5.244	5.234	5.249	VV	252	1877	0.13%	0.021%
31	5.256	5.249	5.275	VV	228	2943	0.21%	0.034%
32	5.290	5.275	5.297	VV	207	2173	0.15%	0.025%
33	5.301	5.297	5.313	VV	243	1411	0.10%	0.016%
34	5.335	5.313	5.342	VV	218	2850	0.20%	0.033%
35	5.344	5.342	5.348	VV	183	524	0.04%	0.006%
36	5.350	5.348	5.355	VV	158	559	0.04%	0.006%

					rteres			
37	5.365	5.355	5.378	VV	154	1520	0.11%	0.017%
38	5.383	5.378	5.389	VV	162	607	0.04%	0.007%
39	5.405	5.389	5.428	VV	188	2725	0.19%	0.031%
40	5.434	5.428	5.446	VV	119	1104	0.08%	0.013%
41	5.466	5.446	5.501	VV	215	5098	0.36%	0.058%
42	5.507	5.501	5.530	VV	181	1859	0.13%	0.021%
43	5.535	5.530	5.602	VV	151	3329	0.23%	0.038%
44	5.639	5.602	5.680	VV	286	4761	0.33%	0.054%
45	5.704	5.680	5.744	PV	269	4903	0.34%	0.056%
46	5.748	5.744	5.784	VV	171	3464	0.24%	0.040%
47	5.795	5.784	5.856	VV	358	6990	0.49%	0.080%
48	5.909	5.856	5.959	VV	561	18086	1.26%	0.207%
49	5.970	5.959	6.005	VV	259	6997	0.49%	0.080%
50	6.031	6.005	6.049	VV	722	7183	0.50%	0.082%
51	6.057	6.049	6.085	VV	371	3390	0.24%	0.039%
52	6.101	6.085	6.142	VV	240	5442	0.38%	0.062%
53	6.160	6.142	6.183	VV	216	3194	0.22%	0.037%
54	6.218	6.183	6.225	VV	318	4977	0.35%	0.057%
55	6.246	6.225	6.292	VV	296	10317	0.72%	0.118%
56	6.304	6.292	6.322	VV	456	4443	0.31%	0.051%
57	6.330	6.322	6.404	VV	362	14314	1.00%	0.164%
58	6.407	6.404	6.414	VV	365	1639	0.11%	0.019%
59	6.465	6.414	6.489	VV	354	12548	0.88%	0.143%
60	6.498	6.489	6.517	VV	221	3462	0.24%	0.040%
61	6.526	6.517	6.533	VV	240	2042	0.14%	0.023%
62	6.554	6.533	6.607	VV	329	10846	0.76%	0.124%
63	6.620	6.607	6.647	VV	301	6541	0.46%	0.075%
64	6.652	6.647	6.720	VV	284	8929	0.62%	0.102%
65	6.735	6.720	6.800	VV	464	11390	0.80%	0.130%
66	6.823	6.800	6.867	VV	348	10375	0.72%	0.119%
67	6.914	6.867	6.925	VV	325	9794	0.68%	0.112%
68	6.929	6.925	7.082	VV	334	21801	1.52%	0.249%
69	7.096	7.082	7.110	VV	189	2086	0.15%	0.024%
70	7.122	7.110	7.148	VV	208	3051	0.21%	0.035%
71	7.159	7.148	7.170	VV	149	1541	0.11%	0.018%
72	7.191	7.170	7.215	VV	266	4170	0.29%	0.048%
73	7.243	7.215	7.265	VV	317	6535	0.46%	0.075%
74	7.296	7.265	7.334	VV	330	10306	0.72%	0.118%
75	7.387	7.334	7.439	VV	549	21129	1.48%	0.242%
76	7.447	7.439	7.537	VV	341	10482	0.73%	0.120%
77	7.549	7.537	7.559	VV	165	1691	0.12%	0.019%
78	7.566	7.559	7.599	VV	157	2689	0.19%	0.031%
79	7.622	7.599	7.687	VV	163	5651	0.39%	0.065%
80	7.696	7.687	7.763	VV	191	3702	0.26%	0.042%
81	7.789	7.763	7.831	VV	220	3485	0.24%	0.040%
82	7.900	7.831	7.949	VV	1365	19858	1.39%	0.227%
83	7.954	7.949	7.975	VV	107	1438	0.10%	0.016%
84	7.980	7.975	8.002	VV	139	1379	0.10%	0.016%
85	8.072	8.002	8.130	PV	1380	23461	1.64%	0.268%
86	8.137	8.130	8.173	VV	210	2310	0.16%	0.026%
87	8.186	8.173	8.222	VV	128	2808	0.20%	0.032%
88	8.234	8.222	8.271	VV	261	4530	0.32%	0.052%
89	8.279	8.271	8.305	VV	148	2467	0.17%	0.028%

					rteres			
90	8.324	8.305	8.347	VV	232	3740	0.26%	0.043%
91	8.473	8.347	8.492	VV	944	23553	1.65%	0.269%
92	8.504	8.492	8.535	VV	510	9883	0.69%	0.113%
93	8.543	8.535	8.585	VV	296	6011	0.42%	0.069%
94	8.621	8.585	8.732	VV	2257	72294	5.05%	0.827%
95	8.739	8.732	8.803	VV	308	8403	0.59%	0.096%
96	8.836	8.803	8.848	VV	377	6405	0.45%	0.073%
97	8.862	8.848	8.897	VV	409	7806	0.55%	0.089%
98	8.937	8.897	8.975	VV	641	16750	1.17%	0.192%
99	9.003	8.975	9.027	VV	522	11980	0.84%	0.137%
100	9.041	9.027	9.087	VV	458	10846	0.76%	0.124%
101	9.099	9.087	9.110	VV	186	2311	0.16%	0.026%
102	9.152	9.110	9.175	VV	338	9138	0.64%	0.104%
103	9.196	9.175	9.212	VV	321	5522	0.39%	0.063%
104	9.233	9.212	9.295	VV	599	18729	1.31%	0.214%
105	9.301	9.295	9.311	VV	216	1532	0.11%	0.018%
106	9.334	9.311	9.356	VV	498	8101	0.57%	0.093%
107	9.383	9.356	9.431	VV	339	9137	0.64%	0.104%
108	9.438	9.431	9.472	VV	145	2530	0.18%	0.029%
109	9.492	9.472	9.504	VV	230	2305	0.16%	0.026%
110	9.521	9.504	9.552	VV	315	4290	0.30%	0.049%
111	9.622	9.552	9.650	VV	221	7292	0.51%	0.083%
112	9.671	9.650	9.682	PV	228	2354	0.16%	0.027%
113	9.726	9.682	9.788	VV	906	29741	2.08%	0.340%
114	9.795	9.788	9.824	VV	361	5760	0.40%	0.066%
115	9.868	9.824	9.919	VV	343	12873	0.90%	0.147%
116	9.947	9.919	9.970	VV	1414	17040	1.19%	0.195%
117	10.000	9.970	10.102	VV	11894	355766	24.86%	4.068%
118	10.115	10.102	10.170	VV	2108	55464	3.88%	0.634%
119	10.188	10.170	10.210	VV	1028	21962	1.53%	0.251%
120	10.228	10.210	10.252	VV	1068	22316	1.56%	0.255%
121	10.265	10.252	10.373	VV	957	34326	2.40%	0.393%
122	10.384	10.373	10.410	VV	202	3628	0.25%	0.041%
123	10.461	10.410	10.486	VV	1285	26014	1.82%	0.297%
124	10.500	10.486	10.524	VV	489	9358	0.65%	0.107%
125	10.536	10.524	10.546	VV	282	3426	0.24%	0.039%
126	10.565	10.546	10.587	VV	448	8125	0.57%	0.093%
127	10.601	10.587	10.617	VV	404	5480	0.38%	0.063%
128	10.634	10.617	10.666	VV	470	8522	0.60%	0.097%
129	10.673	10.666	10.695	VV	237	3018	0.21%	0.035%
130	10.743	10.695	10.799	PV	424	17545	1.23%	0.201%
131	10.857	10.799	10.902	VV	987	27254	1.90%	0.312%
132	10.931	10.902	10.951	VV	1113	19123	1.34%	0.219%
133	10.960	10.951	11.017	VV	504	11889	0.83%	0.136%
134	11.042	11.017	11.067	VV	240	4610	0.32%	0.053%
135	11.082	11.067	11.099	VV	200	2984	0.21%	0.034%
136	11.132	11.099	11.194	VV	3569	98018	6.85%	1.121%
137	11.215	11.194	11.277	VV	1931	65937	4.61%	0.754%
138	11.291	11.277	11.355	VV	706	22709	1.59%	0.260%
139	11.364	11.355	11.385	VV	276	4324	0.30%	0.049%
140	11.400	11.385	11.425	VV	243	4609	0.32%	0.053%
141	11.448	11.425	11.455	VV	210	3008	0.21%	0.034%

					rteres			
142	11.491	11.455	11.527	VV	574	11622	0.81%	0.133%
143	11.562	11.527	11.593	VV	1265	20180	1.41%	0.231%
144	11.606	11.593	11.620	VV	262	2865	0.20%	0.033%
145	11.643	11.620	11.689	VV	1374	24937	1.74%	0.285%
146	11.721	11.689	11.741	VV	950	13200	0.92%	0.151%
147	11.758	11.741	11.779	VV	551	7607	0.53%	0.087%
148	11.802	11.779	11.835	VV	172	3833	0.27%	0.044%
149	11.872	11.835	11.899	PV	568	11420	0.80%	0.131%
150	11.935	11.899	11.950	VV	1216	21153	1.48%	0.242%
151	11.984	11.950	12.017	VV	1547	45724	3.19%	0.523%
152	12.044	12.017	12.067	VV	4902	72907	5.09%	0.834%
153	12.077	12.067	12.094	VV	1236	17396	1.22%	0.199%
154	12.111	12.094	12.183	VV	1299	28125	1.96%	0.322%
155	12.235	12.183	12.272	VV	1022	19406	1.36%	0.222%
156	12.289	12.272	12.310	VV	446	6991	0.49%	0.080%
157	12.330	12.310	12.397	VV	1503	28701	2.01%	0.328%
158	12.430	12.397	12.462	VV	566	15071	1.05%	0.172%
159	12.495	12.462	12.571	VV	22653	304088	21.25%	3.477%
160	12.581	12.571	12.643	VV	906	28067	1.96%	0.321%
161	12.652	12.643	12.660	VV	552	5472	0.38%	0.063%
162	12.678	12.660	12.710	VV	682	16605	1.16%	0.190%
163	12.724	12.710	12.777	VV	658	17823	1.25%	0.204%
164	12.831	12.777	12.855	VV	1851	44663	3.12%	0.511%
165	12.875	12.855	12.922	VV	1771	42656	2.98%	0.488%
166	12.949	12.922	13.033	VV	14287	247031	17.26%	2.825%
167	13.051	13.033	13.075	VV	456	9361	0.65%	0.107%
168	13.098	13.075	13.122	VV	1751	33599	2.35%	0.384%
169	13.132	13.122	13.178	VV	983	24747	1.73%	0.283%
170	13.199	13.178	13.219	VV	760	14607	1.02%	0.167%
171	13.248	13.219	13.332	VV	11315	244697	17.10%	2.798%
172	13.352	13.332	13.415	VV	1636	44900	3.14%	0.513%
173	13.444	13.415	13.472	VV	717	16070	1.12%	0.184%
174	13.491	13.472	13.515	VV	956	16191	1.13%	0.185%
175	13.548	13.515	13.570	VV	805	20811	1.45%	0.238%
176	13.583	13.570	13.622	VV	608	14195	0.99%	0.162%
177	13.635	13.622	13.647	VV	389	5530	0.39%	0.063%
178	13.667	13.647	13.689	VV	697	12974	0.91%	0.148%
179	13.716	13.689	13.789	VV	1542	40865	2.86%	0.467%
180	13.851	13.789	13.891	PV	2940	73725	5.15%	0.843%
181	13.902	13.891	13.926	VV	924	14665	1.02%	0.168%
182	13.958	13.926	13.979	VV	2374	41777	2.92%	0.478%
183	13.994	13.979	14.010	VV	1711	27627	1.93%	0.316%
184	14.031	14.010	14.059	VV	3111	48655	3.40%	0.556%
185	14.080	14.059	14.101	VV	1367	25034	1.75%	0.286%
186	14.119	14.101	14.149	VV	1562	32859	2.30%	0.376%
187	14.165	14.149	14.260	VV	1165	32618	2.28%	0.373%
188	14.305	14.260	14.315	VV	404	9462	0.66%	0.108%
189	14.325	14.315	14.407	VV	331	12571	0.88%	0.144%
190	14.440	14.407	14.453	PV	617	10199	0.71%	0.117%
191	14.478	14.453	14.531	VV	1940	50253	3.51%	0.575%
192	14.556	14.531	14.571	VV	993	20633	1.44%	0.236%
193	14.580	14.571	14.615	VV	965	17985	1.26%	0.206%
194	14.644	14.615	14.656	VV	1462	25272	1.77%	0.289%

					rteres			
195	14.677	14.656	14.726	VV	1599	50717	3.54%	0.580%
196	14.742	14.726	14.757	VV	1126	17776	1.24%	0.203%
197	14.779	14.757	14.801	VV	1476	31010	2.17%	0.355%
198	14.827	14.801	14.865	VV	2511	60910	4.26%	0.697%
199	14.885	14.865	14.927	VV	1435	38857	2.71%	0.444%
200	14.979	14.927	15.085	VV	102016	1431319	100.00%	16.367%
201	15.103	15.085	15.118	VV	1156	16062	1.12%	0.184%
202	15.143	15.118	15.164	VV	10020	152218	10.63%	1.741%
203	15.184	15.164	15.271	VV	9265	205697	14.37%	2.352%
204	15.300	15.271	15.325	VV	1148	21471	1.50%	0.246%
205	15.356	15.325	15.364	VV	893	15226	1.06%	0.174%
206	15.373	15.364	15.412	VV	866	13187	0.92%	0.151%
207	15.451	15.412	15.464	PV	381	6638	0.46%	0.076%
208	15.501	15.464	15.533	VV	1208	28936	2.02%	0.331%
209	15.566	15.533	15.672	VV	36740	703486	49.15%	8.045%
210	15.723	15.672	15.749	VV	5564	99263	6.94%	1.135%
211	15.773	15.749	15.795	VV	2513	39882	2.79%	0.456%
212	15.824	15.795	15.851	VV	2917	61764	4.32%	0.706%
213	15.860	15.851	15.892	VV	1768	32742	2.29%	0.374%
214	15.910	15.892	15.937	VV	1205	27037	1.89%	0.309%
215	15.982	15.937	16.061	VV	2202	101145	7.07%	1.157%
216	16.091	16.061	16.136	VV	1639	47910	3.35%	0.548%
217	16.156	16.136	16.183	VV	762	17355	1.21%	0.198%
218	16.208	16.183	16.240	VV	1372	24979	1.75%	0.286%
219	16.270	16.240	16.308	VV	635	18504	1.29%	0.212%
220	16.321	16.308	16.335	VV	321	4553	0.32%	0.052%
221	16.340	16.335	16.358	VV	236	1910	0.13%	0.022%
222	16.412	16.358	16.445	PV	573	13217	0.92%	0.151%
223	16.512	16.445	16.547	PV	1191	32177	2.25%	0.368%
224	16.588	16.547	16.670	VV	5427	142851	9.98%	1.634%
225	16.709	16.670	16.757	VV	15597	361623	25.26%	4.135%
226	16.774	16.757	16.811	VV	6975	112135	7.83%	1.282%
227	16.842	16.811	16.925	VV	4179	99230	6.93%	1.135%
228	16.980	16.925	17.004	PV	4479	87144	6.09%	0.997%
229	17.031	17.004	17.071	VV	8618	180054	12.58%	2.059%
230	17.097	17.071	17.145	VV	10891	239397	16.73%	2.738%
231	17.158	17.145	17.177	VV	2655	44831	3.13%	0.513%
232	17.206	17.177	17.271	VV	9002	177398	12.39%	2.029%
233	17.282	17.271	17.287	VV	654	6024	0.42%	0.069%
234	17.341	17.287	17.359	VV	1465	43249	3.02%	0.495%
235	17.393	17.359	17.430	VV	1234	38003	2.66%	0.435%
236	17.485	17.430	17.506	VV	1634	49825	3.48%	0.570%
237	17.537	17.506	17.578	VV	2745	72845	5.09%	0.833%
238	17.609	17.578	17.668	VV	3224	68283	4.77%	0.781%
239	17.702	17.668	17.725	PV	1343	22966	1.60%	0.263%
240	17.758	17.725	17.777	VV	1199	20885	1.46%	0.239%
241	17.810	17.777	17.821	VV	409	8893	0.62%	0.102%
242	17.898	17.821	17.910	PV	372	11695	0.82%	0.134%
243	17.926	17.910	17.933	PV	333	3138	0.22%	0.036%
Sum of corrected areas:						8744889		

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-48	SDG No.:	Q2150
Lab Sample ID:	Q2150-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	80.7
Sample Wt/Vol:	30.05	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015917.D	1	06/04/25 08:30	06/04/25 15:15	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1430	J	209	2060	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	13.3		37 - 130	67%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015917.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 15:15
Operator : YP\AJ
Sample : Q2150-04
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-48

Integration File: autoint1.e
Quant Time: Jun 05 05:36:09 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.980	1634345	13.335 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

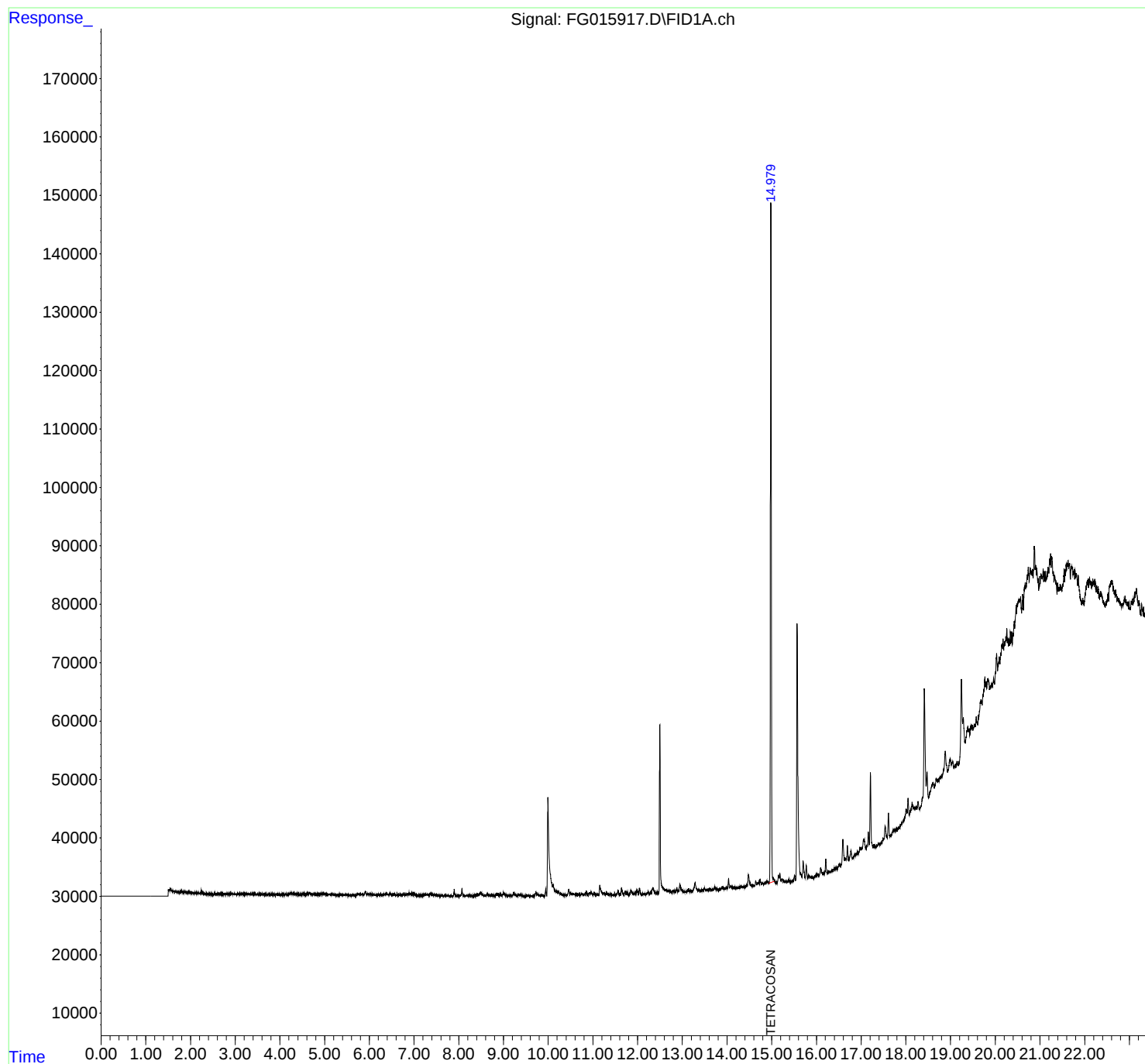
(m)=manual int.

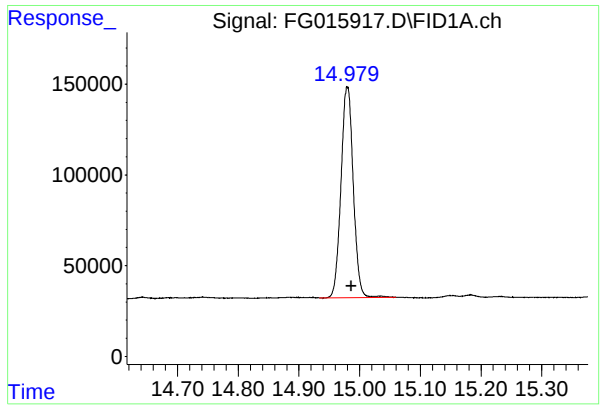
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015917.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 15:15
Operator : YP\AJ
Sample : Q2150-04
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-48

Integration File: autoint1.e
Quant Time: Jun 05 05:36:09 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.980 min

Delta R.T.: -0.006 min

Response: 1634345

Conc: 13.33 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-48

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015917.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 15:15
 Sample : Q2150-04
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.309	4.300	4.328	BV	129	844	0.05%	0.014%
2	4.348	4.328	4.352	PV	126	1264	0.08%	0.020%
3	4.358	4.352	4.368	VV	137	813	0.05%	0.013%
4	4.374	4.368	4.383	VV	135	889	0.05%	0.014%
5	4.386	4.383	4.389	VV	134	371	0.02%	0.006%
6	4.394	4.389	4.404	VV	201	1071	0.07%	0.017%
7	4.407	4.404	4.410	VV	160	354	0.02%	0.006%
8	4.414	4.410	4.438	VV	118	1483	0.09%	0.024%
9	4.440	4.438	4.449	VV	143	471	0.03%	0.008%
10	4.461	4.449	4.472	PV	152	1235	0.08%	0.020%
11	4.487	4.472	4.514	VV	257	3808	0.23%	0.061%
12	4.519	4.514	4.537	VV	234	2281	0.14%	0.037%
13	4.543	4.537	4.572	VV	218	2725	0.17%	0.044%
14	4.576	4.572	4.587	VV	145	604	0.04%	0.010%
15	4.608	4.587	4.631	VV	356	5500	0.34%	0.088%
16	4.660	4.631	4.697	VV	360	8500	0.52%	0.137%
17	4.701	4.697	4.708	VV	201	933	0.06%	0.015%
18	4.726	4.708	4.736	VV	175	2113	0.13%	0.034%
19	4.739	4.736	4.746	VV	188	896	0.05%	0.014%
20	4.753	4.746	4.774	VV	195	2619	0.16%	0.042%
21	4.778	4.774	4.789	VV	200	1186	0.07%	0.019%
22	4.804	4.789	4.828	VV	183	2991	0.18%	0.048%
23	4.844	4.828	4.872	VV	198	3404	0.21%	0.055%
24	4.881	4.872	4.891	VV	189	1779	0.11%	0.029%
25	4.895	4.891	4.904	VV	234	1367	0.08%	0.022%
26	4.909	4.904	4.924	VV	202	2101	0.13%	0.034%
27	4.926	4.924	4.937	VV	254	1583	0.10%	0.025%
28	4.947	4.937	4.963	VV	306	4177	0.25%	0.067%
29	4.967	4.963	4.983	VV	354	3147	0.19%	0.051%
30	4.986	4.983	4.995	VV	344	1917	0.12%	0.031%
31	5.002	4.995	5.028	VV	260	3967	0.24%	0.064%
32	5.040	5.028	5.051	VV	256	3049	0.19%	0.049%
33	5.055	5.051	5.063	VV	314	1663	0.10%	0.027%
34	5.071	5.063	5.084	VV	227	2517	0.15%	0.040%
35	5.094	5.084	5.111	VV	248	2634	0.16%	0.042%
36	5.116	5.111	5.132	VV	186	1745	0.11%	0.028%

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37	5.152	5.132	5.182	VV	363	6846	0.42%	0.110%
38	5.186	5.182	5.190	VV	189	801	0.05%	0.013%
39	5.193	5.190	5.214	VV	219	2461	0.15%	0.040%
40	5.227	5.214	5.235	VV	204	1812	0.11%	0.029%
41	5.240	5.235	5.256	VV	107	1146	0.07%	0.018%
42	5.259	5.256	5.268	VV	115	594	0.04%	0.010%
43	5.279	5.268	5.287	VV	142	1251	0.08%	0.020%
44	5.299	5.287	5.304	VV	175	1374	0.08%	0.022%
45	5.310	5.304	5.319	VV	199	1206	0.07%	0.019%
46	5.331	5.319	5.336	VV	211	1438	0.09%	0.023%
47	5.341	5.336	5.361	VV	152	2056	0.13%	0.033%
48	5.380	5.361	5.387	VV	177	1948	0.12%	0.031%
49	5.394	5.387	5.400	VV	204	991	0.06%	0.016%
50	5.404	5.400	5.423	VV	145	1704	0.10%	0.027%
51	5.429	5.423	5.441	VV	197	1486	0.09%	0.024%
52	5.471	5.441	5.485	VV	213	4593	0.28%	0.074%
53	5.487	5.485	5.519	VV	212	2583	0.16%	0.042%
54	5.525	5.519	5.529	VV	114	546	0.03%	0.009%
55	5.533	5.529	5.542	VV	150	744	0.05%	0.012%
56	5.546	5.542	5.555	VV	115	800	0.05%	0.013%
57	5.567	5.555	5.581	VV	188	1838	0.11%	0.030%
58	5.584	5.581	5.601	VV	159	1296	0.08%	0.021%
59	5.606	5.601	5.614	VV	133	760	0.05%	0.012%
60	5.623	5.614	5.639	VV	177	2056	0.13%	0.033%
61	5.644	5.639	5.653	VV	167	1150	0.07%	0.018%
62	5.662	5.653	5.668	VV	172	1048	0.06%	0.017%
63	5.673	5.668	5.678	VV	145	529	0.03%	0.008%
64	5.691	5.678	5.696	VV	171	957	0.06%	0.015%
65	5.726	5.696	5.742	PV	339	5539	0.34%	0.089%
66	5.754	5.742	5.767	VV	300	3397	0.21%	0.055%
67	5.778	5.767	5.785	VV	284	2473	0.15%	0.040%
68	5.794	5.785	5.798	VV	292	1955	0.12%	0.031%
69	5.803	5.798	5.808	VV	240	1412	0.09%	0.023%
70	5.814	5.808	5.819	VV	286	1523	0.09%	0.024%
71	5.824	5.819	5.833	VV	315	2254	0.14%	0.036%
72	5.838	5.833	5.852	VV	290	3024	0.18%	0.049%
73	5.856	5.852	5.879	VV	327	4355	0.27%	0.070%
74	5.907	5.879	5.948	VV	788	18728	1.14%	0.301%
75	5.963	5.948	5.968	VV	416	3850	0.23%	0.062%
76	5.972	5.968	5.984	VV	372	2972	0.18%	0.048%
77	5.991	5.984	5.996	VV	312	2072	0.13%	0.033%
78	6.013	5.996	6.067	VV	405	12150	0.74%	0.195%
79	6.073	6.067	6.081	VV	259	1796	0.11%	0.029%
80	6.085	6.081	6.092	VV	268	1554	0.09%	0.025%
81	6.106	6.092	6.132	VV	285	4512	0.28%	0.073%
82	6.136	6.132	6.144	VV	198	1070	0.07%	0.017%
83	6.150	6.144	6.161	VV	170	1539	0.09%	0.025%
84	6.177	6.161	6.221	VV	427	5930	0.36%	0.095%
85	6.248	6.221	6.255	VV	249	3821	0.23%	0.061%
86	6.263	6.255	6.277	VV	237	2479	0.15%	0.040%
87	6.282	6.277	6.292	VV	211	1525	0.09%	0.025%
88	6.296	6.292	6.301	VV	213	881	0.05%	0.014%
89	6.310	6.301	6.321	VV	256	2228	0.14%	0.036%

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90	6.329	6.321	6.336	VV	278	1918	0.12%	0.031%
91	6.343	6.336	6.349	VV	282	1815	0.11%	0.029%
92	6.354	6.349	6.372	VV	328	4146	0.25%	0.067%
93	6.382	6.372	6.396	VV	399	4820	0.29%	0.077%
94	6.401	6.396	6.413	VV	277	2608	0.16%	0.042%
95	6.417	6.413	6.422	VV	292	1341	0.08%	0.022%
96	6.430	6.422	6.447	VV	338	4037	0.25%	0.065%
97	6.459	6.447	6.481	VV	396	6067	0.37%	0.098%
98	6.485	6.481	6.498	VV	296	2533	0.15%	0.041%
99	6.509	6.498	6.514	VV	269	2093	0.13%	0.034%
100	6.553	6.514	6.581	VV	451	11350	0.69%	0.182%
101	6.585	6.581	6.594	VV	222	1416	0.09%	0.023%
102	6.598	6.594	6.606	VV	194	1259	0.08%	0.020%
103	6.622	6.606	6.640	VV	304	4652	0.28%	0.075%
104	6.653	6.640	6.685	VV	288	5716	0.35%	0.092%
105	6.696	6.685	6.711	VV	246	2717	0.17%	0.044%
106	6.731	6.711	6.747	VV	346	5741	0.35%	0.092%
107	6.756	6.747	6.761	VV	325	1954	0.12%	0.031%
108	6.775	6.761	6.801	VV	314	5663	0.35%	0.091%
109	6.823	6.801	6.833	VV	350	5028	0.31%	0.081%
110	6.857	6.833	6.870	VV	510	6382	0.39%	0.103%
111	6.886	6.870	6.937	VV	544	14017	0.85%	0.225%
112	6.949	6.937	6.982	VV	463	9498	0.58%	0.153%
113	6.999	6.982	7.015	VV	482	5068	0.31%	0.081%
114	7.020	7.015	7.033	VV	323	2329	0.14%	0.037%
115	7.041	7.033	7.049	VV	230	1901	0.12%	0.031%
116	7.053	7.049	7.058	VV	252	998	0.06%	0.016%
117	7.070	7.058	7.098	VV	205	3709	0.23%	0.060%
118	7.106	7.098	7.122	VV	244	2176	0.13%	0.035%
119	7.127	7.122	7.131	VV	173	658	0.04%	0.011%
120	7.138	7.131	7.146	VV	250	1410	0.09%	0.023%
121	7.151	7.146	7.179	VV	231	2826	0.17%	0.045%
122	7.195	7.179	7.209	VV	296	2964	0.18%	0.048%
123	7.247	7.209	7.253	VV	327	6112	0.37%	0.098%
124	7.257	7.253	7.264	VV	290	1618	0.10%	0.026%
125	7.276	7.264	7.284	VV	281	3149	0.19%	0.051%
126	7.291	7.284	7.302	VV	348	3236	0.20%	0.052%
127	7.310	7.302	7.330	VV	289	3934	0.24%	0.063%
128	7.353	7.330	7.362	VV	395	4923	0.30%	0.079%
129	7.377	7.362	7.397	VV	417	7474	0.46%	0.120%
130	7.401	7.397	7.449	VV	335	7564	0.46%	0.122%
131	7.455	7.449	7.468	VV	310	2608	0.16%	0.042%
132	7.473	7.468	7.497	VV	211	2619	0.16%	0.042%
133	7.517	7.497	7.535	VV	206	3286	0.20%	0.053%
134	7.540	7.535	7.547	VV	153	829	0.05%	0.013%
135	7.556	7.547	7.567	VV	156	1438	0.09%	0.023%
136	7.570	7.567	7.587	VV	157	1138	0.07%	0.018%
137	7.619	7.587	7.655	VV	187	4837	0.30%	0.078%
138	7.663	7.655	7.679	VV	118	1110	0.07%	0.018%
139	7.698	7.679	7.722	VV	181	2734	0.17%	0.044%
140	7.726	7.722	7.745	VV	115	1079	0.07%	0.017%
141	7.749	7.745	7.759	VV	86	531	0.03%	0.009%

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142	7.761	7.759	7.767	VV	111	391	0.02%	0.006%
143	7.777	7.767	7.782	VV	129	800	0.05%	0.013%
144	7.789	7.782	7.794	VV	75	539	0.03%	0.009%
145	7.805	7.794	7.814	VV	115	673	0.04%	0.011%
146	7.818	7.814	7.829	VV	113	404	0.02%	0.006%
147	7.832	7.829	7.837	VV	86	357	0.02%	0.006%
148	7.843	7.837	7.861	VV	117	815	0.05%	0.013%
149	7.900	7.861	7.934	PV	1276	15263	0.93%	0.245%
150	7.938	7.934	8.006	VV	128	2766	0.17%	0.044%
151	8.010	8.006	8.016	VV	56	196	0.01%	0.003%
152	8.050	8.016	8.055	VV	302	3481	0.21%	0.056%
153	8.072	8.055	8.127	VV	1367	18131	1.11%	0.291%
154	8.135	8.127	8.141	VV	166	1056	0.06%	0.017%
155	8.147	8.141	8.160	VV	171	1414	0.09%	0.023%
156	8.165	8.160	8.183	VV	140	1722	0.11%	0.028%
157	8.189	8.183	8.224	VV	150	2478	0.15%	0.040%
158	8.232	8.224	8.262	VV	201	3361	0.20%	0.054%
159	8.264	8.262	8.267	VV	174	382	0.02%	0.006%
160	8.270	8.267	8.278	VV	177	727	0.04%	0.012%
161	8.283	8.278	8.305	VV	157	1753	0.11%	0.028%
162	8.317	8.305	8.322	VV	193	1269	0.08%	0.020%
163	8.338	8.322	8.349	VV	253	2126	0.13%	0.034%
164	8.352	8.349	8.364	VV	113	519	0.03%	0.008%
165	8.408	8.364	8.424	VV	417	5736	0.35%	0.092%
166	8.431	8.424	8.442	VV	278	2202	0.13%	0.035%
167	8.472	8.442	8.487	VV	621	10270	0.63%	0.165%
168	8.503	8.487	8.572	VV	614	15440	0.94%	0.248%
169	8.645	8.572	8.686	VV	346	15650	0.95%	0.252%
170	8.695	8.686	8.711	VV	189	2311	0.14%	0.037%
171	8.742	8.711	8.814	VV	266	7690	0.47%	0.124%
172	8.834	8.814	8.850	VV	433	5954	0.36%	0.096%
173	8.860	8.850	8.885	VV	344	5429	0.33%	0.087%
174	8.887	8.885	8.910	VV	433	2414	0.15%	0.039%
175	8.936	8.910	8.969	VV	603	10967	0.67%	0.176%
176	8.995	8.969	9.031	VV	626	14036	0.86%	0.226%
177	9.044	9.031	9.117	VV	364	10290	0.63%	0.165%
178	9.122	9.117	9.157	VV	212	3374	0.21%	0.054%
179	9.163	9.157	9.187	VV	171	2229	0.14%	0.036%
180	9.233	9.187	9.315	VV	734	21932	1.34%	0.353%
181	9.334	9.315	9.356	VV	341	5848	0.36%	0.094%
182	9.383	9.356	9.411	VV	299	7269	0.44%	0.117%
183	9.422	9.411	9.451	VV	145	2063	0.13%	0.033%
184	9.475	9.451	9.484	VV	114	1740	0.11%	0.028%
185	9.524	9.484	9.562	VV	219	4139	0.25%	0.067%
186	9.575	9.562	9.590	VV	132	1351	0.08%	0.022%
187	9.622	9.590	9.654	PV	120	2892	0.18%	0.046%
188	9.660	9.654	9.685	VV	70	1281	0.08%	0.021%
189	9.723	9.685	9.800	VV	673	23120	1.41%	0.372%
190	9.804	9.800	9.832	VV	296	3417	0.21%	0.055%
191	9.848	9.832	9.882	VV	201	4281	0.26%	0.069%
192	9.892	9.882	9.920	VV	204	2021	0.12%	0.032%
193	9.947	9.920	9.967	VV	1282	14622	0.89%	0.235%
194	9.995	9.967	10.102	VV	16764	454913	27.75%	7.313%

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195	10.114	10.102	10.168	VV	1948	51495	3.14%	0.828%
196	10.185	10.168	10.210	VV	959	19646	1.20%	0.316%
197	10.228	10.210	10.329	VV	833	32349	1.97%	0.520%
198	10.337	10.329	10.367	VV	274	3827	0.23%	0.062%
199	10.388	10.367	10.410	VV	184	3202	0.20%	0.051%
200	10.461	10.410	10.484	VV	1163	23171	1.41%	0.372%
201	10.495	10.484	10.524	VV	447	8749	0.53%	0.141%
202	10.536	10.524	10.546	VV	390	4424	0.27%	0.071%
203	10.564	10.546	10.613	VV	335	10937	0.67%	0.176%
204	10.631	10.613	10.657	VV	374	5586	0.34%	0.090%
205	10.685	10.657	10.716	VV	328	5918	0.36%	0.095%
206	10.742	10.716	10.799	VV	430	10943	0.67%	0.176%
207	10.855	10.799	10.890	VV	781	19179	1.17%	0.308%
208	10.927	10.890	10.942	VV	503	11123	0.68%	0.179%
209	10.959	10.942	10.998	VV	568	13024	0.79%	0.209%
210	11.026	10.998	11.064	VV	293	9244	0.56%	0.149%
211	11.090	11.064	11.120	VV	247	5569	0.34%	0.090%
212	11.155	11.120	11.215	VV	1750	44226	2.70%	0.711%
213	11.231	11.215	11.265	VV	454	10743	0.66%	0.173%
214	11.286	11.265	11.355	VV	353	12964	0.79%	0.208%
215	11.368	11.355	11.408	VV	266	5003	0.31%	0.080%
216	11.415	11.408	11.423	VV	112	827	0.05%	0.013%
217	11.429	11.423	11.436	VV	117	629	0.04%	0.010%
218	11.443	11.436	11.475	VV	153	2051	0.13%	0.033%
219	11.495	11.475	11.520	PV	271	3554	0.22%	0.057%
220	11.562	11.520	11.600	VV	807	16044	0.98%	0.258%
221	11.608	11.600	11.620	VV	291	1939	0.12%	0.031%
222	11.641	11.620	11.702	VV	1221	23493	1.43%	0.378%
223	11.721	11.702	11.740	VV	686	9053	0.55%	0.146%
224	11.755	11.740	11.785	VV	536	7152	0.44%	0.115%
225	11.804	11.785	11.820	VV	148	1926	0.12%	0.031%
226	11.848	11.820	11.907	VV	733	20773	1.27%	0.334%
227	11.914	11.907	11.929	VV	289	2281	0.14%	0.037%
228	11.989	11.929	12.026	VV	836	24834	1.51%	0.399%
229	12.045	12.026	12.106	VV	1092	16778	1.02%	0.270%
230	12.118	12.106	12.145	PV	310	2814	0.17%	0.045%
231	12.235	12.145	12.264	PV	555	12008	0.73%	0.193%
232	12.292	12.264	12.308	VV	459	5779	0.35%	0.093%
233	12.345	12.308	12.425	VV	1069	34356	2.10%	0.552%
234	12.443	12.425	12.470	VV	307	4788	0.29%	0.077%
235	12.497	12.470	12.548	VV	28756	366233	22.34%	5.888%
236	12.557	12.548	12.577	VV	1219	18113	1.10%	0.291%
237	12.585	12.577	12.628	VV	880	20884	1.27%	0.336%
238	12.636	12.628	12.672	VV	640	13274	0.81%	0.213%
239	12.696	12.672	12.757	VV	477	17113	1.04%	0.275%
240	12.797	12.757	12.835	VV	489	13862	0.85%	0.223%
241	12.843	12.835	12.855	VV	278	3062	0.19%	0.049%
242	12.877	12.855	12.912	VV	773	14825	0.90%	0.238%
243	12.945	12.912	13.052	VV	1435	41080	2.51%	0.660%
244	13.054	13.052	13.084	VV	138	1273	0.08%	0.020%
245	13.142	13.084	13.205	PV	470	12347	0.75%	0.198%
246	13.286	13.205	13.351	VV	1496	47142	2.88%	0.758%

					rteres			
247	13.366	13.351	13.412	VV	302	6865	0.42%	0.110%
248	13.450	13.412	13.462	VV	260	5096	0.31%	0.082%
249	13.489	13.462	13.540	VV	516	11550	0.70%	0.186%
250	13.621	13.540	13.645	VV	321	11496	0.70%	0.185%
251	13.666	13.645	13.687	VV	223	3530	0.22%	0.057%
252	13.723	13.687	13.790	VV	501	15629	0.95%	0.251%
253	13.807	13.790	13.820	VV	164	1222	0.07%	0.020%
254	13.899	13.820	13.929	PV	531	14451	0.88%	0.232%
255	13.937	13.929	13.955	VV	253	2792	0.17%	0.045%
256	14.033	13.955	14.056	VV	1827	32748	2.00%	0.526%
257	14.076	14.056	14.119	VV	574	13050	0.80%	0.210%
258	14.129	14.119	14.162	VV	411	5805	0.35%	0.093%
259	14.195	14.162	14.217	VV	213	5391	0.33%	0.087%
260	14.229	14.217	14.257	VV	76	1414	0.09%	0.023%
261	14.309	14.257	14.326	PV	318	6659	0.41%	0.107%
262	14.336	14.326	14.374	VV	199	4496	0.27%	0.072%
263	14.377	14.374	14.410	VV	182	1680	0.10%	0.027%
264	14.441	14.410	14.454	VV	375	5537	0.34%	0.089%
265	14.480	14.454	14.544	VV	2129	50382	3.07%	0.810%
266	14.552	14.544	14.565	VV	245	2629	0.16%	0.042%
267	14.588	14.565	14.619	VV	251	5388	0.33%	0.087%
268	14.642	14.619	14.665	VV	904	13008	0.79%	0.209%
269	14.685	14.665	14.713	VV	572	12937	0.79%	0.208%
270	14.742	14.713	14.784	VV	920	21860	1.33%	0.351%
271	14.801	14.784	14.825	VV	395	7128	0.43%	0.115%
272	14.853	14.825	14.860	VV	367	5738	0.35%	0.092%
273	14.885	14.860	14.914	VV	628	15232	0.93%	0.245%
274	14.920	14.914	14.940	VV	429	5501	0.34%	0.088%
275	14.980	14.940	15.020	VV	116266	1639531	100.00%	26.357%
276	15.034	15.020	15.112	VV	1096	29167	1.78%	0.469%
277	15.151	15.112	15.165	VV	1281	22757	1.39%	0.366%
278	15.183	15.165	15.210	VV	1647	27368	1.67%	0.440%
279	15.232	15.210	15.307	VV	715	20009	1.22%	0.322%
280	15.329	15.307	15.355	VV	223	3572	0.22%	0.057%
281	15.379	15.355	15.414	PV	465	7507	0.46%	0.121%
282	15.438	15.414	15.480	VV	98	1987	0.12%	0.032%
283	15.511	15.480	15.535	PV	997	14088	0.86%	0.226%
284	15.566	15.535	15.670	VV	43651	839409	51.20%	13.494%
285	15.703	15.670	15.742	VV	3098	63227	3.86%	1.016%
286	15.772	15.742	15.810	VV	2335	37612	2.29%	0.605%
287	15.836	15.810	15.867	VV	516	10715	0.65%	0.172%
288	15.885	15.867	15.915	VV	242	3334	0.20%	0.054%
289	15.969	15.915	15.977	PV	303	3014	0.18%	0.048%
290	16.008	15.977	16.065	VV	395	10356	0.63%	0.166%
291	16.095	16.065	16.145	VV	1214	27216	1.66%	0.438%
292	16.207	16.145	16.245	VV	2511	34818	2.12%	0.560%
293	16.274	16.245	16.292	VV	241	4125	0.25%	0.066%
294	16.345	16.292	16.364	PV	227	4538	0.28%	0.073%
295	16.404	16.364	16.464	VV	394	9605	0.59%	0.154%
296	16.501	16.464	16.534	PV	677	13676	0.83%	0.220%
297	16.590	16.534	16.637	VV	4510	103747	6.33%	1.668%
298	16.651	16.637	16.669	VV	1052	16923	1.03%	0.272%
299	16.691	16.669	16.717	VV	2994	44715	2.73%	0.719%

					rteres			
300	16.772	16.717	16.804	VV	1902	48873	2.98%	0.786%
301	16.890	16.804	16.904	VV	862	36146	2.20%	0.581%
302	16.920	16.904	16.939	VV	999	16660	1.02%	0.268%
303	16.988	16.939	17.024	VV	1304	56456	3.44%	0.908%
304	17.051	17.024	17.110	VV	2506	87794	5.35%	1.411%
305	17.160	17.110	17.180	VV	3325	69501	4.24%	1.117%
306	17.207	17.180	17.279	VV	13237	212863	12.98%	3.422%
307	17.287	17.279	17.309	VV	609	4163	0.25%	0.067%
308	17.393	17.309	17.424	VV	420	11371	0.69%	0.183%
309	17.535	17.424	17.582	PV	2508	71870	4.38%	1.155%
310	17.609	17.582	17.652	VV	4221	66103	4.03%	1.063%
311	17.745	17.652	17.759	VV	633	25317	1.54%	0.407%
312	17.775	17.759	17.810	VV	543	10648	0.65%	0.171%
313	17.841	17.810	17.849	PV	301	4319	0.26%	0.069%
314	17.952	17.849	17.961	PV	251	10889	0.66%	0.175%
					Sum of corrected areas:		6220393	

FG052225.M Thu Jun 05 06:12:56 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-47	SDG No.:	Q2150
Lab Sample ID:	Q2150-05	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	81
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015918.D	1	06/04/25 08:30	06/04/25 15:45	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1540	J	209	2060	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.3		37 - 130	52%	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\FG060425\
Data File : FG015918.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 15:45
Operator : YP\AJ
Sample : Q2150-05
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-47

Integration File: autoint1.e
Quant Time: Jun 05 05:36:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.980	1262451	10.301 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

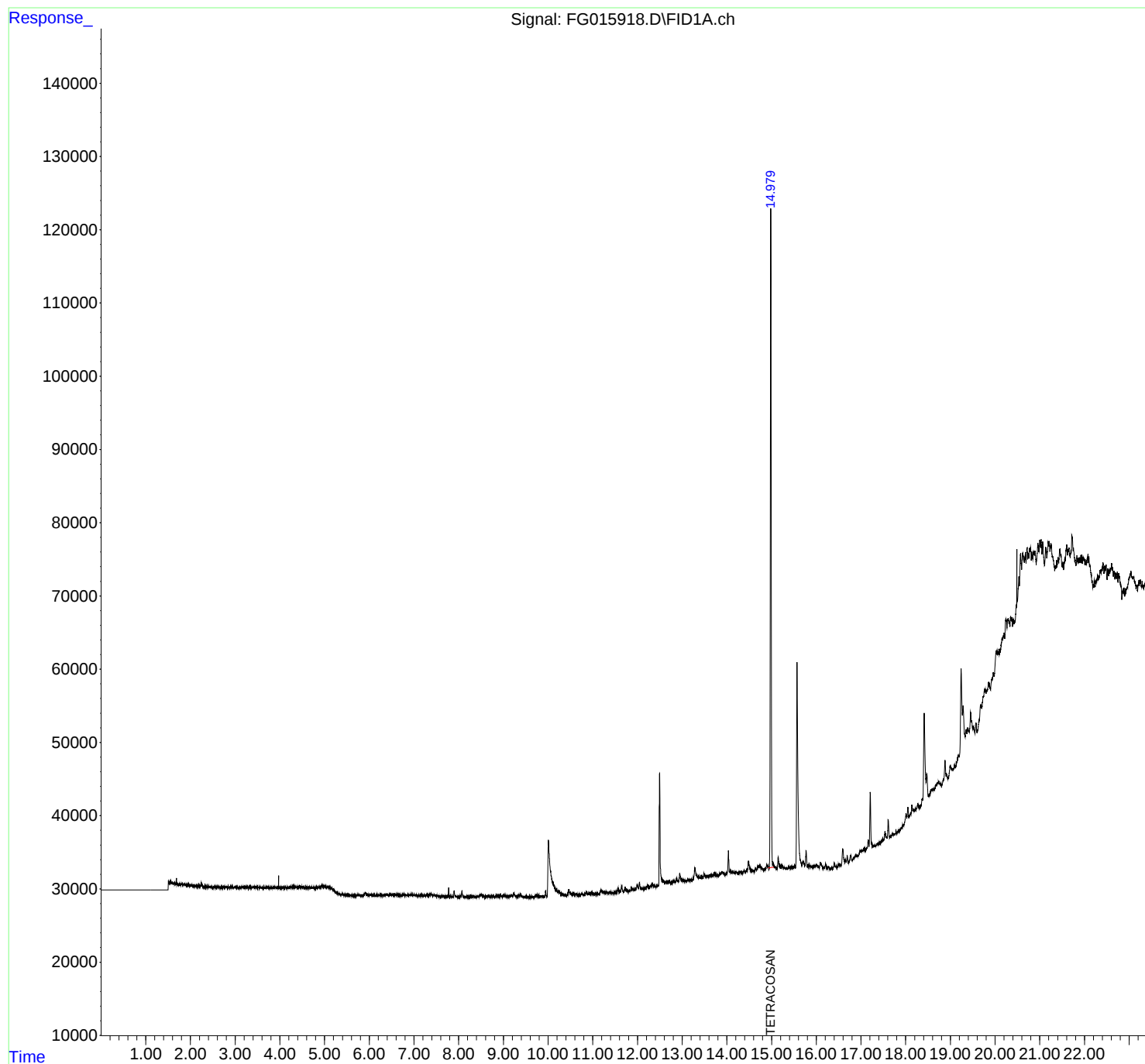
(m)=manual int.

