

Cover Page

Order ID : Q2543

Project ID : South River WM Replacement

Client : CDM Smith

Lab Sample Number

Q2543-01
Q2543-02
Q2543-03
Q2543-04

Client Sample Number

TP-41
TP-49
TP-23
TP-23-99

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: 7/17/2025

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 #: Q2543

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 Castody

✓

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: PRADIP PRAJAPATI

Date: 07/17/2025

LAB CHRONICLE

OrderID:	Q2543	OrderDate:	7/9/2025 12:26:00 PM
Client:	CDM Smith	Project:	South River WM Replacement
Contact:	Marcie Ann Encinas	Location:	O42,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2543-01	TP-41	SOIL			07/08/25			07/09/25
			Diesel Range Organics	8015D		07/16/25	07/16/25	
			Gasoline Range Organics	8015D			07/10/25	
			PCB	8082A		07/10/25	07/10/25	
			Pesticide-TCL	8081B		07/10/25	07/10/25	
Q2543-02	TP-49	SOIL			07/09/25			07/09/25
			Diesel Range Organics	8015D		07/16/25	07/16/25	
			Gasoline Range Organics	8015D			07/10/25	
			PCB	8082A		07/10/25	07/10/25	
			Pesticide-TCL	8081B		07/10/25	07/10/25	
Q2543-03	TP-23	SOIL			07/09/25			07/09/25
			Diesel Range Organics	8015D		07/16/25	07/16/25	
			Gasoline Range Organics	8015D			07/10/25	
			PCB	8082A		07/10/25	07/10/25	
			Pesticide-TCL	8081B		07/10/25	07/10/25	
Q2543-04	TP-23-99	SOIL			07/09/25			07/09/25
			Diesel Range Organics	8015D		07/16/25	07/16/25	
			Gasoline Range Organics	8015D			07/10/25	
			PCB	8082A		07/10/25	07/10/25	
			Pesticide-TCL	8081B		07/10/25	07/10/25	



QC SUMMARY

SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Alliance

Client: CDM Smith

Lab Code: ACE

SDG No.: Q2543

CLIENT ID	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF016170.D	92				0
PIBLK-FF016177.D	101				0
PIBLK-FG016300.D	91				0
PIBLK-FG016308.D	93				0
PIBLK-FG016313.D	93				0
PB168878BL	88				0
PB168878BS	85				0
TP-41	61				0
TP-49	46				0
TP-23	54				0
TP-23-99	76				0
TP-23-99MS	62				0
TP-23-99MSD	59				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:	<u>Alliance</u>	Client:	<u>CDM Smith</u>
Lab Code:	<u>ACE</u>	SDG No:	<u>Q2543</u>
Client Sample ID :	<u>TP-23-99MS</u>	Datafile:	<u>FG016311.D</u>

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
DRO	7793	4230	10586	82%		68-131

SOIL DIESEL RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:	<u>Alliance</u>	Client:	<u>CDM Smith</u>
Lab Code:	<u>ACE</u>	SDG No:	<u>Q2543</u>
Client Sample ID :	<u>TP-23-99MSD</u>	Datafile:	<u>FG016312.D</u>

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
DRO	7801	4230	10604	82%		68-131

MS/MSD % Recovery RPD : 0.2



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

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

Lab Name: Alliance

Client: CDM Smith

Lab Code: ACE

SDG No: Q2543

Client Sample ID : PB168878BS

Datafile: FG016304.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS (%)
DRO	6660	0	5498	83	68-131

4B
METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PB168878BL

Lab Name: Alliance

Contract: CAMP02

Lab Code: ACE

SDG NO.: Q2543

Lab File ID: FG016303.D

Lab Sample ID: PB168878BL

Instrument ID: FG

Date Extracted: 07/16/2025

Matrix: (soil/water) Soil

Date Analyzed: 07/16/25

Level: (low/med) low

Time Analyzed: 14:18

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

CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TP-41	Q2543-01	FF016174.D	07/16/25
TP-49	Q2543-02	FF016175.D	07/16/25
TP-23	Q2543-03	FF016176.D	07/16/25
PB168878BS	PB168878BS	FG016304.D	07/16/25
TP-23-99	Q2543-04	FG016310.D	07/16/25
TP-23-99MS	Q2543-04MS	FG016311.D	07/16/25
TP-23-99MSD	Q2543-04MSD	FG016312.D	07/16/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	07/08/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-41	SDG No.:	Q2543
Lab Sample ID:	Q2543-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	82
Sample Wt/Vol:	30.03	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF016174.D	1	07/16/25 10:00	07/16/25 19:16	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	11300		206	2030	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	12.3		37 - 130	61%	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\FF071625\
Data File : FF016174.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:16
Operator : YP\AJ
Sample : Q2543-01
Misc :
ALS Vial : 78 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-41

Integration File: autoint1.e
Quant Time: Jul 17 03:39:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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...	15.094	1195250	12.275 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

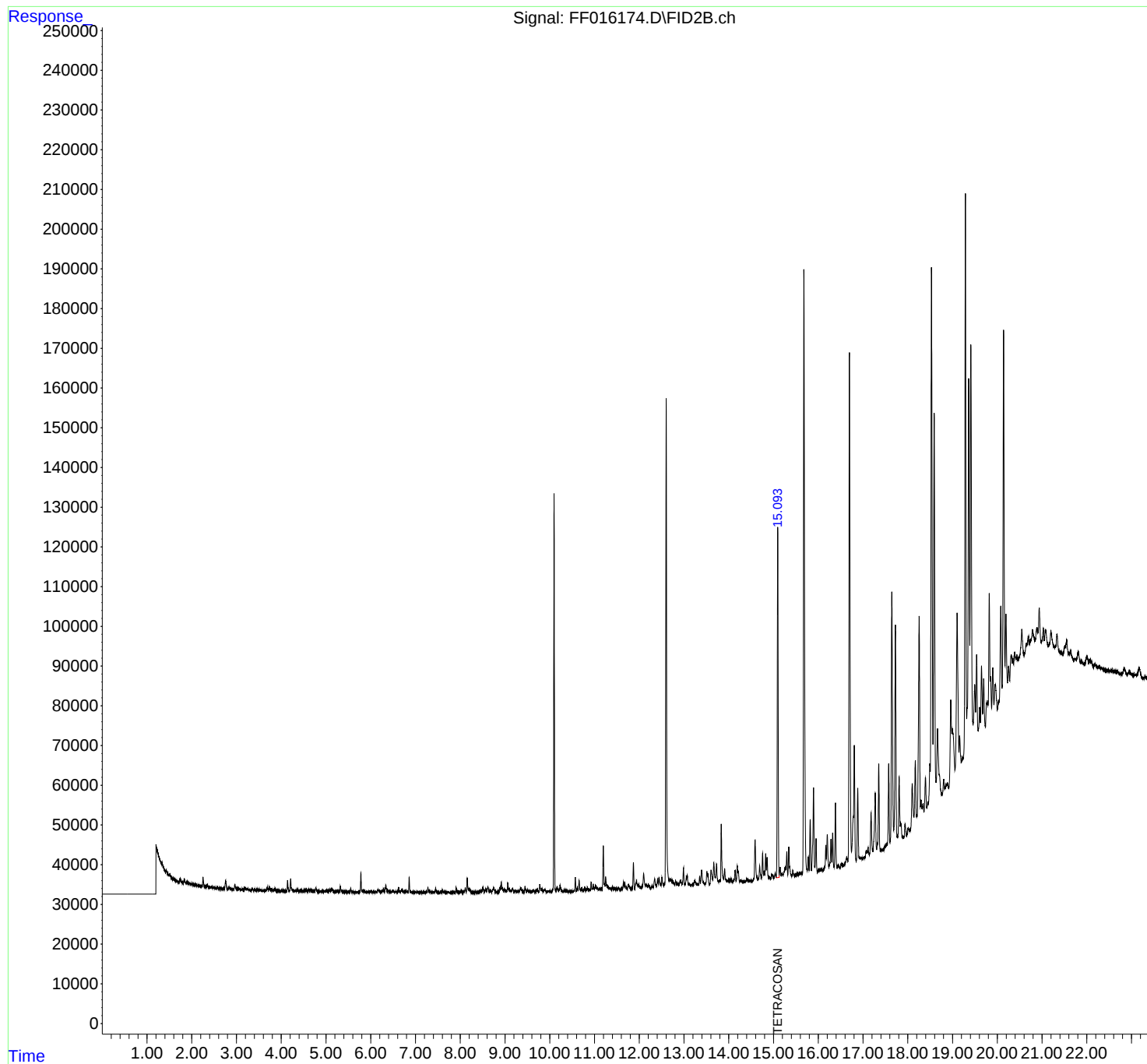
(m)=manual int.