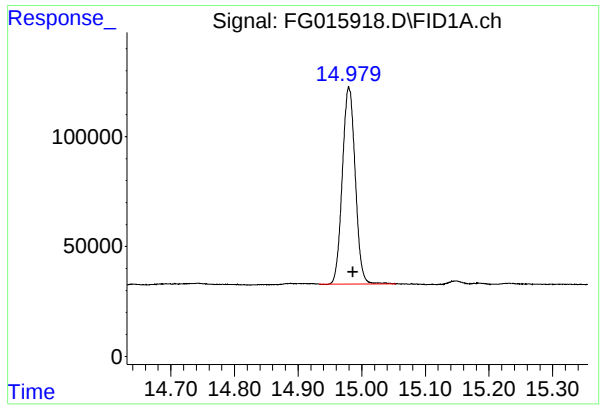
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015918.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 15:45
Operator : YP\AJ
Sample : Q2150-05
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-47

Integration File: autoint1.e
Quant Time: Jun 05 05:36:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.980 min
Delta R.T.: -0.006 min
Response: 1262451
Conc: 10.30 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-47

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015918.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 15:45
 Sample : Q2150-05
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.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	91	579	0.04%	0.009%
2	4.316	4.314	4.336	VV	140	1152	0.08%	0.019%
3	4.340	4.336	4.381	VV	110	2528	0.18%	0.041%
4	4.387	4.381	4.419	VV	198	3024	0.22%	0.049%
5	4.443	4.419	4.450	VV	328	3357	0.24%	0.054%
6	4.455	4.450	4.473	VV	239	2639	0.19%	0.042%
7	4.481	4.473	4.491	VV	315	2866	0.21%	0.046%
8	4.493	4.491	4.513	VV	369	3151	0.23%	0.051%
9	4.516	4.513	4.528	VV	357	2320	0.17%	0.037%
10	4.536	4.528	4.551	VV	304	3432	0.25%	0.055%
11	4.567	4.551	4.583	VV	325	4854	0.35%	0.078%
12	4.585	4.583	4.607	VV	304	4189	0.30%	0.067%
13	4.616	4.607	4.636	VV	359	5364	0.39%	0.086%
14	4.659	4.636	4.690	VV	462	11852	0.86%	0.191%
15	4.703	4.690	4.714	VV	441	5448	0.39%	0.088%
16	4.724	4.714	4.729	VV	472	3367	0.24%	0.054%
17	4.734	4.729	4.748	VV	417	4308	0.31%	0.069%
18	4.753	4.748	4.778	VV	464	6819	0.49%	0.110%
19	4.783	4.778	4.797	VV	414	4549	0.33%	0.073%
20	4.882	4.797	4.888	VV	700	27604	2.00%	0.444%
21	4.903	4.888	4.911	VV	793	9235	0.67%	0.149%
22	4.952	4.911	4.966	VV	904	26085	1.89%	0.420%
23	4.969	4.966	4.992	VV	877	12209	0.88%	0.197%
24	5.002	4.992	5.059	VV	850	31218	2.26%	0.503%
25	5.064	5.059	5.071	VV	766	5403	0.39%	0.087%
26	5.083	5.071	5.097	VV	865	12079	0.87%	0.194%
27	5.102	5.097	5.123	VV	879	11991	0.87%	0.193%
28	5.127	5.123	5.136	VV	806	5938	0.43%	0.096%
29	5.140	5.136	5.218	VV	829	29579	2.14%	0.476%
30	5.222	5.218	5.254	VV	488	7760	0.56%	0.125%
31	5.256	5.254	5.282	VV	359	4178	0.30%	0.067%
32	5.285	5.282	5.313	VV	288	3591	0.26%	0.058%
33	5.315	5.313	5.341	VV	235	2342	0.17%	0.038%
34	5.345	5.341	5.351	VV	131	575	0.04%	0.009%
35	5.356	5.351	5.359	PV	101	359	0.03%	0.006%
36	5.363	5.359	5.372	VV	139	731	0.05%	0.012%

					rteres			
37	5.378	5.372	5.420	VV	110	2323	0.17%	0.037%
38	5.421	5.420	5.439	VV	169	723	0.05%	0.012%
39	5.449	5.439	5.461	VV	144	1037	0.07%	0.017%
40	5.469	5.461	5.477	VV	145	1060	0.08%	0.017%
41	5.486	5.477	5.516	VV	133	1754	0.13%	0.028%
42	5.533	5.516	5.568	PV	139	1826	0.13%	0.029%
43	5.572	5.568	5.591	VV	69	739	0.05%	0.012%
44	5.595	5.591	5.611	VV	95	508	0.04%	0.008%
45	5.623	5.611	5.631	PV	108	760	0.05%	0.012%
46	5.634	5.631	5.664	VB	73	925	0.07%	0.015%
47	5.724	5.683	5.729	BV	107	762	0.06%	0.012%
48	5.733	5.729	5.739	VV	112	582	0.04%	0.009%
49	5.742	5.739	5.750	VV	123	668	0.05%	0.011%
50	5.752	5.750	5.757	VV	137	351	0.03%	0.006%
51	5.760	5.757	5.766	VV	136	439	0.03%	0.007%
52	5.771	5.766	5.791	VV	99	930	0.07%	0.015%
53	5.808	5.791	5.825	PV	94	1245	0.09%	0.020%
54	5.832	5.825	5.837	VV	124	471	0.03%	0.008%
55	5.844	5.837	5.856	PV	132	793	0.06%	0.013%
56	5.859	5.856	5.864	VV	71	292	0.02%	0.005%
57	5.908	5.864	5.947	PV	466	10796	0.78%	0.174%
58	5.955	5.947	5.960	VV	160	1075	0.08%	0.017%
59	5.972	5.960	6.004	VV	254	4235	0.31%	0.068%
60	6.020	6.004	6.025	VV	242	2365	0.17%	0.038%
61	6.031	6.025	6.089	VV	199	5050	0.37%	0.081%
62	6.093	6.089	6.099	VV	179	712	0.05%	0.011%
63	6.103	6.099	6.113	VV	124	862	0.06%	0.014%
64	6.120	6.113	6.127	VV	169	918	0.07%	0.015%
65	6.131	6.127	6.153	VV	132	1239	0.09%	0.020%
66	6.155	6.153	6.170	VV	115	931	0.07%	0.015%
67	6.183	6.170	6.187	VV	174	1174	0.08%	0.019%
68	6.198	6.187	6.216	VV	189	2239	0.16%	0.036%
69	6.230	6.216	6.240	VV	192	1900	0.14%	0.031%
70	6.263	6.240	6.286	VV	218	4034	0.29%	0.065%
71	6.290	6.286	6.307	VV	133	1297	0.09%	0.021%
72	6.319	6.307	6.325	VV	170	1600	0.12%	0.026%
73	6.327	6.325	6.349	VV	218	2411	0.17%	0.039%
74	6.356	6.349	6.372	VV	257	2767	0.20%	0.045%
75	6.379	6.372	6.415	VV	323	5942	0.43%	0.096%
76	6.418	6.415	6.422	VV	238	765	0.06%	0.012%
77	6.437	6.422	6.444	VV	234	2337	0.17%	0.038%
78	6.459	6.444	6.510	VV	277	7968	0.58%	0.128%
79	6.516	6.510	6.524	VV	215	1639	0.12%	0.026%
80	6.556	6.524	6.585	VV	421	9460	0.68%	0.152%
81	6.588	6.585	6.600	VV	200	1677	0.12%	0.027%
82	6.623	6.600	6.651	VV	306	6503	0.47%	0.105%
83	6.665	6.651	6.674	VV	208	2611	0.19%	0.042%
84	6.678	6.674	6.721	VV	146	3734	0.27%	0.060%
85	6.757	6.721	6.774	VV	258	5782	0.42%	0.093%
86	6.790	6.774	6.806	VV	259	3708	0.27%	0.060%
87	6.855	6.806	6.865	VV	244	6989	0.51%	0.113%
88	6.946	6.865	6.996	VV	319	19675	1.42%	0.317%
89	7.012	6.996	7.032	VV	260	4906	0.35%	0.079%

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90	7.056	7.032	7.096	VV	240	6962	0.50%	0.112%
91	7.125	7.096	7.134	VV	192	2912	0.21%	0.047%
92	7.148	7.134	7.162	VV	176	2484	0.18%	0.040%
93	7.241	7.162	7.262	VV	239	10594	0.77%	0.171%
94	7.291	7.262	7.332	VV	282	8549	0.62%	0.138%
95	7.350	7.332	7.369	VV	364	6538	0.47%	0.105%
96	7.377	7.369	7.425	VV	388	9785	0.71%	0.158%
97	7.452	7.425	7.481	VV	314	7258	0.52%	0.117%
98	7.489	7.481	7.503	VV	234	2440	0.18%	0.039%
99	7.512	7.503	7.524	VV	170	2050	0.15%	0.033%
100	7.544	7.524	7.553	VV	197	2599	0.19%	0.042%
101	7.559	7.553	7.611	VV	194	3332	0.24%	0.054%
102	7.641	7.611	7.680	VV	189	4429	0.32%	0.071%
103	7.699	7.680	7.744	VV	138	3115	0.23%	0.050%
104	7.774	7.744	7.820	VV	905	4188	0.30%	0.067%
105	7.827	7.820	7.864	VV	111	1521	0.11%	0.024%
106	7.900	7.864	7.976	PV	941	15151	1.10%	0.244%
107	7.987	7.976	8.009	VV	107	1422	0.10%	0.023%
108	8.015	8.009	8.027	VV	179	1009	0.07%	0.016%
109	8.045	8.027	8.054	VV	210	2586	0.19%	0.042%
110	8.073	8.054	8.142	VV	872	13044	0.94%	0.210%
111	8.147	8.142	8.157	VV	87	535	0.04%	0.009%
112	8.178	8.157	8.219	VV	98	2175	0.16%	0.035%
113	8.233	8.219	8.244	PV	167	1494	0.11%	0.024%
114	8.252	8.244	8.269	VV	145	1477	0.11%	0.024%
115	8.277	8.269	8.314	VV	77	1914	0.14%	0.031%
116	8.327	8.314	8.361	VV	154	2881	0.21%	0.046%
117	8.374	8.361	8.383	VV	123	1008	0.07%	0.016%
118	8.394	8.383	8.403	VV	166	1078	0.08%	0.017%
119	8.443	8.403	8.452	VV	187	3691	0.27%	0.059%
120	8.476	8.452	8.489	VV	365	5487	0.40%	0.088%
121	8.505	8.489	8.592	VV	461	12470	0.90%	0.201%
122	8.596	8.592	8.609	VV	130	727	0.05%	0.012%
123	8.640	8.609	8.708	VV	243	9124	0.66%	0.147%
124	8.739	8.708	8.786	VV	228	5572	0.40%	0.090%
125	8.793	8.786	8.808	VV	118	1037	0.07%	0.017%
126	8.834	8.808	8.857	VV	319	4948	0.36%	0.080%
127	8.864	8.857	8.909	VV	229	4534	0.33%	0.073%
128	8.936	8.909	8.967	VV	488	7923	0.57%	0.128%
129	9.006	8.967	9.116	VV	340	17511	1.27%	0.282%
130	9.157	9.116	9.186	VV	270	8519	0.62%	0.137%
131	9.231	9.186	9.314	VV	641	19991	1.45%	0.322%
132	9.337	9.314	9.351	VV	240	4121	0.30%	0.066%
133	9.385	9.351	9.486	VV	437	12029	0.87%	0.194%
134	9.519	9.486	9.559	PV	185	4094	0.30%	0.066%
135	9.571	9.559	9.586	VV	106	902	0.07%	0.015%
136	9.592	9.586	9.600	VV	67	401	0.03%	0.006%
137	9.621	9.600	9.643	VV	90	1209	0.09%	0.019%
138	9.671	9.643	9.686	PV	127	1802	0.13%	0.029%
139	9.695	9.686	9.704	VV	87	954	0.07%	0.015%
140	9.731	9.704	9.822	VV	354	15413	1.11%	0.248%
141	9.841	9.822	9.869	VV	172	3598	0.26%	0.058%

					rteres			
142	9.881	9.869	9.920	VV	199	2443	0.18%	0.039%
143	9.947	9.920	9.970	PV	830	10843	0.78%	0.175%
144	10.010	9.970	10.104	VV	7689	284354	20.56%	4.578%
145	10.113	10.104	10.172	VV	1890	58280	4.21%	0.938%
146	10.183	10.172	10.207	VV	1084	19293	1.39%	0.311%
147	10.230	10.207	10.336	VV	745	36109	2.61%	0.581%
148	10.349	10.336	10.372	VV	266	4797	0.35%	0.077%
149	10.386	10.372	10.415	VV	226	3883	0.28%	0.063%
150	10.464	10.415	10.531	VV	897	28308	2.05%	0.456%
151	10.537	10.531	10.576	VV	289	6325	0.46%	0.102%
152	10.583	10.576	10.617	VV	291	5031	0.36%	0.081%
153	10.634	10.617	10.657	VV	317	5002	0.36%	0.081%
154	10.680	10.657	10.712	VV	166	3823	0.28%	0.062%
155	10.747	10.712	10.810	VV	299	9086	0.66%	0.146%
156	10.860	10.810	10.900	VV	485	13965	1.01%	0.225%
157	10.926	10.900	10.952	VV	376	8302	0.60%	0.134%
158	10.966	10.952	11.021	VV	422	9547	0.69%	0.154%
159	11.049	11.021	11.069	VV	222	3839	0.28%	0.062%
160	11.098	11.069	11.117	VV	229	4485	0.32%	0.072%
161	11.135	11.117	11.144	VV	164	1653	0.12%	0.027%
162	11.177	11.144	11.222	PV	631	19069	1.38%	0.307%
163	11.234	11.222	11.274	VV	402	10043	0.73%	0.162%
164	11.289	11.274	11.329	VV	313	7830	0.57%	0.126%
165	11.337	11.329	11.347	VV	214	1844	0.13%	0.030%
166	11.369	11.347	11.391	VV	229	4386	0.32%	0.071%
167	11.403	11.391	11.442	VV	138	3431	0.25%	0.055%
168	11.498	11.442	11.524	VV	160	4264	0.31%	0.069%
169	11.564	11.524	11.605	VV	669	13746	0.99%	0.221%
170	11.644	11.605	11.693	VV	897	18831	1.36%	0.303%
171	11.722	11.693	11.741	VV	695	10320	0.75%	0.166%
172	11.759	11.741	11.786	VV	407	5975	0.43%	0.096%
173	11.875	11.786	11.896	PV	475	13827	1.00%	0.223%
174	11.909	11.896	11.931	VV	357	4659	0.34%	0.075%
175	11.993	11.931	12.027	VV	781	25986	1.88%	0.418%
176	12.045	12.027	12.072	VV	1073	17503	1.27%	0.282%
177	12.079	12.072	12.103	VV	379	5210	0.38%	0.084%
178	12.120	12.103	12.154	VV	302	6427	0.46%	0.103%
179	12.170	12.154	12.186	VV	237	3763	0.27%	0.061%
180	12.234	12.186	12.269	VV	630	20575	1.49%	0.331%
181	12.290	12.269	12.311	VV	534	11364	0.82%	0.183%
182	12.330	12.311	12.351	VV	892	14906	1.08%	0.240%
183	12.357	12.351	12.409	VV	495	14409	1.04%	0.232%
184	12.436	12.409	12.452	VV	494	9326	0.67%	0.150%
185	12.494	12.452	12.579	VV	15646	236448	17.09%	3.807%
186	12.586	12.579	12.607	VV	1028	14897	1.08%	0.240%
187	12.622	12.607	12.632	VV	802	11415	0.83%	0.184%
188	12.640	12.632	12.662	VV	844	13410	0.97%	0.216%
189	12.701	12.662	12.727	VV	997	29679	2.15%	0.478%
190	12.734	12.727	12.769	VV	632	15123	1.09%	0.244%
191	12.797	12.769	12.854	VV	866	36395	2.63%	0.586%
192	12.878	12.854	12.919	VV	1163	32744	2.37%	0.527%
193	12.944	12.919	13.067	VV	1737	81870	5.92%	1.318%
194	13.129	13.067	13.154	VV	873	36805	2.66%	0.593%

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195	13.158	13.154	13.184	VV	727	12158	0.88%	0.196%
196	13.196	13.184	13.221	VV	775	14701	1.06%	0.237%
197	13.288	13.221	13.347	VV	2239	98522	7.12%	1.586%
198	13.370	13.347	13.406	VV	1088	33420	2.42%	0.538%
199	13.450	13.406	13.472	VV	1082	36467	2.64%	0.587%
200	13.491	13.472	13.542	VV	1390	44481	3.22%	0.716%
201	13.548	13.542	13.580	VV	1009	20777	1.50%	0.335%
202	13.618	13.580	13.636	VV	1143	32958	2.38%	0.531%
203	13.655	13.636	13.677	VV	1068	24256	1.75%	0.391%
204	13.716	13.677	13.783	VV	1295	66953	4.84%	1.078%
205	13.808	13.783	13.819	VV	1032	19435	1.41%	0.313%
206	13.839	13.819	13.853	VV	1190	21192	1.53%	0.341%
207	13.897	13.853	13.976	VV	1365	82083	5.93%	1.322%
208	14.033	13.976	14.058	VV	4089	92180	6.66%	1.484%
209	14.075	14.058	14.100	VV	1472	31419	2.27%	0.506%
210	14.133	14.100	14.174	VV	1257	48852	3.53%	0.787%
211	14.193	14.174	14.214	VV	1221	25773	1.86%	0.415%
212	14.222	14.214	14.247	VV	1093	18719	1.35%	0.301%
213	14.309	14.247	14.341	VV	1165	54026	3.91%	0.870%
214	14.382	14.341	14.421	VV	1185	48017	3.47%	0.773%
215	14.438	14.421	14.453	VV	1259	21819	1.58%	0.351%
216	14.480	14.453	14.536	VV	2419	81510	5.89%	1.312%
217	14.550	14.536	14.562	VV	1195	17089	1.24%	0.275%
218	14.570	14.562	14.622	VV	1104	35673	2.58%	0.574%
219	14.641	14.622	14.663	VV	1358	29095	2.10%	0.468%
220	14.743	14.663	14.824	VV	1727	128014	9.25%	2.061%
221	14.889	14.824	14.944	VV	1571	88903	6.43%	1.431%
222	14.980	14.944	15.119	VV	90688	1383252	100.00%	22.272%
223	15.148	15.119	15.172	VV	2497	52951	3.83%	0.853%
224	15.184	15.172	15.212	VV	1422	29306	2.12%	0.472%
225	15.231	15.212	15.326	VV	1428	69952	5.06%	1.126%
226	15.328	15.326	15.359	VV	926	15840	1.15%	0.255%
227	15.380	15.359	15.405	VV	1051	25434	1.84%	0.410%
228	15.417	15.405	15.431	VV	940	13987	1.01%	0.225%
229	15.440	15.431	15.491	VV	968	33007	2.39%	0.531%
230	15.511	15.491	15.533	VV	1281	25543	1.85%	0.411%
231	15.567	15.533	15.676	VV	28241	631299	45.64%	10.165%
232	15.706	15.676	15.742	VV	1600	50051	3.62%	0.806%
233	15.772	15.742	15.815	VV	2897	66266	4.79%	1.067%
234	15.835	15.815	15.901	VV	1002	39938	2.89%	0.643%
235	15.910	15.901	15.945	VV	717	17252	1.25%	0.278%
236	15.986	15.945	15.993	VV	774	20203	1.46%	0.325%
237	16.017	15.993	16.066	VV	876	28841	2.09%	0.464%
238	16.094	16.066	16.149	VV	1099	36907	2.67%	0.594%
239	16.159	16.149	16.187	VV	437	8318	0.60%	0.134%
240	16.207	16.187	16.251	VV	920	19438	1.41%	0.313%
241	16.272	16.251	16.299	VV	467	8507	0.62%	0.137%
242	16.306	16.299	16.320	VV	194	1654	0.12%	0.027%
243	16.342	16.320	16.364	PV	239	3382	0.24%	0.054%
244	16.402	16.364	16.467	PV	763	16639	1.20%	0.268%
245	16.499	16.467	16.542	PV	326	7904	0.57%	0.127%
246	16.591	16.542	16.636	VV	2222	51375	3.71%	0.827%

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247	16.655	16.636	16.671	VV	495	8606	0.62%	0.139%	
248	16.692	16.671	16.719	VV	1024	13600	0.98%	0.219%	
249	16.770	16.719	16.807	PV	748	17568	1.27%	0.283%	
250	16.853	16.807	16.861	VV	295	5863	0.42%	0.094%	
251	16.982	16.861	17.002	VV	689	28041	2.03%	0.452%	
252	17.018	17.002	17.031	VV	641	9120	0.66%	0.147%	
253	17.069	17.031	17.086	VV	647	18095	1.31%	0.291%	
254	17.094	17.086	17.108	VV	417	5105	0.37%	0.082%	
255	17.160	17.108	17.179	VV	1496	32319	2.34%	0.520%	
256	17.206	17.179	17.267	VV	7783	124444	9.00%	2.004%	
257	17.292	17.267	17.304	VV	216	4021	0.29%	0.065%	
258	17.318	17.304	17.332	VV	194	2557	0.18%	0.041%	
259	17.395	17.332	17.426	PV	237	8695	0.63%	0.140%	
260	17.492	17.426	17.509	PV	313	9187	0.66%	0.148%	
261	17.536	17.509	17.582	VV	1232	26832	1.94%	0.432%	
262	17.609	17.582	17.653	VV	2459	37564	2.72%	0.605%	
263	17.704	17.653	17.729	PV	313	4739	0.34%	0.076%	
264	17.784	17.729	17.801	VV	400	2301	0.17%	0.037%	
265	17.845	17.801	17.864	VV	195	3080	0.22%	0.050%	
266	17.938	17.864	17.944	PV	200	2643	0.19%	0.043%	
					Sum of corrected areas:		6210716		

FG052225.M Thu Jun 05 06:13:24 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-50	SDG No.:	Q2150
Lab Sample ID:	Q2150-06	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	86
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
FG015919.D	1	06/04/25 08:30	06/04/25 16:48	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	7840		196	1930	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.8		37 - 130	59%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015919.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 16:48
Operator : YP\AJ
Sample : Q2150-06
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-50

Integration File: autoint1.e
Quant Time: Jun 05 05:36:37 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.983	1442343	11.768 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

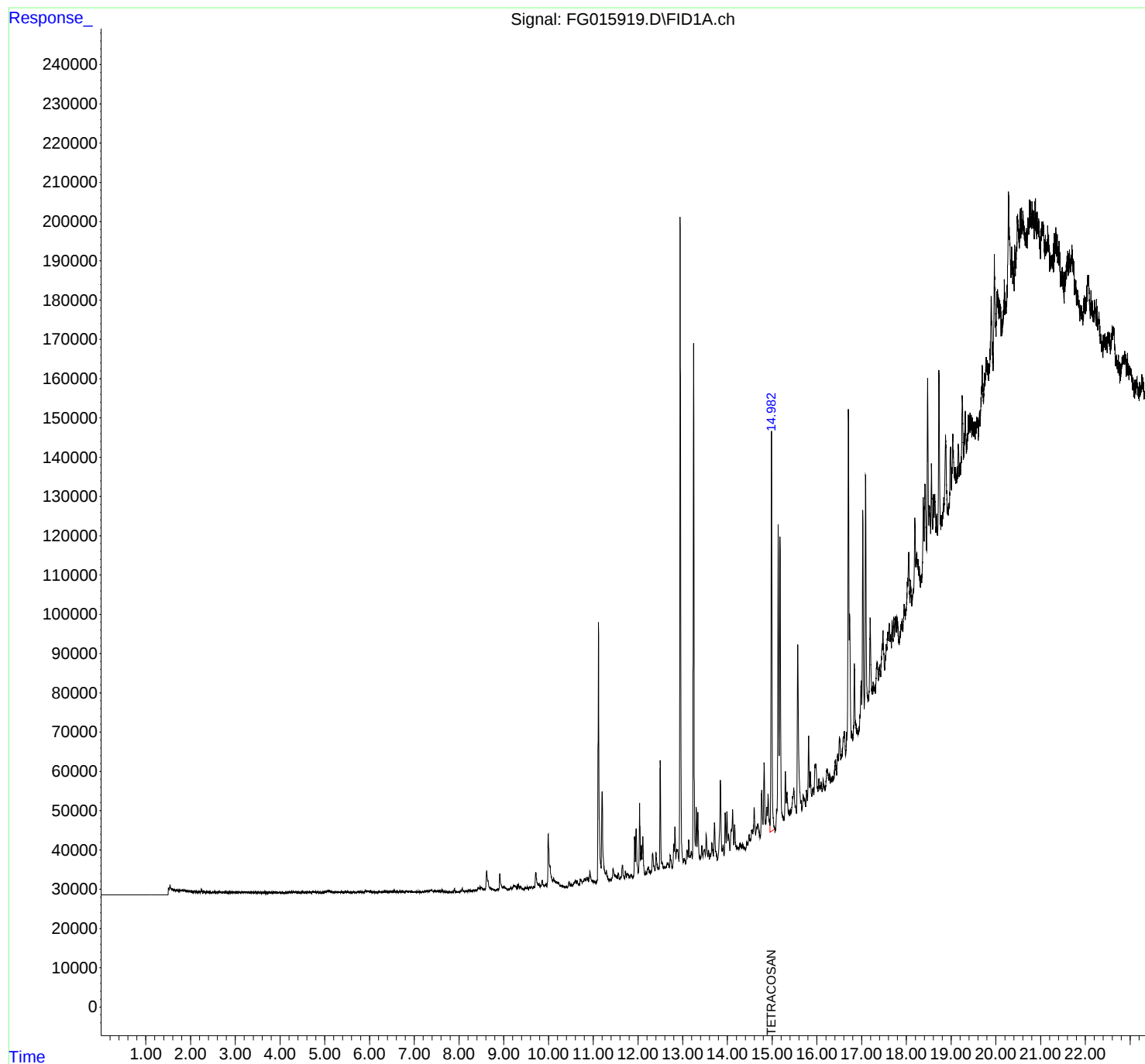
(m)=manual int.

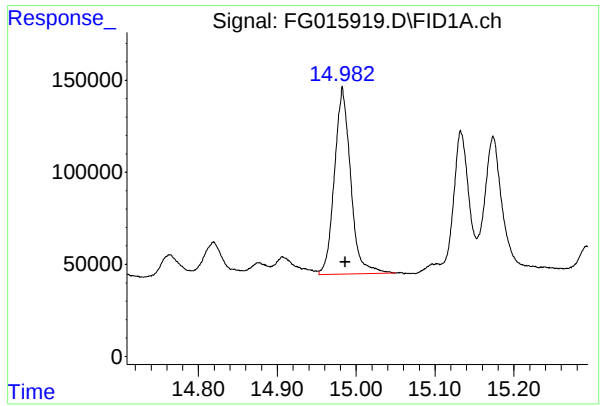
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015919.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 16:48
Operator : YP\AJ
Sample : Q2150-06
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-50

Integration File: autoint1.e
Quant Time: Jun 05 05:36:37 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.983 min
Delta R.T.: -0.004 min
Response: 1442343
Conc: 11.77 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-50

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015919.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 16:48
Sample : Q2150-06
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.349	4.330	4.354	BV	171	523	0.02%	0.002%
2	4.357	4.354	4.370	VV	100	597	0.03%	0.002%
3	4.379	4.370	4.391	PV	86	541	0.03%	0.002%
4	4.399	4.391	4.411	VV	86	491	0.02%	0.002%
5	4.425	4.411	4.437	VV	84	713	0.03%	0.003%
6	4.442	4.437	4.455	VV	88	306	0.01%	0.001%
7	4.459	4.455	4.465	PV	65	196	0.01%	0.001%
8	4.469	4.465	4.472	VV	66	164	0.01%	0.001%
9	4.489	4.472	4.493	PV	209	1304	0.06%	0.005%
10	4.498	4.493	4.511	VV	119	1214	0.06%	0.004%
11	4.519	4.511	4.523	VV	162	775	0.04%	0.003%
12	4.528	4.523	4.539	VV	123	811	0.04%	0.003%
13	4.543	4.539	4.592	VV	149	2574	0.12%	0.009%
14	4.610	4.592	4.631	PV	177	2270	0.11%	0.008%
15	4.663	4.631	4.705	PV	290	6938	0.32%	0.025%
16	4.725	4.705	4.748	VV	342	5247	0.25%	0.019%
17	4.760	4.748	4.781	VV	265	4241	0.20%	0.015%
18	4.796	4.781	4.835	VV	257	5782	0.27%	0.020%
19	4.839	4.835	4.873	VV	213	3112	0.15%	0.011%
20	4.894	4.873	4.900	VV	162	1767	0.08%	0.006%
21	4.905	4.900	4.916	VV	117	768	0.04%	0.003%
22	4.933	4.916	4.939	VV	137	1120	0.05%	0.004%
23	4.948	4.939	4.954	VV	175	996	0.05%	0.004%
24	4.963	4.954	4.968	VV	170	956	0.04%	0.003%
25	4.982	4.968	4.988	VV	215	1908	0.09%	0.007%
26	4.998	4.988	5.008	VV	243	2367	0.11%	0.008%
27	5.014	5.008	5.020	VV	268	1668	0.08%	0.006%
28	5.063	5.020	5.070	VV	458	9950	0.47%	0.035%
29	5.083	5.070	5.137	VV	530	14858	0.70%	0.052%
30	5.154	5.137	5.162	VV	451	4584	0.21%	0.016%
31	5.166	5.162	5.178	VV	329	2209	0.10%	0.008%
32	5.185	5.178	5.200	VV	270	2495	0.12%	0.009%
33	5.204	5.200	5.228	VV	162	2116	0.10%	0.007%
34	5.246	5.228	5.257	VV	203	2297	0.11%	0.008%
35	5.263	5.257	5.268	VV	202	817	0.04%	0.003%
36	5.272	5.268	5.278	VV	137	669	0.03%	0.002%

					rteres			
37	5.286	5.278	5.296	VV	124	1247	0.06%	0.004%
38	5.305	5.296	5.323	VV	183	2130	0.10%	0.008%
39	5.330	5.323	5.334	VV	182	904	0.04%	0.003%
40	5.343	5.334	5.354	VV	167	1579	0.07%	0.006%
41	5.364	5.354	5.369	VV	267	1391	0.07%	0.005%
42	5.383	5.369	5.401	VV	232	3202	0.15%	0.011%
43	5.405	5.401	5.411	VV	154	690	0.03%	0.002%
44	5.413	5.411	5.430	VV	161	1088	0.05%	0.004%
45	5.471	5.430	5.500	VV	272	7768	0.36%	0.027%
46	5.504	5.500	5.534	VV	274	3715	0.17%	0.013%
47	5.536	5.534	5.572	VV	181	3032	0.14%	0.011%
48	5.580	5.572	5.591	VV	133	1177	0.06%	0.004%
49	5.595	5.591	5.613	VV	156	820	0.04%	0.003%
50	5.629	5.613	5.633	VV	249	1932	0.09%	0.007%
51	5.638	5.633	5.645	VV	245	1510	0.07%	0.005%
52	5.650	5.645	5.684	VV	230	2984	0.14%	0.011%
53	5.690	5.684	5.699	VV	97	618	0.03%	0.002%
54	5.723	5.699	5.776	VV	273	7925	0.37%	0.028%
55	5.787	5.776	5.793	VV	178	1328	0.06%	0.005%
56	5.809	5.793	5.821	VV	230	2480	0.12%	0.009%
57	5.825	5.821	5.834	VV	234	1225	0.06%	0.004%
58	5.843	5.834	5.849	VV	151	1054	0.05%	0.004%
59	5.862	5.849	5.876	VV	183	2223	0.10%	0.008%
60	5.909	5.876	5.931	VV	603	11216	0.53%	0.040%
61	5.937	5.931	5.942	VV	297	1722	0.08%	0.006%
62	5.972	5.942	5.998	VV	392	10447	0.49%	0.037%
63	6.016	5.998	6.087	VV	340	10354	0.48%	0.037%
64	6.106	6.087	6.117	VV	189	2411	0.11%	0.009%
65	6.119	6.117	6.137	VV	137	1148	0.05%	0.004%
66	6.165	6.137	6.181	PV	94	1492	0.07%	0.005%
67	6.200	6.181	6.209	VV	206	1652	0.08%	0.006%
68	6.231	6.209	6.260	VV	252	6607	0.31%	0.023%
69	6.266	6.260	6.271	VV	273	1411	0.07%	0.005%
70	6.321	6.271	6.334	VV	269	7780	0.36%	0.027%
71	6.384	6.334	6.397	VV	403	10398	0.49%	0.037%
72	6.402	6.397	6.417	VV	282	2725	0.13%	0.010%
73	6.429	6.417	6.436	VV	229	2313	0.11%	0.008%
74	6.437	6.436	6.441	VV	252	662	0.03%	0.002%
75	6.445	6.441	6.448	VV	257	892	0.04%	0.003%
76	6.458	6.448	6.509	VV	319	7595	0.36%	0.027%
77	6.515	6.509	6.523	VV	241	1457	0.07%	0.005%
78	6.528	6.523	6.536	VV	337	2115	0.10%	0.007%
79	6.553	6.536	6.572	VV	447	7106	0.33%	0.025%
80	6.578	6.572	6.592	VV	191	1997	0.09%	0.007%
81	6.623	6.592	6.641	VV	300	6036	0.28%	0.021%
82	6.673	6.641	6.683	VV	301	5002	0.23%	0.018%
83	6.690	6.683	6.694	VV	269	1418	0.07%	0.005%
84	6.701	6.694	6.716	VV	289	2963	0.14%	0.010%
85	6.734	6.716	6.740	VV	291	3547	0.17%	0.013%
86	6.746	6.740	6.807	VV	309	7903	0.37%	0.028%
87	6.821	6.807	6.844	VV	379	5706	0.27%	0.020%
88	6.851	6.844	6.872	VV	311	3869	0.18%	0.014%
89	6.876	6.872	6.880	VV	249	968	0.05%	0.003%

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90	6.887	6.880	6.936	VV	276	6969	0.33%	0.025%
91	6.951	6.936	6.980	VV	312	5634	0.26%	0.020%
92	7.005	6.980	7.022	VV	216	4580	0.21%	0.016%
93	7.027	7.022	7.063	VV	229	2782	0.13%	0.010%
94	7.069	7.063	7.091	VV	186	2375	0.11%	0.008%
95	7.097	7.091	7.106	VV	225	1122	0.05%	0.004%
96	7.112	7.106	7.142	VV	216	3251	0.15%	0.011%
97	7.147	7.142	7.153	VV	160	938	0.04%	0.003%
98	7.159	7.153	7.164	VV	206	1116	0.05%	0.004%
99	7.189	7.164	7.214	VV	225	5307	0.25%	0.019%
100	7.251	7.214	7.259	VV	343	8072	0.38%	0.029%
101	7.264	7.259	7.269	VV	313	1726	0.08%	0.006%
102	7.287	7.269	7.304	VV	367	6518	0.31%	0.023%
103	7.334	7.304	7.339	VV	425	6980	0.33%	0.025%
104	7.362	7.339	7.372	VV	569	10294	0.48%	0.036%
105	7.386	7.372	7.392	VV	686	6726	0.32%	0.024%
106	7.393	7.392	7.424	VV	628	7963	0.37%	0.028%
107	7.454	7.424	7.477	VV	531	12464	0.58%	0.044%
108	7.494	7.477	7.506	VV	344	5432	0.25%	0.019%
109	7.515	7.506	7.543	VV	472	7365	0.34%	0.026%
110	7.560	7.543	7.576	VV	365	5910	0.28%	0.021%
111	7.580	7.576	7.585	VV	247	1154	0.05%	0.004%
112	7.623	7.585	7.681	VV	491	15639	0.73%	0.055%
113	7.694	7.681	7.712	VV	278	3337	0.16%	0.012%
114	7.717	7.712	7.729	VV	132	1192	0.06%	0.004%
115	7.737	7.729	7.768	VV	171	2143	0.10%	0.008%
116	7.791	7.768	7.816	VV	149	2272	0.11%	0.008%
117	7.829	7.816	7.836	PV	118	827	0.04%	0.003%
118	7.847	7.836	7.856	VV	126	1178	0.06%	0.004%
119	7.860	7.856	7.867	VV	98	592	0.03%	0.002%
120	7.900	7.867	7.927	VV	1035	13242	0.62%	0.047%
121	7.931	7.927	7.941	VV	120	896	0.04%	0.003%
122	7.947	7.941	7.968	VV	153	1493	0.07%	0.005%
123	7.989	7.968	8.021	PV	167	3143	0.15%	0.011%
124	8.049	8.021	8.057	VV	402	4813	0.23%	0.017%
125	8.074	8.057	8.119	VV	1077	16702	0.78%	0.059%
126	8.149	8.119	8.154	VV	198	3163	0.15%	0.011%
127	8.161	8.154	8.182	VV	177	2373	0.11%	0.008%
128	8.227	8.182	8.254	VV	500	12785	0.60%	0.045%
129	8.257	8.254	8.275	VV	357	3037	0.14%	0.011%
130	8.290	8.275	8.297	VV	266	2859	0.13%	0.010%
131	8.300	8.297	8.306	VV	232	1027	0.05%	0.004%
132	8.324	8.306	8.354	VV	483	9197	0.43%	0.032%
133	8.371	8.354	8.394	VV	358	7522	0.35%	0.027%
134	8.430	8.394	8.451	VV	1006	21945	1.03%	0.078%
135	8.471	8.451	8.486	VV	1095	18859	0.88%	0.067%
136	8.506	8.486	8.559	VV	1109	30837	1.44%	0.109%
137	8.565	8.559	8.567	VV	423	1989	0.09%	0.007%
138	8.577	8.567	8.587	VV	573	6374	0.30%	0.023%
139	8.618	8.587	8.741	VV	5169	161108	7.55%	0.569%
140	8.749	8.741	8.806	VV	517	11223	0.53%	0.040%
141	8.837	8.806	8.851	VV	349	5182	0.24%	0.018%

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142	8.864	8.851	8.876	VV	441	4962	0.23%	0.018%
143	8.913	8.876	8.975	VV	4299	95102	4.45%	0.336%
144	8.992	8.975	9.004	VV	984	14612	0.68%	0.052%
145	9.020	9.004	9.036	VV	935	15160	0.71%	0.054%
146	9.042	9.036	9.078	VV	660	10731	0.50%	0.038%
147	9.083	9.078	9.104	VV	253	2934	0.14%	0.010%
148	9.126	9.104	9.139	VV	390	6151	0.29%	0.022%
149	9.156	9.139	9.176	VV	759	12368	0.58%	0.044%
150	9.219	9.176	9.234	VV	1216	27837	1.30%	0.098%
151	9.248	9.234	9.307	VV	1132	33871	1.59%	0.120%
152	9.333	9.307	9.356	VV	1322	23288	1.09%	0.082%
153	9.373	9.356	9.439	VV	978	21114	0.99%	0.075%
154	9.444	9.439	9.447	PV	49	253	0.01%	0.001%
155	9.483	9.447	9.506	VV	708	11514	0.54%	0.041%
156	9.526	9.506	9.554	VV	643	9578	0.45%	0.034%
157	9.578	9.554	9.605	VV	663	12669	0.59%	0.045%
158	9.623	9.605	9.649	VV	649	11994	0.56%	0.042%
159	9.672	9.649	9.683	VV	573	8047	0.38%	0.028%
160	9.716	9.683	9.769	VV	4265	104799	4.91%	0.370%
161	9.783	9.769	9.817	VV	1319	28637	1.34%	0.101%
162	9.831	9.817	9.837	VV	839	8698	0.41%	0.031%
163	9.860	9.837	9.904	VV	2120	49195	2.30%	0.174%
164	9.918	9.904	9.932	VV	908	13157	0.62%	0.046%
165	9.948	9.932	9.964	VV	1319	17180	0.80%	0.061%
166	9.995	9.964	10.096	VV	13863	396185	18.56%	1.400%
167	10.114	10.096	10.134	VV	2561	46987	2.20%	0.166%
168	10.142	10.134	10.169	VV	1849	34103	1.60%	0.120%
169	10.192	10.169	10.211	VV	1483	33014	1.55%	0.117%
170	10.222	10.211	10.255	VV	1363	26522	1.24%	0.094%
171	10.259	10.255	10.267	VV	494	3616	0.17%	0.013%
172	10.294	10.267	10.325	VV	558	14410	0.67%	0.051%
173	10.330	10.325	10.367	VV	191	3232	0.15%	0.011%
174	10.387	10.367	10.399	PV	135	1281	0.06%	0.005%
175	10.414	10.399	10.419	VV	91	667	0.03%	0.002%
176	10.424	10.419	10.429	PV	82	246	0.01%	0.001%
177	10.459	10.429	10.486	VV	1331	22180	1.04%	0.078%
178	10.505	10.486	10.524	VV	602	9222	0.43%	0.033%
179	10.539	10.524	10.543	VV	343	3077	0.14%	0.011%
180	10.602	10.543	10.622	VV	1474	42185	1.98%	0.149%
181	10.643	10.622	10.686	VV	1324	26568	1.24%	0.094%
182	10.713	10.686	10.727	VV	1573	23604	1.11%	0.083%
183	10.732	10.727	10.755	VV	1289	13590	0.64%	0.048%
184	10.773	10.755	10.779	VV	892	10698	0.50%	0.038%
185	10.801	10.779	10.837	VV	1474	42129	1.97%	0.149%
186	10.859	10.837	10.870	VV	1715	26955	1.26%	0.095%
187	10.882	10.870	10.899	VV	1625	19636	0.92%	0.069%
188	10.927	10.899	10.975	VV	3184	76092	3.56%	0.269%
189	10.985	10.975	11.004	VV	690	8563	0.40%	0.030%
190	11.019	11.004	11.066	VV	634	11408	0.53%	0.040%
191	11.117	11.066	11.176	VV	66254	1009437	47.28%	3.566%
192	11.199	11.176	11.276	VV	23036	462614	21.67%	1.634%
193	11.292	11.276	11.357	VV	2838	61933	2.90%	0.219%
194	11.371	11.357	11.393	VV	442	5977	0.28%	0.021%

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195	11.443	11.393	11.477	VV	2972	68395	3.20%	0.242%
196	11.483	11.477	11.506	VV	1289	19365	0.91%	0.068%
197	11.517	11.506	11.539	VV	929	15012	0.70%	0.053%
198	11.561	11.539	11.592	VV	1675	23915	1.12%	0.084%
199	11.652	11.592	11.700	PV	3489	71987	3.37%	0.254%
200	11.721	11.700	11.740	VV	1786	22011	1.03%	0.078%
201	11.758	11.740	11.773	VV	1201	16870	0.79%	0.060%
202	11.782	11.773	11.805	VV	971	11226	0.53%	0.040%
203	11.849	11.805	11.873	VV	777	15192	0.71%	0.054%
204	11.879	11.873	11.899	VV	184	1853	0.09%	0.007%
205	11.925	11.899	11.941	PV	10341	128699	6.03%	0.455%
206	11.959	11.941	12.011	VV	12238	215834	10.11%	0.763%
207	12.037	12.011	12.059	VV	18534	267258	12.52%	0.944%
208	12.074	12.059	12.089	VV	7586	103300	4.84%	0.365%
209	12.106	12.089	12.156	VV	9882	164611	7.71%	0.582%
210	12.175	12.156	12.197	VV	723	7865	0.37%	0.028%
211	12.231	12.197	12.257	VV	1744	36890	1.73%	0.130%
212	12.270	12.257	12.274	VV	470	3575	0.17%	0.013%
213	12.282	12.274	12.289	VV	400	2781	0.13%	0.010%
214	12.328	12.289	12.377	VV	4975	114651	5.37%	0.405%
215	12.402	12.377	12.447	VV	5216	98458	4.61%	0.348%
216	12.462	12.447	12.472	VV	978	13204	0.62%	0.047%
217	12.496	12.472	12.532	VV	28413	361690	16.94%	1.278%
218	12.540	12.532	12.572	VV	2189	36362	1.70%	0.128%
219	12.589	12.572	12.601	VV	1033	14570	0.68%	0.051%
220	12.604	12.601	12.615	VV	812	6507	0.30%	0.023%
221	12.624	12.615	12.632	VV	955	8333	0.39%	0.029%
222	12.651	12.632	12.663	VV	1865	25861	1.21%	0.091%
223	12.673	12.663	12.700	VV	1881	27370	1.28%	0.097%
224	12.720	12.700	12.762	VV	3664	73442	3.44%	0.259%
225	12.797	12.762	12.809	VV	6283	79720	3.73%	0.282%
226	12.826	12.809	12.846	VV	10584	150490	7.05%	0.532%
227	12.863	12.846	12.877	VV	4760	77292	3.62%	0.273%
228	12.888	12.877	12.915	VV	4740	77770	3.64%	0.275%
229	12.942	12.915	13.014	VV	163737	2135013	100.00%	7.543%
230	13.031	13.014	13.068	VV	2034	45801	2.15%	0.162%
231	13.093	13.068	13.115	VV	4009	82183	3.85%	0.290%
232	13.133	13.115	13.156	VV	6647	97416	4.56%	0.344%
233	13.164	13.156	13.176	VV	2578	29454	1.38%	0.104%
234	13.193	13.176	13.216	VV	3457	64068	3.00%	0.226%
235	13.242	13.216	13.282	VV	132886	1689494	79.13%	5.969%
236	13.301	13.282	13.319	VV	14452	203347	9.52%	0.718%
237	13.337	13.319	13.398	VV	13145	236353	11.07%	0.835%
238	13.426	13.398	13.451	VV	4478	81426	3.81%	0.288%
239	13.487	13.451	13.504	VV	3310	83532	3.91%	0.295%
240	13.523	13.504	13.559	VV	6958	124254	5.82%	0.439%
241	13.576	13.559	13.597	VV	2828	42447	1.99%	0.150%
242	13.612	13.597	13.626	VV	1882	26011	1.22%	0.092%
243	13.651	13.626	13.682	VV	4589	94645	4.43%	0.334%
244	13.708	13.682	13.779	VV	9465	195427	9.15%	0.690%
245	13.841	13.779	13.884	PV	19677	412948	19.34%	1.459%
246	13.900	13.884	13.919	VV	3104	44644	2.09%	0.158%

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247	13.948	13.919	13.967	VV	11247	157902	7.40%	0.558%
248	13.987	13.967	14.008	VV	11399	173384	8.12%	0.613%
249	14.024	14.008	14.053	VV	5390	102300	4.79%	0.361%
250	14.114	14.053	14.139	VV	11283	302498	14.17%	1.069%
251	14.158	14.139	14.212	VV	7209	145279	6.80%	0.513%
252	14.215	14.212	14.217	VV	1368	3688	0.17%	0.013%
253	14.222	14.217	14.231	VV	1308	10024	0.47%	0.035%
254	14.235	14.231	14.249	VV	1127	10815	0.51%	0.038%
255	14.285	14.249	14.306	VV	2106	49948	2.34%	0.176%
256	14.311	14.306	14.333	VV	1376	17814	0.83%	0.063%
257	14.348	14.333	14.364	VV	1425	18304	0.86%	0.065%
258	14.380	14.364	14.409	VV	674	8976	0.42%	0.032%
259	14.437	14.409	14.452	PV	1572	25599	1.20%	0.090%
260	14.482	14.452	14.505	VV	2994	61448	2.88%	0.217%
261	14.538	14.505	14.547	VV	3954	66979	3.14%	0.237%
262	14.551	14.547	14.565	VV	3969	36125	1.69%	0.128%
263	14.596	14.565	14.629	VV	9179	187295	8.77%	0.662%
264	14.648	14.629	14.659	VV	3772	57695	2.70%	0.204%
265	14.681	14.659	14.730	VV	4503	124581	5.84%	0.440%
266	14.764	14.730	14.792	VV	12538	221557	10.38%	0.783%
267	14.819	14.792	14.857	VV	18893	348110	16.30%	1.230%
268	14.877	14.857	14.891	VV	7341	111990	5.25%	0.396%
269	14.907	14.891	14.952	VV	10221	205213	9.61%	0.725%
270	14.983	14.952	15.051	VV	101694	1468533	68.78%	5.188%
271	15.056	15.051	15.074	VV	751	4297	0.20%	0.015%
272	15.103	15.074	15.107	PV	5090	58631	2.75%	0.207%
273	15.133	15.107	15.153	VV	76979	1025365	48.03%	3.623%
274	15.174	15.153	15.232	VV	73510	1164290	54.53%	4.114%
275	15.239	15.232	15.264	VV	2169	29970	1.40%	0.106%
276	15.292	15.264	15.313	VV	13003	195454	9.15%	0.691%
277	15.327	15.313	15.369	VV	7045	149193	6.99%	0.527%
278	15.377	15.369	15.392	VV	1904	21739	1.02%	0.077%
279	15.408	15.392	15.426	VV	2465	35071	1.64%	0.124%
280	15.481	15.426	15.542	VV	7218	243545	11.41%	0.860%
281	15.569	15.542	15.662	VV	42630	871189	40.80%	3.078%
282	15.690	15.662	15.713	PV	3255	58149	2.72%	0.205%
283	15.722	15.713	15.749	VV	2369	27148	1.27%	0.096%
284	15.766	15.749	15.786	VV	3983	51221	2.40%	0.181%
285	15.812	15.786	15.836	VV	17308	253617	11.88%	0.896%
286	15.852	15.836	15.886	VV	7863	130194	6.10%	0.460%
287	15.922	15.886	15.932	VV	3176	68331	3.20%	0.241%
288	15.972	15.932	16.020	VV	8584	285776	13.39%	1.010%
289	16.045	16.020	16.070	VV	4179	80339	3.76%	0.284%
290	16.093	16.070	16.120	VV	2953	47323	2.22%	0.167%
291	16.139	16.120	16.156	VV	3164	39565	1.85%	0.140%
292	16.161	16.156	16.177	VV	1217	11640	0.55%	0.041%
293	16.182	16.177	16.187	PV	391	2259	0.11%	0.008%
294	16.225	16.187	16.231	VV	4862	73892	3.46%	0.261%
295	16.232	16.231	16.268	VV	4606	65959	3.09%	0.233%
296	16.279	16.268	16.299	VV	2551	30330	1.42%	0.107%
297	16.315	16.299	16.333	VV	1317	15523	0.73%	0.055%
298	16.352	16.333	16.369	VV	1127	9693	0.45%	0.034%
299	16.415	16.369	16.441	PV	4077	77845	3.65%	0.275%

					rters			
300	16.461	16.441	16.479	PV	4712	73017	3.42%	0.258%
301	16.503	16.479	16.532	VV	8174	167434	7.84%	0.592%
302	16.611	16.532	16.641	VV	7117	262431	12.29%	0.927%
303	16.671	16.641	16.673	VV	5638	63845	2.99%	0.226%
304	16.702	16.673	16.721	VV	86804	1280306	59.97%	4.523%
305	16.730	16.721	16.773	VV	34437	509652	23.87%	1.801%
306	16.778	16.773	16.802	VV	3823	39921	1.87%	0.141%
307	16.836	16.802	16.890	VV	19626	352106	16.49%	1.244%
308	16.896	16.890	16.913	VV	1888	17112	0.80%	0.060%
309	16.939	16.913	16.944	PV	1051	7843	0.37%	0.028%
310	16.986	16.944	17.002	VV	11819	204252	9.57%	0.722%
311	17.025	17.002	17.057	VV	54124	758706	35.54%	2.681%
312	17.088	17.057	17.140	VV	60860	994241	46.57%	3.513%
313	17.146	17.140	17.156	VV	3774	30178	1.41%	0.107%
314	17.189	17.156	17.236	VV	22633	461132	21.60%	1.629%
315	17.240	17.236	17.249	VV	4199	26783	1.25%	0.095%
316	17.258	17.249	17.264	VV	4752	32653	1.53%	0.115%
317	17.265	17.264	17.279	VV	4191	24808	1.16%	0.088%
318	17.299	17.279	17.307	VV	2766	39510	1.85%	0.140%
319	17.338	17.307	17.375	VV	7735	211490	9.91%	0.747%
320	17.404	17.375	17.414	VV	5661	99110	4.64%	0.350%
321	17.475	17.414	17.517	VV	11964	397534	18.62%	1.405%
322	17.548	17.517	17.562	VV	7102	135689	6.36%	0.479%
323	17.579	17.562	17.597	VV	9080	171226	8.02%	0.605%
324	17.617	17.597	17.634	VV	10564	191007	8.95%	0.675%
325	17.648	17.634	17.666	VV	6791	114375	5.36%	0.404%
326	17.682	17.666	17.698	VV	9750	136628	6.40%	0.483%
327	17.716	17.698	17.734	VV	9622	157009	7.35%	0.555%
328	17.754	17.734	17.780	VV	9162	182833	8.56%	0.646%
329	17.790	17.780	17.802	VV	8159	89290	4.18%	0.315%
330	17.805	17.802	17.839	VV	6816	62160	2.91%	0.220%
331	17.850	17.839	17.854	PV	1708	8645	0.40%	0.031%
332	17.903	17.854	17.921	VV	3809	91589	4.29%	0.324%
333	17.949	17.921	17.973	PV	5086	71861	3.37%	0.254%
334	17.991	17.973	17.995	PV	1037	9259	0.43%	0.033%
					Sum of corrected areas:		28303952	

FG052225.M Thu Jun 05 06:14:02 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/27/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-51	SDG No.:	Q2150
Lab Sample ID:	Q2150-07	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.7
Sample Wt/Vol:	30.04	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	Diesel Range Organics
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015920.D	1	06/04/25 08:30	06/04/25 17:18	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1780	J	202	1990	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.7		37 - 130	53%	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\FG060425\
Data File : FG015920.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 17:18
Operator : YP\AJ
Sample : Q2150-07
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-51

Integration File: autoint1.e
Quant Time: Jun 05 05:36:52 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.983	1311403	10.700 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

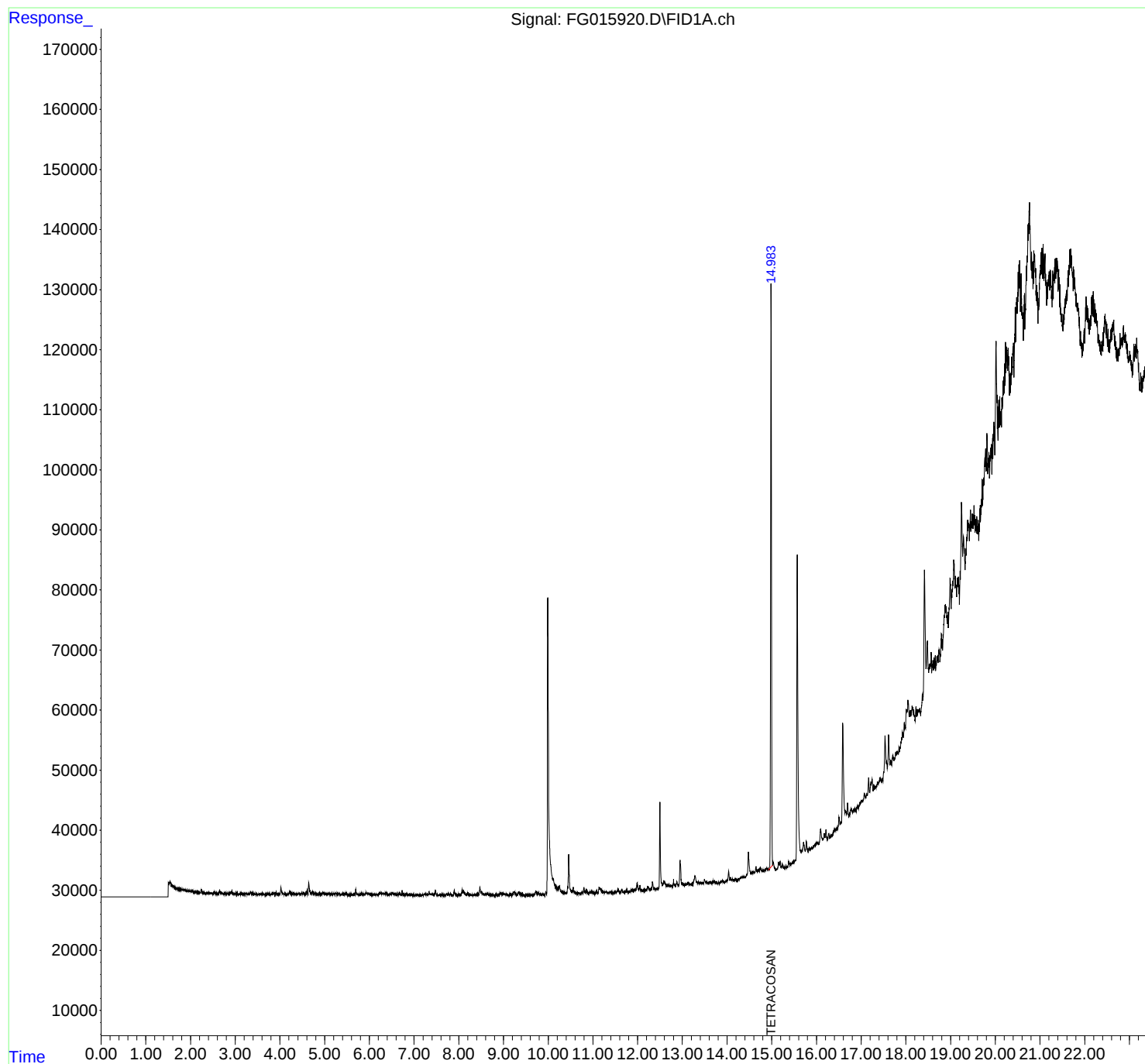
(m)=manual int.

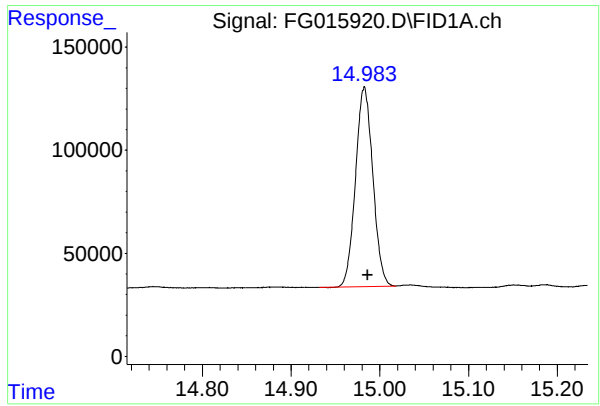
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015920.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 17:18
Operator : YP\AJ
Sample : Q2150-07
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-51

Integration File: autoint1.e
Quant Time: Jun 05 05:36:52 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.983 min
Delta R.T.: -0.004 min
Response: 1311403
Conc: 10.70 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-51

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015920.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 17:18
 Sample : Q2150-07
 Misc :
 ALS Vial : 29 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.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	4.328	BV	56	235	0.02%	0.003%
2	4.332	4.328	4.348	PV	100	312	0.02%	0.004%
3	4.353	4.348	4.357	PV	151	315	0.02%	0.004%
4	4.369	4.357	4.382	PV	102	800	0.06%	0.011%
5	4.394	4.382	4.403	VV	138	867	0.06%	0.012%
6	4.409	4.403	4.428	VV	144	1343	0.10%	0.019%
7	4.434	4.428	4.453	VV	166	1823	0.14%	0.025%
8	4.456	4.453	4.468	VV	134	599	0.04%	0.008%
9	4.485	4.468	4.490	PV	237	1860	0.14%	0.026%
10	4.493	4.490	4.506	VV	252	1478	0.11%	0.020%
11	4.530	4.506	4.553	VV	358	5455	0.41%	0.075%
12	4.555	4.553	4.576	VV	152	1171	0.09%	0.016%
13	4.606	4.576	4.622	VV	695	8757	0.65%	0.121%
14	4.644	4.622	4.698	VV	2023	36058	2.68%	0.497%
15	4.703	4.698	4.707	VV	259	1104	0.08%	0.015%
16	4.723	4.707	4.777	VV	528	13544	1.01%	0.187%
17	4.793	4.777	4.801	VV	227	2485	0.18%	0.034%
18	4.811	4.801	4.822	VV	177	1603	0.12%	0.022%
19	4.826	4.822	4.844	VV	153	1424	0.11%	0.020%
20	4.848	4.844	4.859	VV	115	738	0.05%	0.010%
21	4.882	4.859	4.898	VV	250	3584	0.27%	0.049%
22	4.911	4.898	4.932	VV	240	3569	0.27%	0.049%
23	4.935	4.932	4.939	VV	197	770	0.06%	0.011%
24	4.945	4.939	4.958	VV	350	3218	0.24%	0.044%
25	4.968	4.958	4.986	VV	331	4185	0.31%	0.058%
26	4.991	4.986	5.021	VV	273	4517	0.34%	0.062%
27	5.023	5.021	5.038	VV	184	1421	0.11%	0.020%
28	5.042	5.038	5.047	VV	165	894	0.07%	0.012%
29	5.053	5.047	5.062	VV	190	1258	0.09%	0.017%
30	5.066	5.062	5.087	VV	292	2801	0.21%	0.039%
31	5.098	5.087	5.123	VV	223	3350	0.25%	0.046%
32	5.153	5.123	5.174	VV	261	4624	0.34%	0.064%
33	5.195	5.174	5.229	VV	352	6738	0.50%	0.093%
34	5.244	5.229	5.272	VV	361	5718	0.42%	0.079%
35	5.281	5.272	5.307	VV	250	3659	0.27%	0.050%
36	5.326	5.307	5.343	VV	278	4536	0.34%	0.063%

					rteres			
37	5.346	5.343	5.365	VV	205	1927	0.14%	0.027%
38	5.368	5.365	5.383	VV	163	1220	0.09%	0.017%
39	5.414	5.383	5.432	VV	186	4031	0.30%	0.056%
40	5.435	5.432	5.448	VV	131	1262	0.09%	0.017%
41	5.469	5.448	5.474	VV	234	2520	0.19%	0.035%
42	5.491	5.474	5.521	VV	317	4878	0.36%	0.067%
43	5.529	5.521	5.537	VV	65	534	0.04%	0.007%
44	5.540	5.537	5.544	VV	74	294	0.02%	0.004%
45	5.549	5.544	5.553	VV	115	417	0.03%	0.006%
46	5.562	5.553	5.573	PV	139	1186	0.09%	0.016%
47	5.577	5.573	5.592	VV	166	1052	0.08%	0.015%
48	5.596	5.592	5.602	VV	111	530	0.04%	0.007%
49	5.618	5.602	5.623	VV	172	1373	0.10%	0.019%
50	5.628	5.623	5.641	VV	225	1741	0.13%	0.024%
51	5.663	5.641	5.677	VV	260	3191	0.24%	0.044%
52	5.696	5.677	5.720	VV	1046	11295	0.84%	0.156%
53	5.724	5.720	5.756	VV	242	3429	0.25%	0.047%
54	5.760	5.756	5.775	VV	167	1298	0.10%	0.018%
55	5.778	5.775	5.784	VV	102	461	0.03%	0.006%
56	5.792	5.784	5.807	VV	193	1624	0.12%	0.022%
57	5.836	5.807	5.850	VV	327	5159	0.38%	0.071%
58	5.862	5.850	5.870	VV	231	2039	0.15%	0.028%
59	5.876	5.870	5.886	VV	225	1369	0.10%	0.019%
60	5.925	5.886	5.941	VV	479	9789	0.73%	0.135%
61	5.946	5.941	5.963	VV	381	3968	0.29%	0.055%
62	5.980	5.963	6.012	VV	328	7376	0.55%	0.102%
63	6.020	6.012	6.075	VV	233	5164	0.38%	0.071%
64	6.080	6.075	6.085	VV	139	664	0.05%	0.009%
65	6.092	6.085	6.095	VV	174	644	0.05%	0.009%
66	6.105	6.095	6.127	VV	154	1772	0.13%	0.024%
67	6.130	6.127	6.156	VV	130	1748	0.13%	0.024%
68	6.160	6.156	6.170	VV	127	1017	0.08%	0.014%
69	6.174	6.170	6.180	VV	112	719	0.05%	0.010%
70	6.185	6.180	6.192	VV	172	893	0.07%	0.012%
71	6.201	6.192	6.208	VV	205	1740	0.13%	0.024%
72	6.231	6.208	6.258	VV	431	10103	0.75%	0.139%
73	6.268	6.258	6.282	VV	364	4440	0.33%	0.061%
74	6.287	6.282	6.300	VV	323	3218	0.24%	0.044%
75	6.308	6.300	6.321	VV	343	3689	0.27%	0.051%
76	6.330	6.321	6.335	VV	316	2373	0.18%	0.033%
77	6.339	6.335	6.344	VV	360	1539	0.11%	0.021%
78	6.354	6.344	6.364	VV	376	3312	0.25%	0.046%
79	6.379	6.364	6.400	VV	431	7283	0.54%	0.100%
80	6.408	6.400	6.423	VV	265	3264	0.24%	0.045%
81	6.431	6.423	6.436	VV	272	1633	0.12%	0.023%
82	6.450	6.436	6.474	VV	279	5415	0.40%	0.075%
83	6.505	6.474	6.536	VV	607	10981	0.82%	0.151%
84	6.556	6.536	6.580	VV	384	7202	0.54%	0.099%
85	6.584	6.580	6.605	VV	284	3002	0.22%	0.041%
86	6.609	6.605	6.625	VV	210	1927	0.14%	0.027%
87	6.651	6.625	6.655	VV	255	3679	0.27%	0.051%
88	6.663	6.655	6.671	VV	318	2339	0.17%	0.032%
89	6.674	6.671	6.692	VV	252	2724	0.20%	0.038%

					rteres			
90	6.700	6.692	6.708	VV	223	1712	0.13%	0.024%
91	6.732	6.708	6.780	VV	746	8319	0.62%	0.115%
92	6.787	6.780	6.796	VV	172	1409	0.10%	0.019%
93	6.818	6.796	6.876	VV	243	7927	0.59%	0.109%
94	6.906	6.876	6.914	VV	212	3576	0.27%	0.049%
95	6.934	6.914	6.945	VV	212	3189	0.24%	0.044%
96	6.956	6.945	6.976	VV	191	2621	0.19%	0.036%
97	6.980	6.976	6.993	VV	132	1107	0.08%	0.015%
98	6.998	6.993	7.021	VV	195	1502	0.11%	0.021%
99	7.053	7.021	7.070	VV	189	2969	0.22%	0.041%
100	7.107	7.070	7.137	VV	205	4182	0.31%	0.058%
101	7.141	7.137	7.150	VV	70	526	0.04%	0.007%
102	7.154	7.150	7.161	VV	145	558	0.04%	0.008%
103	7.174	7.161	7.179	VV	123	1048	0.08%	0.014%
104	7.182	7.179	7.188	VV	122	594	0.04%	0.008%
105	7.194	7.188	7.211	VV	193	1977	0.15%	0.027%
106	7.226	7.211	7.231	VV	274	2535	0.19%	0.035%
107	7.238	7.231	7.257	VV	283	3782	0.28%	0.052%
108	7.261	7.257	7.266	VV	247	1114	0.08%	0.015%
109	7.272	7.266	7.279	VV	271	1589	0.12%	0.022%
110	7.289	7.279	7.310	VV	277	4106	0.31%	0.057%
111	7.314	7.310	7.321	VV	240	1236	0.09%	0.017%
112	7.337	7.321	7.355	VV	749	9554	0.71%	0.132%
113	7.370	7.355	7.377	VV	288	3486	0.26%	0.048%
114	7.387	7.377	7.396	VV	321	2767	0.21%	0.038%
115	7.400	7.396	7.415	VV	252	2434	0.18%	0.034%
116	7.425	7.415	7.439	VV	260	2851	0.21%	0.039%
117	7.449	7.439	7.465	VV	416	4649	0.35%	0.064%
118	7.482	7.465	7.503	VV	866	11046	0.82%	0.152%
119	7.507	7.503	7.527	VV	246	2493	0.19%	0.034%
120	7.533	7.527	7.542	VV	179	1436	0.11%	0.020%
121	7.547	7.542	7.553	VV	212	971	0.07%	0.013%
122	7.558	7.553	7.563	VV	150	905	0.07%	0.012%
123	7.567	7.563	7.597	VV	162	2299	0.17%	0.032%
124	7.602	7.597	7.606	VV	166	695	0.05%	0.010%
125	7.622	7.606	7.669	VV	279	6164	0.46%	0.085%
126	7.677	7.669	7.699	VV	118	1652	0.12%	0.023%
127	7.732	7.699	7.752	PV	502	6560	0.49%	0.090%
128	7.765	7.752	7.804	VV	386	8131	0.60%	0.112%
129	7.818	7.804	7.842	VV	423	5425	0.40%	0.075%
130	7.856	7.842	7.868	VV	124	1312	0.10%	0.018%
131	7.901	7.868	7.953	VV	1015	16372	1.22%	0.226%
132	7.957	7.953	7.961	VV	113	405	0.03%	0.006%
133	7.986	7.961	7.992	VV	232	2458	0.18%	0.034%
134	8.005	7.992	8.037	VV	344	6210	0.46%	0.086%
135	8.074	8.037	8.089	VV	1010	15685	1.17%	0.216%
136	8.103	8.089	8.174	VV	940	23789	1.77%	0.328%
137	8.204	8.174	8.232	VV	533	11229	0.83%	0.155%
138	8.245	8.232	8.287	VV	275	6215	0.46%	0.086%
139	8.293	8.287	8.312	VV	173	2009	0.15%	0.028%
140	8.316	8.312	8.352	VV	169	3673	0.27%	0.051%
141	8.360	8.352	8.378	VV	176	2498	0.19%	0.034%

					rteres			
142	8.404	8.378	8.420	VV	437	6803	0.51%	0.094%
143	8.425	8.420	8.439	VV	248	2604	0.19%	0.036%
144	8.472	8.439	8.497	VV	1433	25387	1.89%	0.350%
145	8.504	8.497	8.559	VV	602	14059	1.04%	0.194%
146	8.575	8.559	8.579	VV	284	2860	0.21%	0.039%
147	8.585	8.579	8.594	VV	336	2284	0.17%	0.031%
148	8.637	8.594	8.662	VV	368	11483	0.85%	0.158%
149	8.666	8.662	8.685	VV	294	3307	0.25%	0.046%
150	8.690	8.685	8.702	VV	257	1893	0.14%	0.026%
151	8.707	8.702	8.733	VV	205	2576	0.19%	0.036%
152	8.739	8.733	8.772	VV	195	3285	0.24%	0.045%
153	8.779	8.772	8.807	VV	171	1550	0.12%	0.021%
154	8.826	8.807	8.832	PV	193	1287	0.10%	0.018%
155	8.837	8.832	8.844	VV	188	873	0.06%	0.012%
156	8.866	8.844	8.874	VV	172	2294	0.17%	0.032%
157	8.879	8.874	8.882	VV	148	460	0.03%	0.006%
158	8.919	8.882	8.924	VV	380	4417	0.33%	0.061%
159	8.943	8.924	8.966	VV	495	9541	0.71%	0.132%
160	8.994	8.966	8.999	VV	416	5819	0.43%	0.080%
161	9.002	8.999	9.034	VV	352	5494	0.41%	0.076%
162	9.042	9.034	9.074	VV	306	4778	0.36%	0.066%
163	9.093	9.074	9.122	VV	191	3751	0.28%	0.052%
164	9.134	9.122	9.139	VV	239	1834	0.14%	0.025%
165	9.156	9.139	9.182	VV	272	4744	0.35%	0.065%
166	9.200	9.182	9.208	VV	256	2962	0.22%	0.041%
167	9.233	9.208	9.258	VV	656	13907	1.03%	0.192%
168	9.262	9.258	9.299	VV	437	5793	0.43%	0.080%
169	9.304	9.299	9.308	VV	175	704	0.05%	0.010%
170	9.343	9.308	9.404	VV	631	17675	1.31%	0.244%
171	9.410	9.404	9.420	VV	168	850	0.06%	0.012%
172	9.427	9.420	9.442	VV	341	1406	0.10%	0.019%
173	9.462	9.442	9.488	PV	106	1448	0.11%	0.020%
174	9.493	9.488	9.507	VV	89	636	0.05%	0.009%
175	9.515	9.507	9.528	VV	183	1727	0.13%	0.024%
176	9.530	9.528	9.552	VV	175	1671	0.12%	0.023%
177	9.566	9.552	9.574	VV	115	998	0.07%	0.014%
178	9.589	9.574	9.597	VV	111	987	0.07%	0.014%
179	9.613	9.597	9.625	VV	136	1276	0.09%	0.018%
180	9.630	9.625	9.652	VV	126	907	0.07%	0.013%
181	9.656	9.652	9.680	VV	113	1028	0.08%	0.014%
182	9.721	9.680	9.769	VV	712	20011	1.49%	0.276%
183	9.773	9.769	9.837	VV	381	10162	0.76%	0.140%
184	9.843	9.837	9.860	VV	208	2345	0.17%	0.032%
185	9.869	9.860	9.874	VV	202	1328	0.10%	0.018%
186	9.877	9.874	9.929	VV	234	2795	0.21%	0.039%
187	9.949	9.929	9.964	PV	528	6012	0.45%	0.083%
188	9.990	9.964	10.105	VV	49613	1026905	76.31%	14.157%
189	10.111	10.105	10.225	VV	2698	112274	8.34%	1.548%
190	10.228	10.225	10.230	VV	1079	3056	0.23%	0.042%
191	10.251	10.230	10.309	VV	1492	42376	3.15%	0.584%
192	10.316	10.309	10.335	VV	456	6606	0.49%	0.091%
193	10.339	10.335	10.344	VV	436	2005	0.15%	0.028%
194	10.351	10.344	10.373	VV	410	6092	0.45%	0.084%

					rteres			
195	10.378	10.373	10.395	VV	323	3518	0.26%	0.048%
196	10.402	10.395	10.412	VV	308	2897	0.22%	0.040%
197	10.459	10.412	10.525	VV	6697	122956	9.14%	1.695%
198	10.530	10.525	10.532	VV	479	1790	0.13%	0.025%
199	10.561	10.532	10.599	VV	1227	23928	1.78%	0.330%
200	10.604	10.599	10.623	VV	391	4023	0.30%	0.055%
201	10.638	10.623	10.661	VV	230	3803	0.28%	0.052%
202	10.676	10.661	10.697	VV	238	3550	0.26%	0.049%
203	10.709	10.697	10.718	VV	159	1642	0.12%	0.023%
204	10.757	10.718	10.780	VV	319	8085	0.60%	0.111%
205	10.801	10.780	10.824	VV	1113	16080	1.19%	0.222%
206	10.829	10.824	10.838	VV	347	2752	0.20%	0.038%
207	10.858	10.838	10.885	VV	784	12273	0.91%	0.169%
208	10.888	10.885	10.899	VV	186	1110	0.08%	0.015%
209	10.930	10.899	10.942	VV	352	6020	0.45%	0.083%
210	10.960	10.942	10.973	VV	322	5611	0.42%	0.077%
211	10.981	10.973	11.002	VV	425	4965	0.37%	0.068%
212	11.009	11.002	11.029	VV	167	1619	0.12%	0.022%
213	11.036	11.029	11.047	VV	176	1333	0.10%	0.018%
214	11.050	11.047	11.056	VV	175	674	0.05%	0.009%
215	11.082	11.056	11.114	VV	632	8796	0.65%	0.121%
216	11.141	11.114	11.149	PV	1013	12548	0.93%	0.173%
217	11.154	11.149	11.218	VV	948	25344	1.88%	0.349%
218	11.235	11.218	11.245	VV	382	5065	0.38%	0.070%
219	11.248	11.245	11.264	VV	271	2307	0.17%	0.032%
220	11.297	11.264	11.304	VV	306	5215	0.39%	0.072%
221	11.307	11.304	11.322	VV	248	1995	0.15%	0.028%
222	11.331	11.322	11.343	VV	195	1486	0.11%	0.020%
223	11.345	11.343	11.360	VV	118	862	0.06%	0.012%
224	11.382	11.360	11.389	VV	219	2636	0.20%	0.036%
225	11.391	11.389	11.404	VV	192	1096	0.08%	0.015%
226	11.424	11.404	11.459	VV	191	3123	0.23%	0.043%
227	11.472	11.459	11.475	VV	132	865	0.06%	0.012%
228	11.500	11.475	11.525	VV	268	5395	0.40%	0.074%
229	11.540	11.525	11.545	VV	316	2682	0.20%	0.037%
230	11.563	11.545	11.599	VV	720	12184	0.91%	0.168%
231	11.601	11.599	11.621	VV	140	1485	0.11%	0.020%
232	11.643	11.621	11.677	VV	601	10245	0.76%	0.141%
233	11.684	11.677	11.689	VV	81	492	0.04%	0.007%
234	11.693	11.689	11.697	VV	89	262	0.02%	0.004%
235	11.701	11.697	11.703	PV	76	178	0.01%	0.002%
236	11.721	11.703	11.736	VV	336	3540	0.26%	0.049%
237	11.756	11.736	11.787	VV	618	7715	0.57%	0.106%
238	11.804	11.787	11.822	PV	174	2432	0.18%	0.034%
239	11.870	11.822	11.902	VV	403	11337	0.84%	0.156%
240	11.913	11.902	11.924	VV	309	3199	0.24%	0.044%
241	11.948	11.924	11.965	VV	397	7547	0.56%	0.104%
242	11.987	11.965	12.029	VV	1410	28510	2.12%	0.393%
243	12.047	12.029	12.101	VV	969	16526	1.23%	0.228%
244	12.114	12.101	12.145	VV	164	2336	0.17%	0.032%
245	12.149	12.145	12.160	VV	111	772	0.06%	0.011%
246	12.168	12.160	12.184	VV	206	1967	0.15%	0.027%

					rteres			
247	12.186	12.184	12.192	VV	122	396	0.03%	0.005%
248	12.231	12.192	12.270	PV	684	15302	1.14%	0.211%
249	12.288	12.270	12.309	VV	253	3750	0.28%	0.052%
250	12.332	12.309	12.390	VV	1390	23137	1.72%	0.319%
251	12.405	12.390	12.417	VV	173	2122	0.16%	0.029%
252	12.430	12.417	12.437	VV	188	1525	0.11%	0.021%
253	12.442	12.437	12.449	VV	136	715	0.05%	0.010%
254	12.496	12.449	12.565	VV	14561	203785	15.14%	2.809%
255	12.589	12.565	12.607	VV	1365	25181	1.87%	0.347%
256	12.616	12.607	12.639	VV	1007	15015	1.12%	0.207%
257	12.659	12.639	12.680	VV	666	13328	0.99%	0.184%
258	12.704	12.680	12.724	VV	571	12086	0.90%	0.167%
259	12.751	12.724	12.779	VV	452	11640	0.87%	0.160%
260	12.804	12.779	12.845	VV	1299	22266	1.65%	0.307%
261	12.876	12.845	12.921	VV	995	25537	1.90%	0.352%
262	12.949	12.921	13.037	VV	4544	101470	7.54%	1.399%
263	13.051	13.037	13.067	VV	390	5687	0.42%	0.078%
264	13.133	13.067	13.171	VV	688	27247	2.02%	0.376%
265	13.176	13.171	13.189	VV	370	3351	0.25%	0.046%
266	13.193	13.189	13.197	VV	376	1633	0.12%	0.023%
267	13.201	13.197	13.219	VV	346	4091	0.30%	0.056%
268	13.283	13.219	13.343	VV	1661	59561	4.43%	0.821%
269	13.369	13.343	13.387	VV	511	11660	0.87%	0.161%
270	13.392	13.387	13.402	VV	351	2809	0.21%	0.039%
271	13.426	13.402	13.440	VV	417	7967	0.59%	0.110%
272	13.448	13.440	13.472	VV	366	5217	0.39%	0.072%
273	13.495	13.472	13.531	VV	889	18839	1.40%	0.260%
274	13.544	13.531	13.572	VV	448	7715	0.57%	0.106%
275	13.593	13.572	13.600	VV	291	3742	0.28%	0.052%
276	13.625	13.600	13.655	VV	447	9369	0.70%	0.129%
277	13.676	13.655	13.681	VV	350	3712	0.28%	0.051%
278	13.684	13.681	13.688	VV	273	904	0.07%	0.012%
279	13.711	13.688	13.747	VV	424	10904	0.81%	0.150%
280	13.758	13.747	13.784	VV	245	3348	0.25%	0.046%
281	13.799	13.784	13.804	PV	96	441	0.03%	0.006%
282	13.853	13.804	13.858	VV	142	1864	0.14%	0.026%
283	13.899	13.858	13.927	VV	359	9719	0.72%	0.134%
284	13.932	13.927	13.945	VV	182	1344	0.10%	0.019%
285	13.978	13.945	13.992	VV	188	3127	0.23%	0.043%
286	14.035	13.992	14.059	VV	1753	28479	2.12%	0.393%
287	14.079	14.059	14.102	VV	651	10185	0.76%	0.140%
288	14.116	14.102	14.121	VV	320	2746	0.20%	0.038%
289	14.126	14.121	14.154	VV	288	3662	0.27%	0.050%
290	14.158	14.154	14.165	VV	130	603	0.04%	0.008%
291	14.171	14.165	14.174	VV	131	469	0.03%	0.006%
292	14.178	14.174	14.184	VV	163	622	0.05%	0.009%
293	14.192	14.184	14.212	VV	221	1976	0.15%	0.027%
294	14.215	14.212	14.221	VV	88	316	0.02%	0.004%
295	14.227	14.221	14.232	PV	145	520	0.04%	0.007%
296	14.239	14.232	14.249	VV	107	520	0.04%	0.007%
297	14.252	14.249	14.256	VV	165	292	0.02%	0.004%
298	14.259	14.256	14.262	PV	107	252	0.02%	0.003%
299	14.305	14.262	14.310	VV	323	5846	0.43%	0.081%

					rteres			
300	14.323	14.310	14.335	VV	341	4119	0.31%	0.057%
301	14.340	14.335	14.353	VV	361	3020	0.22%	0.042%
302	14.359	14.353	14.364	VV	343	1894	0.14%	0.026%
303	14.370	14.364	14.391	VV	293	3746	0.28%	0.052%
304	14.397	14.391	14.403	VV	186	1282	0.10%	0.018%
305	14.476	14.403	14.545	VV	4227	105806	7.86%	1.459%
306	14.554	14.545	14.558	VV	638	4391	0.33%	0.061%
307	14.576	14.558	14.619	VV	724	22763	1.69%	0.314%
308	14.644	14.619	14.667	VV	1506	27526	2.05%	0.379%
309	14.682	14.667	14.697	VV	849	13313	0.99%	0.184%
310	14.708	14.697	14.714	VV	742	7176	0.53%	0.099%
311	14.745	14.714	14.785	VV	1196	33369	2.48%	0.460%
312	14.806	14.785	14.825	VV	609	12381	0.92%	0.171%
313	14.881	14.825	14.907	VV	765	26733	1.99%	0.369%
314	14.917	14.907	14.942	VV	551	10034	0.75%	0.138%
315	14.983	14.942	15.019	VV	97152	1345645	100.00%	18.551%
316	15.034	15.019	15.069	VV	1457	27784	2.06%	0.383%
317	15.072	15.069	15.099	VV	344	3038	0.23%	0.042%
318	15.152	15.099	15.170	VV	1183	21460	1.59%	0.296%
319	15.187	15.170	15.217	VV	1220	19513	1.45%	0.269%
320	15.233	15.217	15.270	VV	828	11771	0.87%	0.162%
321	15.276	15.270	15.300	PV	107	1375	0.10%	0.019%
322	15.307	15.300	15.312	VV	107	556	0.04%	0.008%
323	15.323	15.312	15.340	VV	110	1150	0.09%	0.016%
324	15.379	15.340	15.423	PV	751	10930	0.81%	0.151%
325	15.528	15.423	15.533	VV	235	7810	0.58%	0.108%
326	15.568	15.533	15.654	VV	50918	902236	67.05%	12.438%
327	15.712	15.654	15.748	VV	2284	71981	5.35%	0.992%
328	15.773	15.748	15.810	VV	2140	39365	2.93%	0.543%
329	15.840	15.810	15.859	VV	747	13899	1.03%	0.192%
330	15.910	15.859	15.915	VV	375	10654	0.79%	0.147%
331	16.019	15.915	16.024	VV	581	31333	2.33%	0.432%
332	16.027	16.024	16.054	VV	498	5836	0.43%	0.080%
333	16.092	16.054	16.152	VV	2460	62037	4.61%	0.855%
334	16.174	16.152	16.190	VV	1349	20302	1.51%	0.280%
335	16.211	16.190	16.241	VV	1775	26591	1.98%	0.367%
336	16.275	16.241	16.294	VV	781	10429	0.78%	0.144%
337	16.332	16.294	16.337	PV	119	2004	0.15%	0.028%
338	16.356	16.337	16.364	VV	175	1048	0.08%	0.014%
339	16.413	16.364	16.418	PV	545	13799	1.03%	0.190%
340	16.421	16.418	16.428	VV	475	2486	0.18%	0.034%
341	16.448	16.428	16.461	VV	491	7322	0.54%	0.101%
342	16.502	16.461	16.527	VV	1997	37854	2.81%	0.522%
343	16.586	16.527	16.637	VV	16896	351695	26.14%	4.848%
344	16.656	16.637	16.674	VV	1817	35344	2.63%	0.487%
345	16.695	16.674	16.725	VV	2862	48669	3.62%	0.671%
346	16.771	16.725	16.810	VV	1416	43475	3.23%	0.599%
347	16.849	16.810	16.863	VV	647	17325	1.29%	0.239%
348	16.872	16.863	16.886	VV	422	3510	0.26%	0.048%
349	16.927	16.886	16.939	PV	496	12206	0.91%	0.168%
350	16.972	16.939	16.985	VV	831	14561	1.08%	0.201%
351	17.002	16.985	17.022	VV	821	13815	1.03%	0.190%

						rteres		
352	17.067	17.022	17.105	VV	1460	39724	2.95%	0.548%
353	17.123	17.105	17.139	VV	926	14007	1.04%	0.193%
354	17.166	17.139	17.184	VV	3250	46230	3.44%	0.637%
355	17.189	17.184	17.194	VV	783	4566	0.34%	0.063%
356	17.244	17.194	17.265	VV	2405	65516	4.87%	0.903%
357	17.287	17.265	17.298	VV	979	11976	0.89%	0.165%
358	17.321	17.298	17.330	VV	516	6827	0.51%	0.094%
359	17.362	17.330	17.370	VV	895	11069	0.82%	0.153%
360	17.395	17.370	17.400	VV	639	9262	0.69%	0.128%
361	17.415	17.400	17.424	VV	1066	12300	0.91%	0.170%
362	17.432	17.424	17.454	VV	900	10191	0.76%	0.140%
363	17.476	17.454	17.487	VV	401	4851	0.36%	0.067%
364	17.500	17.487	17.505	PV	1329	9126	0.68%	0.126%
365	17.532	17.505	17.583	VV	6967	150187	11.16%	2.070%
366	17.613	17.583	17.642	VV	6081	98144	7.29%	1.353%
367	17.650	17.642	17.655	VV	1000	6631	0.49%	0.091%
368	17.663	17.655	17.684	VV	1177	9684	0.72%	0.134%
369	17.707	17.684	17.725	VV	1398	21782	1.62%	0.300%
370	17.734	17.725	17.749	VV	546	6190	0.46%	0.085%
371	17.769	17.749	17.777	VV	1089	10014	0.74%	0.138%
372	17.788	17.777	17.794	VV	916	7174	0.53%	0.099%
373	17.802	17.794	17.807	VV	741	4904	0.36%	0.068%
374	17.814	17.807	17.832	VV	572	5508	0.41%	0.076%
375	17.846	17.832	17.855	PV	991	6923	0.51%	0.095%
376	17.870	17.855	17.877	PV	353	2468	0.18%	0.034%
377	17.922	17.877	17.942	VV	1486	29379	2.18%	0.405%
378	17.963	17.942	17.973	PV	1711	14630	1.09%	0.202%
379	17.985	17.973	17.992	VV	401	3988	0.30%	0.055%
					Sum of corrected areas:	7253907		

FG052225.M Thu Jun 05 06:14:40 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/28/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-52	SDG No.:	Q2150
Lab Sample ID:	Q2150-08	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.7
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015921.D	1	06/04/25 08:30	06/04/25 17:47	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	12700		197	1940	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	15.4		37 - 130	77%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015921.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 17:47
Operator : YP\AJ
Sample : Q2150-08
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-52

Integration File: autoint1.e
Quant Time: Jun 05 05:37:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.985	1890840	15.428 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

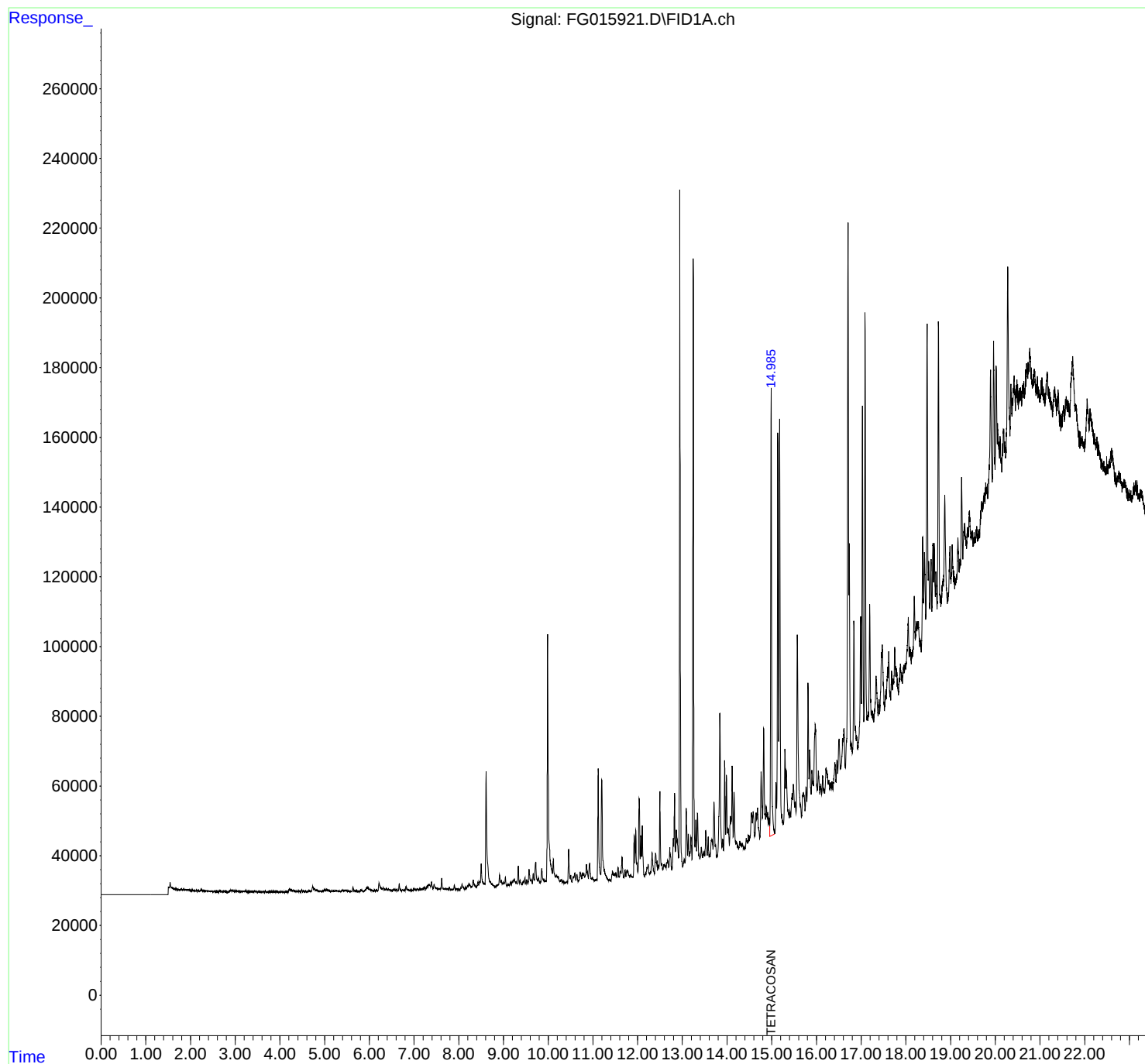
(m)=manual int.