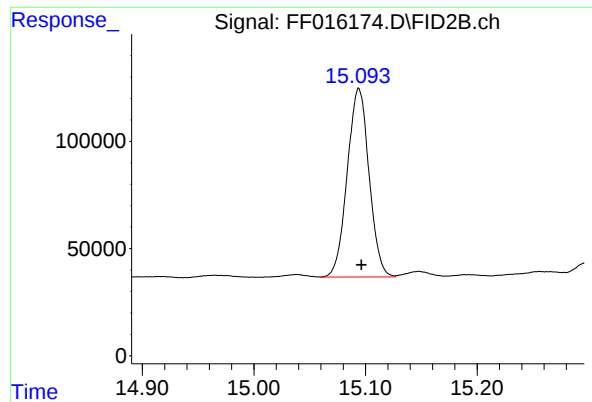
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016174.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:16
Operator : YP\AJ
Sample : Q2543-01
Misc :
ALS Vial : 78 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-41

Integration File: autoint1.e
Quant Time: Jul 17 03:39:06 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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.: 15.094 min
Delta R.T.: -0.002 min
Response: 1195250
Conc: 12.27 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-41

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016174.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:16
Sample : Q2543-01
Misc :
ALS Vial : 78 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.210	4.187	4.277	HH	3855	84207	3.09%	0.253%
2	4.283	4.277	4.302	HH	787	11224	0.41%	0.034%
3	4.321	4.302	4.345	HH	1015	22235	0.82%	0.067%
4	4.369	4.345	4.390	HH	1046	23573	0.86%	0.071%
5	4.406	4.390	4.420	HH	864	14579	0.53%	0.044%
6	4.437	4.420	4.494	HH	1093	36972	1.36%	0.111%
7	4.498	4.494	4.504	HH	732	4330	0.16%	0.013%
8	4.516	4.504	4.532	HH	1038	14900	0.55%	0.045%
9	4.555	4.532	4.584	HH	1103	26858	0.99%	0.081%
10	4.586	4.584	4.594	HH	722	4174	0.15%	0.013%
11	4.612	4.594	4.625	HH	1244	17966	0.66%	0.054%
12	4.643	4.625	4.673	HH	1125	27403	1.01%	0.082%
13	4.682	4.673	4.713	HH	886	19053	0.70%	0.057%
14	4.730	4.713	4.751	HH	895	17030	0.62%	0.051%
15	4.773	4.751	4.824	HH	1531	41016	1.50%	0.123%
16	4.829	4.824	4.870	HH	750	17787	0.65%	0.053%
17	4.874	4.870	4.882	HH	677	4631	0.17%	0.014%
18	4.892	4.882	4.896	HH	722	5663	0.21%	0.017%
19	4.901	4.896	4.905	HH	696	3366	0.12%	0.010%
20	4.917	4.905	4.927	HH	707	9083	0.33%	0.027%
21	4.931	4.927	4.952	HH	650	9564	0.35%	0.029%
22	4.973	4.952	4.997	HH	876	20421	0.75%	0.061%
23	5.012	4.997	5.027	HH	849	13801	0.51%	0.041%
24	5.032	5.027	5.040	HH	752	5541	0.20%	0.017%
25	5.137	5.040	5.204	HH	1160	78939	2.90%	0.237%
26	5.243	5.204	5.257	HH	904	21509	0.79%	0.065%
27	5.262	5.257	5.278	HH	792	9386	0.34%	0.028%
28	5.288	5.278	5.299	HH	637	7137	0.26%	0.021%
29	5.321	5.299	5.381	HH	1947	44144	1.62%	0.133%
30	5.404	5.381	5.419	HH	681	13325	0.49%	0.040%
31	5.431	5.419	5.447	HH	643	9295	0.34%	0.028%
32	5.461	5.447	5.467	HH	580	5978	0.22%	0.018%
33	5.473	5.467	5.482	HH	529	4572	0.17%	0.014%
34	5.487	5.482	5.505	HH	521	6449	0.24%	0.019%
35	5.518	5.505	5.524	HH	490	4951	0.18%	0.015%
36	5.553	5.524	5.583	HH	1506	28065	1.03%	0.084%