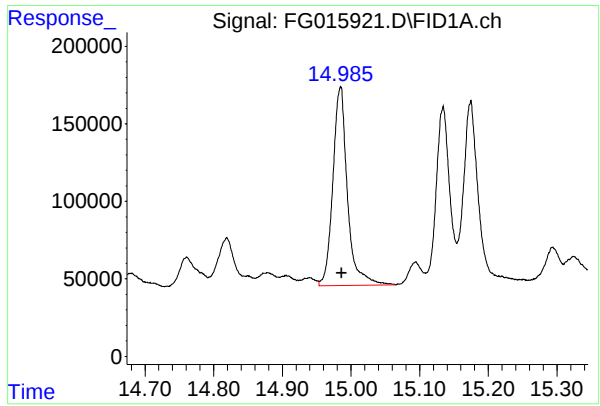
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015921.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 17:47
Operator : YP\AJ
Sample : Q2150-08
Misc :
ALS Vial : 30 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-52

Integration File: autoint1.e
Quant Time: Jun 05 05:37:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.985 min

Delta R.T.: -0.001 min

Response: 1890840

Conc: 15.43 ug/ml

Instrument :

FID_G

ClientSampleId :

TP-52

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015921.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 17:47
Sample : Q2150-08
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.314	4.300	4.336	BV	36	151	0.01%	0.000%
2	4.350	4.336	4.372	PV	140	1855	0.08%	0.004%
3	4.378	4.372	4.409	VV	123	1443	0.06%	0.003%
4	4.416	4.409	4.420	PV	130	474	0.02%	0.001%
5	4.437	4.420	4.447	VV	149	1453	0.06%	0.003%
6	4.450	4.447	4.460	VV	112	516	0.02%	0.001%
7	4.488	4.460	4.508	PV	524	7676	0.32%	0.017%
8	4.528	4.508	4.561	VV	209	4387	0.18%	0.010%
9	4.568	4.561	4.589	VV	160	1490	0.06%	0.003%
10	4.609	4.589	4.630	VV	189	2262	0.09%	0.005%
11	4.654	4.630	4.678	VV	361	6265	0.26%	0.014%
12	4.681	4.678	4.695	VV	188	1227	0.05%	0.003%
13	4.697	4.695	4.703	VV	191	582	0.02%	0.001%
14	4.731	4.703	4.760	VV	1527	32810	1.37%	0.073%
15	4.770	4.760	4.821	VV	957	22940	0.96%	0.051%
16	4.825	4.821	4.846	VV	453	5533	0.23%	0.012%
17	4.851	4.846	4.872	VV	370	4108	0.17%	0.009%
18	4.884	4.872	4.910	VV	271	5562	0.23%	0.012%
19	4.924	4.910	4.938	VV	292	4069	0.17%	0.009%
20	4.958	4.938	4.971	VV	304	5138	0.21%	0.011%
21	4.996	4.971	5.010	VV	650	10890	0.46%	0.024%
22	5.015	5.010	5.019	VV	443	2427	0.10%	0.005%
23	5.047	5.019	5.088	VV	614	20199	0.85%	0.045%
24	5.092	5.088	5.127	VV	402	6401	0.27%	0.014%
25	5.141	5.127	5.152	VV	257	3488	0.15%	0.008%
26	5.164	5.152	5.188	VV	391	6044	0.25%	0.013%
27	5.200	5.188	5.216	VV	317	3672	0.15%	0.008%
28	5.244	5.216	5.256	VV	418	6160	0.26%	0.014%
29	5.266	5.256	5.277	VV	377	4216	0.18%	0.009%
30	5.282	5.277	5.297	VV	369	3598	0.15%	0.008%
31	5.312	5.297	5.343	VV	415	6880	0.29%	0.015%
32	5.348	5.343	5.360	VV	143	1112	0.05%	0.002%
33	5.388	5.360	5.391	VV	489	6074	0.25%	0.013%
34	5.399	5.391	5.429	VV	506	8268	0.35%	0.018%
35	5.447	5.429	5.452	VV	349	4391	0.18%	0.010%
36	5.472	5.452	5.481	VV	525	7361	0.31%	0.016%

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37	5.486	5.481	5.503	VV	437	4528	0.19%	0.010%
38	5.508	5.503	5.520	VV	311	2501	0.10%	0.006%
39	5.524	5.520	5.549	VV	265	3235	0.14%	0.007%
40	5.554	5.549	5.557	VV	231	717	0.03%	0.002%
41	5.573	5.557	5.605	VV	257	4295	0.18%	0.010%
42	5.635	5.605	5.682	PV	1366	22688	0.95%	0.050%
43	5.701	5.682	5.711	VV	331	4134	0.17%	0.009%
44	5.722	5.711	5.742	VV	309	4637	0.19%	0.010%
45	5.752	5.742	5.773	VV	272	3532	0.15%	0.008%
46	5.809	5.773	5.849	VV	635	15131	0.63%	0.034%
47	5.862	5.849	5.869	VV	202	1873	0.08%	0.004%
48	5.952	5.869	6.032	VV	1250	64556	2.70%	0.143%
49	6.035	6.032	6.061	VV	445	6085	0.25%	0.014%
50	6.066	6.061	6.078	VV	282	2631	0.11%	0.006%
51	6.083	6.078	6.093	VV	176	1529	0.06%	0.003%
52	6.110	6.093	6.132	VV	374	5183	0.22%	0.012%
53	6.160	6.132	6.181	VV	374	6859	0.29%	0.015%
54	6.217	6.181	6.285	VV	2422	73751	3.09%	0.164%
55	6.308	6.285	6.334	VV	1027	22317	0.93%	0.050%
56	6.350	6.334	6.357	VV	545	6721	0.28%	0.015%
57	6.378	6.357	6.404	VV	844	16889	0.71%	0.038%
58	6.409	6.404	6.416	VV	426	2627	0.11%	0.006%
59	6.428	6.416	6.480	VV	629	15490	0.65%	0.034%
60	6.487	6.480	6.515	VV	340	4716	0.20%	0.010%
61	6.538	6.515	6.547	VV	510	6487	0.27%	0.014%
62	6.557	6.547	6.586	VV	482	7997	0.33%	0.018%
63	6.620	6.586	6.645	VV	458	11033	0.46%	0.025%
64	6.668	6.645	6.721	VV	2075	30994	1.30%	0.069%
65	6.745	6.721	6.760	VV	324	5471	0.23%	0.012%
66	6.765	6.760	6.779	VV	276	1808	0.08%	0.004%
67	6.792	6.779	6.800	VV	281	2706	0.11%	0.006%
68	6.821	6.800	6.842	VV	1362	16951	0.71%	0.038%
69	6.857	6.842	6.880	VV	536	7973	0.33%	0.018%
70	6.892	6.880	6.909	VV	297	3149	0.13%	0.007%
71	6.922	6.909	6.935	VV	244	2357	0.10%	0.005%
72	6.957	6.935	6.975	VV	262	3307	0.14%	0.007%
73	6.993	6.975	7.022	VV	646	10772	0.45%	0.024%
74	7.027	7.022	7.042	VV	332	3245	0.14%	0.007%
75	7.076	7.042	7.110	VV	575	14726	0.62%	0.033%
76	7.131	7.110	7.152	VV	519	9474	0.40%	0.021%
77	7.166	7.152	7.173	VV	486	4491	0.19%	0.010%
78	7.201	7.173	7.222	VV	781	16366	0.68%	0.036%
79	7.239	7.222	7.266	VV	1012	19872	0.83%	0.044%
80	7.290	7.266	7.302	VV	1367	21250	0.89%	0.047%
81	7.323	7.302	7.340	VV	1820	35039	1.47%	0.078%
82	7.349	7.340	7.371	VV	1719	26790	1.12%	0.060%
83	7.390	7.371	7.428	VV	2482	47539	1.99%	0.106%
84	7.450	7.428	7.478	VV	1747	33690	1.41%	0.075%
85	7.489	7.478	7.503	VV	844	10645	0.45%	0.024%
86	7.511	7.503	7.540	VV	647	10334	0.43%	0.023%
87	7.544	7.540	7.548	VV	384	1823	0.08%	0.004%
88	7.556	7.548	7.569	VV	496	5640	0.24%	0.013%
89	7.576	7.569	7.588	VV	513	5144	0.22%	0.011%

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90	7.619	7.588	7.671	VV	3507	55267	2.31%	0.123%
91	7.678	7.671	7.696	VV	481	6257	0.26%	0.014%
92	7.702	7.696	7.720	VV	470	5413	0.23%	0.012%
93	7.746	7.720	7.772	VV	437	10139	0.42%	0.023%
94	7.793	7.772	7.819	VV	810	12339	0.52%	0.027%
95	7.841	7.819	7.860	VV	311	4616	0.19%	0.010%
96	7.900	7.860	7.928	VV	1421	20163	0.84%	0.045%
97	7.957	7.928	7.976	VV	485	7875	0.33%	0.018%
98	7.989	7.976	8.019	VV	346	4470	0.19%	0.010%
99	8.049	8.019	8.058	PV	692	8787	0.37%	0.020%
100	8.074	8.058	8.133	VV	1678	36046	1.51%	0.080%
101	8.151	8.133	8.167	VV	701	10198	0.43%	0.023%
102	8.194	8.167	8.207	VV	1142	17586	0.74%	0.039%
103	8.231	8.207	8.243	VV	1501	25785	1.08%	0.057%
104	8.248	8.243	8.272	VV	1332	18159	0.76%	0.040%
105	8.290	8.272	8.301	VV	864	13393	0.56%	0.030%
106	8.321	8.301	8.364	VV	2584	59729	2.50%	0.133%
107	8.369	8.364	8.397	VV	1029	15542	0.65%	0.035%
108	8.429	8.397	8.447	VV	1923	38550	1.61%	0.086%
109	8.471	8.447	8.482	VV	2168	36234	1.52%	0.081%
110	8.503	8.482	8.565	VV	7152	149568	6.26%	0.332%
111	8.576	8.565	8.588	VV	1450	18398	0.77%	0.041%
112	8.612	8.588	8.732	VV	33446	680726	28.49%	1.513%
113	8.750	8.732	8.820	VV	1174	38364	1.61%	0.085%
114	8.833	8.820	8.847	VV	603	7865	0.33%	0.017%
115	8.860	8.847	8.873	VV	841	10990	0.46%	0.024%
116	8.884	8.873	8.890	VV	917	8538	0.36%	0.019%
117	8.913	8.890	8.942	VV	3661	67298	2.82%	0.150%
118	8.953	8.942	8.978	VV	2048	32022	1.34%	0.071%
119	8.994	8.978	9.008	VV	1484	22074	0.92%	0.049%
120	9.019	9.008	9.027	VV	1349	14129	0.59%	0.031%
121	9.044	9.027	9.078	VV	2926	43945	1.84%	0.098%
122	9.100	9.078	9.110	VV	778	11350	0.47%	0.025%
123	9.121	9.110	9.136	VV	814	10044	0.42%	0.022%
124	9.158	9.136	9.178	VV	1446	25882	1.08%	0.058%
125	9.242	9.178	9.278	VV	2096	90063	3.77%	0.200%
126	9.282	9.278	9.308	VV	1319	19100	0.80%	0.042%
127	9.332	9.308	9.357	VV	5852	80453	3.37%	0.179%
128	9.370	9.357	9.403	VV	1848	33980	1.42%	0.076%
129	9.419	9.403	9.424	VV	725	8366	0.35%	0.019%
130	9.443	9.424	9.463	VV	1485	25661	1.07%	0.057%
131	9.482	9.463	9.504	VV	2485	37753	1.58%	0.084%
132	9.522	9.504	9.546	VV	1779	30083	1.26%	0.067%
133	9.574	9.546	9.610	VV	4810	92394	3.87%	0.205%
134	9.618	9.610	9.648	VV	1762	28858	1.21%	0.064%
135	9.666	9.648	9.687	VV	3469	50734	2.12%	0.113%
136	9.719	9.687	9.765	VV	6629	155784	6.52%	0.346%
137	9.784	9.765	9.819	VV	2157	45331	1.90%	0.101%
138	9.856	9.819	9.904	VV	4749	109779	4.59%	0.244%
139	9.914	9.904	9.933	VV	1385	19812	0.83%	0.044%
140	9.948	9.933	9.958	VV	1206	16062	0.67%	0.036%
141	9.987	9.958	10.095	VV	71780	1338888	56.03%	2.976%

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142	10.115	10.095	10.166	VV	7321	165994	6.95%	0.369%
143	10.184	10.166	10.213	VV	2572	63080	2.64%	0.140%
144	10.219	10.213	10.260	VV	2118	43357	1.81%	0.096%
145	10.264	10.260	10.269	VV	851	3864	0.16%	0.009%
146	10.287	10.269	10.323	VV	1280	29002	1.21%	0.064%
147	10.334	10.323	10.363	VV	723	10738	0.45%	0.024%
148	10.378	10.363	10.393	VV	396	5466	0.23%	0.012%
149	10.415	10.393	10.435	VV	536	10779	0.45%	0.024%
150	10.459	10.435	10.492	VV	9903	145728	6.10%	0.324%
151	10.504	10.492	10.530	VV	2338	33656	1.41%	0.075%
152	10.560	10.530	10.575	VV	1916	33632	1.41%	0.075%
153	10.596	10.575	10.620	VV	2978	55296	2.31%	0.123%
154	10.641	10.620	10.669	VV	2409	45099	1.89%	0.100%
155	10.684	10.669	10.688	VV	774	7653	0.32%	0.017%
156	10.713	10.688	10.753	VV	3035	80565	3.37%	0.179%
157	10.770	10.753	10.784	VV	2768	42175	1.76%	0.094%
158	10.792	10.784	10.820	VV	2498	44694	1.87%	0.099%
159	10.857	10.820	10.899	VV	5263	135476	5.67%	0.301%
160	10.927	10.899	10.965	VV	5522	116710	4.88%	0.259%
161	10.968	10.965	10.971	VV	1064	3840	0.16%	0.009%
162	10.990	10.971	11.008	VV	1324	23374	0.98%	0.052%
163	11.012	11.008	11.032	VV	815	9256	0.39%	0.021%
164	11.051	11.032	11.065	VV	621	9760	0.41%	0.022%
165	11.085	11.065	11.096	VV	864	12205	0.51%	0.027%
166	11.118	11.096	11.172	VV	32370	491293	20.56%	1.092%
167	11.197	11.172	11.354	VV	29293	607418	25.42%	1.350%
168	11.369	11.354	11.399	VV	499	8446	0.35%	0.019%
169	11.437	11.399	11.458	PV	2962	53442	2.24%	0.119%
170	11.464	11.458	11.478	VV	1821	20276	0.85%	0.045%
171	11.491	11.478	11.501	VV	2001	25581	1.07%	0.057%
172	11.512	11.501	11.536	VV	2216	34496	1.44%	0.077%
173	11.562	11.536	11.591	VV	3642	61201	2.56%	0.136%
174	11.613	11.591	11.629	VV	2505	42423	1.78%	0.094%
175	11.651	11.629	11.694	VV	6453	112785	4.72%	0.251%
176	11.719	11.694	11.737	VV	2657	38820	1.62%	0.086%
177	11.760	11.737	11.772	VV	2468	36888	1.54%	0.082%
178	11.778	11.772	11.821	VV	2236	40908	1.71%	0.091%
179	11.846	11.821	11.869	VV	981	20379	0.85%	0.045%
180	11.882	11.869	11.893	VV	495	5983	0.25%	0.013%
181	11.924	11.893	11.941	VV	12043	158351	6.63%	0.352%
182	11.957	11.941	12.007	VV	13750	240058	10.05%	0.534%
183	12.035	12.007	12.057	VV	22398	353317	14.79%	0.785%
184	12.072	12.057	12.087	VV	11946	153928	6.44%	0.342%
185	12.103	12.087	12.152	VV	14701	238411	9.98%	0.530%
186	12.178	12.152	12.182	PV	923	8406	0.35%	0.019%
187	12.212	12.182	12.218	VV	2434	34887	1.46%	0.078%
188	12.233	12.218	12.253	VV	3198	47775	2.00%	0.106%
189	12.263	12.253	12.278	VV	820	8616	0.36%	0.019%
190	12.323	12.278	12.377	VV	6383	135989	5.69%	0.302%
191	12.401	12.377	12.443	VV	5890	120603	5.05%	0.268%
192	12.461	12.443	12.476	VV	2412	36051	1.51%	0.080%
193	12.496	12.476	12.529	VV	23361	288490	12.07%	0.641%
194	12.539	12.529	12.562	VV	2590	36502	1.53%	0.081%

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195	12.581	12.562	12.603	VV	2118	38664	1.62%	0.086%
196	12.607	12.603	12.616	VV	1835	12679	0.53%	0.028%
197	12.623	12.616	12.635	VV	1632	15764	0.66%	0.035%
198	12.650	12.635	12.659	VV	2409	27727	1.16%	0.062%
199	12.672	12.659	12.698	VV	3044	50174	2.10%	0.112%
200	12.718	12.698	12.762	VV	6582	122209	5.11%	0.272%
201	12.796	12.762	12.808	PV	8982	125560	5.25%	0.279%
202	12.826	12.808	12.846	VV	21647	295379	12.36%	0.657%
203	12.865	12.846	12.883	VV	11092	196186	8.21%	0.436%
204	12.886	12.883	12.918	VV	7965	113357	4.74%	0.252%
205	12.944	12.918	13.010	VV	194131	2351659	98.41%	5.227%
206	13.043	13.010	13.059	VV	2180	37585	1.57%	0.084%
207	13.086	13.059	13.117	VV	16516	276441	11.57%	0.614%
208	13.134	13.117	13.153	VV	8918	120505	5.04%	0.268%
209	13.167	13.153	13.171	VV	3780	36792	1.54%	0.082%
210	13.192	13.171	13.216	VV	8000	133657	5.59%	0.297%
211	13.243	13.216	13.282	VV	172471	2176480	91.08%	4.838%
212	13.301	13.282	13.319	VV	12335	173758	7.27%	0.386%
213	13.337	13.319	13.393	VV	14186	256192	10.72%	0.569%
214	13.425	13.393	13.446	VV	4034	75201	3.15%	0.167%
215	13.470	13.446	13.476	VV	2320	32936	1.38%	0.073%
216	13.491	13.476	13.502	VV	2781	33210	1.39%	0.074%
217	13.523	13.502	13.556	VV	8600	144771	6.06%	0.322%
218	13.576	13.556	13.598	VV	6649	92340	3.86%	0.205%
219	13.610	13.598	13.622	VV	1375	15981	0.67%	0.036%
220	13.650	13.622	13.662	VV	5366	98579	4.13%	0.219%
221	13.667	13.662	13.685	VV	5624	59474	2.49%	0.132%
222	13.707	13.685	13.733	VV	15687	263979	11.05%	0.587%
223	13.744	13.733	13.770	VV	3680	47213	1.98%	0.105%
224	13.838	13.770	13.885	PV	40874	796685	33.34%	1.771%
225	13.901	13.885	13.923	VV	4824	72894	3.05%	0.162%
226	13.946	13.923	13.967	VV	27106	364651	15.26%	0.811%
227	13.985	13.967	14.010	VV	22839	335169	14.03%	0.745%
228	14.023	14.010	14.053	VV	7193	142071	5.95%	0.316%
229	14.076	14.053	14.091	VV	10609	187802	7.86%	0.417%
230	14.114	14.091	14.137	VV	24809	378814	15.85%	0.842%
231	14.156	14.137	14.189	VV	17324	268074	11.22%	0.596%
232	14.192	14.189	14.205	VV	2988	24122	1.01%	0.054%
233	14.210	14.205	14.216	VV	2681	16240	0.68%	0.036%
234	14.219	14.216	14.262	VV	2554	39849	1.67%	0.089%
235	14.284	14.262	14.298	VV	2790	40593	1.70%	0.090%
236	14.312	14.298	14.331	VV	2159	32713	1.37%	0.073%
237	14.346	14.331	14.380	VV	1704	26207	1.10%	0.058%
238	14.385	14.380	14.398	VV	587	3193	0.13%	0.007%
239	14.429	14.398	14.460	PV	2966	57900	2.42%	0.129%
240	14.480	14.460	14.498	VV	3444	58675	2.46%	0.130%
241	14.549	14.498	14.565	VV	9472	231716	9.70%	0.515%
242	14.584	14.565	14.625	VV	9518	220663	9.23%	0.490%
243	14.649	14.625	14.664	VV	8681	152343	6.38%	0.339%
244	14.680	14.664	14.729	VV	9789	213385	8.93%	0.474%
245	14.761	14.729	14.792	VV	19809	376252	15.75%	0.836%
246	14.819	14.792	14.848	VV	31958	554753	23.21%	1.233%

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247	14.850	14.848	14.861	VV	7064	51005	2.13%	0.113%
248	14.879	14.861	14.897	VV	8963	159056	6.66%	0.354%
249	14.906	14.897	14.923	VV	7168	90961	3.81%	0.202%
250	14.940	14.923	14.955	VV	5379	80786	3.38%	0.180%
251	14.985	14.955	15.066	VV	128440	1890269	79.10%	4.202%
252	15.094	15.066	15.109	PV	14547	187446	7.84%	0.417%
253	15.134	15.109	15.154	VV	114184	1542790	64.56%	3.429%
254	15.174	15.154	15.248	VV	116944	1777978	74.40%	3.952%
255	15.251	15.248	15.257	VV	2049	9413	0.39%	0.021%
256	15.294	15.257	15.310	VV	22311	342570	14.34%	0.761%
257	15.324	15.310	15.392	VV	16183	385274	16.12%	0.856%
258	15.407	15.392	15.424	VV	3896	57160	2.39%	0.127%
259	15.454	15.424	15.467	VV	8342	160047	6.70%	0.356%
260	15.482	15.467	15.509	VV	10991	202511	8.47%	0.450%
261	15.525	15.509	15.541	VV	5525	80791	3.38%	0.180%
262	15.570	15.541	15.640	VV	52061	1100507	46.05%	2.446%
263	15.644	15.640	15.664	VV	3799	27916	1.17%	0.062%
264	15.705	15.664	15.744	PV	6425	208912	8.74%	0.464%
265	15.766	15.744	15.785	VV	7483	114828	4.81%	0.255%
266	15.810	15.785	15.833	VV	36739	525428	21.99%	1.168%
267	15.849	15.833	15.881	VV	17220	300517	12.58%	0.668%
268	15.898	15.881	15.923	VV	10456	197848	8.28%	0.440%
269	15.926	15.923	15.931	VV	6803	29525	1.24%	0.066%
270	15.972	15.931	16.022	VV	23238	724157	30.30%	1.610%
271	16.042	16.022	16.077	VV	9140	187352	7.84%	0.416%
272	16.097	16.077	16.122	VV	4559	84614	3.54%	0.188%
273	16.137	16.122	16.163	VV	6528	100488	4.21%	0.223%
274	16.166	16.163	16.172	VV	2272	11660	0.49%	0.026%
275	16.178	16.172	16.183	VV	1484	9435	0.39%	0.021%
276	16.218	16.183	16.227	VV	7971	137848	5.77%	0.306%
277	16.236	16.227	16.270	VV	6879	122634	5.13%	0.273%
278	16.278	16.270	16.302	VV	3838	45179	1.89%	0.100%
279	16.311	16.302	16.333	VV	2770	32214	1.35%	0.072%
280	16.347	16.333	16.368	VV	2622	29102	1.22%	0.065%
281	16.411	16.368	16.440	PV	6610	149439	6.25%	0.332%
282	16.457	16.440	16.477	VV	6845	103474	4.33%	0.230%
283	16.504	16.477	16.539	VV	11996	281656	11.79%	0.626%
284	16.616	16.539	16.648	VV	12918	458063	19.17%	1.018%
285	16.705	16.648	16.723	VV	155450	2389639	100.00%	5.312%
286	16.732	16.723	16.770	VV	63382	822334	34.41%	1.828%
287	16.783	16.770	16.803	VV	5678	85574	3.58%	0.190%
288	16.836	16.803	16.863	VV	38196	625672	26.18%	1.391%
289	16.869	16.863	16.887	VV	8994	101159	4.23%	0.225%
290	16.896	16.887	16.924	VV	5648	88973	3.72%	0.198%
291	16.986	16.924	17.004	VV	37729	642007	26.87%	1.427%
292	17.027	17.004	17.060	VV	97089	1410986	59.05%	3.136%
293	17.087	17.060	17.126	VV	123284	1766144	73.91%	3.926%
294	17.130	17.126	17.135	VV	6947	37555	1.57%	0.083%
295	17.140	17.135	17.153	VV	7189	68150	2.85%	0.151%
296	17.189	17.153	17.229	VV	37560	714328	29.89%	1.588%
297	17.233	17.229	17.243	VV	6306	46709	1.95%	0.104%
298	17.249	17.243	17.253	VV	5486	32649	1.37%	0.073%
299	17.257	17.253	17.278	VV	6000	63449	2.66%	0.141%

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300	17.336	17.278	17.376	VV	14703	448330	18.76%	0.997%
301	17.399	17.376	17.411	VV	6723	99688	4.17%	0.222%
302	17.456	17.411	17.462	VV	19188	333406	13.95%	0.741%
303	17.470	17.462	17.521	VV	21232	408836	17.11%	0.909%
304	17.553	17.521	17.561	VV	6418	107849	4.51%	0.240%
305	17.592	17.561	17.599	VV	11938	210265	8.80%	0.467%
306	17.616	17.599	17.647	VV	16494	272768	11.41%	0.606%
307	17.652	17.647	17.660	VV	4244	26986	1.13%	0.060%
308	17.681	17.660	17.696	VV	9143	141608	5.93%	0.315%
309	17.712	17.696	17.728	VV	6997	104287	4.36%	0.232%
310	17.749	17.728	17.773	VV	14808	279687	11.70%	0.622%
311	17.779	17.773	17.834	VV	8668	184052	7.70%	0.409%
312	17.856	17.834	17.859	PV	3958	39822	1.67%	0.089%
313	17.877	17.859	17.899	VV	7223	118627	4.96%	0.264%
314	17.903	17.899	17.912	VV	3874	20066	0.84%	0.045%
315	17.915	17.912	17.922	VV	2298	9027	0.38%	0.020%
316	17.979	17.922	17.988	PV	1658	59892	2.51%	0.133%
					Sum of corrected areas:	44989371		

FG052225.M Thu Jun 05 06:15:13 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/28/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-54	SDG No.:	Q2150
Lab Sample ID:	Q2150-09	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.6
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015897.D	1	06/04/25 08:30	06/04/25 12:48	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	3240		202	1990	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	15.9		37 - 130	80%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015897.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 12:48
Operator : YP\AJ
Sample : Q2150-09
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-54

Integration File: autoint1.e
Quant Time: Jun 05 03:02:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.016	1943201	15.910 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

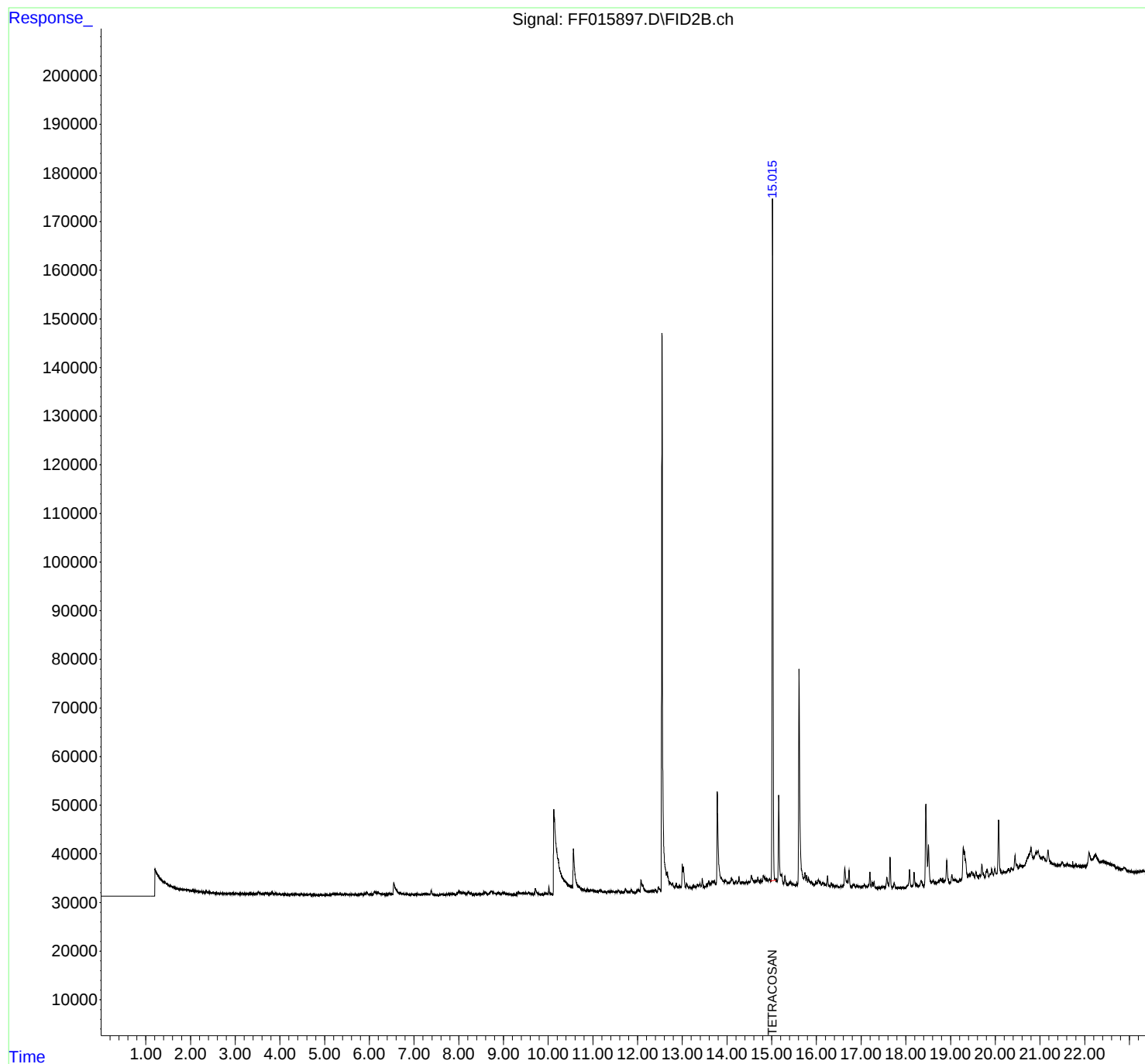
(m)=manual int.

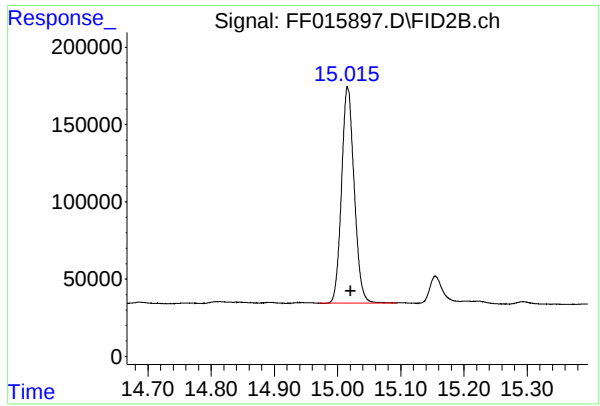
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015897.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 12:48
Operator : YP\AJ
Sample : Q2150-09
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-54

Integration File: autoint1.e
Quant Time: Jun 05 03:02:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.016 min
Delta R.T.: -0.005 min
Response: 1943201
Conc: 15.91 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-54

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015897.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 12:48
 Sample : Q2150-09
 Misc :
 ALS Vial : 71 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.535	4.518	4.541	BV	114	417	0.02%	0.003%
2	4.546	4.541	4.569	PV	92	719	0.03%	0.006%
3	4.576	4.569	4.585	VV	107	720	0.03%	0.006%
4	4.594	4.585	4.606	VV	132	1013	0.05%	0.008%
5	4.610	4.606	4.621	VV	130	680	0.03%	0.005%
6	4.626	4.621	4.650	VV	102	1594	0.08%	0.012%
7	4.652	4.650	4.660	VV	142	578	0.03%	0.005%
8	4.676	4.660	4.696	VV	198	2349	0.11%	0.018%
9	4.701	4.696	4.705	VV	124	453	0.02%	0.004%
10	4.709	4.705	4.714	VV	130	489	0.02%	0.004%
11	4.724	4.714	4.741	VV	154	1440	0.07%	0.011%
12	4.750	4.741	4.763	PV	147	1179	0.06%	0.009%
13	4.771	4.763	4.779	VV	155	991	0.05%	0.008%
14	4.797	4.779	4.820	VV	164	2644	0.13%	0.021%
15	4.825	4.820	4.835	VV	120	730	0.04%	0.006%
16	4.840	4.835	4.864	VV	136	1455	0.07%	0.011%
17	4.871	4.864	4.883	VV	172	1137	0.05%	0.009%
18	4.889	4.883	4.916	VV	129	2031	0.10%	0.016%
19	4.921	4.916	4.935	VV	161	1201	0.06%	0.009%
20	4.939	4.935	4.966	VV	147	1589	0.08%	0.012%
21	4.974	4.966	4.983	VV	149	1032	0.05%	0.008%
22	4.998	4.983	5.010	VV	145	1524	0.07%	0.012%
23	5.021	5.010	5.046	VV	202	2135	0.10%	0.017%
24	5.056	5.046	5.070	PV	146	1459	0.07%	0.011%
25	5.078	5.070	5.084	VV	132	851	0.04%	0.007%
26	5.087	5.084	5.093	VV	122	692	0.03%	0.005%
27	5.121	5.093	5.129	VV	244	3443	0.17%	0.027%
28	5.135	5.129	5.151	VV	259	2732	0.13%	0.021%
29	5.160	5.151	5.169	VV	280	2467	0.12%	0.019%
30	5.172	5.169	5.184	VV	271	2142	0.10%	0.017%
31	5.186	5.184	5.193	VV	256	1222	0.06%	0.010%
32	5.227	5.193	5.245	VV	341	8601	0.41%	0.067%
33	5.269	5.245	5.276	VV	308	4769	0.23%	0.037%
34	5.287	5.276	5.293	VV	374	2826	0.14%	0.022%
35	5.295	5.293	5.307	VV	306	2168	0.10%	0.017%
36	5.317	5.307	5.348	VV	312	7027	0.34%	0.055%

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37	5.353	5.348	5.368	VV	331	2905	0.14%	0.023%
38	5.374	5.368	5.381	VV	248	1774	0.09%	0.014%
39	5.384	5.381	5.390	VV	204	1291	0.06%	0.010%
40	5.399	5.390	5.418	VV	290	3827	0.18%	0.030%
41	5.436	5.418	5.442	VV	262	3145	0.15%	0.025%
42	5.448	5.442	5.456	VV	296	1976	0.09%	0.015%
43	5.462	5.456	5.468	VV	265	1813	0.09%	0.014%
44	5.471	5.468	5.476	VV	231	1023	0.05%	0.008%
45	5.489	5.476	5.515	VV	292	5428	0.26%	0.042%
46	5.519	5.515	5.526	VV	241	1247	0.06%	0.010%
47	5.538	5.526	5.547	VV	204	2365	0.11%	0.018%
48	5.555	5.547	5.589	VV	253	4806	0.23%	0.038%
49	5.603	5.589	5.619	VV	230	3106	0.15%	0.024%
50	5.624	5.619	5.637	VV	209	1945	0.09%	0.015%
51	5.644	5.637	5.653	VV	238	1850	0.09%	0.014%
52	5.671	5.653	5.693	VV	298	4961	0.24%	0.039%
53	5.697	5.693	5.701	VV	202	846	0.04%	0.007%
54	5.706	5.701	5.712	VV	193	1081	0.05%	0.008%
55	5.735	5.712	5.770	VV	226	5280	0.25%	0.041%
56	5.807	5.770	5.826	VV	318	7235	0.35%	0.057%
57	5.831	5.826	5.851	VV	270	3045	0.15%	0.024%
58	5.854	5.851	5.867	VV	197	1712	0.08%	0.013%
59	5.892	5.867	5.911	VV	352	6945	0.33%	0.054%
60	5.942	5.911	5.984	VV	619	17297	0.83%	0.135%
61	5.990	5.984	6.011	VV	292	4116	0.20%	0.032%
62	6.021	6.011	6.034	VV	236	3158	0.15%	0.025%
63	6.038	6.034	6.046	VV	311	1337	0.06%	0.010%
64	6.050	6.046	6.061	VV	200	1304	0.06%	0.010%
65	6.065	6.061	6.079	VV	176	1616	0.08%	0.013%
66	6.115	6.079	6.162	VV	719	25874	1.24%	0.202%
67	6.185	6.162	6.241	VV	728	23938	1.15%	0.187%
68	6.245	6.241	6.259	VV	379	3450	0.17%	0.027%
69	6.266	6.259	6.285	VV	311	4366	0.21%	0.034%
70	6.299	6.285	6.303	VV	263	2499	0.12%	0.020%
71	6.313	6.303	6.317	VV	274	2084	0.10%	0.016%
72	6.334	6.317	6.361	VV	329	6823	0.33%	0.053%
73	6.363	6.361	6.368	VV	239	980	0.05%	0.008%
74	6.371	6.368	6.377	VV	254	1206	0.06%	0.009%
75	6.394	6.377	6.418	VV	253	4715	0.23%	0.037%
76	6.441	6.418	6.458	VV	521	8330	0.40%	0.065%
77	6.464	6.458	6.489	VV	392	5136	0.25%	0.040%
78	6.492	6.489	6.520	VV	260	3948	0.19%	0.031%
79	6.546	6.520	6.683	VV	2543	109078	5.23%	0.853%
80	6.685	6.683	6.690	VV	440	1661	0.08%	0.013%
81	6.694	6.690	6.699	VV	398	2090	0.10%	0.016%
82	6.705	6.699	6.710	VV	386	2313	0.11%	0.018%
83	6.720	6.710	6.728	VV	363	3897	0.19%	0.030%
84	6.733	6.728	6.792	VV	360	11759	0.56%	0.092%
85	6.799	6.792	6.806	VV	328	2203	0.11%	0.017%
86	6.825	6.806	6.877	VV	295	8192	0.39%	0.064%
87	6.889	6.877	6.923	VV	168	3307	0.16%	0.026%
88	6.933	6.923	6.939	VV	168	1442	0.07%	0.011%
89	6.943	6.939	6.947	VV	225	1011	0.05%	0.008%

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90	6.961	6.947	6.994	VV	299	6382	0.31%	0.050%
91	6.996	6.994	7.001	VV	250	887	0.04%	0.007%
92	7.008	7.001	7.017	VV	214	1973	0.09%	0.015%
93	7.022	7.017	7.027	VV	194	1114	0.05%	0.009%
94	7.029	7.027	7.039	VV	230	1158	0.06%	0.009%
95	7.049	7.039	7.080	VV	270	4769	0.23%	0.037%
96	7.087	7.080	7.102	VV	231	2383	0.11%	0.019%
97	7.114	7.102	7.129	VV	246	3127	0.15%	0.024%
98	7.154	7.129	7.174	VV	260	5553	0.27%	0.043%
99	7.184	7.174	7.205	VV	263	4220	0.20%	0.033%
100	7.210	7.205	7.231	VV	296	3966	0.19%	0.031%
101	7.235	7.231	7.242	VV	270	1625	0.08%	0.013%
102	7.250	7.242	7.266	VV	348	3682	0.18%	0.029%
103	7.287	7.266	7.303	VV	306	5549	0.27%	0.043%
104	7.307	7.303	7.335	VV	260	3843	0.18%	0.030%
105	7.355	7.335	7.361	VV	269	3369	0.16%	0.026%
106	7.385	7.361	7.425	VV	1056	20536	0.99%	0.161%
107	7.429	7.425	7.464	VV	201	3211	0.15%	0.025%
108	7.467	7.464	7.501	VV	138	1983	0.10%	0.016%
109	7.512	7.501	7.539	VV	121	1137	0.05%	0.009%
110	7.559	7.539	7.564	VV	92	754	0.04%	0.006%
111	7.591	7.564	7.599	VV	211	2898	0.14%	0.023%
112	7.603	7.599	7.622	VV	184	1930	0.09%	0.015%
113	7.634	7.622	7.641	VV	182	1653	0.08%	0.013%
114	7.647	7.641	7.653	VV	216	1208	0.06%	0.009%
115	7.657	7.653	7.679	VV	181	2123	0.10%	0.017%
116	7.683	7.679	7.709	VV	107	1205	0.06%	0.009%
117	7.737	7.709	7.749	VV	245	4293	0.21%	0.034%
118	7.754	7.749	7.777	VV	264	3399	0.16%	0.027%
119	7.788	7.777	7.807	VV	247	3639	0.17%	0.028%
120	7.813	7.807	7.819	VV	283	1533	0.07%	0.012%
121	7.824	7.819	7.827	VV	221	991	0.05%	0.008%
122	7.831	7.827	7.846	VV	276	2176	0.10%	0.017%
123	7.875	7.846	7.886	VV	260	4924	0.24%	0.038%
124	7.888	7.886	7.892	VV	221	776	0.04%	0.006%
125	7.897	7.892	7.911	VV	222	1956	0.09%	0.015%
126	7.915	7.911	7.917	VV	159	631	0.03%	0.005%
127	7.921	7.917	7.938	VV	197	2072	0.10%	0.016%
128	8.003	7.938	8.077	VV	837	40874	1.96%	0.320%
129	8.096	8.077	8.151	VV	656	19866	0.95%	0.155%
130	8.161	8.151	8.165	VV	323	2589	0.12%	0.020%
131	8.170	8.165	8.182	VV	378	2858	0.14%	0.022%
132	8.208	8.182	8.235	VV	676	16043	0.77%	0.125%
133	8.240	8.235	8.267	VV	522	7146	0.34%	0.056%
134	8.271	8.267	8.274	VV	304	1219	0.06%	0.010%
135	8.285	8.274	8.315	VV	331	6027	0.29%	0.047%
136	8.326	8.315	8.349	VV	242	3554	0.17%	0.028%
137	8.355	8.349	8.374	VV	187	2131	0.10%	0.017%
138	8.382	8.374	8.400	VV	197	1873	0.09%	0.015%
139	8.415	8.400	8.422	VV	173	1417	0.07%	0.011%
140	8.438	8.422	8.467	VV	318	5228	0.25%	0.041%
141	8.471	8.467	8.492	VV	261	3037	0.15%	0.024%

					rteres			
142	8.498	8.492	8.508	VV	260	2027	0.10%	0.016%
143	8.519	8.508	8.542	VV	215	3519	0.17%	0.028%
144	8.561	8.542	8.584	VV	827	12753	0.61%	0.100%
145	8.594	8.584	8.600	VV	583	5017	0.24%	0.039%
146	8.602	8.600	8.631	VV	513	7381	0.35%	0.058%
147	8.635	8.631	8.647	VV	298	2540	0.12%	0.020%
148	8.651	8.647	8.659	VV	250	1637	0.08%	0.013%
149	8.667	8.659	8.672	VV	307	2101	0.10%	0.016%
150	8.723	8.672	8.768	VV	812	33764	1.62%	0.264%
151	8.772	8.768	8.781	VV	587	4215	0.20%	0.033%
152	8.786	8.781	8.855	VV	526	15476	0.74%	0.121%
153	8.883	8.855	8.927	VV	595	15206	0.73%	0.119%
154	8.934	8.927	8.946	VV	287	2765	0.13%	0.022%
155	8.971	8.946	8.998	VV	573	12330	0.59%	0.096%
156	9.013	8.998	9.056	VV	637	13770	0.66%	0.108%
157	9.075	9.056	9.080	VV	325	3621	0.17%	0.028%
158	9.083	9.080	9.099	VV	293	2726	0.13%	0.021%
159	9.102	9.099	9.106	VV	214	865	0.04%	0.007%
160	9.109	9.106	9.122	VV	184	1610	0.08%	0.013%
161	9.127	9.122	9.134	VV	196	1059	0.05%	0.008%
162	9.145	9.134	9.151	VV	193	1692	0.08%	0.013%
163	9.155	9.151	9.157	VV	151	432	0.02%	0.003%
164	9.162	9.157	9.169	VV	161	940	0.05%	0.007%
165	9.183	9.169	9.206	VV	197	2654	0.13%	0.021%
166	9.209	9.206	9.237	VV	132	1394	0.07%	0.011%
167	9.271	9.237	9.286	VV	193	4198	0.20%	0.033%
168	9.322	9.286	9.373	VV	665	20984	1.01%	0.164%
169	9.378	9.373	9.404	VV	400	6497	0.31%	0.051%
170	9.427	9.404	9.446	VV	502	10224	0.49%	0.080%
171	9.449	9.446	9.461	VV	347	2874	0.14%	0.022%
172	9.464	9.461	9.474	VV	384	2557	0.12%	0.020%
173	9.501	9.474	9.524	VV	433	9751	0.47%	0.076%
174	9.559	9.524	9.635	VV	629	21247	1.02%	0.166%
175	9.639	9.635	9.651	VV	224	1805	0.09%	0.014%
176	9.654	9.651	9.658	VV	238	788	0.04%	0.006%
177	9.712	9.658	9.797	VV	1371	40733	1.95%	0.318%
178	9.804	9.797	9.811	VV	218	1294	0.06%	0.010%
179	9.814	9.811	9.838	VV	161	2182	0.10%	0.017%
180	9.852	9.838	9.871	VV	194	2474	0.12%	0.019%
181	9.893	9.871	9.909	VV	137	2425	0.12%	0.019%
182	9.929	9.909	9.964	VV	299	8198	0.39%	0.064%
183	9.984	9.964	9.991	VV	287	3925	0.19%	0.031%
184	9.993	9.991	9.995	VV	229	587	0.03%	0.005%
185	10.017	9.995	10.066	VV	1732	27737	1.33%	0.217%
186	10.073	10.066	10.103	VV	233	2956	0.14%	0.023%
187	10.127	10.103	10.384	PV	17637	1154172	55.38%	9.022%
188	10.389	10.384	10.444	VV	2744	83774	4.02%	0.655%
189	10.447	10.444	10.457	VV	1961	15128	0.73%	0.118%
190	10.461	10.457	10.466	VV	1938	9869	0.47%	0.077%
191	10.468	10.466	10.505	VV	1944	41357	1.98%	0.323%
192	10.516	10.505	10.542	VV	1824	37478	1.80%	0.293%
193	10.565	10.542	10.679	VV	9403	318323	15.27%	2.488%
194	10.703	10.679	10.729	VV	1674	44323	2.13%	0.346%

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195	10.733	10.729	10.749	VV	1242	13718	0.66%	0.107%
196	10.759	10.749	10.788	VV	1116	23330	1.12%	0.182%
197	10.801	10.788	10.833	VV	1007	23720	1.14%	0.185%
198	10.837	10.833	10.856	VV	764	9572	0.46%	0.075%
199	10.880	10.856	10.901	VV	1039	23050	1.11%	0.180%
200	10.907	10.901	10.917	VV	735	6546	0.31%	0.051%
201	10.949	10.917	10.970	VV	890	24202	1.16%	0.189%
202	10.981	10.970	10.986	VV	826	7463	0.36%	0.058%
203	10.993	10.986	11.012	VV	853	11490	0.55%	0.090%
204	11.016	11.012	11.033	VV	726	8862	0.43%	0.069%
205	11.037	11.033	11.092	VV	725	20414	0.98%	0.160%
206	11.094	11.092	11.106	VV	513	3886	0.19%	0.030%
207	11.127	11.106	11.132	VV	538	7947	0.38%	0.062%
208	11.153	11.132	11.201	VV	791	25946	1.24%	0.203%
209	11.205	11.201	11.242	VV	559	10971	0.53%	0.086%
210	11.264	11.242	11.296	VV	513	13036	0.63%	0.102%
211	11.301	11.296	11.307	VV	319	2066	0.10%	0.016%
212	11.341	11.307	11.379	VV	564	19719	0.95%	0.154%
213	11.400	11.379	11.427	VV	590	13527	0.65%	0.106%
214	11.439	11.427	11.471	VV	537	12288	0.59%	0.096%
215	11.475	11.471	11.489	VV	377	3714	0.18%	0.029%
216	11.492	11.489	11.514	VV	402	5297	0.25%	0.041%
217	11.523	11.514	11.548	VV	465	8532	0.41%	0.067%
218	11.575	11.548	11.619	VV	684	18560	0.89%	0.145%
219	11.641	11.619	11.666	VV	461	9039	0.43%	0.071%
220	11.676	11.666	11.680	VV	267	1846	0.09%	0.014%
221	11.730	11.680	11.769	VV	1020	26340	1.26%	0.206%
222	11.784	11.769	11.817	VV	424	8312	0.40%	0.065%
223	11.849	11.817	11.908	VV	771	22756	1.09%	0.178%
224	11.921	11.908	11.951	VV	213	3460	0.17%	0.027%
225	12.017	11.951	12.050	VV	783	26567	1.27%	0.208%
226	12.073	12.050	12.107	VV	2726	60094	2.88%	0.470%
227	12.113	12.107	12.116	VV	1606	8767	0.42%	0.069%
228	12.119	12.116	12.166	VV	1580	28969	1.39%	0.226%
229	12.173	12.166	12.201	VV	555	9458	0.45%	0.074%
230	12.207	12.201	12.213	VV	387	2552	0.12%	0.020%
231	12.233	12.213	12.255	VV	399	8636	0.41%	0.068%
232	12.275	12.255	12.284	VV	430	5973	0.29%	0.047%
233	12.300	12.284	12.319	VV	532	8997	0.43%	0.070%
234	12.331	12.319	12.338	VV	382	3796	0.18%	0.030%
235	12.349	12.338	12.365	VV	388	5846	0.28%	0.046%
236	12.395	12.365	12.426	VV	727	17031	0.82%	0.133%
237	12.433	12.426	12.439	VV	235	1523	0.07%	0.012%
238	12.464	12.439	12.520	VV	1209	34481	1.65%	0.270%
239	12.546	12.520	12.641	VV	115015	1722312	82.64%	13.464%
240	12.658	12.641	12.723	VV	4231	148560	7.13%	1.161%
241	12.729	12.723	12.761	VV	2039	41491	1.99%	0.324%
242	12.764	12.761	12.767	VV	1647	6115	0.29%	0.048%
243	12.784	12.767	12.832	VV	1965	54283	2.60%	0.424%
244	12.864	12.832	12.886	VV	1949	45570	2.19%	0.356%
245	12.894	12.886	12.909	VV	1155	15334	0.74%	0.120%
246	12.933	12.909	12.949	VV	1373	27848	1.34%	0.218%

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247	12.961	12.949	12.974	VV	1253	17989	0.86%	0.141%
248	12.999	12.974	13.012	VV	5805	82185	3.94%	0.642%
249	13.023	13.012	13.074	VV	5198	108759	5.22%	0.850%
250	13.095	13.074	13.148	VV	1775	56981	2.73%	0.445%
251	13.167	13.148	13.185	VV	1068	22105	1.06%	0.173%
252	13.187	13.185	13.217	VV	1039	16348	0.78%	0.128%
253	13.258	13.217	13.292	VV	1337	49247	2.36%	0.385%
254	13.339	13.292	13.364	VV	1604	53311	2.56%	0.417%
255	13.392	13.364	13.423	VV	1728	50777	2.44%	0.397%
256	13.445	13.423	13.486	VV	2710	59345	2.85%	0.464%
257	13.544	13.486	13.561	VV	1665	54737	2.63%	0.428%
258	13.587	13.561	13.622	VV	2223	64114	3.08%	0.501%
259	13.667	13.622	13.687	VV	2081	71725	3.44%	0.561%
260	13.707	13.687	13.746	VV	2160	65784	3.16%	0.514%
261	13.782	13.746	13.946	VV	20311	593866	28.49%	4.642%
262	13.968	13.946	14.047	VV	2289	117282	5.63%	0.917%
263	14.096	14.047	14.112	VV	2736	83715	4.02%	0.654%
264	14.122	14.112	14.155	VV	2488	53266	2.56%	0.416%
265	14.204	14.155	14.236	VV	2139	88489	4.25%	0.692%
266	14.265	14.236	14.296	VV	2940	78063	3.75%	0.610%
267	14.342	14.296	14.409	VV	1805	115203	5.53%	0.901%
268	14.431	14.409	14.467	VV	1952	61624	2.96%	0.482%
269	14.487	14.467	14.511	VV	2009	47330	2.27%	0.370%
270	14.542	14.511	14.612	VV	3132	142439	6.83%	1.113%
271	14.628	14.612	14.653	VV	1996	47208	2.27%	0.369%
272	14.687	14.653	14.732	VV	2781	99923	4.79%	0.781%
273	14.760	14.732	14.786	VV	2111	62660	3.01%	0.490%
274	14.812	14.786	14.877	VV	3020	139451	6.69%	1.090%
275	14.892	14.877	14.919	VV	2460	55921	2.68%	0.437%
276	14.942	14.919	14.978	VV	2379	76940	3.69%	0.601%
277	15.016	14.978	15.092	VV	141699	2084178	100.00%	16.292%
278	15.100	15.092	15.124	VV	2250	40029	1.92%	0.313%
279	15.155	15.124	15.194	VV	19509	330174	15.84%	2.581%
280	15.203	15.194	15.214	VV	3255	37954	1.82%	0.297%
281	15.222	15.214	15.272	VV	3241	76210	3.66%	0.596%
282	15.294	15.272	15.368	VV	2919	96927	4.65%	0.758%
283	15.427	15.368	15.459	VV	1582	75404	3.62%	0.589%
284	15.483	15.459	15.509	VV	1280	35534	1.70%	0.278%
285	15.517	15.509	15.544	VV	1095	21511	1.03%	0.168%
286	15.562	15.544	15.574	VV	1221	20120	0.97%	0.157%
287	15.609	15.574	15.707	VV	45230	906721	43.50%	7.088%
288	15.743	15.707	15.763	VV	3526	88024	4.22%	0.688%
289	15.780	15.763	15.804	VV	2992	56609	2.72%	0.443%
290	15.821	15.804	15.869	VV	2524	73579	3.53%	0.575%
291	15.885	15.869	15.959	VV	1610	67068	3.22%	0.524%
292	15.983	15.959	16.014	VV	1634	44743	2.15%	0.350%
293	16.042	16.014	16.071	VV	2040	55244	2.65%	0.432%
294	16.081	16.071	16.119	VV	1591	37914	1.82%	0.296%
295	16.142	16.119	16.217	VV	1406	65233	3.13%	0.510%
296	16.246	16.217	16.304	VV	2809	65375	3.14%	0.511%
297	16.330	16.304	16.362	VV	1204	30789	1.48%	0.241%
298	16.378	16.362	16.407	VV	824	17696	0.85%	0.138%
299	16.451	16.407	16.484	VV	715	26247	1.26%	0.205%

					rteres			
300	16.494	16.484	16.514	VV	563	8375	0.40%	0.065%
301	16.552	16.514	16.580	VV	616	19152	0.92%	0.150%
302	16.632	16.580	16.672	VV	4353	106459	5.11%	0.832%
303	16.689	16.672	16.706	VV	1711	29520	1.42%	0.231%
304	16.728	16.706	16.791	VV	3855	74169	3.56%	0.580%
305	16.816	16.791	16.824	VV	820	12453	0.60%	0.097%
306	16.840	16.824	16.876	VV	976	20945	1.00%	0.164%
307	16.898	16.876	16.958	VV	638	26371	1.27%	0.206%
308	16.967	16.958	16.986	VV	408	6020	0.29%	0.047%
309	17.077	16.986	17.101	VV	705	32351	1.55%	0.253%
310	17.113	17.101	17.136	VV	531	8754	0.42%	0.068%
311	17.195	17.136	17.222	VV	3399	62617	3.00%	0.489%
312	17.246	17.222	17.264	VV	1307	20114	0.97%	0.157%
313	17.286	17.264	17.335	VV	1367	24170	1.16%	0.189%
314	17.347	17.335	17.367	VV	137	2034	0.10%	0.016%
315	17.374	17.367	17.394	VV	90	1244	0.06%	0.010%
316	17.409	17.394	17.426	VV	162	2029	0.10%	0.016%
317	17.461	17.426	17.486	PV	123	2534	0.12%	0.020%
					Sum of corrected areas:	12792277		

FF052125.M Thu Jun 05 03:42:51 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/28/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-53	SDG No.:	Q2150
Lab Sample ID:	Q2150-10	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.3
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015922.D	1	06/04/25 08:30	06/04/25 18:17	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	2000		198	1950	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.8		37 - 130	54%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015922.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 18:17
Operator : YP\AJ
Sample : Q2150-10
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-53

Integration File: autoint1.e
Quant Time: Jun 05 05:37:22 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.984	1319302	10.764 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

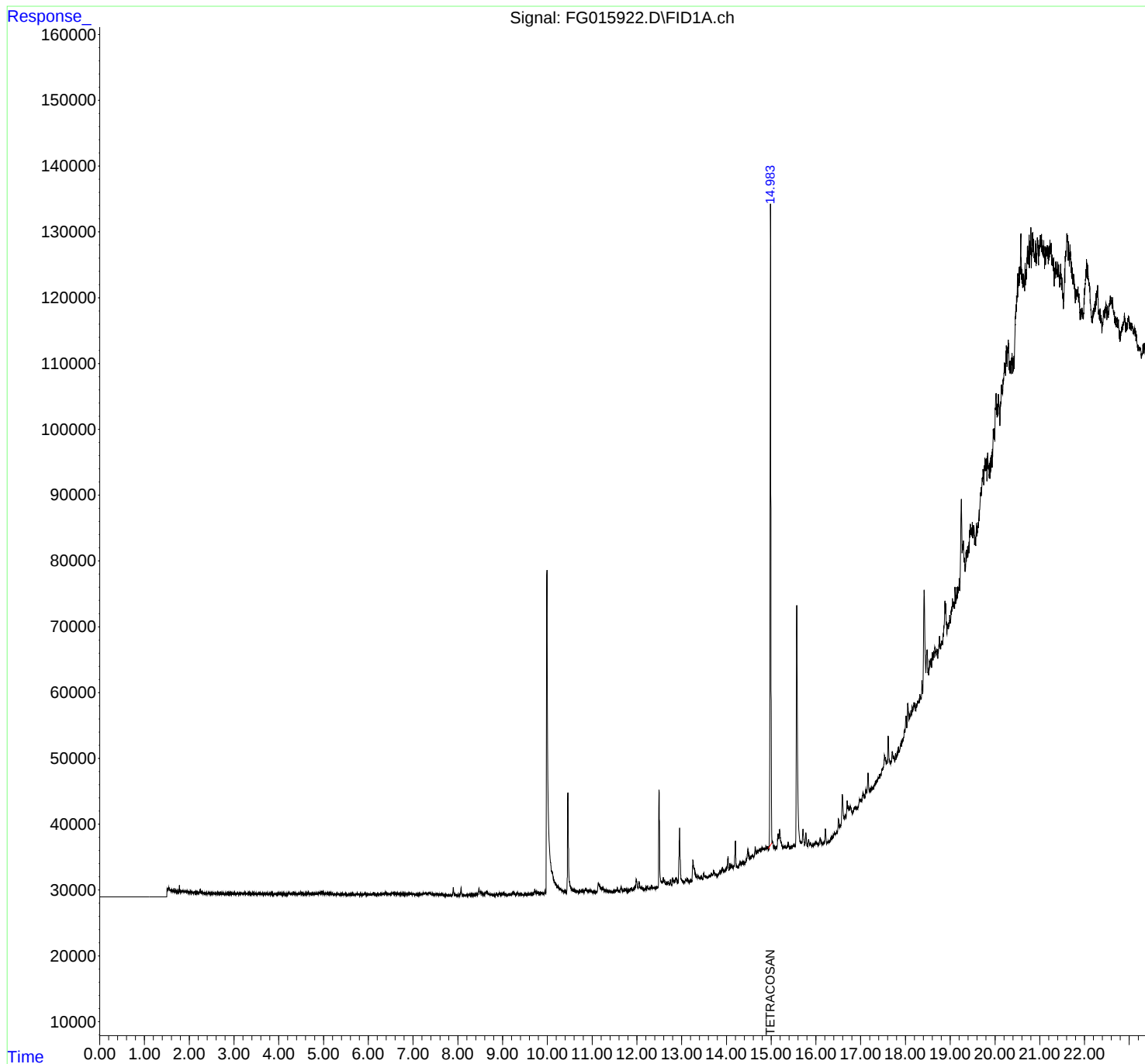
(m)=manual int.

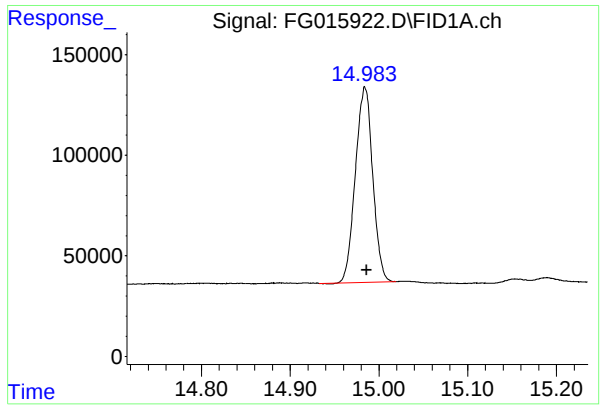
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015922.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 18:17
Operator : YP\AJ
Sample : Q2150-10
Misc :
ALS Vial : 31 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-53

Integration File: autoint1.e
Quant Time: Jun 05 05:37:22 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 14.984 min
Delta R.T.: -0.002 min
Response: 1319302
Conc: 10.76 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-53

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015922.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 18:17
 Sample : Q2150-10
 Misc :
 ALS Vial : 31 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.324	4.300	4.330	BV	155	537	0.04%	0.007%
2	4.351	4.330	4.358	PV	122	931	0.06%	0.012%
3	4.366	4.358	4.378	VV	120	867	0.06%	0.011%
4	4.385	4.378	4.396	VV	119	719	0.05%	0.009%
5	4.402	4.396	4.412	VV	116	711	0.05%	0.009%
6	4.422	4.412	4.428	PV	170	1057	0.07%	0.013%
7	4.433	4.428	4.438	VV	154	668	0.04%	0.008%
8	4.443	4.438	4.447	VV	168	535	0.04%	0.007%
9	4.490	4.447	4.506	VV	304	5831	0.38%	0.072%
10	4.509	4.506	4.555	VV	200	3381	0.22%	0.042%
11	4.559	4.555	4.568	VV	124	680	0.04%	0.008%
12	4.577	4.568	4.584	VV	116	806	0.05%	0.010%
13	4.589	4.584	4.597	VV	127	667	0.04%	0.008%
14	4.613	4.597	4.628	VV	244	2913	0.19%	0.036%
15	4.633	4.628	4.643	VV	159	1002	0.07%	0.012%
16	4.660	4.643	4.687	VV	264	4385	0.29%	0.054%
17	4.694	4.687	4.703	VV	183	1170	0.08%	0.014%
18	4.710	4.703	4.717	VV	142	990	0.07%	0.012%
19	4.740	4.717	4.746	VV	233	2847	0.19%	0.035%
20	4.750	4.746	4.758	VV	175	1173	0.08%	0.015%
21	4.764	4.758	4.773	VV	229	1648	0.11%	0.020%
22	4.776	4.773	4.783	VV	185	937	0.06%	0.012%
23	4.803	4.783	4.837	VV	190	5388	0.36%	0.067%
24	4.842	4.837	4.867	VV	186	2777	0.18%	0.034%
25	4.869	4.867	4.874	VV	167	649	0.04%	0.008%
26	4.905	4.874	4.912	VV	287	5114	0.34%	0.063%
27	4.915	4.912	4.921	VV	336	1587	0.10%	0.020%
28	4.929	4.921	4.953	VV	376	6341	0.42%	0.078%
29	4.956	4.953	4.970	VV	345	2942	0.19%	0.036%
30	4.972	4.970	4.977	VV	307	1099	0.07%	0.014%
31	4.981	4.977	4.986	VV	294	1387	0.09%	0.017%
32	4.999	4.986	5.028	VV	316	5926	0.39%	0.073%
33	5.032	5.028	5.045	VV	238	1867	0.12%	0.023%
34	5.049	5.045	5.065	VV	192	2192	0.14%	0.027%
35	5.068	5.065	5.084	VV	215	2167	0.14%	0.027%
36	5.091	5.084	5.097	VV	226	1379	0.09%	0.017%

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37	5.103	5.097	5.120	VV	221	2405	0.16%	0.030%
38	5.125	5.120	5.134	VV	223	1305	0.09%	0.016%
39	5.153	5.134	5.174	VV	258	4315	0.28%	0.053%
40	5.200	5.174	5.232	VV	220	4762	0.31%	0.059%
41	5.239	5.232	5.248	VV	203	1200	0.08%	0.015%
42	5.252	5.248	5.259	VV	166	792	0.05%	0.010%
43	5.267	5.259	5.272	VV	189	877	0.06%	0.011%
44	5.283	5.272	5.295	VV	159	1329	0.09%	0.016%
45	5.309	5.295	5.316	VV	180	1694	0.11%	0.021%
46	5.321	5.316	5.344	VV	216	1924	0.13%	0.024%
47	5.357	5.344	5.372	VV	159	1760	0.12%	0.022%
48	5.380	5.372	5.421	VV	117	2991	0.20%	0.037%
49	5.429	5.421	5.433	VV	148	566	0.04%	0.007%
50	5.437	5.433	5.448	VV	153	734	0.05%	0.009%
51	5.471	5.448	5.493	VV	174	3014	0.20%	0.037%
52	5.512	5.493	5.539	VV	168	2133	0.14%	0.026%
53	5.549	5.539	5.587	PV	125	2333	0.15%	0.029%
54	5.600	5.587	5.606	VV	150	892	0.06%	0.011%
55	5.629	5.606	5.653	VV	215	3230	0.21%	0.040%
56	5.657	5.653	5.679	VV	122	1124	0.07%	0.014%
57	5.691	5.679	5.696	VV	93	548	0.04%	0.007%
58	5.699	5.696	5.702	VV	80	216	0.01%	0.003%
59	5.727	5.702	5.753	VV	217	4050	0.27%	0.050%
60	5.757	5.753	5.763	VV	171	801	0.05%	0.010%
61	5.784	5.763	5.808	VV	141	2622	0.17%	0.032%
62	5.824	5.808	5.840	VV	146	1956	0.13%	0.024%
63	5.844	5.840	5.853	VV	120	671	0.04%	0.008%
64	5.869	5.853	5.881	VV	134	1654	0.11%	0.020%
65	5.888	5.881	5.891	VV	129	505	0.03%	0.006%
66	5.916	5.891	5.948	VV	220	4914	0.32%	0.061%
67	5.972	5.948	5.992	VV	158	2858	0.19%	0.035%
68	6.002	5.992	6.009	VV	137	1231	0.08%	0.015%
69	6.016	6.009	6.022	VV	144	906	0.06%	0.011%
70	6.031	6.022	6.036	VV	146	1100	0.07%	0.014%
71	6.040	6.036	6.062	VV	148	1621	0.11%	0.020%
72	6.067	6.062	6.077	VV	156	1035	0.07%	0.013%
73	6.088	6.077	6.095	VV	184	1550	0.10%	0.019%
74	6.099	6.095	6.106	VV	164	823	0.05%	0.010%
75	6.112	6.106	6.118	VV	137	897	0.06%	0.011%
76	6.124	6.118	6.132	VV	358	1179	0.08%	0.015%
77	6.137	6.132	6.149	VV	152	1247	0.08%	0.015%
78	6.154	6.149	6.186	VV	169	2791	0.18%	0.035%
79	6.223	6.186	6.226	VV	216	3406	0.22%	0.042%
80	6.231	6.226	6.235	VV	200	893	0.06%	0.011%
81	6.238	6.235	6.241	VV	198	536	0.04%	0.007%
82	6.244	6.241	6.258	VV	194	1706	0.11%	0.021%
83	6.267	6.258	6.303	VV	237	4501	0.30%	0.056%
84	6.308	6.303	6.325	VV	264	2582	0.17%	0.032%
85	6.340	6.325	6.368	VV	260	5457	0.36%	0.067%
86	6.379	6.368	6.412	VV	407	7654	0.50%	0.095%
87	6.424	6.412	6.456	VV	269	6045	0.40%	0.075%
88	6.465	6.456	6.472	VV	248	2213	0.15%	0.027%
89	6.475	6.472	6.489	VV	235	2143	0.14%	0.026%

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90	6.493	6.489	6.529	VV	221	5144	0.34%	0.064%
91	6.551	6.529	6.592	VV	415	10646	0.70%	0.132%
92	6.602	6.592	6.617	VV	256	3296	0.22%	0.041%
93	6.621	6.617	6.661	VV	312	5809	0.38%	0.072%
94	6.680	6.661	6.714	VV	287	7147	0.47%	0.088%
95	6.723	6.714	6.752	VV	249	5058	0.33%	0.063%
96	6.779	6.752	6.807	VV	268	7008	0.46%	0.087%
97	6.857	6.807	6.867	VV	277	7457	0.49%	0.092%
98	6.898	6.867	6.916	VV	277	6467	0.43%	0.080%
99	6.925	6.916	6.935	VV	248	2563	0.17%	0.032%
100	6.958	6.935	6.975	VV	286	5539	0.37%	0.069%
101	6.981	6.975	6.990	VV	215	1884	0.12%	0.023%
102	6.997	6.990	7.045	VV	238	5947	0.39%	0.074%
103	7.086	7.045	7.134	VV	188	7235	0.48%	0.089%
104	7.237	7.134	7.249	VV	375	14190	0.94%	0.175%
105	7.252	7.249	7.268	VV	343	3645	0.24%	0.045%
106	7.278	7.268	7.324	VV	330	9508	0.63%	0.118%
107	7.360	7.324	7.375	VV	472	10629	0.70%	0.131%
108	7.382	7.375	7.432	VV	381	9804	0.65%	0.121%
109	7.450	7.432	7.485	VV	277	7185	0.47%	0.089%
110	7.489	7.485	7.497	VV	238	1377	0.09%	0.017%
111	7.517	7.497	7.559	VV	265	8148	0.54%	0.101%
112	7.565	7.559	7.579	VV	232	2253	0.15%	0.028%
113	7.587	7.579	7.599	VV	231	2139	0.14%	0.026%
114	7.621	7.599	7.705	VV	261	9347	0.62%	0.116%
115	7.712	7.705	7.775	VV	95	2693	0.18%	0.033%
116	7.781	7.775	7.788	VV	78	430	0.03%	0.005%
117	7.800	7.788	7.814	VV	85	730	0.05%	0.009%
118	7.822	7.814	7.834	VV	52	567	0.04%	0.007%
119	7.839	7.834	7.872	VV	97	1221	0.08%	0.015%
120	7.901	7.872	7.969	VV	1209	16711	1.10%	0.207%
121	7.977	7.969	8.012	PV	75	888	0.06%	0.011%
122	8.074	8.012	8.106	VV	1260	18092	1.19%	0.224%
123	8.128	8.106	8.170	VV	113	2528	0.17%	0.031%
124	8.207	8.170	8.231	PV	107	2445	0.16%	0.030%
125	8.251	8.231	8.271	VV	131	2041	0.13%	0.025%
126	8.281	8.271	8.315	VV	164	2803	0.18%	0.035%
127	8.325	8.315	8.356	VV	183	2419	0.16%	0.030%
128	8.389	8.356	8.400	VV	177	2871	0.19%	0.036%
129	8.408	8.400	8.420	VV	170	1808	0.12%	0.022%
130	8.473	8.420	8.494	VV	1083	19439	1.28%	0.240%
131	8.508	8.494	8.580	VV	555	17534	1.16%	0.217%
132	8.638	8.580	8.726	VV	530	26106	1.72%	0.323%
133	8.732	8.726	8.784	VV	171	3155	0.21%	0.039%
134	8.791	8.784	8.810	VV	67	439	0.03%	0.005%
135	8.864	8.810	8.899	VV	415	5097	0.34%	0.063%
136	8.940	8.899	8.975	VV	348	8276	0.55%	0.102%
137	8.998	8.975	9.109	VV	234	11779	0.78%	0.146%
138	9.143	9.109	9.192	VV	155	4422	0.29%	0.055%
139	9.234	9.192	9.301	VV	542	13601	0.90%	0.168%
140	9.336	9.301	9.364	VV	509	7520	0.50%	0.093%
141	9.381	9.364	9.465	VV	259	5487	0.36%	0.068%

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142	9.492	9.465	9.507	PV	72	1211	0.08%	0.015%
143	9.527	9.507	9.552	VV	180	2780	0.18%	0.034%
144	9.562	9.552	9.577	VV	147	1187	0.08%	0.015%
145	9.579	9.577	9.589	VV	97	421	0.03%	0.005%
146	9.616	9.589	9.655	VV	189	3923	0.26%	0.049%
147	9.668	9.655	9.684	PV	176	1792	0.12%	0.022%
148	9.723	9.684	9.829	VV	634	25708	1.69%	0.318%
149	9.842	9.829	9.853	VV	243	2728	0.18%	0.034%
150	9.873	9.853	9.915	VV	302	6526	0.43%	0.081%
151	9.949	9.915	9.965	VV	700	7899	0.52%	0.098%
152	9.991	9.965	10.105	VV	48908	1112644	73.34%	13.761%
153	10.113	10.105	10.213	VV	3391	133564	8.80%	1.652%
154	10.224	10.213	10.425	VV	1281	79814	5.26%	0.987%
155	10.460	10.425	10.625	VV	15335	282321	18.61%	3.492%
156	10.639	10.625	10.665	VV	342	7219	0.48%	0.089%
157	10.682	10.665	10.698	VV	343	5695	0.38%	0.070%
158	10.727	10.698	10.805	VV	546	19150	1.26%	0.237%
159	10.859	10.805	10.907	VV	764	23955	1.58%	0.296%
160	10.930	10.907	10.949	VV	409	8066	0.53%	0.100%
161	10.960	10.949	11.035	VV	396	11915	0.79%	0.147%
162	11.051	11.035	11.062	VV	112	1606	0.11%	0.020%
163	11.079	11.062	11.108	VV	190	3569	0.24%	0.044%
164	11.141	11.108	11.215	PV	1386	52672	3.47%	0.651%
165	11.230	11.215	11.272	VV	657	18974	1.25%	0.235%
166	11.288	11.272	11.357	VV	404	14260	0.94%	0.176%
167	11.368	11.357	11.415	VV	225	4579	0.30%	0.057%
168	11.443	11.415	11.470	VV	140	2203	0.15%	0.027%
169	11.502	11.470	11.530	PV	240	5312	0.35%	0.066%
170	11.565	11.530	11.597	VV	648	11102	0.73%	0.137%
171	11.646	11.597	11.702	VV	760	16197	1.07%	0.200%
172	11.723	11.702	11.742	VV	502	6364	0.42%	0.079%
173	11.761	11.742	11.784	VV	370	5520	0.36%	0.068%
174	11.806	11.784	11.826	VV	182	2278	0.15%	0.028%
175	11.857	11.826	11.867	PV	360	5774	0.38%	0.071%
176	11.881	11.867	11.904	VV	482	6995	0.46%	0.087%
177	11.989	11.904	12.028	VV	1716	49678	3.27%	0.614%
178	12.048	12.028	12.102	VV	1350	27272	1.80%	0.337%
179	12.122	12.102	12.161	VV	406	8785	0.58%	0.109%
180	12.172	12.161	12.182	VV	200	1342	0.09%	0.017%
181	12.208	12.182	12.217	VV	336	3923	0.26%	0.049%
182	12.237	12.217	12.264	VV	546	8697	0.57%	0.108%
183	12.287	12.264	12.307	VV	221	3870	0.26%	0.048%
184	12.332	12.307	12.375	VV	574	11068	0.73%	0.137%
185	12.384	12.375	12.410	VV	206	2727	0.18%	0.034%
186	12.440	12.410	12.457	PV	288	3972	0.26%	0.049%
187	12.497	12.457	12.549	VV	14653	196570	12.96%	2.431%
188	12.556	12.549	12.569	VV	923	10047	0.66%	0.124%
189	12.589	12.569	12.644	VV	1494	40187	2.65%	0.497%
190	12.660	12.644	12.675	VV	613	9619	0.63%	0.119%
191	12.701	12.675	12.730	VV	707	15113	1.00%	0.187%
192	12.752	12.730	12.775	VV	964	13104	0.86%	0.162%
193	12.802	12.775	12.821	VV	1150	17990	1.19%	0.223%
194	12.835	12.821	12.846	VV	673	8836	0.58%	0.109%

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195	12.873	12.846	12.919	VV	1101	29873	1.97%	0.369%
196	12.955	12.919	13.042	VV	8522	160788	10.60%	1.989%
197	13.053	13.042	13.062	VV	188	1911	0.13%	0.024%
198	13.086	13.062	13.115	VV	493	10549	0.70%	0.130%
199	13.134	13.115	13.162	VV	561	9354	0.62%	0.116%
200	13.201	13.162	13.219	PV	218	3390	0.22%	0.042%
201	13.253	13.219	13.314	VV	3205	88734	5.85%	1.097%
202	13.322	13.314	13.343	VV	947	12424	0.82%	0.154%
203	13.364	13.343	13.394	VV	725	16160	1.07%	0.200%
204	13.402	13.394	13.414	VV	415	4116	0.27%	0.051%
205	13.438	13.414	13.472	VV	519	11329	0.75%	0.140%
206	13.493	13.472	13.532	PV	914	16801	1.11%	0.208%
207	13.550	13.532	13.580	VV	429	8057	0.53%	0.100%
208	13.624	13.580	13.640	VV	527	9997	0.66%	0.124%
209	13.670	13.640	13.692	VV	585	13139	0.87%	0.163%
210	13.716	13.692	13.755	VV	1018	21688	1.43%	0.268%
211	13.765	13.755	13.787	VV	359	4562	0.30%	0.056%
212	13.902	13.787	13.912	PV	1054	34627	2.28%	0.428%
213	13.924	13.912	13.950	VV	812	14948	0.99%	0.185%
214	14.034	13.950	14.058	VV	2549	62815	4.14%	0.777%
215	14.080	14.058	14.104	VV	1369	25714	1.70%	0.318%
216	14.125	14.104	14.150	VV	1052	23194	1.53%	0.287%
217	14.199	14.150	14.265	VV	4466	91115	6.01%	1.127%
218	14.306	14.265	14.350	VV	983	41303	2.72%	0.511%
219	14.380	14.350	14.415	VV	953	33015	2.18%	0.408%
220	14.478	14.415	14.535	VV	2751	111914	7.38%	1.384%
221	14.581	14.535	14.615	VV	1687	68658	4.53%	0.849%
222	14.643	14.615	14.666	VV	2786	61178	4.03%	0.757%
223	14.677	14.666	14.687	VV	1956	23029	1.52%	0.285%
224	14.749	14.687	14.770	VV	2277	101690	6.70%	1.258%
225	14.805	14.770	14.827	VV	2234	73220	4.83%	0.906%
226	14.844	14.827	14.860	VV	2189	40663	2.68%	0.503%
227	14.889	14.860	14.908	VV	2305	60467	3.99%	0.748%
228	14.918	14.908	14.945	VV	2203	44236	2.92%	0.547%
229	14.984	14.945	15.094	VV	99776	1517020	100.00%	18.762%
230	15.154	15.094	15.172	VV	3677	110591	7.29%	1.368%
231	15.189	15.172	15.262	VV	4288	140676	9.27%	1.740%
232	15.269	15.262	15.287	VV	1473	21935	1.45%	0.271%
233	15.303	15.287	15.340	VV	1457	43573	2.87%	0.539%
234	15.381	15.340	15.423	VV	1908	66640	4.39%	0.824%
235	15.447	15.423	15.467	VV	1143	28307	1.87%	0.350%
236	15.501	15.467	15.509	VV	1233	28779	1.90%	0.356%
237	15.519	15.509	15.537	VV	1254	18727	1.23%	0.232%
238	15.570	15.537	15.672	VV	37468	731325	48.21%	9.045%
239	15.709	15.672	15.752	VV	3277	86706	5.72%	1.072%
240	15.775	15.752	15.809	VV	2567	46875	3.09%	0.580%
241	15.836	15.809	15.879	VV	1363	36049	2.38%	0.446%
242	15.885	15.879	15.910	VV	702	9423	0.62%	0.117%
243	15.925	15.910	15.935	VV	443	5991	0.39%	0.074%
244	15.999	15.935	16.065	VV	691	34753	2.29%	0.430%
245	16.092	16.065	16.141	VV	1227	26492	1.75%	0.328%
246	16.170	16.141	16.187	PV	272	4354	0.29%	0.054%

					rteres				
247	16.211	16.187	16.244	VV	2230	30522	2.01%	0.377%	
248	16.280	16.244	16.297	VV	201	3906	0.26%	0.048%	
249	16.349	16.297	16.370	PV	355	7591	0.50%	0.094%	
250	16.422	16.370	16.436	PV	403	11027	0.73%	0.136%	
251	16.503	16.436	16.539	VV	1892	37040	2.44%	0.458%	
252	16.590	16.539	16.632	VV	4873	108052	7.12%	1.336%	
253	16.657	16.632	16.670	VV	1117	22969	1.51%	0.284%	
254	16.697	16.670	16.713	VV	3035	50189	3.31%	0.621%	
255	16.724	16.713	16.740	VV	1949	28032	1.85%	0.347%	
256	16.772	16.740	16.815	VV	1676	49471	3.26%	0.612%	
257	16.858	16.815	16.872	VV	744	15536	1.02%	0.192%	
258	16.887	16.872	16.918	VV	567	9414	0.62%	0.116%	
259	16.986	16.918	17.015	VV	905	26952	1.78%	0.333%	
260	17.050	17.015	17.077	VV	1462	30351	2.00%	0.375%	
261	17.113	17.077	17.132	VV	1383	26505	1.75%	0.328%	
262	17.163	17.132	17.195	VV	3485	58588	3.86%	0.725%	
263	17.210	17.195	17.225	VV	721	8618	0.57%	0.107%	
264	17.245	17.225	17.255	VV	663	7722	0.51%	0.096%	
265	17.266	17.255	17.285	VV	394	3588	0.24%	0.044%	
266	17.330	17.285	17.347	PV	770	16707	1.10%	0.207%	
267	17.419	17.347	17.430	VV	1046	33310	2.20%	0.412%	
268	17.444	17.430	17.457	VV	887	11798	0.78%	0.146%	
269	17.476	17.457	17.483	VV	1430	17848	1.18%	0.221%	
270	17.532	17.483	17.571	VV	2957	102166	6.73%	1.264%	
271	17.582	17.571	17.591	VV	1619	17786	1.17%	0.220%	
272	17.613	17.591	17.659	VV	5198	97143	6.40%	1.201%	
273	17.706	17.659	17.724	VV	2026	45734	3.01%	0.566%	
274	17.734	17.724	17.762	VV	1049	17011	1.12%	0.210%	
275	17.778	17.762	17.793	PV	1050	10236	0.67%	0.127%	
276	17.814	17.793	17.825	PV	788	7676	0.51%	0.095%	
277	17.845	17.825	17.864	VV	1081	11503	0.76%	0.142%	
278	17.899	17.864	17.910	PV	878	11464	0.76%	0.142%	
					Sum of corrected areas:	8085546			

FG052225.M Thu Jun 05 06:15:52 2025



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q2150 SAS No.: Q2150 SDG No.: Q2150

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

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: CAMP02
 ProjectID: South River WM Replacement
 Lab Code: CHEM Case No.: Q2150 SAS No.: Q2150 SDG No.: Q2150

Calibration Sequence : FG052225			Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID	
1000	132190666	132191	FG015886.D	
500	67168968	134338	FG015887.D	
200	26324104	131621	FG015888.D	
100	13743634	137436	FG015889.D	
50	6335792	126716	FG015890.D	
AVG RF : 132460		% RSD : 2.974		AVG RT : 14.9848

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.: Q2150 SAS No.: Q2150 SDG No.: Q2150
DataFile: FF015895.D Analyst Name: YP\AJ Analyst Date: 06-04-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	65931359	131863	133515	1.237

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015895.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 11:46
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Jun 05 03:01:59 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.019	5978332	48.948 ug/ml
Target Compounds			
2) N-DECANE	4.565	6134144	51.750 ug/ml
3) N-DODECANE	6.733	6392900	50.809 ug/ml
4) N-TETRADECANE	8.560	6529246	52.037 ug/ml
5) N-HEXADECANE	10.167	6557070	49.995 ug/ml
6) N-OCTADECANE	11.611	6758094	49.183 ug/ml
7) N-EICOSANE	12.921	6878706	48.344 ug/ml
8) N-DOCOSANE	14.119	6706283	48.275 ug/ml
10) N-TETRACOSANE	15.223	6730160	48.285 ug/ml
11) N-HEXACOSANE	16.245	6668011	48.077 ug/ml
12) N-OCTACOSANE	17.195	6576745	47.840 ug/ml

(f)=RT Delta > 1/2 Window

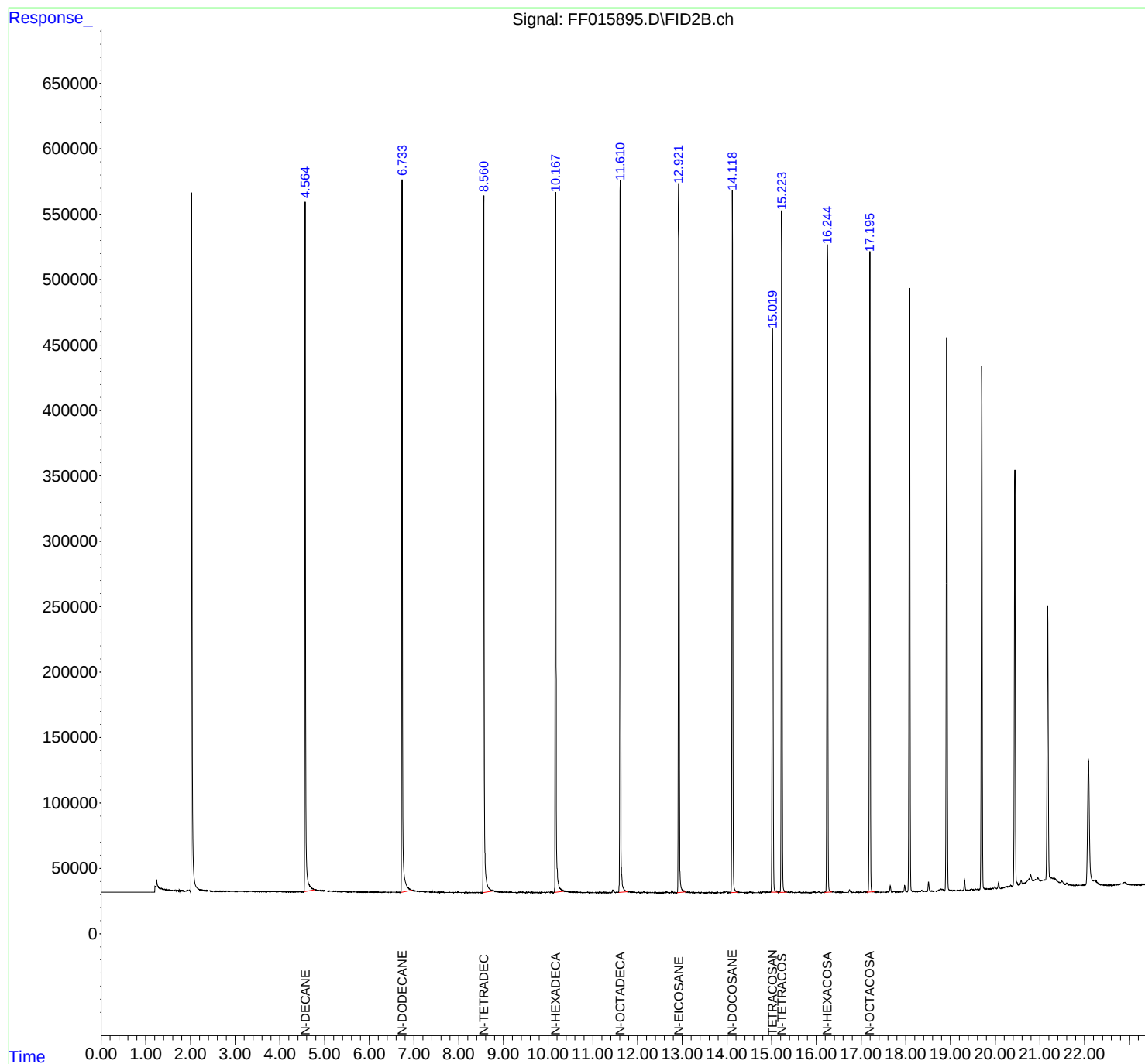
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015895.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 11:46
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jun 05 03:01:59 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015895.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 11:46
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.565	4.539	4.784	BB	527292	6134144	89.18%	8.530%
2	6.733	6.707	6.959	BB	544659	6392900	92.94%	8.890%
3	8.560	8.532	8.775	BB	531779	6529246	94.92%	9.080%
4	10.167	10.137	10.357	BB	534413	6557070	95.32%	9.118%
5	11.611	11.579	11.785	BB	542439	6758094	98.25%	9.398%
6	12.921	12.882	13.064	BB	542290	6878706	100.00%	9.566%
7	14.119	14.072	14.242	BB	537429	6706283	97.49%	9.326%
8	15.019	14.982	15.139	BB	430430	5978332	86.91%	8.314%
9	15.223	15.167	15.337	BB	520020	6730160	97.84%	9.359%
10	16.245	16.184	16.344	BB	495080	6668011	96.94%	9.273%
11	17.195	17.124	17.297	BB	488355	6576745	95.61%	9.146%
Sum of corrected areas:						71909690		

FF052125.M Thu Jun 05 03:38:54 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.: Q2150 SAS No.: Q2150 SDG No.: Q2150
DataFile: FF015909.D Analyst Name: YP\AJ Analyst Date: 06-04-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	64819040	129638	133515	2.904

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015909.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 19:16
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Jun 05 03:05:57 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.024	5794485	47.443 ug/ml
Target Compounds			
2) N-DECANE	4.563	6194949	52.263 ug/ml
3) N-DODECANE	6.733	6377387	50.685 ug/ml
4) N-TETRADECANE	8.560	6446357	51.377 ug/ml
5) N-HEXADECANE	10.168	6478773	49.398 ug/ml
6) N-OCTADECANE	11.612	6647666	48.379 ug/ml
7) N-EICOSANE	12.924	6765447	47.548 ug/ml
8) N-DOCOSANE	14.124	6579517	47.363 ug/ml
10) N-TETRACOSANE	15.228	6556465	47.039 ug/ml
11) N-HEXACOSANE	16.250	6457624	46.560 ug/ml
12) N-OCTACOSANE	17.202	6314855	45.935 ug/ml

(f)=RT Delta > 1/2 Window

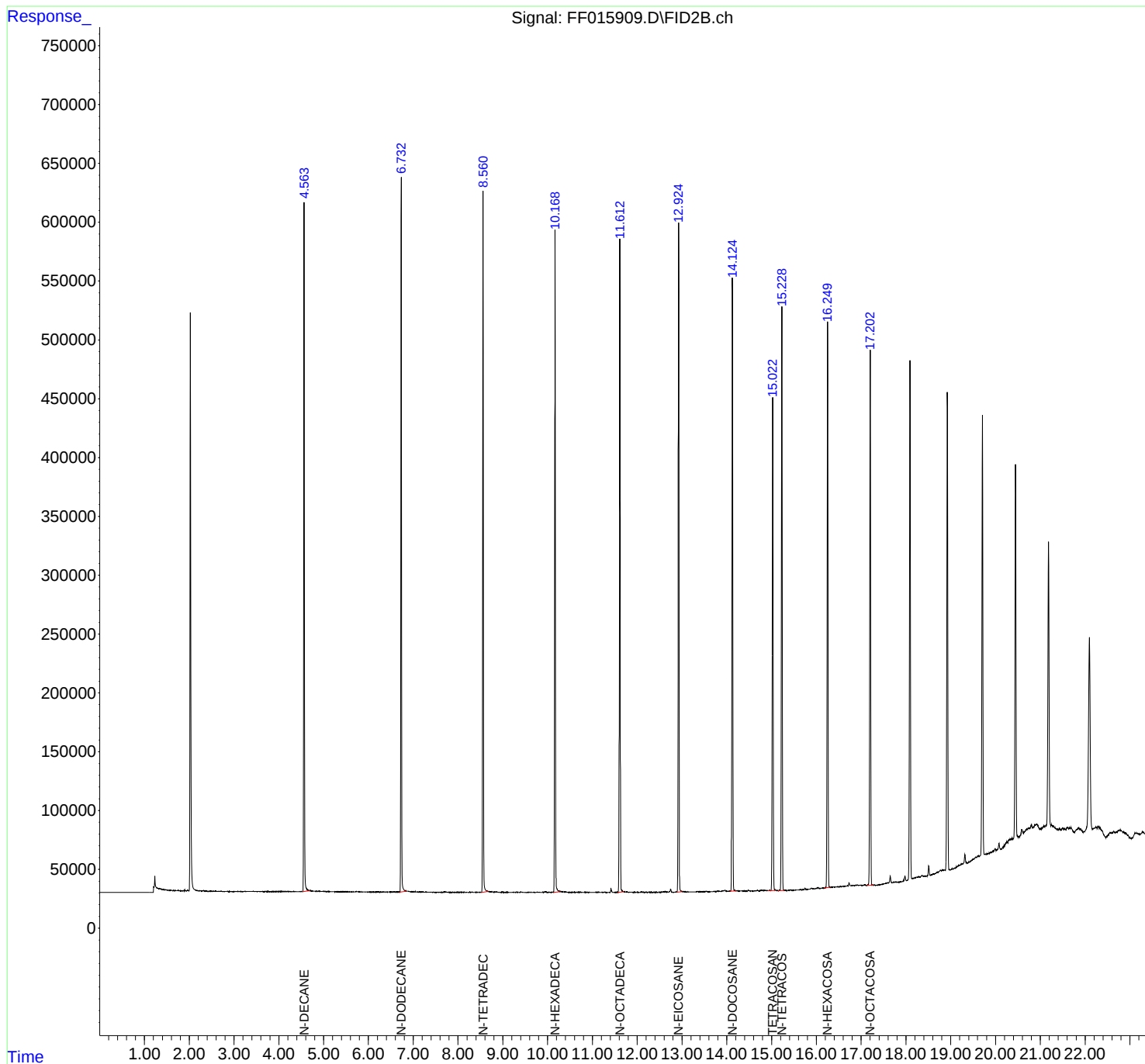
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015909.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 19:16
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jun 05 03:05:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015909.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 19:16
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.563	4.531	4.689	BB	585694	6194949	91.57%	8.773%
2	6.733	6.692	6.852	BB	608040	6377387	94.26%	9.031%
3	8.560	8.526	8.674	BB	595725	6446357	95.28%	9.129%
4	10.168	10.132	10.289	BB	562834	6478773	95.76%	9.175%
5	11.612	11.574	11.711	BB	555308	6647666	98.26%	9.414%
6	12.924	12.881	13.006	BB	568129	6765447	100.00%	9.581%
7	14.124	14.066	14.209	BB	521494	6579517	97.25%	9.318%
8	15.024	14.914	15.094	BB	417950	5794485	85.65%	8.206%
9	15.228	15.142	15.297	BB	495346	6556465	96.91%	9.285%
10	16.250	16.174	16.314	BB	480983	6457624	95.45%	9.145%
11	17.202	17.122	17.272	BB	456127	6314855	93.34%	8.943%
Sum of corrected areas:						70613525		

FF052125.M Thu Jun 05 03:40:25 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.: Q2150 SAS No.: Q2150 SDG No.: Q2150
DataFile: FG015910.D Analyst Name: YP\AJ Analyst Date: 06-04-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	64165362	128331	132460	3.117

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015910.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 11:46
 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: Jun 05 05:34:04 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Quant Title :
 QLast Update : Thu May 22 06:20:25 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...	14.982	5760753	47.003 ug/ml
Target Compounds			
2) N-DECANE	4.484	6043457	51.434 ug/ml
3) N-DODECANE	6.667	6241086	51.421 ug/ml
4) N-TETRADECANE	8.503	6426926	50.332 ug/ml
5) N-HEXADECANE	10.117	6529842	49.012 ug/ml
6) N-OCTADECANE	11.565	6685780	48.446 ug/ml
7) N-EICOSANE	12.878	6758974	47.842 ug/ml
8) N-DOCOSANE	14.080	6527424	47.519 ug/ml
10) N-TETRACOSANE	15.187	6450457	46.922 ug/ml
11) N-HEXACOSANE	16.209	6332239	46.606 ug/ml
12) N-OCTACOSANE	17.162	6169177	45.757 ug/ml

(f)=RT Delta > 1/2 Window

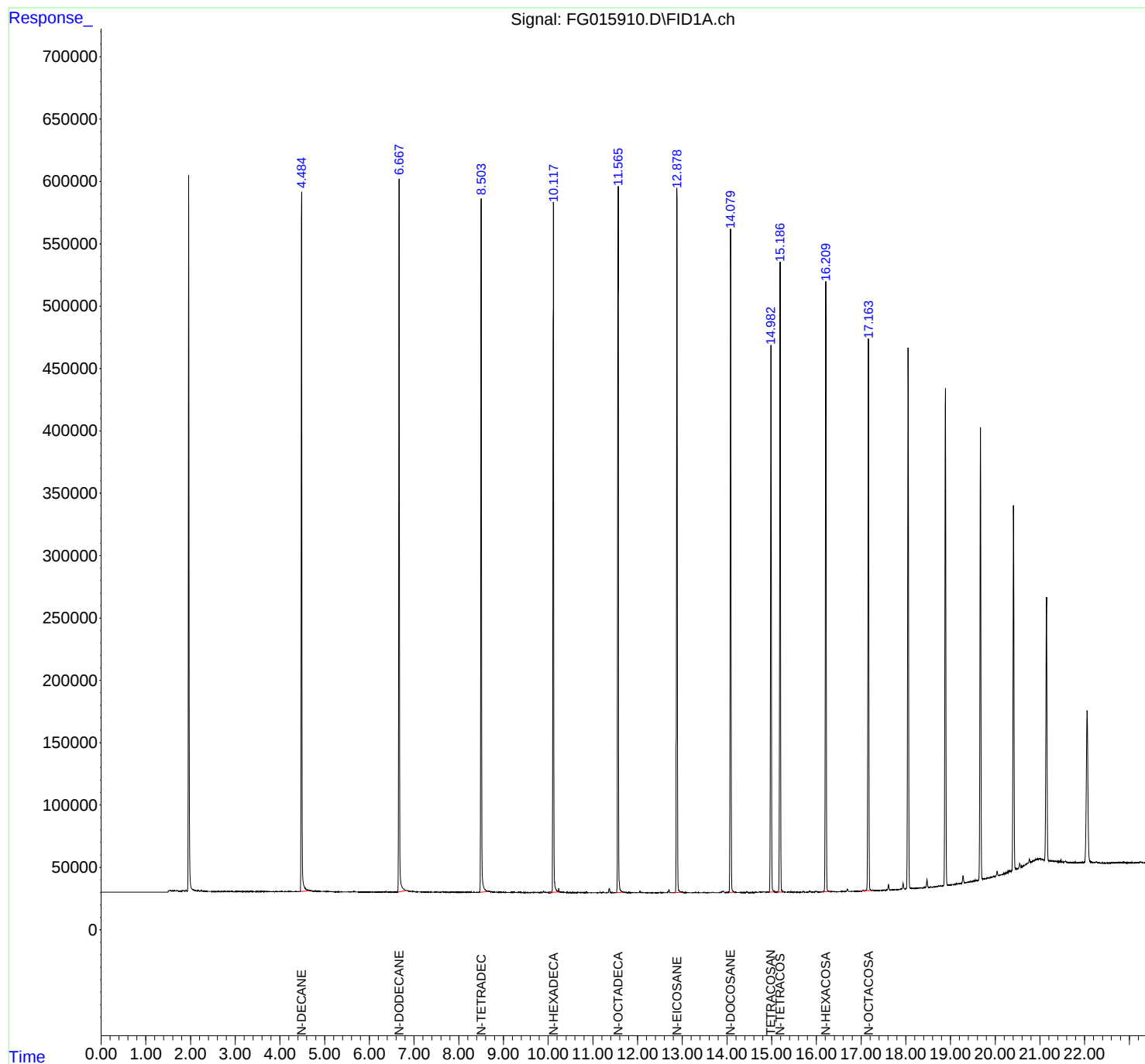
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015910.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 11:46
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: Jun 05 05:34:04 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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\FG060425\
Data File : FG015910.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 11:46
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.484	4.441	4.652	BB	559942	6043457	89.41%	8.643%
2	6.667	6.631	6.833	BB	571770	6241086	92.34%	8.925%
3	8.503	8.456	8.661	BB	555611	6426926	95.09%	9.191%
4	10.117	10.029	10.260	BB	553551	6529842	96.61%	9.338%
5	11.565	11.518	11.681	BB	561342	6685780	98.92%	9.561%
6	12.878	12.827	12.987	BB	564224	6758974	100.00%	9.666%
7	14.080	14.042	14.171	BB	530072	6527424	96.57%	9.335%
8	14.982	14.939	15.051	BV	437552	5760753	85.23%	8.238%
9	15.187	15.117	15.263	BB	504750	6450457	95.44%	9.225%
10	16.209	16.144	16.288	BB	487260	6332239	93.69%	9.056%
11	17.162	17.009	17.245	BV	442311	6169177	91.27%	8.822%
Sum of corrected areas:						69926115		

FG052225.M Thu Jun 05 06:03:48 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.: Q2150 SAS No.: Q2150 SDG No.: Q2150
DataFile: FG015924.D Analyst Name: YP\AJ Analyst Date: 06-04-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	63833620	127667	132460	3.618

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015924.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 19:16
 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: Jun 05 05:37:51 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Quant Title :
 QLast Update : Thu May 22 06:20:25 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.986	5701420	46.519 ug/ml
Target Compounds			
2) N-DECANE	4.486	6038906	51.395 ug/ml
3) N-DODECANE	6.669	6236954	51.387 ug/ml
4) N-TETRADECANE	8.506	6416437	50.250 ug/ml
5) N-HEXADECANE	10.119	6520853	48.945 ug/ml
6) N-OCTADECANE	11.568	6669094	48.325 ug/ml
7) N-EICOSANE	12.882	6726003	47.609 ug/ml
8) N-DOCOSANE	14.085	6486551	47.221 ug/ml
10) N-TETRACOSANE	15.191	6391631	46.495 ug/ml
11) N-HEXACOSANE	16.215	6255892	46.044 ug/ml
12) N-OCTACOSANE	17.168	6091299	45.179 ug/ml