					rteres			
37	5.588	5.583	5.601	HH	607	5652	0.21%	0.017%
38	5.605	5.601	5.617	HH	563	4713	0.17%	0.014%
39	5.637	5.617	5.645	HH	553	8191	0.30%	0.025%
40	5.658	5.645	5.679	HH	613	10163	0.37%	0.031%
41	5.692	5.679	5.705	HH	517	7338	0.27%	0.022%
42	5.713	5.705	5.718	HH	492	3330	0.12%	0.010%
43	5.724	5.718	5.733	HH	532	4460	0.16%	0.013%
44	5.754	5.733	5.760	HH	656	9174	0.34%	0.028%
45	5.780	5.760	5.808	HH	5292	61382	2.25%	0.185%
46	5.825	5.808	5.850	HH	1020	18895	0.69%	0.057%
47	5.852	5.850	5.882	HH	712	11121	0.41%	0.033%
48	5.888	5.882	5.893	HH	528	3367	0.12%	0.010%
49	5.897	5.893	5.919	HH	571	8359	0.31%	0.025%
50	5.922	5.919	5.933	HH	518	3866	0.14%	0.012%
51	5.941	5.933	5.957	HH	534	6974	0.26%	0.021%
52	5.975	5.957	5.979	HH	690	7418	0.27%	0.022%
53	5.986	5.979	5.998	HH	680	6769	0.25%	0.020%
54	6.010	5.998	6.030	HH	754	12511	0.46%	0.038%
55	6.034	6.030	6.053	HH	488	6346	0.23%	0.019%
56	6.066	6.053	6.098	HH	695	13559	0.50%	0.041%
57	6.111	6.098	6.138	HH	684	12423	0.46%	0.037%
58	6.159	6.138	6.179	HH	1064	18710	0.69%	0.056%
59	6.182	6.179	6.189	HH	809	4587	0.17%	0.014%
60	6.195	6.189	6.213	HH	852	10117	0.37%	0.030%
61	6.218	6.213	6.225	HH	667	4701	0.17%	0.014%
62	6.239	6.225	6.243	HH	668	6620	0.24%	0.020%
63	6.247	6.243	6.251	HH	674	2647	0.10%	0.008%
64	6.283	6.251	6.306	HH	1268	27021	0.99%	0.081%
65	6.336	6.306	6.379	HH	2353	55139	2.02%	0.166%
66	6.394	6.379	6.445	HH	931	25224	0.93%	0.076%
67	6.473	6.445	6.482	HH	648	12098	0.44%	0.036%
68	6.501	6.482	6.543	HH	936	22104	0.81%	0.066%
69	6.549	6.543	6.561	HH	552	5530	0.20%	0.017%
70	6.580	6.561	6.597	HH	712	11377	0.42%	0.034%
71	6.622	6.597	6.660	HH	1708	31839	1.17%	0.096%
72	6.694	6.660	6.746	HH	1134	40807	1.50%	0.123%
73	6.748	6.746	6.761	HH	655	5203	0.19%	0.016%
74	6.765	6.761	6.770	HH	601	3062	0.11%	0.009%
75	6.791	6.770	6.814	HH	697	16029	0.59%	0.048%
76	6.818	6.814	6.823	HH	614	3069	0.11%	0.009%
77	6.828	6.823	6.837	HH	532	4334	0.16%	0.013%
78	6.858	6.837	6.908	HH	4196	57945	2.13%	0.174%
79	6.913	6.908	6.927	HH	510	5252	0.19%	0.016%
80	6.939	6.927	6.961	HH	593	9998	0.37%	0.030%
81	6.972	6.961	6.988	HH	517	7218	0.26%	0.022%
82	6.993	6.988	7.006	HH	526	4842	0.18%	0.015%
83	7.019	7.006	7.026	HH	472	5075	0.19%	0.015%
84	7.044	7.026	7.075	HH	553	13361	0.49%	0.040%
85	7.083	7.075	7.088	HH	378	2489	0.09%	0.007%
86	7.108	7.088	7.153	HH	460	13795	0.51%	0.041%
87	7.186	7.153	7.222	HH	613	18665	0.68%	0.056%
88	7.238	7.222	7.255	HH	518	8756	0.32%	0.026%
89	7.277	7.255	7.347	HH	1600	42176	1.55%	0.127%