(f)=RT Delta > 1/2 Window

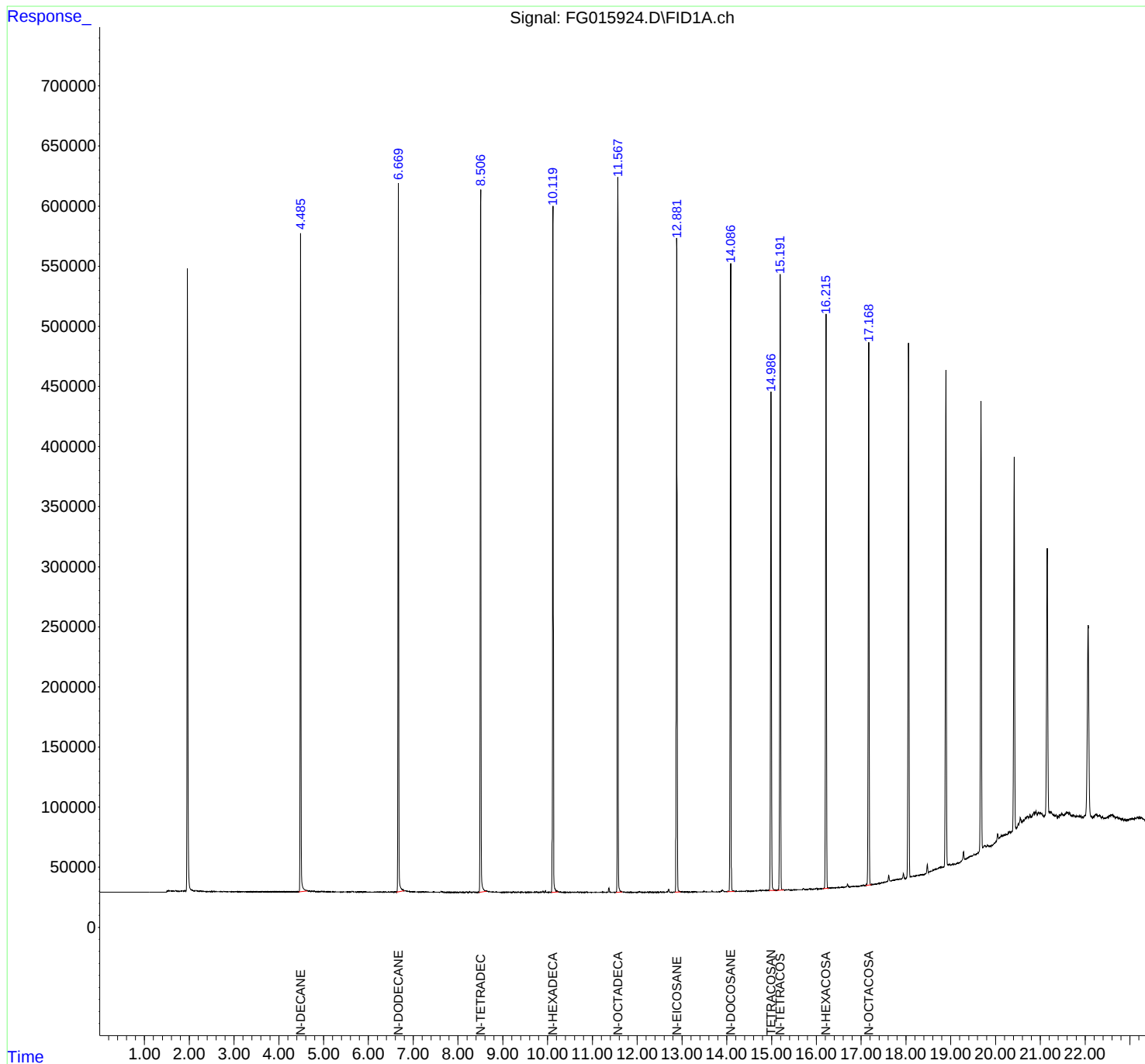
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015924.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 19:16
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: Jun 05 05:37:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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\FG060425\
Data File : FG015924.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 19:16
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.486	4.441	4.632	BB	547690	6038906	89.78%	8.685%
2	6.669	6.625	6.807	BB	588948	6236954	92.73%	8.970%
3	8.506	8.468	8.643	BB	584911	6416437	95.40%	9.228%
4	10.119	10.080	10.245	BB	570732	6520853	96.95%	9.378%
5	11.568	11.528	11.670	BB	593537	6669094	99.15%	9.591%
6	12.882	12.844	12.971	BB	542921	6726003	100.00%	9.673%
7	14.085	14.007	14.171	BB	518893	6486551	96.44%	9.328%
8	14.986	14.937	15.095	BB	413988	5701420	84.77%	8.199%
9	15.191	15.115	15.272	BB	510236	6391631	95.03%	9.192%
10	16.215	16.141	16.280	BB	477765	6255892	93.01%	8.997%
11	17.168	17.096	17.226	BB	452119	6091299	90.56%	8.760%
Sum of corrected areas:						69535038		

FG052225.M Thu Jun 05 06:06:14 2025

Analytical Sequence

Client: CDM Smith

SDG No.: Q2150

Project: South River WM Replacement

Instrument ID: FID_G

GC Column: RXI-1MS ID: 0.18 (mm)

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

MEAN SUROGATE RT FROM INITIAL CALIBRATION 15.0206					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	04 Jun 2025 11:16	FF015894.D	15.034	
50 PPM TRPH STD	50 PPM TRPH STD	04 Jun 2025 11:46	FF015895.D	15.019	
TP-54	Q2150-09	04 Jun 2025 12:48	FF015897.D	15.016	
TP-54MS	Q2150-09MS	04 Jun 2025 13:17	FF015898.D	15.018	
TP-54MSD	Q2150-09MSD	04 Jun 2025 13:47	FF015899.D	15.018	
PIBLK02	LBLK02	04 Jun 2025 18:46	FF015908.D	15.023	
50 PPM TRPH STD	50 PPM TRPH STD	04 Jun 2025 19:16	FF015909.D	15.024	
PIBLK03	LBLK03	04 Jun 2025 11:16	FG015909.D	14.981	
50 PPM TRPH STD	50 PPM TRPH STD	04 Jun 2025 11:46	FG015910.D	14.982	
PB168274BL	PB168274BL	04 Jun 2025 12:48	FG015912.D	14.981	
PB168274BS	PB168274BS	04 Jun 2025 13:17	FG015913.D	14.979	
TP-44	Q2150-01	04 Jun 2025 13:47	FG015914.D	14.979	
TP-42	Q2150-02	04 Jun 2025 14:16	FG015915.D	14.979	
TP-39	Q2150-03	04 Jun 2025 14:46	FG015916.D	14.979	
TP-48	Q2150-04	04 Jun 2025 15:15	FG015917.D	14.980	
TP-47	Q2150-05	04 Jun 2025 15:45	FG015918.D	14.980	
TP-50	Q2150-06	04 Jun 2025 16:48	FG015919.D	14.983	
TP-51	Q2150-07	04 Jun 2025 17:18	FG015920.D	14.983	
TP-52	Q2150-08	04 Jun 2025 17:47	FG015921.D	14.985	
TP-53	Q2150-10	04 Jun 2025 18:17	FG015922.D	14.984	
PIBLK04	LBLK04	04 Jun 2025 18:46	FG015923.D	14.983	
50 PPM TRPH STD	50 PPM TRPH STD	04 Jun 2025 19:16	FG015924.D	14.986	



QC SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168274BL	SDG No.:	Q2150
Lab Sample ID:	PB168274BL	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Decanted:	
GPC Factor :		Final Vol:	1
Prep Method :	SW3541	Test:	Diesel Range Organics
		PH :	
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015912.D	1	06/04/25 08:30	06/04/25 12:48	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	169	U	169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	15.7		37 - 130	78%	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\FG060425\
Data File : FG015912.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 12:48
Operator : YP\AJ
Sample : PB168274BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168274BL

Integration File: autoint1.e
Quant Time: Jun 05 05:34:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.981	1923041	15.690 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

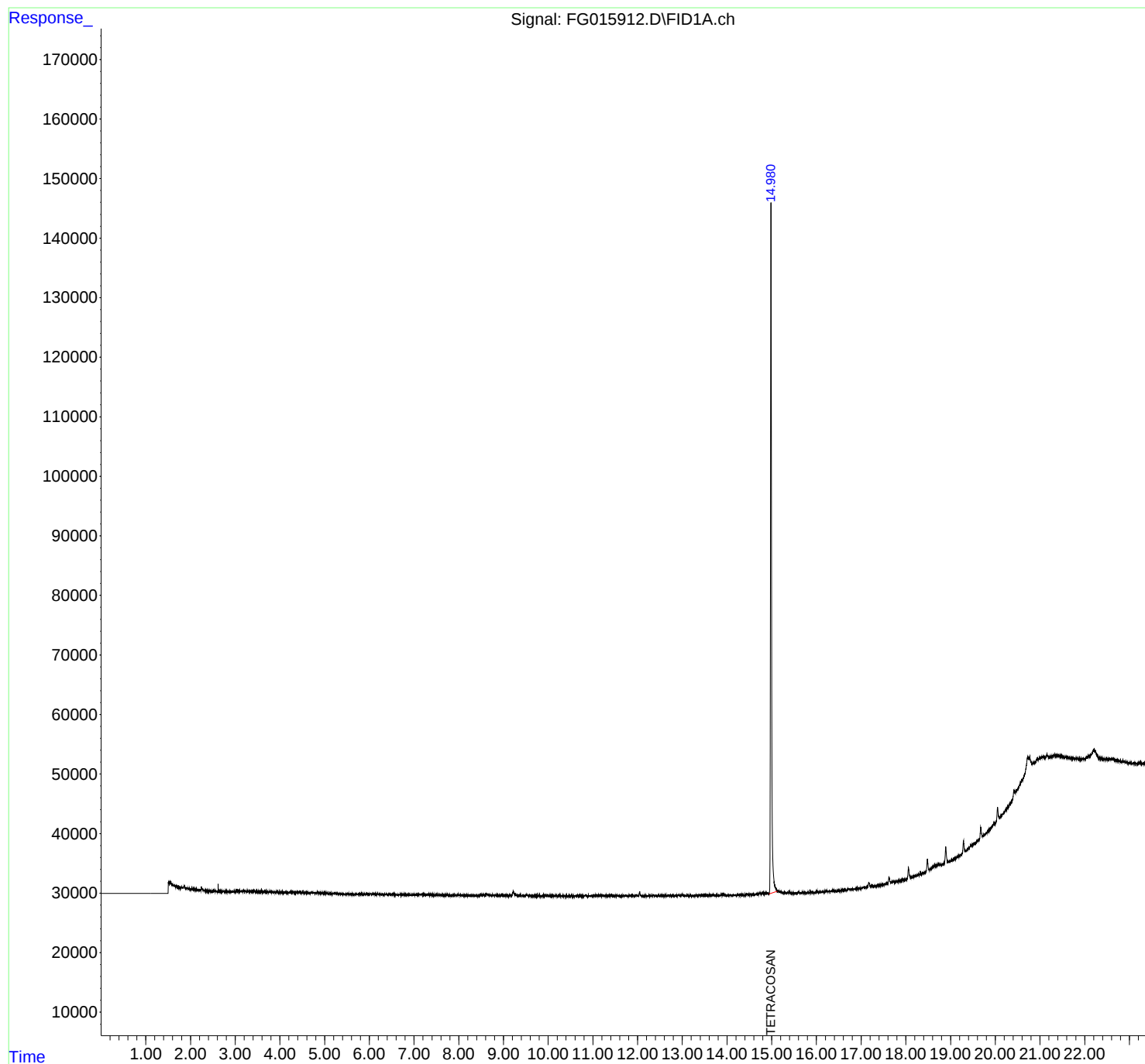
(m)=manual int.

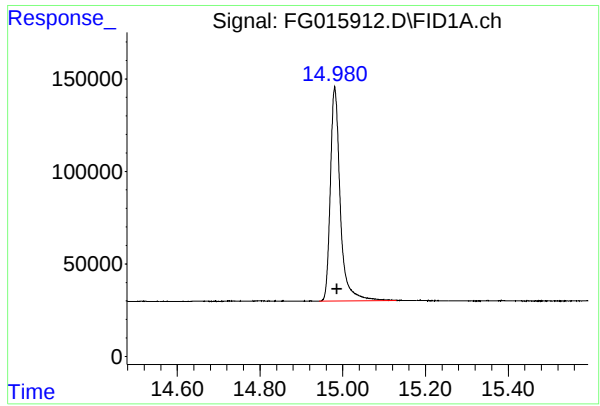
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015912.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 12:48
Operator : YP\AJ
Sample : PB168274BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168274BL

Integration File: autoint1.e
Quant Time: Jun 05 05:34:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.981 min
Delta R.T.: -0.006 min
Response: 1923041
Conc: 15.69 ug/ml

Instrument :
FID_G
ClientSampleId :
PB168274BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015912.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 12:48
Sample : PB168274BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.981	14.943	15.129	BB	115708	1923041	100.00%	100.000%
Sum of corrected areas:						1923041		

FG052225.M Thu Jun 05 06:04:25 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	06/04/25
Project:	South River WM Replacement	Date Received:	06/04/25
Client Sample ID:	PIBLK-FF015894.D	SDG No.:	Q2150
Lab Sample ID:	I.BLK-FF015894.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
FF015894.D	1		06/04/25	FF060425

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	12.0		29 - 130	60%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015894.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 11:16
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 03:01:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.034	1465898	12.002 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

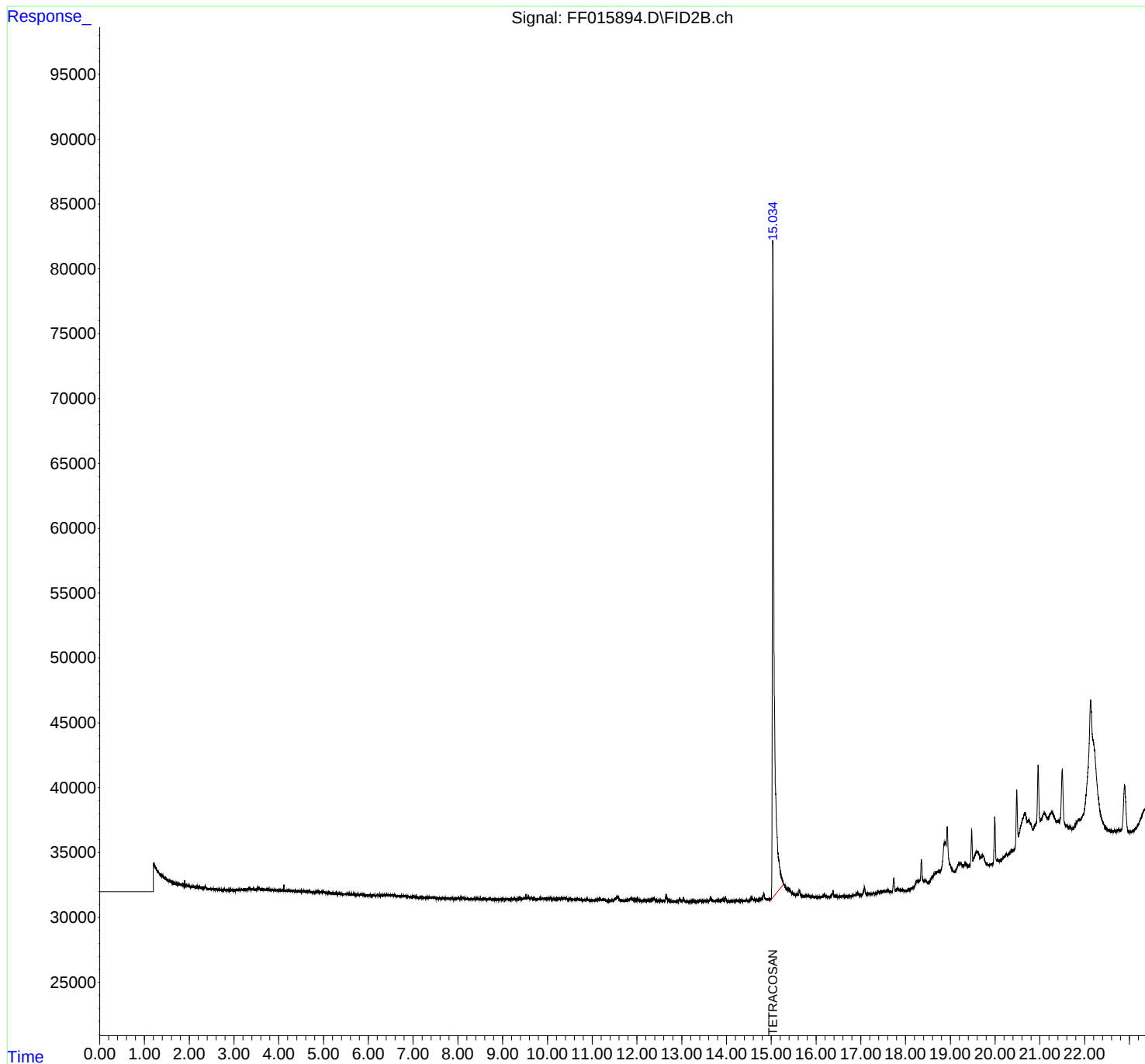
(m)=manual int.

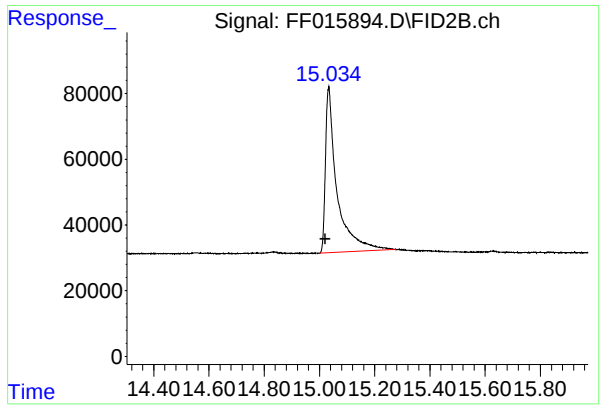
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015894.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 11:16
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 03:01:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.034 min
Delta R.T.: 0.013 min
Response: 1465898
Conc: 12.00 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015894.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 11:16
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.034	14.999	15.277	BB	50311	1465898	100.00%	100.000%
Sum of corrected areas:						1465898		

FF052125.M Thu Jun 05 03:37:49 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	06/04/25
Project:	South River WM Replacement	Date Received:	06/04/25
Client Sample ID:	PIBLK-FF015908.D	SDG No.:	Q2150
Lab Sample ID:	I.BLK-FF015908.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
FF015908.D	1		06/04/25	FF060425

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	14.7		29 - 130	73%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015908.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 18:46
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 03:05:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.023	1794364	14.692 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

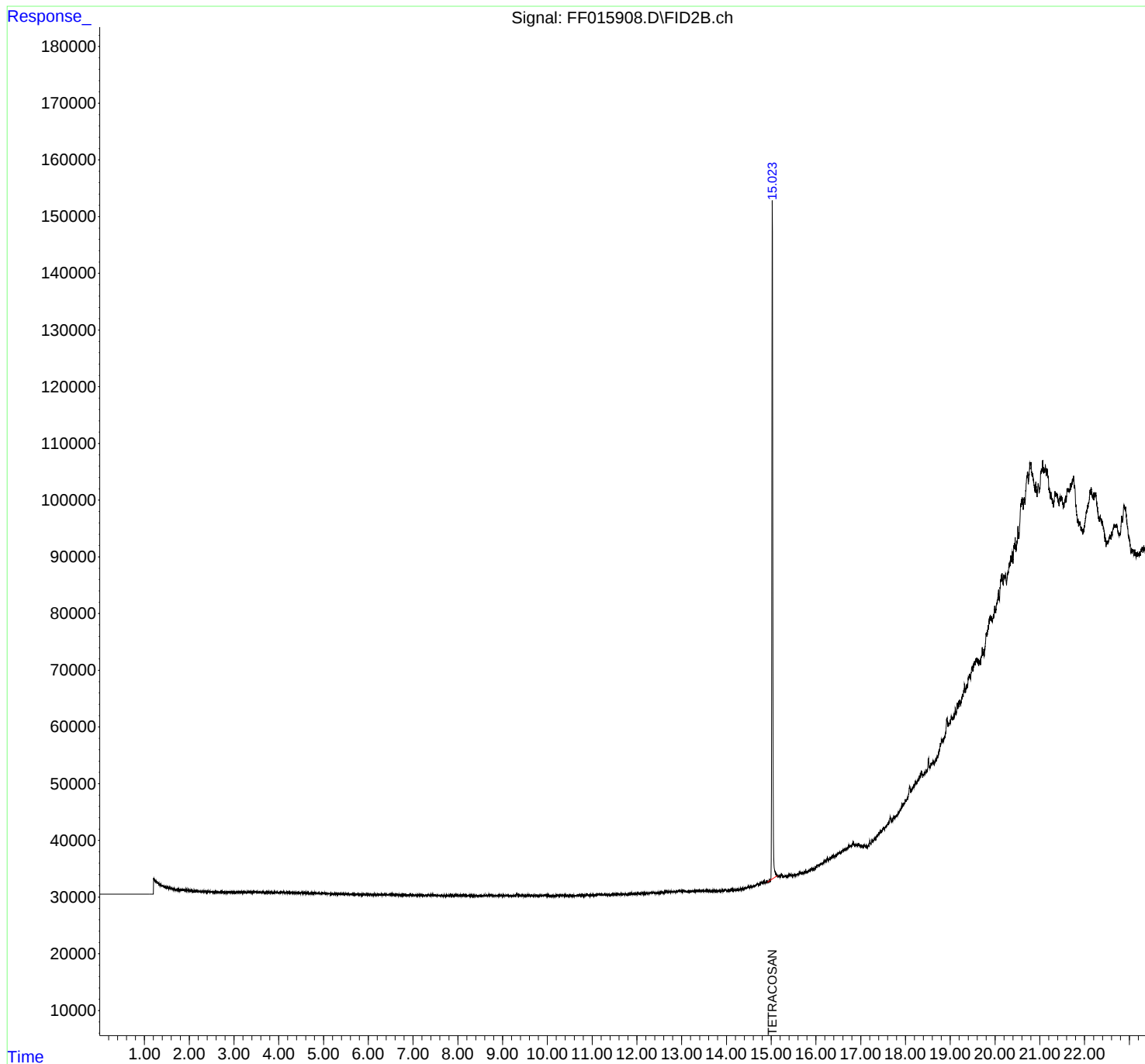
(m)=manual int.

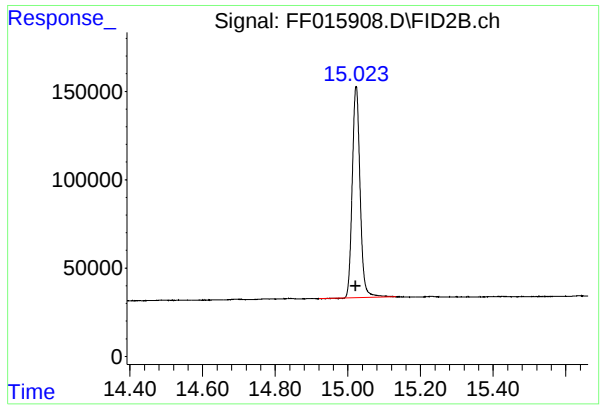
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015908.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 18:46
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 03:05:40 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.023 min
Delta R.T.: 0.002 min
Response: 1794364
Conc: 14.69 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015908.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 18:46
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.023	14.921	15.132	BB	119684	1794364	100.00%	100.000%
Sum of corrected areas:						1794364		

FF052125.M Thu Jun 05 03:39:45 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	06/04/25
Project:	South River WM Replacement	Date Received:	06/04/25
Client Sample ID:	PIBLK-FG015909.D	SDG No.:	Q2150
Lab Sample ID:	I.BLK-FG015909.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
FG015909.D	1		06/04/25	FG060425

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	14.3		29 - 130	71%	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\FG060425\
Data File : FG015909.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 11:16
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: Jun 05 05:33:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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...	14.981	1746163	14.247 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

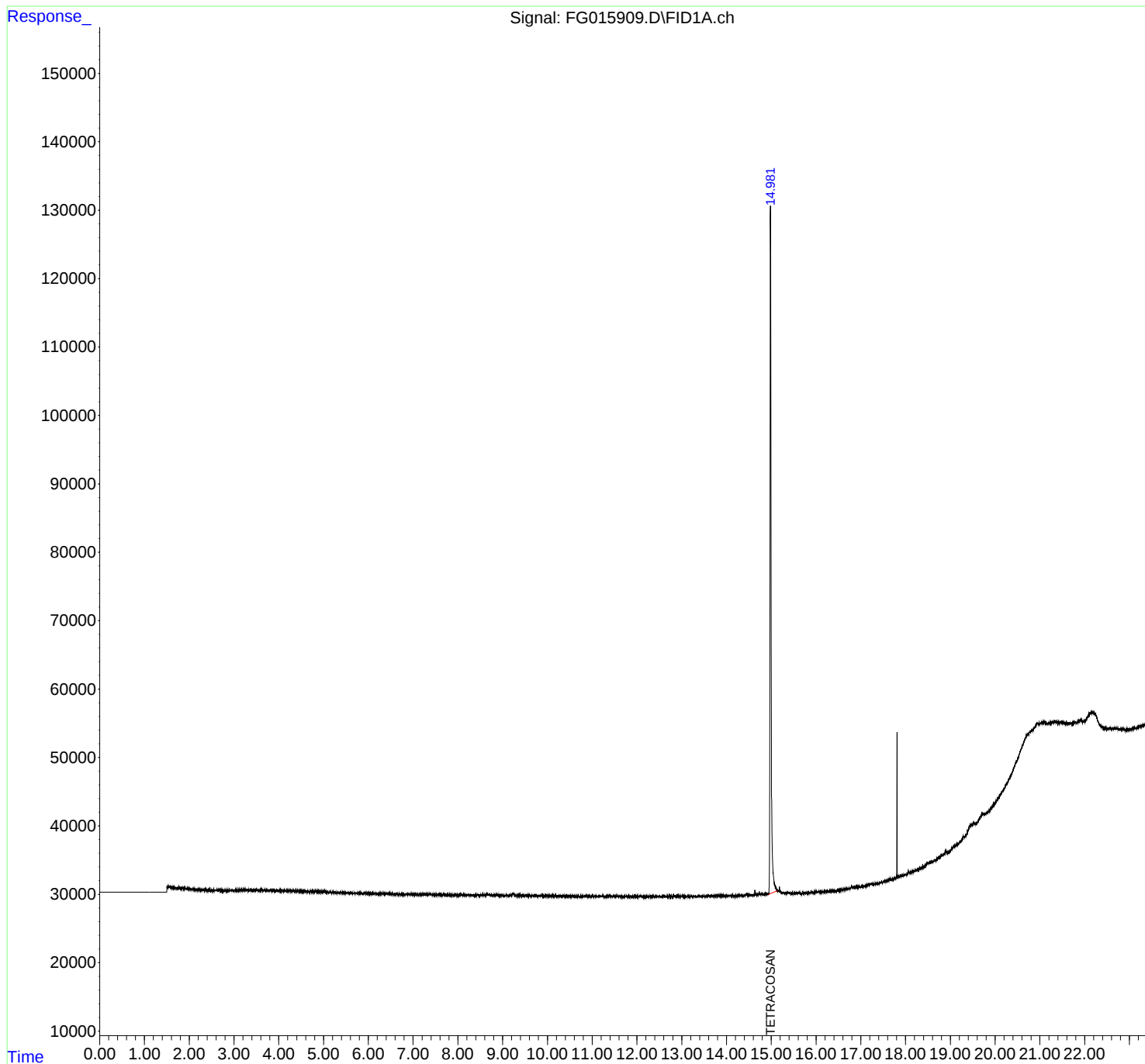
(m)=manual int.

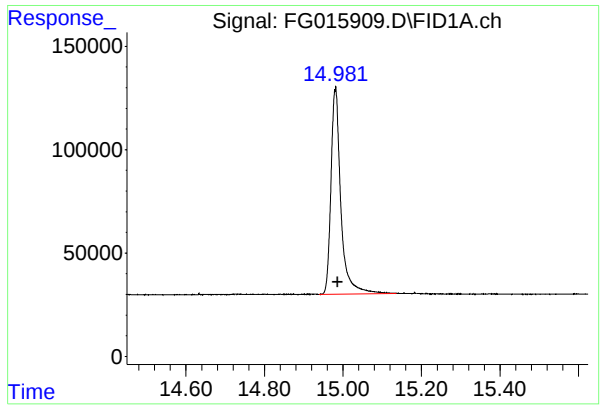
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015909.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 11:16
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 05:33:51 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.981 min
Delta R.T.: -0.005 min
Response: 1746163
Conc: 14.25 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015909.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 11:16
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.981	14.939	15.135	BB	99311	1746163	100.00%	100.000%
Sum of corrected areas:						1746163		

FG052225.M Thu Jun 05 06:02:16 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	06/04/25
Project:	South River WM Replacement	Date Received:	06/04/25
Client Sample ID:	PIBLK-FG015923.D	SDG No.:	Q2150
Lab Sample ID:	I.BLK-FG015923.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
FG015923.D	1		06/04/25	FG060425

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	15.6		29 - 130	78%	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\FG060425\
Data File : FG015923.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 18:46
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: Jun 05 05:37:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	14.983	1912801	15.607 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

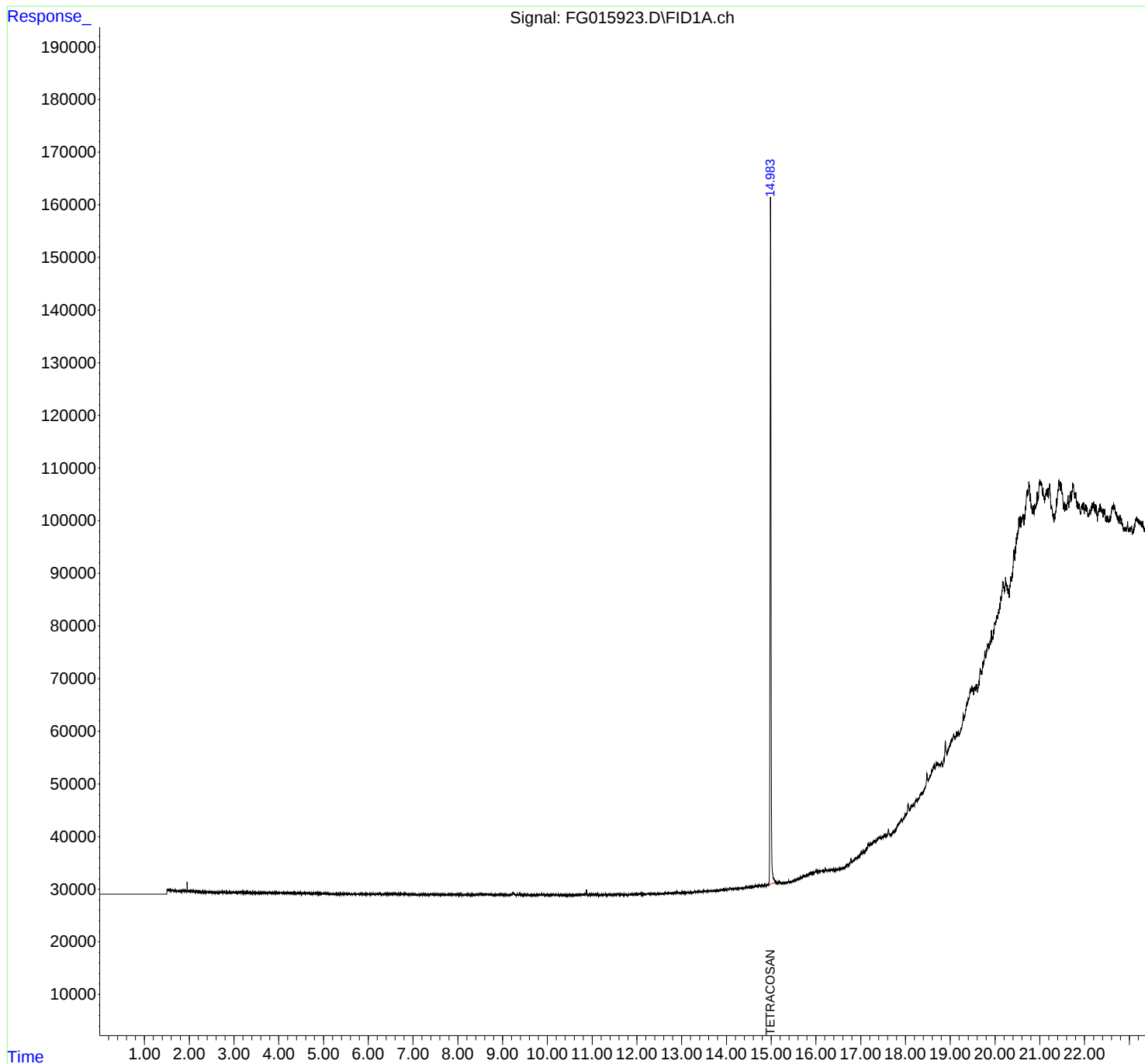
(m)=manual int.

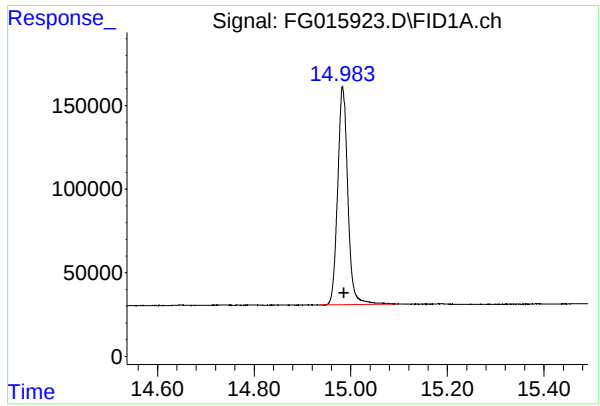
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015923.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 18:46
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jun 05 05:37:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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.: 14.983 min
Delta R.T.: -0.003 min
Response: 1912801
Conc: 15.61 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015923.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 18:46
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	14.983	14.935	15.094	BB	130229	1912801	100.00%	100.000%
Sum of corrected areas:						1912801		

FG052225.M Thu Jun 05 06:05:39 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168274BS	SDG No.:	Q2150
Lab Sample ID:	PB168274BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG015913.D	1	06/04/25 08:30	06/04/25 13:17	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	5870		169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	16.3		37 - 130	82%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
 Data File : FG015913.D
 Signal(s) : FID1A.ch
 Acq On : 04 Jun 2025 13:17
 Operator : YP\AJ
 Sample : PB168274BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB168274BS

Integration File: autoint1.e
 Quant Time: Jun 05 05:35:00 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
 Quant Title :
 QLast Update : Thu May 22 06:20:25 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...	14.979	1999645	16.315 ug/ml
Target Compounds			
2) N-DECANE	4.483	2058281	17.517 ug/ml
3) N-DODECANE	6.666	2205259	18.169 ug/ml
4) N-TETRADECANE	8.502	2229797	17.463 ug/ml
5) N-HEXADECANE	10.114	2341670	17.576 ug/ml
6) N-OCTADECANE	11.562	2475247	17.936 ug/ml
7) N-EICOSANE	12.875	2462652	17.431 ug/ml
8) N-DOCOSANE	14.077	2451579	17.847 ug/ml
10) N-TETRACOSANE	15.183	2442294	17.766 ug/ml
11) N-HEXACOSANE	16.207	2373228	17.467 ug/ml
12) N-OCTACOSANE	17.159	2306831	17.110 ug/ml

(f)=RT Delta > 1/2 Window

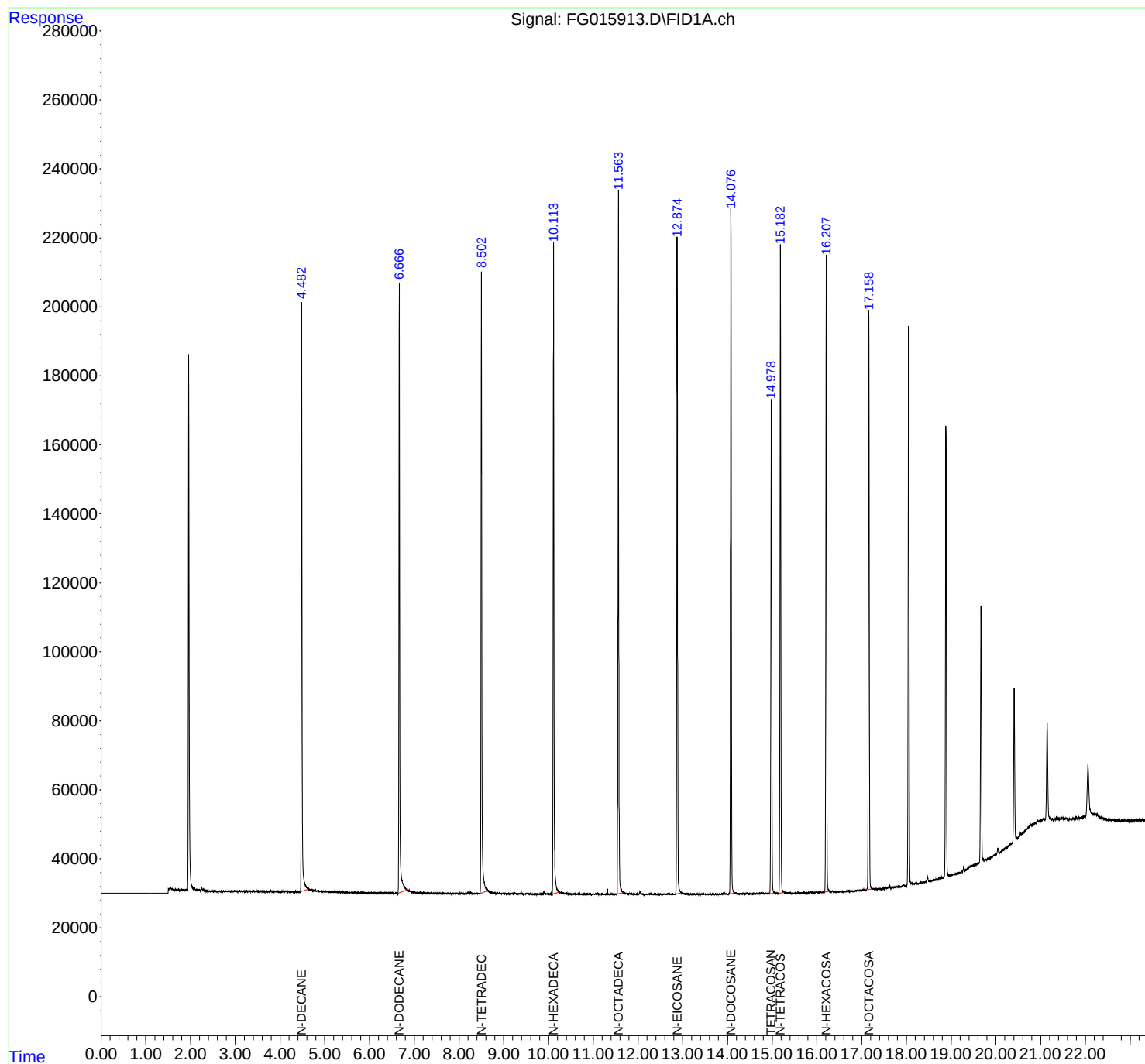
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG060425\
Data File : FG015913.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 13:17
Operator : YP\AJ
Sample : PB168274BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168274BS

Integration File: autoint1.e
Quant Time: Jun 05 05:35:00 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Quant Title :
QLast Update : Thu May 22 06:20:25 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\FG060425\
Data File : FG015913.D
Signal(s) : FID1A.ch
Acq On : 04 Jun 2025 13:17
Sample : PB168274BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG052225.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.483	4.438	4.633	BB	170242	2058281	83.15%	8.121%
2	6.666	6.632	6.835	BB	176631	2205259	89.09%	8.700%
3	8.502	8.458	8.645	BB	179981	2229797	90.08%	8.797%
4	10.114	10.072	10.243	BB	188107	2341670	94.60%	9.239%
5	11.562	11.515	11.676	BB	203620	2475247	100.00%	9.766%
6	12.875	12.829	12.974	BB	190008	2462652	99.49%	9.716%
7	14.077	14.026	14.168	BB	198348	2451579	99.04%	9.672%
8	14.979	14.938	15.062	BB	141209	1999645	80.79%	7.889%
9	15.183	15.143	15.266	BB	187778	2442294	98.67%	9.636%
10	16.207	16.153	16.281	BB	181544	2373228	95.88%	9.363%
11	17.159	17.090	17.227	BB	167873	2306831	93.20%	9.101%
Sum of corrected areas:						25346483		

FG052225.M Thu Jun 05 06:04:52 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/28/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-54MS	SDG No.:	Q2150
Lab Sample ID:	Q2150-09MS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.6
Sample Wt/Vol:	30.08	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015898.D	1	06/04/25 08:30	06/04/25 13:17	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	12200		202	1990	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.9		37 - 130	55%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015898.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 13:17
 Operator : YP\AJ
 Sample : Q2150-09MS
 Misc :
 ALS Vial : 72 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 TP-54MS

Integration File: autoint1.e
 Quant Time: Jun 05 03:02:46 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.018	1337224	10.949 ug/ml
Target Compounds			
2) N-DECANE	4.566	2737827	23.097 ug/ml
3) N-DODECANE	6.734	3059588	24.317 ug/ml
4) N-TETRADECANE	8.561	3103444	24.734 ug/ml
5) N-HEXADECANE	10.167	3829099	29.195 ug/ml
6) N-OCTADECANE	11.609	3435961	25.005 ug/ml
7) N-EICOSANE	12.919	3419098	24.029 ug/ml
8) N-DOCOSANE	14.118	3437804	24.747 ug/ml
10) N-TETRACOSANE	15.221	3442508	24.698 ug/ml
11) N-HEXACOSANE	16.243	3397310	24.495 ug/ml
12) N-OCTACOSANE	17.193	3329989	24.223 ug/ml

(f)=RT Delta > 1/2 Window

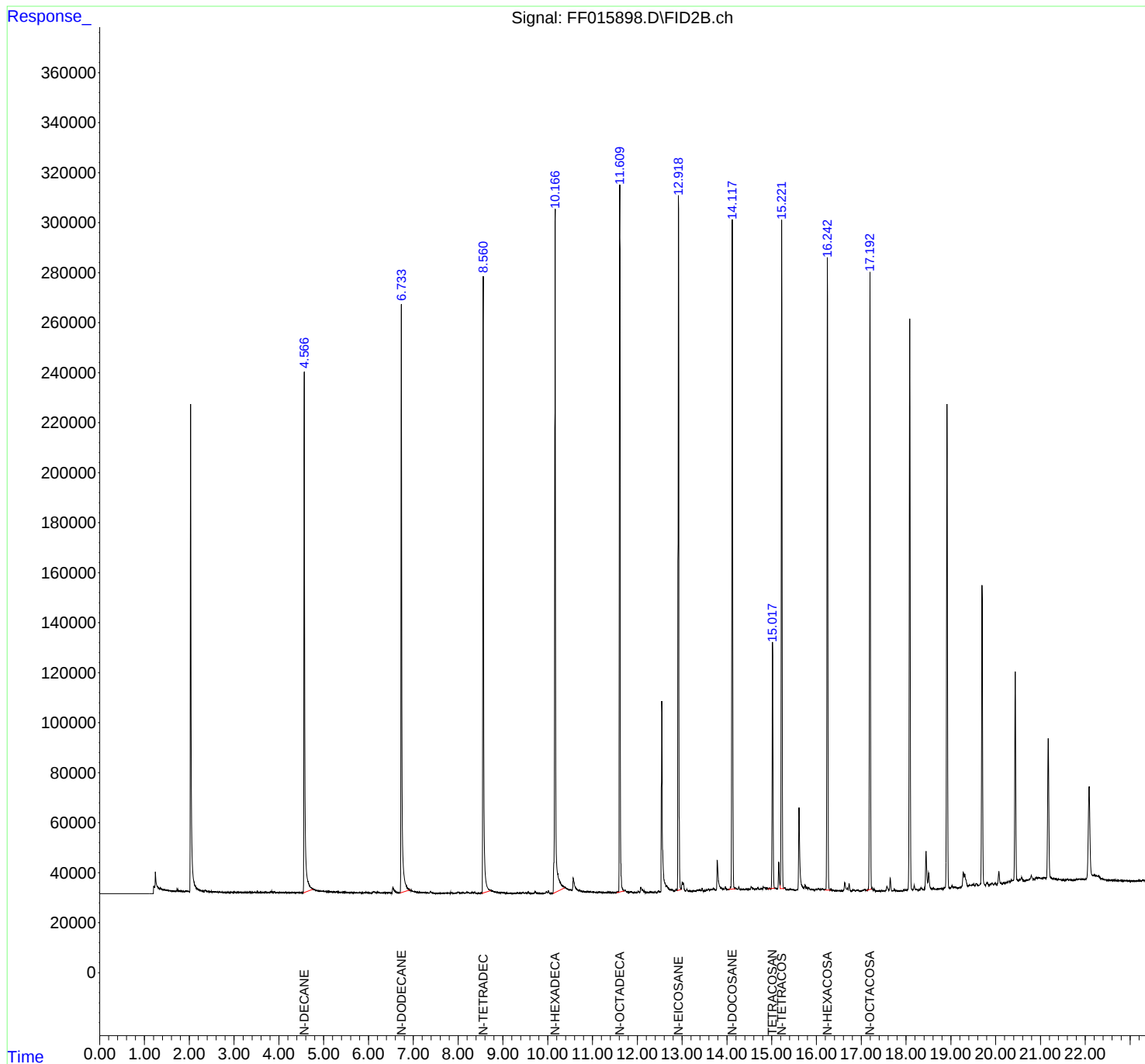
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015898.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 13:17
Operator : YP\AJ
Sample : Q2150-09MS
Misc :
ALS Vial : 72 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-54MS

Integration File: autoint1.e
Quant Time: Jun 05 03:02:46 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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



Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015898.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 13:17
 Sample : Q2150-09MS
 Misc :
 ALS Vial : 72 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.566	4.506	4.795	BV	208236	2854611	69.02%	6.774%
2	4.799	4.795	4.825	VV	1180	19080	0.46%	0.045%
3	4.828	4.825	4.834	VV	999	5162	0.12%	0.012%
4	4.839	4.834	4.886	VV	948	26127	0.63%	0.062%
5	4.890	4.886	4.916	VV	780	12842	0.31%	0.030%
6	4.924	4.916	4.942	VV	742	10333	0.25%	0.025%
7	4.951	4.942	4.967	VV	687	9489	0.23%	0.023%
8	4.970	4.967	4.985	VV	681	6664	0.16%	0.016%
9	5.005	4.985	5.014	VV	646	10159	0.25%	0.024%
10	5.019	5.014	5.026	VV	598	4161	0.10%	0.010%
11	5.038	5.026	5.049	VV	587	7740	0.19%	0.018%
12	5.053	5.049	5.063	VV	565	4545	0.11%	0.011%
13	5.067	5.063	5.087	VV	601	7259	0.18%	0.017%
14	5.091	5.087	5.095	VV	538	2438	0.06%	0.006%
15	5.100	5.095	5.127	VV	548	9302	0.22%	0.022%
16	5.139	5.127	5.143	VV	503	4722	0.11%	0.011%
17	5.147	5.143	5.158	VV	482	4127	0.10%	0.010%
18	5.172	5.158	5.199	VV	471	10232	0.25%	0.024%
19	5.203	5.199	5.209	VV	436	2304	0.06%	0.005%
20	5.212	5.209	5.226	VV	472	3867	0.09%	0.009%
21	5.228	5.226	5.262	VV	404	7801	0.19%	0.019%
22	5.268	5.262	5.291	VV	396	5740	0.14%	0.014%
23	5.296	5.291	5.308	VV	417	3506	0.08%	0.008%
24	5.312	5.308	5.319	VV	360	1964	0.05%	0.005%
25	5.330	5.319	5.345	VV	370	4661	0.11%	0.011%
26	5.349	5.345	5.364	VV	328	3119	0.08%	0.007%
27	5.366	5.364	5.372	VV	277	1132	0.03%	0.003%
28	5.385	5.372	5.393	VV	272	3271	0.08%	0.008%
29	5.398	5.393	5.404	VV	298	1687	0.04%	0.004%
30	5.410	5.404	5.421	VV	266	2425	0.06%	0.006%
31	5.426	5.421	5.438	VV	302	2380	0.06%	0.006%
32	5.447	5.438	5.457	VV	547	2844	0.07%	0.007%
33	5.461	5.457	5.487	VV	251	4176	0.10%	0.010%
34	5.491	5.487	5.519	VV	248	4105	0.10%	0.010%
35	5.525	5.519	5.533	VV	222	1629	0.04%	0.004%
36	5.557	5.533	5.582	VV	241	5155	0.12%	0.012%

					rteres			
37	5.587	5.582	5.594	VV	169	960	0.02%	0.002%
38	5.598	5.594	5.611	VV	184	1406	0.03%	0.003%
39	5.615	5.611	5.625	VV	168	1049	0.03%	0.002%
40	5.638	5.625	5.642	VV	233	1459	0.04%	0.003%
41	5.646	5.642	5.664	VV	147	1855	0.04%	0.004%
42	5.676	5.664	5.718	VV	225	4552	0.11%	0.011%
43	5.732	5.718	5.765	VV	167	2646	0.06%	0.006%
44	5.775	5.765	5.785	VV	165	1292	0.03%	0.003%
45	5.790	5.785	5.805	VV	134	1480	0.04%	0.004%
46	5.807	5.805	5.813	VV	185	505	0.01%	0.001%
47	5.817	5.813	5.821	VV	115	466	0.01%	0.001%
48	5.826	5.821	5.864	VV	144	1959	0.05%	0.005%
49	5.890	5.864	5.894	VV	198	1876	0.05%	0.004%
50	5.897	5.894	5.917	VV	162	1677	0.04%	0.004%
51	5.942	5.917	5.987	VV	379	8936	0.22%	0.021%
52	5.996	5.987	6.015	VV	172	2018	0.05%	0.005%
53	6.021	6.015	6.025	VV	161	626	0.02%	0.001%
54	6.039	6.025	6.052	VV	168	1490	0.04%	0.004%
55	6.056	6.052	6.060	VV	109	304	0.01%	0.001%
56	6.109	6.060	6.162	VV	564	19123	0.46%	0.045%
57	6.166	6.162	6.176	VV	293	2145	0.05%	0.005%
58	6.196	6.176	6.244	VV	424	11123	0.27%	0.026%
59	6.257	6.244	6.272	VV	216	2409	0.06%	0.006%
60	6.280	6.272	6.303	VV	172	2274	0.05%	0.005%
61	6.310	6.303	6.315	VV	170	922	0.02%	0.002%
62	6.339	6.315	6.351	VV	242	3583	0.09%	0.009%
63	6.357	6.351	6.365	VV	172	1249	0.03%	0.003%
64	6.374	6.365	6.378	VV	156	1115	0.03%	0.003%
65	6.443	6.378	6.501	VV	383	12960	0.31%	0.031%
66	6.508	6.501	6.524	VV	155	1408	0.03%	0.003%
67	6.545	6.524	6.615	VV	2241	63716	1.54%	0.151%
68	6.617	6.615	6.659	VV	547	8449	0.20%	0.020%
69	6.663	6.659	6.679	VV	236	2045	0.05%	0.005%
70	6.683	6.679	6.697	VV	179	1428	0.03%	0.003%
71	6.702	6.697	6.708	VV	164	900	0.02%	0.002%
72	6.734	6.708	6.954	VV	234948	3174033	76.74%	7.531%
73	6.961	6.954	6.975	VV	1147	12644	0.31%	0.030%
74	6.979	6.975	7.020	VV	952	20913	0.51%	0.050%
75	7.026	7.020	7.107	VV	734	26723	0.65%	0.063%
76	7.112	7.107	7.194	VV	432	18895	0.46%	0.045%
77	7.197	7.194	7.209	VV	355	2991	0.07%	0.007%
78	7.212	7.209	7.221	VV	325	2279	0.06%	0.005%
79	7.228	7.221	7.236	VV	352	2849	0.07%	0.007%
80	7.244	7.236	7.280	VV	358	7527	0.18%	0.018%
81	7.284	7.280	7.306	VV	302	3840	0.09%	0.009%
82	7.310	7.306	7.328	VV	244	2707	0.07%	0.006%
83	7.337	7.328	7.357	VV	258	3708	0.09%	0.009%
84	7.362	7.357	7.367	VV	223	1199	0.03%	0.003%
85	7.384	7.367	7.418	VV	849	14668	0.35%	0.035%
86	7.422	7.418	7.450	VV	263	3290	0.08%	0.008%
87	7.456	7.450	7.467	VV	119	944	0.02%	0.002%
88	7.474	7.467	7.495	VV	123	1407	0.03%	0.003%
89	7.500	7.495	7.543	PV	93	1228	0.03%	0.003%

					rteres			
90	7.559	7.543	7.565	PV	150	738	0.02%	0.002%
91	7.598	7.565	7.635	VV	200	4124	0.10%	0.010%
92	7.637	7.635	7.641	VV	129	321	0.01%	0.001%
93	7.647	7.641	7.660	VV	156	1128	0.03%	0.003%
94	7.667	7.660	7.674	VV	94	612	0.01%	0.001%
95	7.679	7.674	7.700	VV	97	848	0.02%	0.002%
96	7.718	7.700	7.737	VV	189	2644	0.06%	0.006%
97	7.743	7.737	7.748	VV	158	851	0.02%	0.002%
98	7.772	7.748	7.777	VV	221	2809	0.07%	0.007%
99	7.815	7.777	7.832	VV	248	6200	0.15%	0.015%
100	7.837	7.832	7.842	VV	286	1415	0.03%	0.003%
101	7.847	7.842	7.852	VV	234	1227	0.03%	0.003%
102	7.859	7.852	7.876	VV	239	2856	0.07%	0.007%
103	7.891	7.876	7.899	VV	208	2057	0.05%	0.005%
104	7.903	7.899	7.926	VV	171	2126	0.05%	0.005%
105	7.997	7.926	8.072	VV	691	27607	0.67%	0.066%
106	8.102	8.072	8.138	VV	481	13200	0.32%	0.031%
107	8.142	8.138	8.149	VV	256	1500	0.04%	0.004%
108	8.159	8.149	8.169	VV	293	3030	0.07%	0.007%
109	8.193	8.169	8.234	VV	564	16244	0.39%	0.039%
110	8.239	8.234	8.268	VV	316	5178	0.13%	0.012%
111	8.272	8.268	8.276	VV	261	917	0.02%	0.002%
112	8.279	8.276	8.284	VV	282	1141	0.03%	0.003%
113	8.307	8.284	8.343	VV	497	12083	0.29%	0.029%
114	8.358	8.343	8.402	VV	552	11822	0.29%	0.028%
115	8.410	8.402	8.427	VV	182	1416	0.03%	0.003%
116	8.450	8.427	8.482	PV	226	4785	0.12%	0.011%
117	8.515	8.482	8.529	VV	233	4427	0.11%	0.011%
118	8.561	8.529	8.692	VV	246431	3156909	76.33%	7.491%
119	8.697	8.692	8.722	VV	1569	25184	0.61%	0.060%
120	8.730	8.722	8.753	VV	1285	22095	0.53%	0.052%
121	8.756	8.753	8.842	VV	1148	45239	1.09%	0.107%
122	8.845	8.842	8.865	VV	578	6945	0.17%	0.016%
123	8.883	8.865	8.949	VV	665	22947	0.55%	0.054%
124	8.966	8.949	8.983	VV	525	8859	0.21%	0.021%
125	8.986	8.983	8.995	VV	412	2876	0.07%	0.007%
126	9.012	8.995	9.064	VV	579	14759	0.36%	0.035%
127	9.072	9.064	9.101	VV	308	5374	0.13%	0.013%
128	9.105	9.101	9.115	VV	211	1483	0.04%	0.004%
129	9.121	9.115	9.125	VV	213	1117	0.03%	0.003%
130	9.129	9.125	9.144	VV	225	2092	0.05%	0.005%
131	9.148	9.144	9.162	VV	201	2006	0.05%	0.005%
132	9.163	9.162	9.168	VV	222	542	0.01%	0.001%
133	9.183	9.168	9.198	VV	191	2599	0.06%	0.006%
134	9.240	9.198	9.269	VV	204	5707	0.14%	0.014%
135	9.278	9.269	9.284	VV	183	1295	0.03%	0.003%
136	9.289	9.284	9.294	VV	217	845	0.02%	0.002%
137	9.298	9.294	9.310	VV	163	1212	0.03%	0.003%
138	9.319	9.310	9.360	VV	328	7209	0.17%	0.017%
139	9.364	9.360	9.367	VV	272	960	0.02%	0.002%
140	9.379	9.367	9.397	VV	284	4421	0.11%	0.010%
141	9.403	9.397	9.416	VV	297	2862	0.07%	0.007%

					rteres			
142	9.457	9.416	9.469	VV	363	10024	0.24%	0.024%
143	9.472	9.469	9.484	VV	331	2631	0.06%	0.006%
144	9.511	9.484	9.543	VV	356	8714	0.21%	0.021%
145	9.570	9.543	9.648	VV	728	15633	0.38%	0.037%
146	9.717	9.648	9.759	VV	841	21040	0.51%	0.050%
147	9.763	9.759	9.791	VV	303	2895	0.07%	0.007%
148	9.801	9.791	9.833	VV	147	2270	0.05%	0.005%
149	9.848	9.833	9.856	PV	107	923	0.02%	0.002%
150	9.862	9.856	9.872	VV	109	524	0.01%	0.001%
151	9.874	9.872	9.896	VV	72	377	0.01%	0.001%
152	9.901	9.896	9.913	PV	23	338	0.01%	0.001%
153	9.931	9.913	9.945	VV	207	2967	0.07%	0.007%
154	9.972	9.945	9.997	VV	887	15426	0.37%	0.037%
155	10.016	9.997	10.064	VV	1148	18515	0.45%	0.044%
156	10.069	10.064	10.072	VV	94	405	0.01%	0.001%
157	10.084	10.072	10.099	VV	185	1889	0.05%	0.004%
158	10.114	10.099	10.121	VV	218	2161	0.05%	0.005%
159	10.167	10.121	10.487	VV	273457	4135930	100.00%	9.814%
160	10.492	10.487	10.506	VV	1491	16180	0.39%	0.038%
161	10.513	10.506	10.516	VV	1443	9055	0.22%	0.021%
162	10.521	10.516	10.547	VV	1558	25027	0.61%	0.059%
163	10.572	10.547	10.687	VV	6203	231327	5.59%	0.549%
164	10.709	10.687	10.742	VV	1252	36537	0.88%	0.087%
165	10.745	10.742	10.785	VV	920	20996	0.51%	0.050%
166	10.789	10.785	10.797	VV	772	5116	0.12%	0.012%
167	10.805	10.797	10.845	VV	733	17640	0.43%	0.042%
168	10.847	10.845	10.859	VV	504	4031	0.10%	0.010%
169	10.882	10.859	10.902	VV	829	16461	0.40%	0.039%
170	10.907	10.902	10.912	VV	489	2811	0.07%	0.007%
171	10.948	10.912	10.965	VV	710	18344	0.44%	0.044%
172	10.971	10.965	10.977	VV	576	3901	0.09%	0.009%
173	10.987	10.977	11.006	VV	599	9327	0.23%	0.022%
174	11.011	11.006	11.030	VV	546	7368	0.18%	0.017%
175	11.035	11.030	11.077	VV	515	11908	0.29%	0.028%
176	11.096	11.077	11.110	VV	404	7077	0.17%	0.017%
177	11.145	11.110	11.169	VV	600	16056	0.39%	0.038%
178	11.174	11.169	11.180	VV	443	2483	0.06%	0.006%
179	11.190	11.180	11.229	VV	440	10453	0.25%	0.025%
180	11.234	11.229	11.240	VV	290	1854	0.04%	0.004%
181	11.267	11.240	11.297	VV	381	10030	0.24%	0.024%
182	11.300	11.297	11.310	VV	245	1608	0.04%	0.004%
183	11.347	11.310	11.374	VV	441	13389	0.32%	0.032%
184	11.393	11.374	11.409	VV	461	7693	0.19%	0.018%
185	11.434	11.409	11.479	VV	424	14287	0.35%	0.034%
186	11.485	11.479	11.493	VV	261	1970	0.05%	0.005%
187	11.502	11.493	11.514	VV	311	3382	0.08%	0.008%
188	11.525	11.514	11.538	VV	338	4096	0.10%	0.010%
189	11.562	11.538	11.576	VV	612	10140	0.25%	0.024%
190	11.609	11.576	11.713	VV	281931	3484985	84.26%	8.269%
191	11.727	11.713	11.772	VV	1245	30138	0.73%	0.072%
192	11.775	11.772	11.819	VV	544	11230	0.27%	0.027%
193	11.851	11.819	11.879	VV	631	16120	0.39%	0.038%
194	11.884	11.879	11.921	VV	414	6962	0.17%	0.017%

					rteres			
195	11.928	11.921	11.969	VV	211	4420	0.11%	0.010%
196	11.971	11.969	11.974	VV	135	308	0.01%	0.001%
197	12.018	11.974	12.047	VV	662	17196	0.42%	0.041%
198	12.078	12.047	12.109	VV	2333	48626	1.18%	0.115%
199	12.117	12.109	12.195	VV	1352	35906	0.87%	0.085%
200	12.202	12.195	12.219	VV	285	3188	0.08%	0.008%
201	12.242	12.219	12.249	VV	317	4613	0.11%	0.011%
202	12.260	12.249	12.289	VV	316	5999	0.15%	0.014%
203	12.299	12.289	12.340	VV	499	10270	0.25%	0.024%
204	12.344	12.340	12.349	VV	238	1198	0.03%	0.003%
205	12.354	12.349	12.359	VV	306	1427	0.03%	0.003%
206	12.364	12.359	12.372	VV	299	1950	0.05%	0.005%
207	12.403	12.372	12.446	VV	457	10968	0.27%	0.026%
208	12.470	12.446	12.519	PV	748	20507	0.50%	0.049%
209	12.546	12.519	12.647	VV	76689	1210014	29.26%	2.871%
210	12.658	12.647	12.715	VV	2873	88775	2.15%	0.211%
211	12.737	12.715	12.761	VV	1368	34839	0.84%	0.083%
212	12.765	12.761	12.770	VV	1125	6288	0.15%	0.015%
213	12.785	12.770	12.834	VV	1286	34592	0.84%	0.082%
214	12.867	12.834	12.887	VV	1345	32257	0.78%	0.077%
215	12.919	12.887	12.980	VV	278115	3479758	84.13%	8.257%
216	13.001	12.980	13.014	VV	4311	62259	1.51%	0.148%
217	13.027	13.014	13.077	VV	3984	81605	1.97%	0.194%
218	13.103	13.077	13.146	VV	1323	37900	0.92%	0.090%
219	13.189	13.146	13.217	VV	725	25913	0.63%	0.061%
220	13.253	13.217	13.281	VV	879	25406	0.61%	0.060%
221	13.291	13.281	13.317	VV	668	13533	0.33%	0.032%
222	13.345	13.317	13.370	VV	1072	28900	0.70%	0.069%
223	13.395	13.370	13.424	VV	1132	31395	0.76%	0.074%
224	13.447	13.424	13.509	VV	1784	47094	1.14%	0.112%
225	13.545	13.509	13.558	VV	1209	25582	0.62%	0.061%
226	13.591	13.558	13.616	VV	1454	39861	0.96%	0.095%
227	13.641	13.616	13.652	VV	1097	22116	0.53%	0.052%
228	13.676	13.652	13.689	VV	1378	27494	0.66%	0.065%
229	13.706	13.689	13.744	VV	1500	42322	1.02%	0.100%
230	13.784	13.744	13.940	VV	12773	383089	9.26%	0.909%
231	13.965	13.940	14.010	VV	2170	66241	1.60%	0.157%
232	14.035	14.010	14.050	VV	1287	28016	0.68%	0.066%
233	14.118	14.050	14.190	VV	268546	3551398	85.87%	8.427%
234	14.201	14.190	14.245	VV	1715	47658	1.15%	0.113%
235	14.266	14.245	14.297	VV	2128	48278	1.17%	0.115%
236	14.309	14.297	14.329	VV	1187	21896	0.53%	0.052%
237	14.355	14.329	14.388	VV	1348	42534	1.03%	0.101%
238	14.433	14.388	14.472	VV	1333	59116	1.43%	0.140%
239	14.487	14.472	14.515	VV	1283	31211	0.75%	0.074%
240	14.543	14.515	14.627	VV	2249	103914	2.51%	0.247%
241	14.648	14.627	14.667	VV	1322	30488	0.74%	0.072%
242	14.689	14.667	14.744	VV	1894	63678	1.54%	0.151%
243	14.762	14.744	14.790	VV	1391	36580	0.88%	0.087%
244	14.815	14.790	14.830	VV	2025	41419	1.00%	0.098%
245	14.840	14.830	14.876	VV	1864	45659	1.10%	0.108%
246	14.897	14.876	14.922	VV	1682	40363	0.98%	0.096%

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247	14.942	14.922	14.980	VV	1533	49080	1.19%	0.116%
248	15.018	14.980	15.089	VV	100003	1431763	34.62%	3.397%
249	15.098	15.089	15.121	VV	1535	27784	0.67%	0.066%
250	15.157	15.121	15.186	VV	12058	196617	4.75%	0.467%
251	15.221	15.186	15.277	VV	267974	3519467	85.09%	8.351%
252	15.293	15.277	15.379	VV	1678	70628	1.71%	0.168%
253	15.427	15.379	15.460	VV	1165	49045	1.19%	0.116%
254	15.480	15.460	15.552	VV	925	43573	1.05%	0.103%
255	15.564	15.552	15.580	VV	861	13921	0.34%	0.033%
256	15.609	15.580	15.714	VV	33568	669231	16.18%	1.588%
257	15.744	15.714	15.765	VV	2762	61595	1.49%	0.146%
258	15.780	15.765	15.804	VV	2057	36664	0.89%	0.087%
259	15.821	15.804	15.875	VV	1845	54847	1.33%	0.130%
260	15.885	15.875	15.960	VV	1075	44203	1.07%	0.105%
261	15.986	15.960	16.022	VV	1095	33517	0.81%	0.080%
262	16.041	16.022	16.072	VV	1401	33791	0.82%	0.080%
263	16.085	16.072	16.100	VV	1024	16091	0.39%	0.038%
264	16.139	16.100	16.190	VV	1194	50501	1.22%	0.120%
265	16.243	16.190	16.310	VV	253415	3445131	83.30%	8.175%
266	16.332	16.310	16.367	VV	882	23188	0.56%	0.055%
267	16.380	16.367	16.404	VV	615	10926	0.26%	0.026%
268	16.415	16.404	16.435	VV	394	6812	0.16%	0.016%
269	16.452	16.435	16.483	VV	486	11184	0.27%	0.027%
270	16.495	16.483	16.515	VV	432	6540	0.16%	0.016%
271	16.547	16.515	16.582	VV	384	13132	0.32%	0.031%
272	16.630	16.582	16.672	VV	3558	80259	1.94%	0.190%
273	16.689	16.672	16.705	VV	1167	19471	0.47%	0.046%
274	16.728	16.705	16.794	VV	3058	55856	1.35%	0.133%
275	16.815	16.794	16.823	VV	634	8034	0.19%	0.019%
276	16.839	16.823	16.875	VV	651	14696	0.36%	0.035%
277	16.921	16.875	16.997	VV	539	25112	0.61%	0.060%
278	17.075	16.997	17.099	VV	763	29243	0.71%	0.069%
279	17.114	17.099	17.128	VV	528	7650	0.18%	0.018%
280	17.193	17.128	17.232	VV	247170	3375495	81.61%	8.010%
281	17.242	17.232	17.265	VV	1315	18717	0.45%	0.044%
282	17.284	17.265	17.338	VV	1058	20492	0.50%	0.049%
283	17.356	17.338	17.383	VV	191	2954	0.07%	0.007%
284	17.408	17.383	17.432	PV	153	2312	0.06%	0.005%
285	17.459	17.432	17.483	PV	140	2439	0.06%	0.006%

Sum of corrected areas: 42143480

FF052125.M Thu Jun 05 03:45:41 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	05/28/25
Project:	South River WM Replacement	Date Received:	05/28/25
Client Sample ID:	TP-54MSD	SDG No.:	Q2150
Lab Sample ID:	Q2150-09MSD	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	83.6
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		PH :	
Prep Method :	SW3541	Decanted:	
		Test:	Diesel Range Organics
		Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015899.D	1	06/04/25 08:30	06/04/25 13:47	PB168274

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	12800		202	1990	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	11.5		37 - 130	57%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
 Data File : FF015899.D
 Signal(s) : FID2B.ch
 Acq On : 04 Jun 2025 13:47
 Operator : YP\AJ
 Sample : Q2150-09MSD
 Misc :
 ALS Vial : 73 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 TP-54MSD

Integration File: autoint1.e
 Quant Time: Jun 05 03:03:07 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
 Quant Title :
 QLast Update : Wed May 21 12:32:51 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.018	1399735	11.460 ug/ml
Target Compounds			
2) N-DECANE	4.565	2930687	24.724 ug/ml
3) N-DODECANE	6.733	3253341	25.857 ug/ml
4) N-TETRADECANE	8.561	3280951	26.149 ug/ml
5) N-HEXADECANE	10.166	3913837	29.841 ug/ml
6) N-OCTADECANE	11.610	3610967	26.279 ug/ml
7) N-EICOSANE	12.919	3590330	25.233 ug/ml
8) N-DOCOSANE	14.118	3609795	25.985 ug/ml
10) N-TETRACOSANE	15.221	3611302	25.909 ug/ml
11) N-HEXACOSANE	16.242	3562535	25.686 ug/ml
12) N-OCTACOSANE	17.193	3497806	25.443 ug/ml

(f)=RT Delta > 1/2 Window

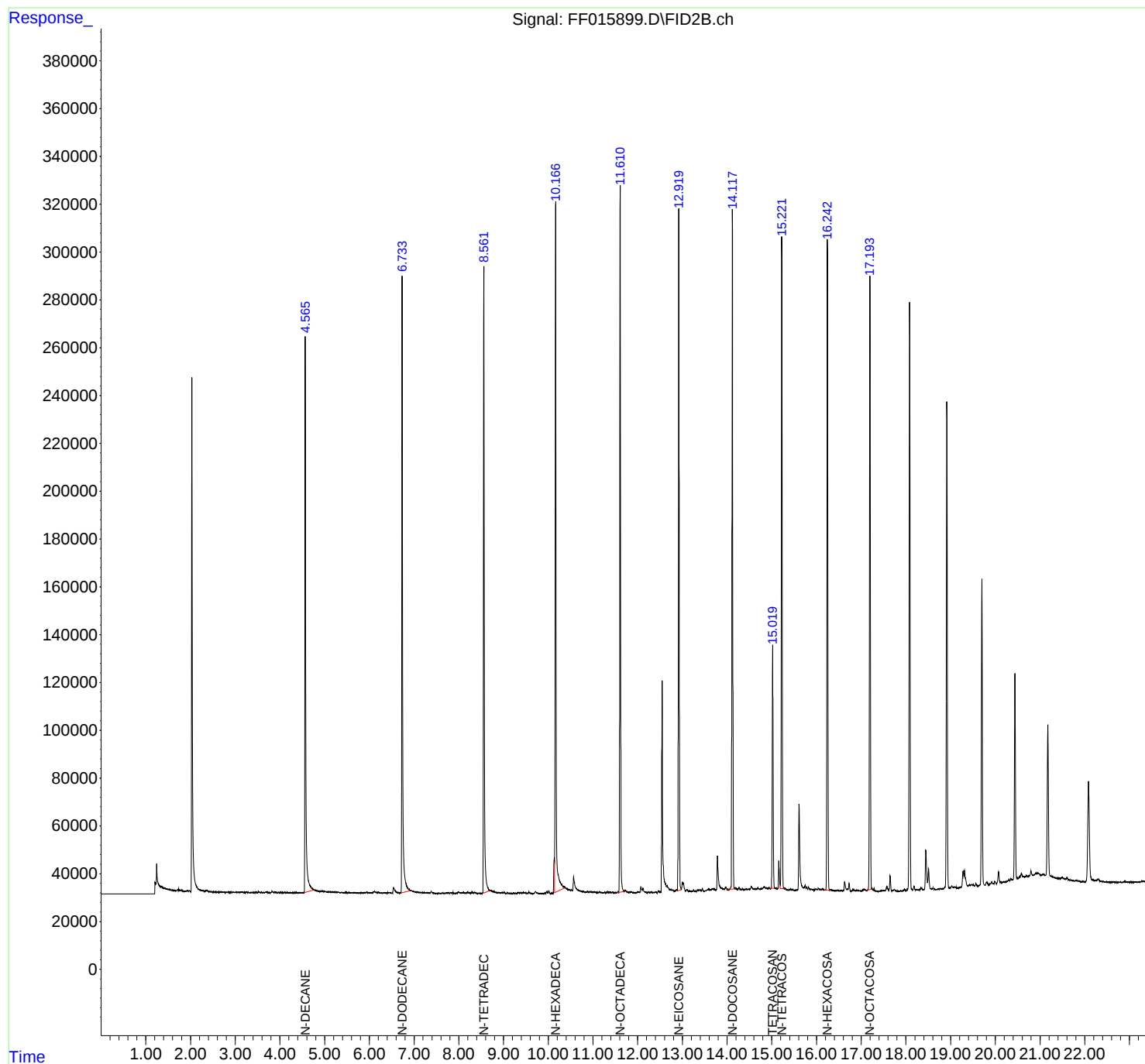
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015899.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 13:47
Operator : YP\AJ
Sample : Q2150-09MSD
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-54MSD

Integration File: autoint1.e
Quant Time: Jun 05 03:03:07 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF052125.M
Quant Title :
QLast Update : Wed May 21 12:32:51 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF060425\
Data File : FF015899.D
Signal(s) : FID2B.ch
Acq On : 04 Jun 2025 13:47
Sample : Q2150-09MSD
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File: Sample.e

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

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.509	4.500	4.537	BV	87	931	0.02%	0.002%
2	4.565	4.537	4.813	PV	232492	3055502	69.39%	6.888%
3	4.819	4.813	4.885	VV	1036	35920	0.82%	0.081%
4	4.910	4.885	4.929	VV	761	17356	0.39%	0.039%
5	4.933	4.929	4.949	VV	703	8037	0.18%	0.018%
6	4.958	4.949	4.965	VV	711	6450	0.15%	0.015%
7	4.973	4.965	4.981	VV	691	6004	0.14%	0.014%
8	4.987	4.981	5.000	VV	624	6785	0.15%	0.015%
9	5.003	5.000	5.007	VV	575	2320	0.05%	0.005%
10	5.013	5.007	5.047	VV	624	13367	0.30%	0.030%
11	5.050	5.047	5.065	VV	539	5358	0.12%	0.012%
12	5.067	5.065	5.076	VV	631	3515	0.08%	0.008%
13	5.078	5.076	5.089	VV	535	3941	0.09%	0.009%
14	5.098	5.089	5.110	VV	567	6332	0.14%	0.014%
15	5.116	5.110	5.128	VV	531	5508	0.13%	0.012%
16	5.132	5.128	5.155	VV	509	7541	0.17%	0.017%
17	5.164	5.155	5.169	VV	494	3749	0.09%	0.008%
18	5.175	5.169	5.184	VV	526	4210	0.10%	0.009%
19	5.192	5.184	5.200	VV	447	3767	0.09%	0.008%
20	5.206	5.200	5.222	VV	420	5253	0.12%	0.012%
21	5.226	5.222	5.236	VV	457	3066	0.07%	0.007%
22	5.244	5.236	5.271	VV	417	7476	0.17%	0.017%
23	5.280	5.271	5.285	VV	378	2734	0.06%	0.006%
24	5.294	5.285	5.299	VV	323	2612	0.06%	0.006%
25	5.303	5.299	5.309	VV	381	1856	0.04%	0.004%
26	5.312	5.309	5.319	VV	320	1767	0.04%	0.004%
27	5.323	5.319	5.333	VV	329	2375	0.05%	0.005%
28	5.348	5.333	5.352	VV	287	2927	0.07%	0.007%
29	5.365	5.352	5.371	VV	281	2811	0.06%	0.006%
30	5.374	5.371	5.383	VV	270	1584	0.04%	0.004%
31	5.389	5.383	5.405	VV	202	2658	0.06%	0.006%
32	5.407	5.405	5.438	VV	280	4194	0.10%	0.009%
33	5.454	5.438	5.458	VV	247	2477	0.06%	0.006%
34	5.480	5.458	5.484	VV	285	2943	0.07%	0.007%
35	5.491	5.484	5.501	VV	265	1854	0.04%	0.004%
36	5.505	5.501	5.512	VV	212	1312	0.03%	0.003%

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37	5.517	5.512	5.539	VV	214	2799	0.06%	0.006%
38	5.548	5.539	5.566	VV	247	2661	0.06%	0.006%
39	5.569	5.566	5.573	VV	174	658	0.01%	0.001%
40	5.578	5.573	5.584	VV	178	834	0.02%	0.002%
41	5.588	5.584	5.601	VV	179	1329	0.03%	0.003%
42	5.605	5.601	5.618	VV	152	1261	0.03%	0.003%
43	5.624	5.618	5.641	VV	204	1745	0.04%	0.004%
44	5.668	5.641	5.687	VV	228	4082	0.09%	0.009%
45	5.698	5.687	5.751	VV	165	3229	0.07%	0.007%
46	5.785	5.751	5.802	VV	143	2732	0.06%	0.006%
47	5.804	5.802	5.818	VV	176	970	0.02%	0.002%
48	5.828	5.818	5.841	VV	147	1232	0.03%	0.003%
49	5.846	5.841	5.850	VV	92	361	0.01%	0.001%
50	5.853	5.850	5.861	VV	82	334	0.01%	0.001%
51	5.869	5.861	5.877	VV	122	715	0.02%	0.002%
52	5.890	5.877	5.917	VV	233	3790	0.09%	0.009%
53	5.937	5.917	5.946	VV	485	5239	0.12%	0.012%
54	5.952	5.946	5.994	VV	337	6124	0.14%	0.014%
55	6.016	5.994	6.032	VV	228	4177	0.09%	0.009%
56	6.036	6.032	6.040	VV	172	674	0.02%	0.002%
57	6.043	6.040	6.051	VV	199	927	0.02%	0.002%
58	6.075	6.051	6.081	VV	270	3399	0.08%	0.008%
59	6.110	6.081	6.152	VV	695	19293	0.44%	0.043%
60	6.158	6.152	6.176	VV	272	3184	0.07%	0.007%
61	6.194	6.176	6.222	VV	430	8613	0.20%	0.019%
62	6.230	6.222	6.268	VV	218	3723	0.08%	0.008%
63	6.277	6.268	6.291	VV	138	1304	0.03%	0.003%
64	6.296	6.291	6.302	VV	115	575	0.01%	0.001%
65	6.307	6.302	6.313	VV	136	594	0.01%	0.001%
66	6.332	6.313	6.359	VV	156	3136	0.07%	0.007%
67	6.362	6.359	6.385	VV	135	1625	0.04%	0.004%
68	6.393	6.385	6.396	VV	151	693	0.02%	0.002%
69	6.408	6.396	6.423	VV	276	1840	0.04%	0.004%
70	6.441	6.423	6.464	VV	369	6284	0.14%	0.014%
71	6.470	6.464	6.489	VV	231	1970	0.04%	0.004%
72	6.540	6.489	6.626	VV	2445	72367	1.64%	0.163%
73	6.629	6.626	6.674	VV	388	6794	0.15%	0.015%
74	6.681	6.674	6.708	VV	261	3924	0.09%	0.009%
75	6.733	6.708	6.919	VV	258645	3336911	75.78%	7.522%
76	6.927	6.919	6.991	VV	1220	42165	0.96%	0.095%
77	6.995	6.991	7.058	VV	774	23733	0.54%	0.054%
78	7.061	7.058	7.073	VV	484	4081	0.09%	0.009%
79	7.078	7.073	7.105	VV	505	8446	0.19%	0.019%
80	7.122	7.105	7.129	VV	430	5677	0.13%	0.013%
81	7.146	7.129	7.174	VV	433	9684	0.22%	0.022%
82	7.191	7.174	7.222	VV	375	9167	0.21%	0.021%
83	7.229	7.222	7.273	VV	324	8453	0.19%	0.019%
84	7.279	7.273	7.339	VV	314	9248	0.21%	0.021%
85	7.343	7.339	7.359	VV	223	2548	0.06%	0.006%
86	7.383	7.359	7.456	VV	943	20622	0.47%	0.046%
87	7.466	7.456	7.476	VV	156	1474	0.03%	0.003%
88	7.485	7.476	7.499	VV	162	1260	0.03%	0.003%
89	7.518	7.499	7.532	VV	99	1181	0.03%	0.003%

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90	7.566	7.532	7.581	PV	154	2725	0.06%	0.006%
91	7.611	7.581	7.637	VV	170	3737	0.08%	0.008%
92	7.654	7.637	7.702	VV	202	4596	0.10%	0.010%
93	7.722	7.702	7.746	VV	249	4994	0.11%	0.011%
94	7.757	7.746	7.791	VV	255	5460	0.12%	0.012%
95	7.797	7.791	7.857	VV	291	9289	0.21%	0.021%
96	7.866	7.857	7.897	VV	454	4116	0.09%	0.009%
97	7.905	7.897	7.933	VV	124	2477	0.06%	0.006%
98	7.993	7.933	8.056	VV	780	24802	0.56%	0.056%
99	8.064	8.056	8.072	VV	231	2036	0.05%	0.005%
100	8.095	8.072	8.150	VV	466	15364	0.35%	0.035%
101	8.193	8.150	8.270	VV	586	23033	0.52%	0.052%
102	8.298	8.270	8.332	VV	526	11387	0.26%	0.026%
103	8.357	8.332	8.419	VV	497	13278	0.30%	0.030%
104	8.457	8.419	8.488	VV	169	4237	0.10%	0.010%
105	8.511	8.488	8.527	VV	161	3021	0.07%	0.007%
106	8.561	8.527	8.864	VV	262401	3428468	77.86%	7.729%
107	8.884	8.864	8.941	VV	601	16980	0.39%	0.038%
108	8.969	8.941	8.997	VV	508	12459	0.28%	0.028%
109	9.009	8.997	9.061	VV	616	12430	0.28%	0.028%
110	9.079	9.061	9.126	VV	235	6738	0.15%	0.015%
111	9.138	9.126	9.201	VV	189	4985	0.11%	0.011%
112	9.208	9.201	9.222	VV	121	1000	0.02%	0.002%
113	9.229	9.222	9.299	VV	408	6732	0.15%	0.015%
114	9.321	9.299	9.357	VV	531	10494	0.24%	0.024%
115	9.374	9.357	9.399	VV	299	6134	0.14%	0.014%
116	9.437	9.399	9.534	VV	458	21399	0.49%	0.048%
117	9.568	9.534	9.656	VV	658	15681	0.36%	0.035%
118	9.716	9.656	9.820	PV	911	28347	0.64%	0.064%
119	9.840	9.820	9.852	VV	115	1547	0.04%	0.003%
120	9.862	9.852	9.874	VV	160	910	0.02%	0.002%
121	9.882	9.874	9.892	PV	79	340	0.01%	0.001%
122	9.930	9.892	9.949	VV	331	5954	0.14%	0.013%
123	9.968	9.949	9.995	VV	980	16098	0.37%	0.036%
124	10.015	9.995	10.066	VV	1143	19292	0.44%	0.043%
125	10.080	10.066	10.092	VV	140	1415	0.03%	0.003%
126	10.166	10.092	10.502	PV	288299	4403183	100.00%	9.926%
127	10.520	10.502	10.546	VV	1483	36106	0.82%	0.081%
128	10.569	10.546	10.689	VV	6907	242255	5.50%	0.546%
129	10.704	10.689	10.846	VV	1220	77924	1.77%	0.176%
130	10.881	10.846	10.913	VV	928	26000	0.59%	0.059%
131	10.940	10.913	10.971	VV	832	21394	0.49%	0.048%
132	10.990	10.971	11.110	VV	674	38171	0.87%	0.086%
133	11.147	11.110	11.231	VV	633	27950	0.63%	0.063%
134	11.258	11.231	11.297	VV	335	11070	0.25%	0.025%
135	11.329	11.297	11.368	VV	559	17249	0.39%	0.039%
136	11.391	11.368	11.416	VV	400	10542	0.24%	0.024%
137	11.438	11.416	11.477	VV	434	11435	0.26%	0.026%
138	11.499	11.477	11.533	VV	264	7181	0.16%	0.016%
139	11.559	11.533	11.576	VV	563	10260	0.23%	0.023%
140	11.610	11.576	11.707	VV	295393	3654698	83.00%	8.239%
141	11.724	11.707	11.770	VV	1349	30891	0.70%	0.070%

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142	11.779	11.770	11.824	VV	478	10894	0.25%	0.025%
143	11.849	11.824	11.959	VV	595	22129	0.50%	0.050%
144	12.019	11.959	12.051	VV	602	19611	0.45%	0.044%
145	12.073	12.051	12.101	VV	2588	47509	1.08%	0.107%
146	12.118	12.101	12.215	VV	2085	53061	1.21%	0.120%
147	12.240	12.215	12.282	VV	298	9593	0.22%	0.022%
148	12.300	12.282	12.322	VV	505	8009	0.18%	0.018%
149	12.342	12.322	12.356	VV	240	4265	0.10%	0.010%
150	12.393	12.356	12.435	VV	452	11811	0.27%	0.027%
151	12.464	12.435	12.522	PV	800	22289	0.51%	0.050%
152	12.546	12.522	12.646	VV	88746	1320178	29.98%	2.976%
153	12.657	12.646	12.771	VV	2976	134018	3.04%	0.302%
154	12.783	12.771	12.832	VV	1337	34262	0.78%	0.077%
155	12.867	12.832	12.887	VV	1362	33766	0.77%	0.076%
156	12.919	12.887	12.977	VV	285931	3646502	82.82%	8.220%
157	13.000	12.977	13.012	VV	4599	66630	1.51%	0.150%
158	13.025	13.012	13.077	VV	4131	85669	1.95%	0.193%
159	13.100	13.077	13.142	VV	1408	38182	0.87%	0.086%
160	13.185	13.142	13.217	VV	810	29313	0.67%	0.066%
161	13.249	13.217	13.310	VV	996	40571	0.92%	0.091%
162	13.336	13.310	13.354	VV	1175	24249	0.55%	0.055%
163	13.361	13.354	13.370	VV	1087	10017	0.23%	0.023%
164	13.393	13.370	13.425	VV	1255	33508	0.76%	0.076%
165	13.447	13.425	13.487	VV	1848	40317	0.92%	0.091%
166	13.546	13.487	13.562	VV	1138	38777	0.88%	0.087%
167	13.589	13.562	13.621	VV	1628	44586	1.01%	0.101%
168	13.668	13.621	13.688	VV	1482	51676	1.17%	0.116%
169	13.710	13.688	13.742	VV	1564	43488	0.99%	0.098%
170	13.782	13.742	13.938	VV	15308	425125	9.65%	0.958%
171	13.965	13.938	14.014	VV	2301	74521	1.69%	0.168%
172	14.024	14.014	14.052	VV	1293	28013	0.64%	0.063%
173	14.118	14.052	14.187	VV	285109	3719672	84.48%	8.385%
174	14.205	14.187	14.241	VV	1688	47704	1.08%	0.108%
175	14.265	14.241	14.299	VV	2220	55285	1.26%	0.125%
176	14.318	14.299	14.330	VV	1267	22449	0.51%	0.051%
177	14.345	14.330	14.384	VV	1367	40333	0.92%	0.091%
178	14.431	14.384	14.467	VV	1429	62118	1.41%	0.140%
179	14.491	14.467	14.514	VV	1325	35461	0.81%	0.080%
180	14.541	14.514	14.616	VV	2416	103657	2.35%	0.234%
181	14.636	14.616	14.664	VV	1392	38590	0.88%	0.087%
182	14.688	14.664	14.737	VV	1952	64946	1.47%	0.146%
183	14.761	14.737	14.779	VV	1478	34884	0.79%	0.079%
184	14.814	14.779	14.822	VV	2137	45075	1.02%	0.102%
185	14.836	14.822	14.874	VV	2336	60307	1.37%	0.136%
186	14.895	14.874	14.919	VV	1768	42929	0.97%	0.097%
187	14.937	14.919	14.982	VV	1711	58547	1.33%	0.132%
188	15.018	14.982	15.064	VV	103140	1476791	33.54%	3.329%
189	15.081	15.064	15.124	VV	1724	55821	1.27%	0.126%
190	15.156	15.124	15.187	VV	13001	209904	4.77%	0.473%
191	15.221	15.187	15.274	VV	273766	3686175	83.72%	8.310%
192	15.291	15.274	15.376	VV	1630	70636	1.60%	0.159%
193	15.426	15.376	15.460	VV	1212	50745	1.15%	0.114%
194	15.473	15.460	15.514	VV	995	26291	0.60%	0.059%

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195	15.608	15.514	15.714	VV	36755	746329	16.95%	1.682%
196	15.744	15.714	15.764	VV	2808	61103	1.39%	0.138%
197	15.779	15.764	15.802	VV	2149	37806	0.86%	0.085%
198	15.822	15.802	15.867	VV	1982	54609	1.24%	0.123%
199	15.884	15.867	15.907	VV	1155	24149	0.55%	0.054%
200	15.916	15.907	15.959	VV	931	24966	0.57%	0.056%
201	15.982	15.959	16.016	VV	1278	33624	0.76%	0.076%
202	16.039	16.016	16.071	VV	1495	37320	0.85%	0.084%
203	16.083	16.071	16.104	VV	1047	18433	0.42%	0.042%
204	16.136	16.104	16.194	VV	1216	48879	1.11%	0.110%
205	16.242	16.194	16.307	VV	273184	3607667	81.93%	8.133%
206	16.326	16.307	16.362	VV	855	22094	0.50%	0.050%
207	16.379	16.362	16.414	VV	573	13813	0.31%	0.031%
208	16.421	16.414	16.428	VV	362	3016	0.07%	0.007%
209	16.450	16.428	16.479	VV	493	12735	0.29%	0.029%
210	16.491	16.479	16.527	VV	381	9290	0.21%	0.021%
211	16.543	16.527	16.578	VV	385	9716	0.22%	0.022%
212	16.628	16.578	16.670	VV	3993	85417	1.94%	0.193%
213	16.689	16.670	16.702	VV	1106	19450	0.44%	0.044%
214	16.728	16.702	16.784	VV	3464	57926	1.32%	0.131%
215	16.835	16.784	16.874	VV	709	23988	0.54%	0.054%
216	16.911	16.874	16.992	VV	555	23855	0.54%	0.054%
217	17.074	16.992	17.129	VV	856	41662	0.95%	0.094%
218	17.193	17.129	17.231	VV	257543	3541300	80.43%	7.983%
219	17.243	17.231	17.266	VV	1405	19560	0.44%	0.044%
220	17.283	17.266	17.384	VV	997	20767	0.47%	0.047%
221	17.406	17.384	17.436	PV	155	2266	0.05%	0.005%
222	17.462	17.436	17.482	PV	186	2475	0.06%	0.006%
					Sum of corrected areas:		44359673	

FF052125.M Thu Jun 05 03:46:18 2025

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2074-05		FF015884.D	FF052125	TETRACOSANE-d50 (SURROGA	mohammad	5/23/2025 5:16:29 AM	Peak Integrated by Software incorrectly
Q2074-07		FF015886.D	FF052125	TETRACOSANE-d50 (SURROGA	mohammad	5/23/2025 5:16:29 AM	Peak Integrated by Software incorrectly
.BLK		FF015888.D	FF052125	TETRACOSANE-d50 (SURROGA	mohammad	5/23/2025 5:16:29 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2176-06		FF015905.D	FF060425	TETRACOSANE-d50 (SURROGA	mohammad	6/6/2025 2:02:03 AM	Peak Integrated by Software incorrectly
Q2176-06		FF015910.D	FF060425	TETRACOSANE-d50 (SURROGA	mohammad	6/6/2025 2:02:03 AM	Peak Integrated by Software incorrectly
Q2176-08		FF015911.D	FF060425	TETRACOSANE-d50 (SURROGA	mohammad	6/6/2025 2:02:03 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
5 TRPH STD		FG015890.D	FG052225	N-TETRACONTANE	mohammad	5/23/2025 5:16:45 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2150-08		FG015927.D	FG060425	TETRACOSANE-d50 (SURROGA	mohammad	6/6/2025 2:02:10 AM	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM
Supervise By	mohammad	Supervise On	5/23/2025 5:16:29 AM
SubDirectory	FF052125	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

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

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF060425

Review By	yogesh	Review On	6/4/2025 1:00:09 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:03 AM
SubDirectory	FF060425	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24469 PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015893.D	04 Jun 2025 10:47	YP\AJ	Ok
2	I.BLK	FF015894.D	04 Jun 2025 11:16	YP\AJ	Ok
3	50 PPM TRPH STD	FF015895.D	04 Jun 2025 11:46	YP\AJ	Ok
4	RT MARKER	FF015896.D	04 Jun 2025 12:15	YP\AJ	Ok
5	Q2150-09	FF015897.D	04 Jun 2025 12:48	YP\AJ	Ok
6	Q2150-09MS	FF015898.D	04 Jun 2025 13:17	YP\AJ	Ok
7	Q2150-09MSD	FF015899.D	04 Jun 2025 13:47	YP\AJ	Ok
8	Q2176-01	FF015900.D	04 Jun 2025 14:16	YP\AJ	Ok
9	Q2176-02	FF015901.D	04 Jun 2025 14:46	YP\AJ	Ok
10	Q2176-03	FF015902.D	04 Jun 2025 15:15	YP\AJ	Ok
11	Q2176-04	FF015903.D	04 Jun 2025 15:45	YP\AJ	Ok
12	Q2176-05	FF015904.D	04 Jun 2025 16:48	YP\AJ	Ok
13	Q2176-06	FF015905.D	04 Jun 2025 17:18	YP\AJ	Ok,M
14	Q2176-07	FF015906.D	04 Jun 2025 17:47	YP\AJ	Ok
15	Q2176-08	FF015907.D	04 Jun 2025 18:17	YP\AJ	Ok
16	I.BLK	FF015908.D	04 Jun 2025 18:46	YP\AJ	Ok
17	50 PPM TRPH STD	FF015909.D	04 Jun 2025 19:16	YP\AJ	Ok
18	Q2176-06	FF015910.D	04 Jun 2025 20:15	YP\AJ	Not Ok
19	Q2176-08	FF015911.D	04 Jun 2025 20:45	YP\AJ	Not Ok
20	I.BLK	FF015912.D	04 Jun 2025 21:14	YP\AJ	Ok
21	50 PPM TRPH STD	FF015913.D	04 Jun 2025 21:44	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG052225

Review By	yogesh	Review On	5/21/2025 1:58:58 PM
Supervise By	mohammad	Supervise On	5/23/2025 5:16:45 AM
SubDirectory	FG052225	HP Acquire Method	HP Processing Method FG052225
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	FG015884.D	21 May 2025 20:34	YP\AJ	Ok
2	I.BLK	FG015885.D	21 May 2025 21:03	YP\AJ	Ok
3	100 TRPH STD	FG015886.D	21 May 2025 21:33	YP\AJ	Ok
4	50 TRPH STD	FG015887.D	21 May 2025 22:02	YP\AJ	Ok
5	20 TRPH STD	FG015888.D	21 May 2025 22:31	YP\AJ	Ok
6	10 TRPH STD	FG015889.D	21 May 2025 23:00	YP\AJ	Ok
7	5 TRPH STD	FG015890.D	21 May 2025 23:30	YP\AJ	Ok,M
8	FG052225ICV	FG015891.D	21 May 2025 23:59	YP\AJ	Ok
9	PP24596	FG015892.D	22 May 2025 00:58	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG060425

Review By	yogesh	Review On	6/4/2025 1:01:13 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:10 AM
SubDirectory	FG060425	HP Acquire Method	HP Processing Method FG052225
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	FG015908.D	04 Jun 2025 10:47	YP\AJ	Ok
2	I.BLK	FG015909.D	04 Jun 2025 11:16	YP\AJ	Ok
3	50 PPM TRPH STD	FG015910.D	04 Jun 2025 11:46	YP\AJ	Ok
4	RT MARKER	FG015911.D	04 Jun 2025 12:15	YP\AJ	Ok
5	PB168274BL	FG015912.D	04 Jun 2025 12:48	YP\AJ	Ok
6	PB168274BS	FG015913.D	04 Jun 2025 13:17	YP\AJ	Ok
7	Q2150-01	FG015914.D	04 Jun 2025 13:47	YP\AJ	Ok
8	Q2150-02	FG015915.D	04 Jun 2025 14:16	YP\AJ	Ok
9	Q2150-03	FG015916.D	04 Jun 2025 14:46	YP\AJ	Ok
10	Q2150-04	FG015917.D	04 Jun 2025 15:15	YP\AJ	Ok
11	Q2150-05	FG015918.D	04 Jun 2025 15:45	YP\AJ	Ok
12	Q2150-06	FG015919.D	04 Jun 2025 16:48	YP\AJ	Ok
13	Q2150-07	FG015920.D	04 Jun 2025 17:18	YP\AJ	Ok
14	Q2150-08	FG015921.D	04 Jun 2025 17:47	YP\AJ	Ok
15	Q2150-10	FG015922.D	04 Jun 2025 18:17	YP\AJ	Ok
16	I.BLK	FG015923.D	04 Jun 2025 18:46	YP\AJ	Ok
17	50 PPM TRPH STD	FG015924.D	04 Jun 2025 19:16	YP\AJ	Ok
18	Q2150-01	FG015925.D	04 Jun 2025 20:15	YP\AJ	Not Ok
19	Q2150-06	FG015926.D	04 Jun 2025 20:45	YP\AJ	Not Ok
20	Q2150-08	FG015927.D	04 Jun 2025 21:14	YP\AJ	Not Ok
21	I.BLK	FG015928.D	04 Jun 2025 21:44	YP\AJ	Ok

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG060425

Review By	yogesh	Review On	6/4/2025 1:01:13 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:10 AM
SubDirectory	FG060425	HP Acquire Method	HP Processing Method FG052225
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	50 PPM TRPH STD	FG015929.D	04 Jun 2025 22:13	YP\AJ	Ok
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M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM
Supervise By	mohammad	Supervise On	5/23/2025 5:16:29 AM
SubDirectory	FF052125	HP Acquire Method	HP Processing Method FF052125
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

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

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF052125

Review By	yogesh	Review On	5/21/2025 1:57:54 PM	
Supervise By	mohammad	Supervise On	5/23/2025 5:16:29 AM	
SubDirectory	FF052125	HP Acquire Method	HP Processing Method	FF052125
STD. NAME	STD REF.#			
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472			
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473			

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF060425

Review By	yogesh	Review On	6/4/2025 1:00:09 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:03 AM
SubDirectory	FF060425	HP Acquire Method	HP Processing Method FF052125

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

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015893.D	04 Jun 2025 10:47		YP\AJ	Ok
2	I.BLK		FF015894.D	04 Jun 2025 11:16		YP\AJ	Ok
3	50 PPM TRPH STD		FF015895.D	04 Jun 2025 11:46		YP\AJ	Ok
4	RT MARKER		FF015896.D	04 Jun 2025 12:15		YP\AJ	Ok
5	Q2150-09		FF015897.D	04 Jun 2025 12:48		YP\AJ	Ok
6	Q2150-09MS		FF015898.D	04 Jun 2025 13:17		YP\AJ	Ok
7	Q2150-09MSD		FF015899.D	04 Jun 2025 13:47		YP\AJ	Ok
8	Q2176-01		FF015900.D	04 Jun 2025 14:16		YP\AJ	Ok
9	Q2176-02		FF015901.D	04 Jun 2025 14:46		YP\AJ	Ok
10	Q2176-03		FF015902.D	04 Jun 2025 15:15		YP\AJ	Ok
11	Q2176-04		FF015903.D	04 Jun 2025 15:45		YP\AJ	Ok
12	Q2176-05		FF015904.D	04 Jun 2025 16:48		YP\AJ	Ok
13	Q2176-06		FF015905.D	04 Jun 2025 17:18		YP\AJ	Ok,M
14	Q2176-07		FF015906.D	04 Jun 2025 17:47		YP\AJ	Ok
15	Q2176-08		FF015907.D	04 Jun 2025 18:17		YP\AJ	Ok
16	I.BLK		FF015908.D	04 Jun 2025 18:46		YP\AJ	Ok
17	50 PPM TRPH STD		FF015909.D	04 Jun 2025 19:16		YP\AJ	Ok
18	Q2176-06		FF015910.D	04 Jun 2025 20:15	not required	YP\AJ	Not Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF060425

Review By	yogesh	Review On	6/4/2025 1:00:09 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:03 AM
SubDirectory	FF060425	HP Acquire Method	HP Processing Method FF052125

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

19	Q2176-08		FF015911.D	04 Jun 2025 20:45	not required	YP\AJ	Not Ok
20	I.BLK		FF015912.D	04 Jun 2025 21:14		YP\AJ	Ok
21	50 PPM TRPH STD		FF015913.D	04 Jun 2025 21:44		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG052225

Review By	yogesh	Review On	5/21/2025 1:58:58 PM
Supervise By	mohammad	Supervise On	5/23/2025 5:16:45 AM
SubDirectory	FG052225	HP Acquire Method	HP Processing Method FG052225

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		FG015884.D	21 May 2025 20:34		YP\AJ	Ok
2	I.BLK		FG015885.D	21 May 2025 21:03		YP\AJ	Ok
3	100 TRPH STD		FG015886.D	21 May 2025 21:33		YP\AJ	Ok
4	50 TRPH STD		FG015887.D	21 May 2025 22:02		YP\AJ	Ok
5	20 TRPH STD		FG015888.D	21 May 2025 22:31		YP\AJ	Ok
6	10 TRPH STD		FG015889.D	21 May 2025 23:00		YP\AJ	Ok
7	5 TRPH STD		FG015890.D	21 May 2025 23:30		YP\AJ	Ok,M
8	FG052225ICV		FG015891.D	21 May 2025 23:59		YP\AJ	Ok
9	PP24596		FG015892.D	22 May 2025 00:58		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG060425

Review By	yogesh	Review On	6/4/2025 1:01:13 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:10 AM
SubDirectory	FG060425	HP Acquire Method	HP Processing Method FG052225

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

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG015908.D	04 Jun 2025 10:47		YPIAJ	Ok
2	I.BLK		FG015909.D	04 Jun 2025 11:16		YPIAJ	Ok
3	50 PPM TRPH STD		FG015910.D	04 Jun 2025 11:46		YPIAJ	Ok
4	RT MARKER		FG015911.D	04 Jun 2025 12:15		YPIAJ	Ok
5	PB168274BL		FG015912.D	04 Jun 2025 12:48		YPIAJ	Ok
6	PB168274BS		FG015913.D	04 Jun 2025 13:17		YPIAJ	Ok
7	Q2150-01		FG015914.D	04 Jun 2025 13:47		YPIAJ	Ok
8	Q2150-02		FG015915.D	04 Jun 2025 14:16		YPIAJ	Ok
9	Q2150-03		FG015916.D	04 Jun 2025 14:46		YPIAJ	Ok
10	Q2150-04		FG015917.D	04 Jun 2025 15:15		YPIAJ	Ok
11	Q2150-05		FG015918.D	04 Jun 2025 15:45		YPIAJ	Ok
12	Q2150-06		FG015919.D	04 Jun 2025 16:48		YPIAJ	Ok
13	Q2150-07		FG015920.D	04 Jun 2025 17:18		YPIAJ	Ok
14	Q2150-08		FG015921.D	04 Jun 2025 17:47		YPIAJ	Ok
15	Q2150-10		FG015922.D	04 Jun 2025 18:17		YPIAJ	Ok
16	I.BLK		FG015923.D	04 Jun 2025 18:46		YPIAJ	Ok
17	50 PPM TRPH STD		FG015924.D	04 Jun 2025 19:16		YPIAJ	Ok
18	Q2150-01		FG015925.D	04 Jun 2025 20:15	not required	YPIAJ	Not Ok

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG060425

Review By	yogesh	Review On	6/4/2025 1:01:13 PM
Supervise By	mohammad	Supervise On	6/6/2025 2:02:10 AM
SubDirectory	FG060425	HP Acquire Method	HP Processing Method FG052225
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	Q2150-06		FG015926.D	04 Jun 2025 20:45	not required	YP\AJ	Not Ok
20	Q2150-08		FG015927.D	04 Jun 2025 21:14	not required	YP\AJ	Not Ok
21	I.BLK		FG015928.D	04 Jun 2025 21:44		YP\AJ	Ok
22	50 PPM TRPH STD		FG015929.D	04 Jun 2025 22:13		YP\AJ	Ok

M : Manual Integration

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/30/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 05/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/30/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135945

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
Q2150-01	TP-44	1	1.15	10.30	11.45	9.28	78.9	
Q2150-02	TP-42	2	1.13	10.45	11.58	10.14	86.2	
Q2150-03	TP-39	3	1.14	10.46	11.6	9.89	83.7	
Q2150-04	TP-48	4	1.18	10.44	11.62	9.6	80.7	
Q2150-05	TP-47	5	1.17	10.18	11.35	9.42	81.0	
Q2150-06	TP-50	6	1.18	10.70	11.88	10.38	86.0	
Q2150-07	TP-51	7	1.17	10.74	11.91	10.16	83.7	
Q2150-08	TP-52	8	1.16	10.61	11.77	10.25	85.7	
Q2150-09	TP-54	9	1.16	10.50	11.66	9.94	83.6	
Q2150-10	TP-53	10	1.12	10.56	11.68	10.13	85.3	
Q2151-01	WC-1	11	1.15	10.02	11.17	9.71	85.4	
Q2151-02	WC-1-EPH	12	1.17	10.23	11.4	9.99	86.2	
Q2151-03	WC-1-VOC	13	1.19	10.41	11.6	9.98	84.4	
Q2152-01	OK-02-05292025	31	1.18	10.25	11.43	10.2	88.0	
Q2152-02	OK-02-05292025-E2	32	1.13	10.47	11.6	10.54	89.9	
Q2153-01	TR-04-0592025	33	1.15	10.40	11.55	10.54	90.3	
Q2153-02	TR-04-0592025-E2	34	1.17	10.39	11.56	10.6	90.8	
Q2154-01	BC271336-1-1	14	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-02	BC271336-1-2	15	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-03	BC271336-2-1	16	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-04	BC271336-2-2	17	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-05	BC278406-1-1	18	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-06	BC278406-1-2	19	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-07	BC278406-2-1	20	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-08	BC278406-2-2	21	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-09	BC22682C-1-1	22	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-10	BC22682C-1-2	23	1.00	1.00	2.00	2.00	100.0	oilc
Q2154-11	GHA409H-1-1	24	1.00	1.00	2.00	2.00	100.0	oilc



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/30/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 05/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:27
Out Date: 05/30/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135945

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
Q2154-12	GHA409H-1-2	25	1.00	1.00	2.00	2.00	100.0	oilc
Q2155-01	446	26	1.18	10.02	11.2	10.42	92.2	
Q2155-02	447-SOLID	27	1.13	10.35	11.48	6.13	48.3	
Q2156-01	KZZ331H-1-1	28	1.00	1.00	2.00	2.00	100.0	oilc
Q2156-02	KZZ331H-1-2	29	1.00	1.00	2.00	2.00	100.0	oilc
Q2157-01	291	30	1.00	1.00	2.00	2.00	100.0	debris

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

WORKLIST(Hardcopy Internal Chain)

W 135945

WorkList Name : %1-052925

WorkList ID : 189801

Department : Wet-Chemistry

Date : 05-29-2025 08:14:20

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2150-01	TP-44	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-02	TP-42	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-03	TP-39	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-04	TP-48	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-05	TP-47	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-06	TP-50	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-07	TP-51	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-08	TP-52	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/27/2025	Chemtech -SO
Q2150-09	TP-54	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/28/2025	Chemtech -SO
Q2150-10	TP-53	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/28/2025	Chemtech -SO
Q2151-01	WC-1	Solid	Percent Solids	Cool 4 deg C	CAMP02	L41	05/28/2025	Chemtech -SO
Q2151-02	WC-1-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/29/2025	Chemtech -SO
Q2151-03	WC-1-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/29/2025	Chemtech -SO
Q2152-01	OK-02-05292025	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/29/2025	Chemtech -SO
Q2152-02	OK-02-05292025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	L21	05/29/2025	Chemtech -SO
Q2153-01	TR-04-0592025	Solid	Percent Solids	Cool 4 deg C	PSEG05	L21	05/29/2025	Chemtech -SO
Q2153-02	TR-04-0592025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	L31	05/29/2025	Chemtech -SO
Q2154-01	BC271336-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-02	BC271336-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-03	BC271336-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-04	BC271336-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO

Date/Time 05/29/25 16:15

Raw Sample Received by: R CWC1

Raw Sample Relinquished by: R.C. (Sm)

Date/Time 05/29/25

Raw Sample Received by: R.C. (Sm)

Raw Sample Relinquished by: R.C. (Sm)

WORKLIST(Hardcopy Internal Chain)

135945

WorkList Name : %1-052925

WorkList ID : 189801

Department : Wet-Chemistry

Date : 05-29-2025 08:14:20

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2154-05	BC278406-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-06	BC278406-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-07	BC278406-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-08	BC278406-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-09	BC22682C-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-10	BC22682C-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-11	GHA409H-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2154-12	GHA409H-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2155-01	446	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2155-02	447-SOLID	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2156-01	KZZ331H-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2156-02	KZZ331H-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO
Q2157-01	291	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	05/29/2025	Chemtech -SO

Date/Time 05/29/25 16:15
 Raw Sample Received by: EWG
 Raw Sample Relinquished by: L.C. (son)

Date/Time 05/29/25 17:30
 Raw Sample Received by: L.C. (son)
 Raw Sample Relinquished by: SC (son)

SOP ID: M3541-ASE Extraction-14

Clean Up SOP #: N/A

Extraction Start Date : 06/04/2025

Matrix : Solid

Extraction Start Time : 08:30

Weigh By: EH

Extraction By: RJ

Extraction End Date : 06/04/2025

Balance check: RJ

Filter By: RJ

Extraction End Time : 11:40

Balance ID: EX-SC-2

pH Meter ID: N/A

Concentration By: EH

pH Strip Lot#: N/A

Hood ID: 3,7

Supervisor By : RUPESH

Extraction Method: ☐ Separatory Funnel

☐ Continous 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	PP24596
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	EP2620
Sand	N/A	E2865
Methylene Chloride	N/A	E3939
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210673.

KD Bath ID: N/A

Envap ID: NEVAP-02

KD Bath Temperature: N/A

Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
6/4/25	RS (Ext Lab)	Y.P. Pestil PG.
11:45	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-14

Concentration Date: 06/04/2025

Sample ID	Client Sample ID	Test	g/ mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB168274BL	PB168274BL	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1			U2-1
PB168274BS	PB168274BS	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1			2
Q2150-01	TP-44	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		3
Q2150-02	TP-42	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		4
Q2150-03	TP-39	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		5
Q2150-04	TP-48	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		6
Q2150-05	TP-47	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		U3-1
Q2150-06	TP-50	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		2
Q2150-07	TP-51	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		3
Q2150-08	TP-52	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		4
Q2150-09	TP-54	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		5
Q2150-09MS	TP-54MS	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		6
Q2150-09MS D	TP-54MSD	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		U6-1
Q2150-10	TP-53	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		2
Q2176-01	TP-46	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		3
Q2176-02	TP-56	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		4
Q2176-03	TP-25	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		5
Q2176-04	TP-26	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		6
Q2176-05	TP-28	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		U1-1
Q2176-06	TP-27	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		2
Q2176-07	TP-31	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		3
Q2176-08	TP-65	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		4

* Extracts relinquished on the same date as received.

RS
6/4

168274
06-03-25

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2176D WorkList ID : 189909 Department : Extraction Date : 06-04-2025 08:25:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2150-01	TP-44	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-02	TP-42	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-03	TP-39	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-04	TP-48	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-05	TP-47	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-06	TP-50	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-07	TP-51	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/27/2025	8015D
Q2150-08	TP-52	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/28/2025	8015D
Q2150-09	TP-54	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/28/2025	8015D
Q2150-10	TP-53	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/28/2025	8015D
Q2176-01	TP-46	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/28/2025	8015D
Q2176-02	TP-56	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-03	TP-25	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-04	TP-26	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-05	TP-28	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-06	TP-27	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-07	TP-31	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/29/2025	8015D
Q2176-08	TP-65	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	L41	05/30/2025	8015D

Date/Time 06/04/25 8:25
Raw Sample Received by: RS LETA-1061
Raw Sample Relinquished by: SDCSM

Date/Time 06/04/25 9:00
Raw Sample Received by: JP CSM
Raw Sample Relinquished by: RS LETA-1061

Prep Standard - Chemical Standard Summary

Order ID : Q2150

Test : Diesel Range Organics

Prepbatch ID : PB168274,

Sequence ID/Qc Batch ID: FG060425,FF060425,

Standard ID :

EP2612,EP2620,PP24162,PP24467,PP24468,PP24469,PP24470,PP24471,PP24472,PP24473,PP24596,

Chemical ID :

E2865,E3551,E3874,E3926,E3930,E3931,E3932,E3939,P11951,P11952,P11955,P11956,P13106,P13108,P13477,P13479,P13483,P13484,P13485,P13486,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2612	05/09/2025	11/05/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel
								05/09/2025

FROM 8000.00000ml of E3930 + 8000.00000ml of E3932 = Final Quantity: 16000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2620	05/30/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SC ALE_2	None	Riteshkumar Patel
						(EX-SC-2)		05/30/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Pest/Pcb STANDARD PREPARATION LOG

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

FROM 1.00000ml of P11955 + 1.00000ml of P11956 + 48.00000ml of E3874 = Final Quantity: 50.000 ml

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

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>
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

<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

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>
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

<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

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>
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

FROM 0.50000ml of E3926 + 0.50000ml of PP24468 = 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>
147	20 PPM DRO Surrogate Spike Solution	PP24596	05/20/2025	11/20/2025	Abdul Mirza	None	None	Yogesh Patel 05/22/2025
<u>FROM</u> 1.00000ml of P13483 + 1.00000ml of P13484 + 1.00000ml of P13485 + 1.00000ml of P13486 + 196.00000ml of E3931 = Final Quantity: 200.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3382-05 / Sand, Purified (cs/4x2.5kg)	0000243821	06/30/2025	04/30/2020 / RAJESH	04/28/2020 / RAJESH	E2865

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	12/04/2025	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-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	02/20/2026	05/02/2025 / RUPESH	03/09/2025 / RUPESH	E3931

CHEMICAL RECEIPT LOG BOOK

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

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)	25A2862010	11/22/2025	05/22/2025 / RUPESH	02/28/2025 / RUPESH	E3939

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

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	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

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	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13483

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	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13484

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	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13485

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	11/20/2025	05/20/2025 / Abdul	07/24/2024 / yogesh	P13486

Sand
Purified
Washed and Ignited



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

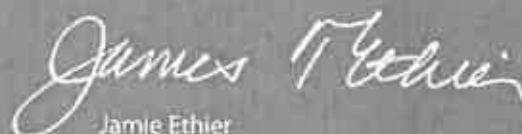
Certificate of Analysis

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

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

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

E 2865


Jamie Ethier
Vice President Global Quality

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

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



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

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

CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3

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



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

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	≤ 10	4
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

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

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

E 3874

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

E 3926

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

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

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

E3930

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

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

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

E3930

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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



Material No.: 9266-A4
Batch No.: 25A2862010
Manufactured Date: 2024-12-18
Expiration Date: 2026-03-19
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	<1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	2
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	99.9 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 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

E3939

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

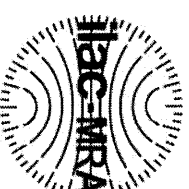
Bellefonte, PA 16823-8812

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:

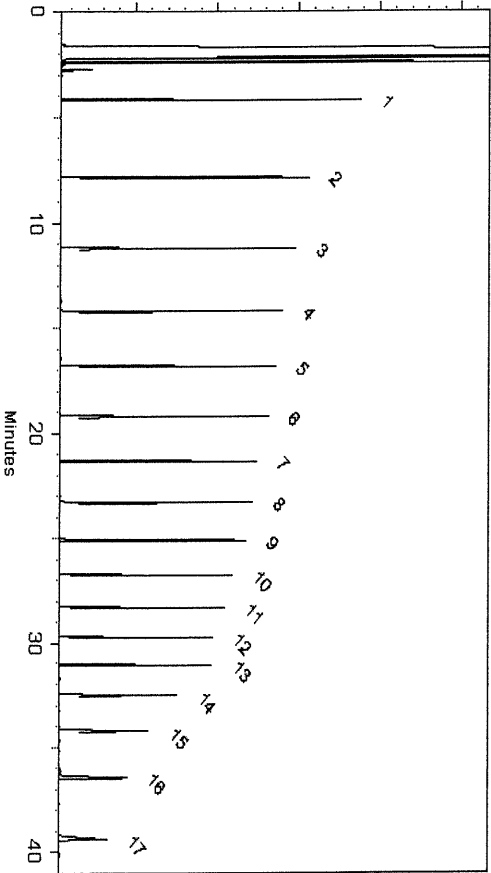
250°C

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.



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

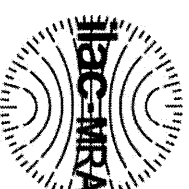
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

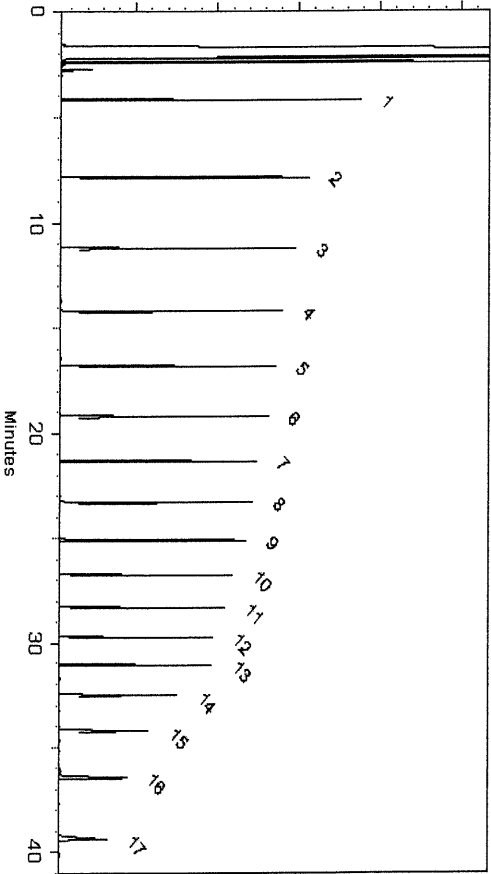
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

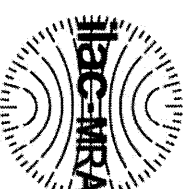
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

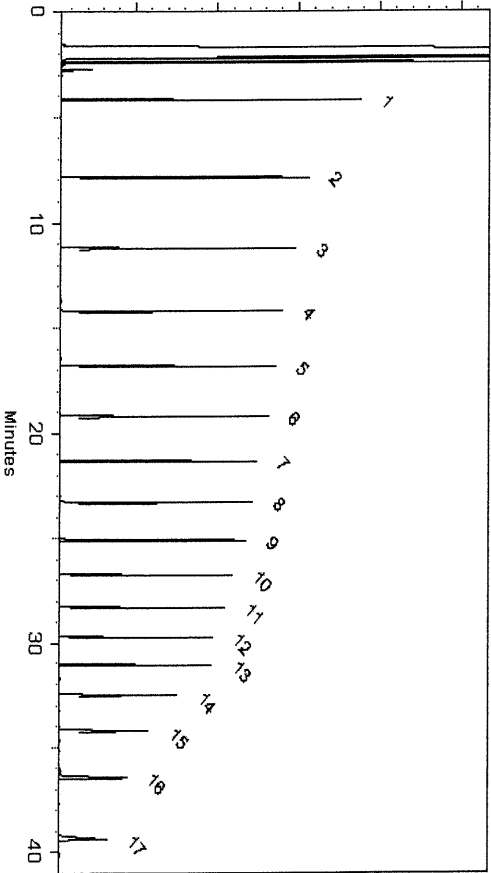
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills
Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

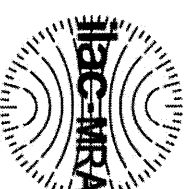
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

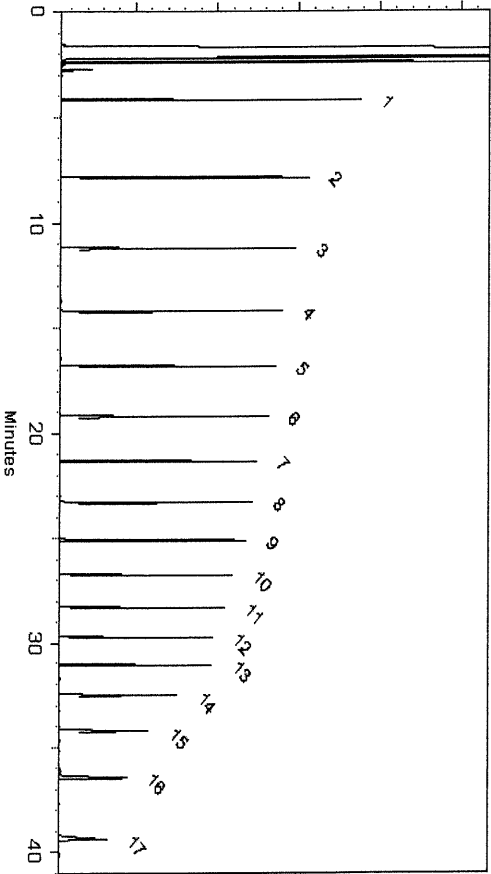
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Florida TRPH Standard

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

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

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

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

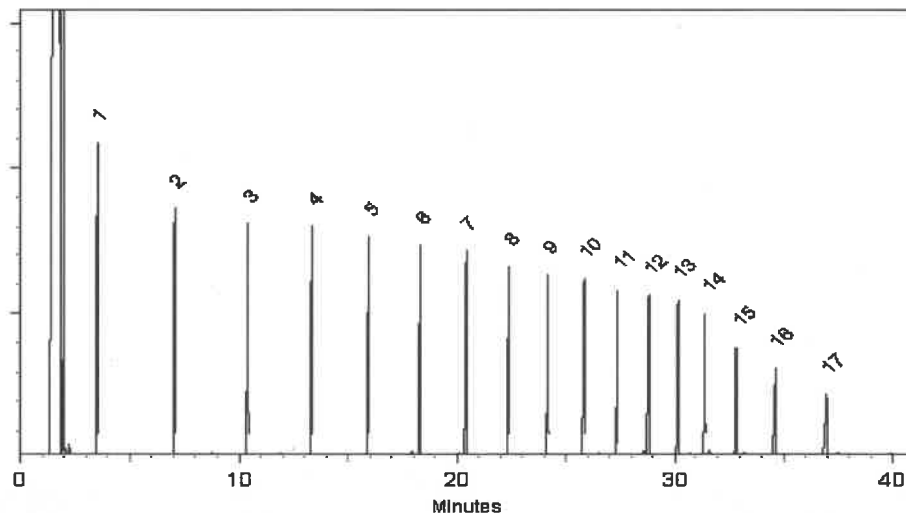
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

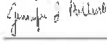


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Florida TRPH Standard

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

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

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

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

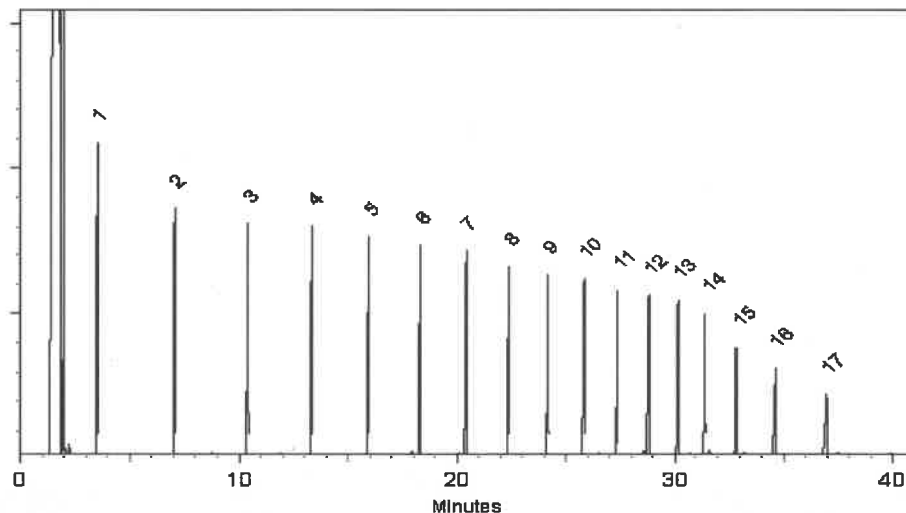
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

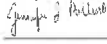


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

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	2.04135	4000.8	15.4	1517-25-2	N/A	N/A
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04159	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 "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	-0.55

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

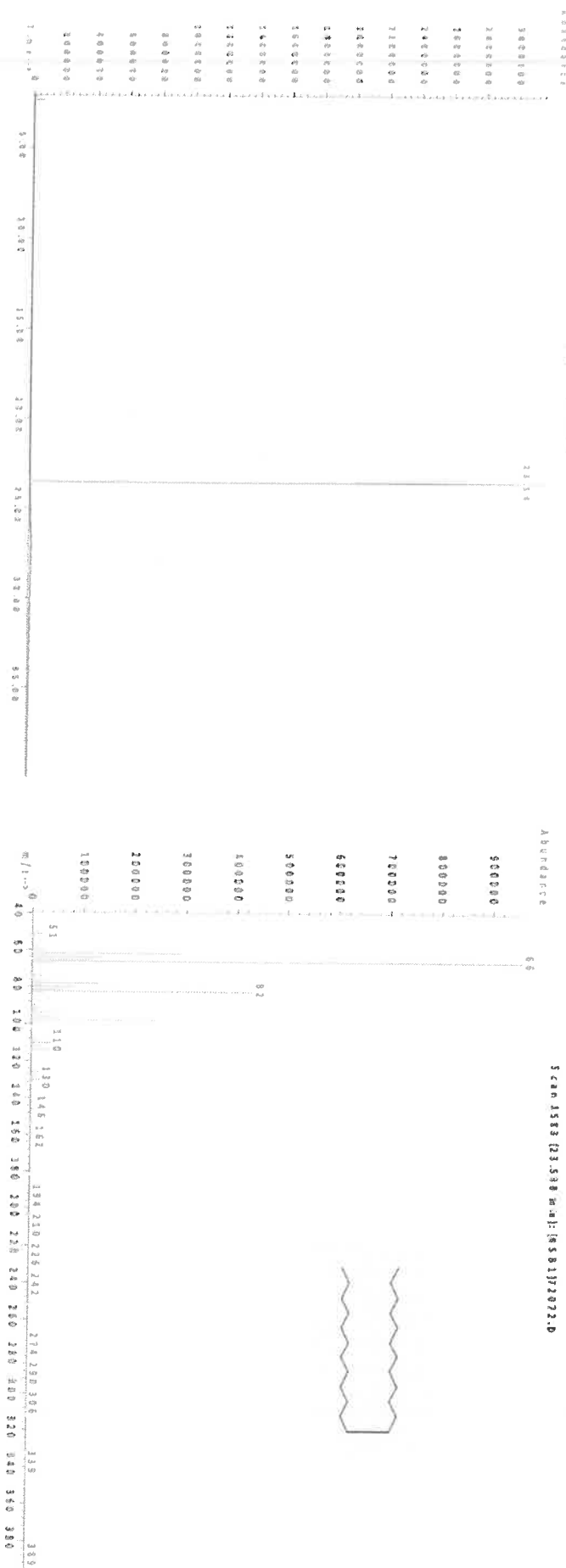
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

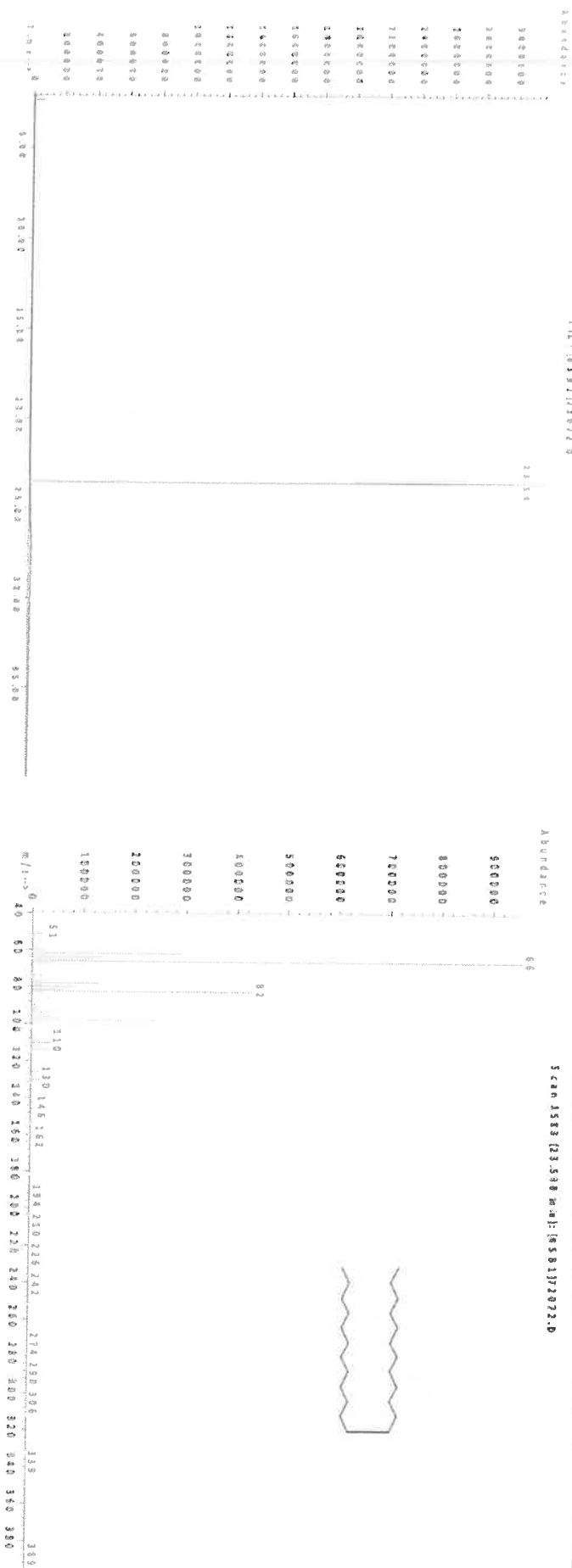
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034



Understanding the Certified Weight Report



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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 070716

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	N/A	or-rat 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-rat 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04136	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	2.04159	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	2.04156	4001.2	15.4	1503-58-3	N/A	N/A	N/A

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

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

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

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

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



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Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019





CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

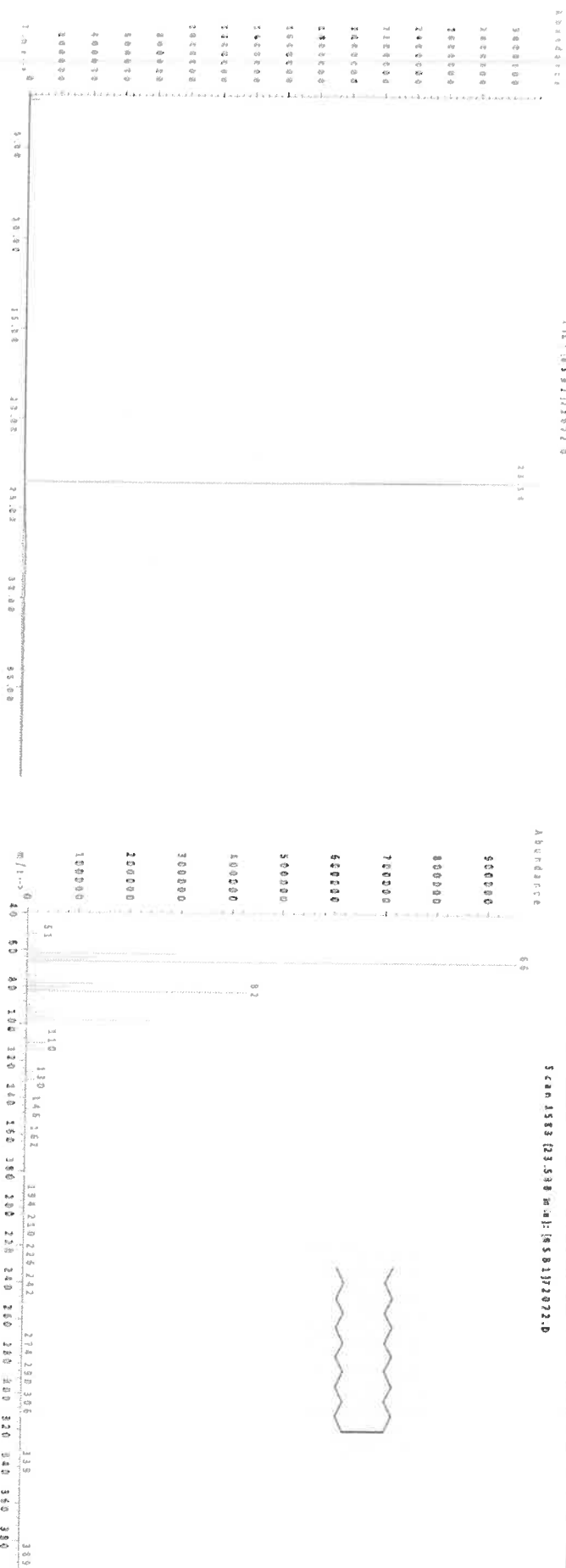
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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 References: Taylor, B.N., and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1996).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-nr 500mg/kg
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	N/A	or-nr 400mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	N/A	or-nr 500mg/kg
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	N/A
5. Chrysene-d12	92	I-19280	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	N/A

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

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

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

Peak No. Name FID RT (min)

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

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Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

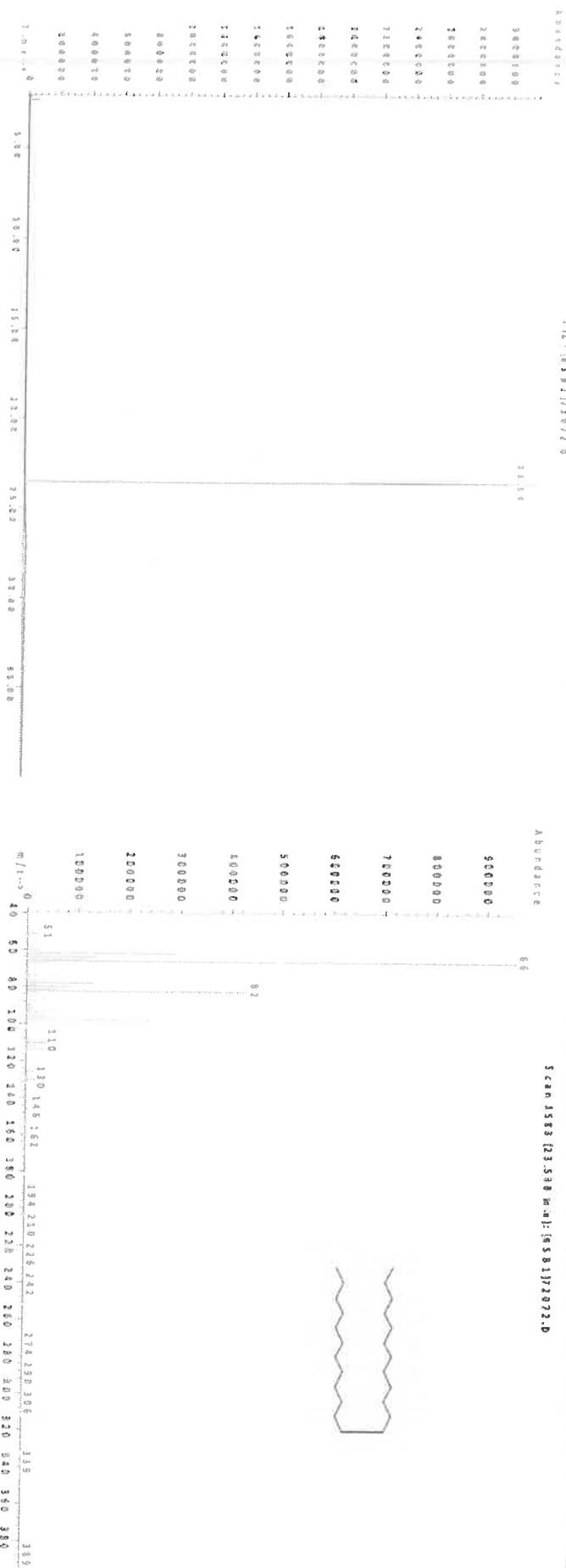
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	N/A	or-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

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

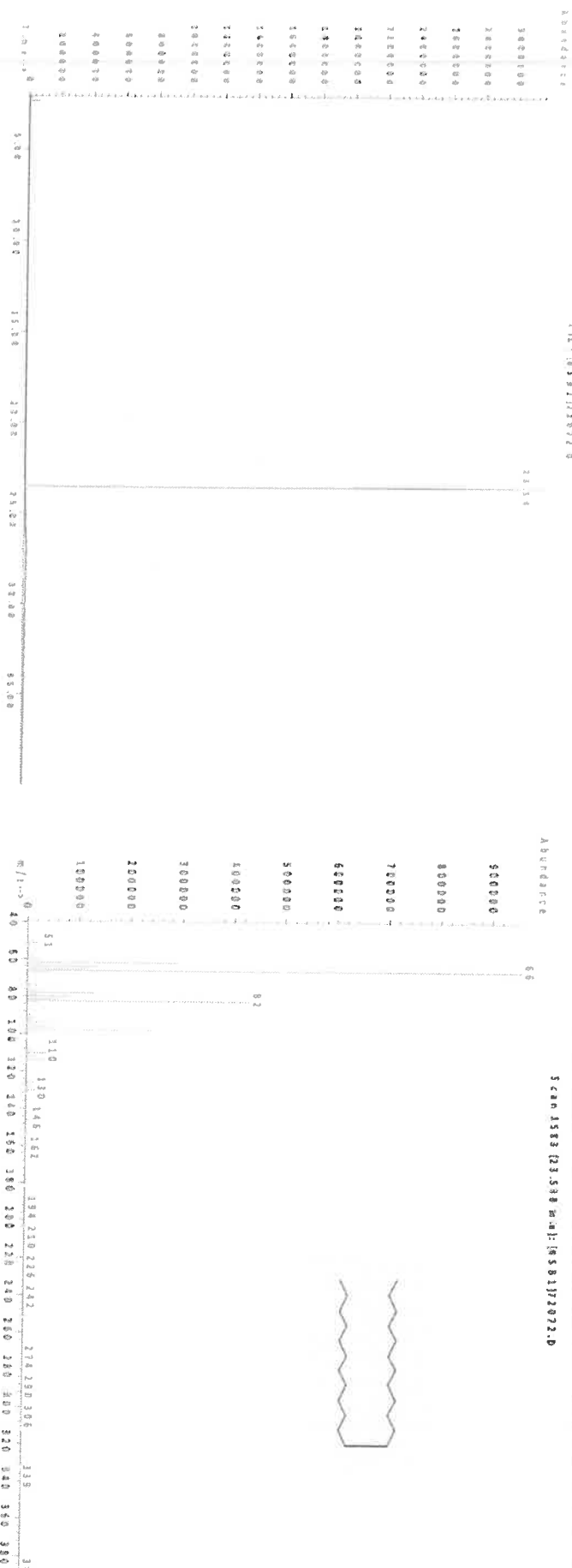
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

Compound	Lot	Nominal Conc (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)	LD50
RM#	Number			Purity						CAS#	OSHA PEL (TWA)

1. n-Tetracosane-d50 2072 PR-26606 1000 98.7 0.2 99.0 0.20471 0.20482 1000.6 4.1 16416-32-3 N/A
Method GC8MSD-3.M: Column:SPB-5 (30m X 0.25mm ID X 0.25µm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (9min.), Rate = 10°C/min., Injector B = 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Candice Warren.



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

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

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.98
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot# **105345**

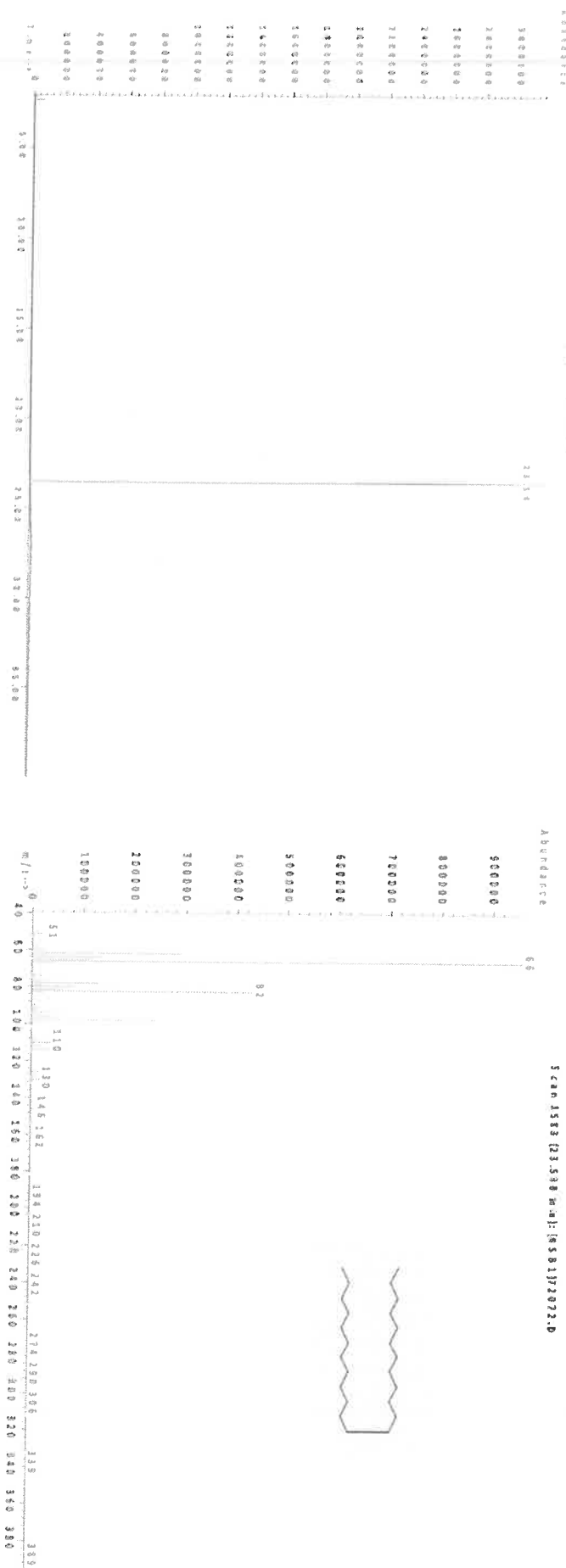
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%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 FIELDREST 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 REPAIR
PROJECT NO. 302781 LOCATION: SOUTH RIVER, NJ
PROJECT MANAGER: MARCIE ENCINAS
e-mail: ENCINAS.MA@CDMSMITH.COM
PHONE: 732-590-4679 FAX: 732-225-7851

CLIENT BILLING INFORMATION

BILL TO: CDM SMITH PO#:
ADDRESS: 110 FIELDREST 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 _____

1. TCL VOC 2. TCL SVOC 3. METALS 4. PCB 5. PESTICIDE 6. HERBICIDE 7. DRO/GRO

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER	
1.	TP-44	SOIL		X	5/27/25	0820	6	X	X	X	X	X	X	X			E	
2.	TP-42	SOIL		X	5/27/25	0915	6	X	X	X	X	X	X	X			E	
3.	TP-39	SOIL		X	5/27/25	0950	6	X	X	X	X	X	X	X			E	
4.	TP-48	SOIL		X	5/27/25	1220	6	X	X	X	X	X	X	X			E	
5.	TP-47	SOIL		X	5/27/25	1120	6	X	X	X	X	X	X	X			E	
6.	TP-50	SOIL		X	5/27/25	1330	6	X	X	X	X	X	X	X			E	
7.	TP-51	SOIL		X	5/27/25	1505	6	X	X	X	X	X	X	X			E	
8.	TP-52	SOIL		X	5/28/25	0850	6	X	X	X	X	X	X	X			E	
9.	TP-54	SOIL		X	5/28/25	1145	6	X	X	X	X	X	X	X			E	
10.	TP-53	SOIL		X	5/28/25	1425	6	X	X	X	X	X	X	X			F	

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

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>5/28/25 1350</u>	RECEIVED BY: 1. <u>[Signature]</u> <u>1550</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>3.5</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: <u>5-28-25</u>	RECEIVED BY: 2. <u>[Signature]</u>	Comments: _____
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>5-28-25</u>	RECEIVED BY: 3. <u>[Signature]</u>	Page _____ of _____
			CLIENT: ☐ Hand Delivered ☐ Other
			Shipment Complete ☐ YES ☐ NO

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2150	CAMP02	Order Date : 5/28/2025 3:53:00 PM	Project Mgr :
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level-1 NJ REDUCE
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/28/2025 12:00:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 18:45	Hard Copy Date :
Invoice Contact : Marcie Ann Encinas			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2150-01	TP-44	Solid	05/27/2025	08:20	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-02	TP-42	Solid	05/27/2025	09:15	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-03	TP-39	Solid	05/27/2025	09:50	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-04	TP-48	Solid	05/27/2025	12:20	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-05	TP-47	Solid	05/27/2025	11:20	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-06	TP-50	Solid	05/27/2025	13:30	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-07	TP-51	Solid	05/27/2025	15:05	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-08	TP-52	Solid	05/28/2025	08:50					

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2150	CAMP02	Order Date : 5/28/2025 3:53:00 PM	Project Mgr :
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level 1 NJ REDUCE
Client Contact : Marcie Ann Encinas		Receive DateTime : 5/28/2025 12:00:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 16:45	Hard Copy Date :
Invoice Contact : Marcie Ann Encinas			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2150-09	TP-54	Solid	05/28/2025	11:45	VOC-TCLVOA-10		8260D		10 Bus. Days
Q2150-10	TP-53	Solid	05/28/2025	14:25	VOC-TCLVOA-10		8260D		10 Bus. Days
					VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By : 

Date / Time : 5/29/25 0950

Received By : 

Date / Time : 05/29/25 0950

Storage Area : VOA Refridgerator Room

Ng # 6
fr 2