					rteres			
90	7.355	7.347	7.394	HH	491	11618	0.43%	0.035%
91	7.426	7.394	7.434	HH	619	10898	0.40%	0.033%
92	7.451	7.434	7.474	HH	1336	19878	0.73%	0.060%
93	7.481	7.474	7.501	HH	499	6790	0.25%	0.020%
94	7.510	7.501	7.540	HH	487	9087	0.33%	0.027%
95	7.574	7.540	7.589	HH	573	13202	0.48%	0.040%
96	7.602	7.589	7.624	HH	931	13338	0.49%	0.040%
97	7.634	7.624	7.671	HH	665	14044	0.52%	0.042%
98	7.680	7.671	7.687	HH	467	4136	0.15%	0.012%
99	7.689	7.687	7.711	HH	443	5175	0.19%	0.016%
100	7.739	7.711	7.774	HH	566	14964	0.55%	0.045%
101	7.795	7.774	7.806	HH	506	7462	0.27%	0.022%
102	7.812	7.806	7.821	HH	492	3933	0.14%	0.012%
103	7.825	7.821	7.847	HH	450	6929	0.25%	0.021%
104	7.863	7.847	7.889	HH	542	11583	0.42%	0.035%
105	7.906	7.889	7.942	HH	1615	27072	0.99%	0.081%
106	7.954	7.942	7.962	HH	512	5667	0.21%	0.017%
107	7.974	7.962	8.002	HH	520	11240	0.41%	0.034%
108	8.023	8.002	8.059	HH	1035	20040	0.74%	0.060%
109	8.081	8.059	8.093	HH	748	12030	0.44%	0.036%
110	8.113	8.093	8.134	HH	1588	24492	0.90%	0.074%
111	8.156	8.134	8.181	HH	4042	56501	2.07%	0.170%
112	8.195	8.181	8.211	HH	1514	20838	0.76%	0.063%
113	8.219	8.211	8.257	HH	1164	20366	0.75%	0.061%
114	8.265	8.257	8.296	HH	575	9593	0.35%	0.029%
115	8.337	8.296	8.367	HH	602	18286	0.67%	0.055%
116	8.372	8.367	8.380	HH	423	3251	0.12%	0.010%
117	8.396	8.380	8.404	HH	488	6098	0.22%	0.018%
118	8.414	8.404	8.434	HH	575	9099	0.33%	0.027%
119	8.471	8.434	8.486	HH	931	24079	0.88%	0.072%
120	8.507	8.486	8.535	HH	1690	33010	1.21%	0.099%
121	8.564	8.535	8.581	HH	1244	26833	0.98%	0.081%
122	8.618	8.581	8.657	HH	1880	52045	1.91%	0.157%
123	8.678	8.657	8.706	HH	980	21067	0.77%	0.063%
124	8.733	8.706	8.739	HH	1214	17837	0.65%	0.054%
125	8.753	8.739	8.786	HH	1558	29548	1.08%	0.089%
126	8.796	8.786	8.801	HH	596	4884	0.18%	0.015%
127	8.807	8.801	8.835	HH	565	9845	0.36%	0.030%
128	8.848	8.835	8.870	HH	709	12140	0.45%	0.037%
129	8.890	8.870	8.902	HH	1724	22432	0.82%	0.067%
130	8.917	8.902	8.974	HH	3096	69169	2.54%	0.208%
131	8.989	8.974	9.039	HH	1092	33014	1.21%	0.099%
132	9.063	9.039	9.082	HH	2824	42069	1.54%	0.127%
133	9.092	9.082	9.113	HH	1371	19984	0.73%	0.060%
134	9.121	9.113	9.138	HH	946	12541	0.46%	0.038%
135	9.173	9.138	9.195	HH	1368	34946	1.28%	0.105%
136	9.226	9.195	9.236	HH	828	17397	0.64%	0.052%
137	9.243	9.236	9.261	HH	775	10082	0.37%	0.030%
138	9.270	9.261	9.278	HH	680	6951	0.25%	0.021%
139	9.287	9.278	9.299	HH	757	8580	0.31%	0.026%
140	9.303	9.299	9.314	HH	805	6597	0.24%	0.020%
141	9.358	9.314	9.384	HH	1590	46245	1.70%	0.139%

					rteres			
142	9.389	9.384	9.407	HH	768	8768	0.32%	0.026%
143	9.416	9.407	9.424	HH	640	5891	0.22%	0.018%
144	9.448	9.424	9.476	HH	1966	35018	1.28%	0.105%
145	9.481	9.476	9.487	HH	825	5117	0.19%	0.015%
146	9.500	9.487	9.519	HH	909	15628	0.57%	0.047%
147	9.523	9.519	9.531	HH	656	4695	0.17%	0.014%
148	9.541	9.531	9.546	HH	724	5990	0.22%	0.018%
149	9.550	9.546	9.574	HH	728	9945	0.36%	0.030%
150	9.633	9.574	9.672	HH	1030	40491	1.49%	0.122%
151	9.705	9.672	9.716	HH	904	18442	0.68%	0.055%
152	9.722	9.716	9.757	HH	891	18961	0.70%	0.057%
153	9.777	9.757	9.807	HH	2467	42573	1.56%	0.128%
154	9.827	9.807	9.853	HH	1258	26427	0.97%	0.079%
155	9.870	9.853	9.877	HH	1024	12667	0.46%	0.038%
156	9.890	9.877	9.932	HH	1089	28698	1.05%	0.086%
157	9.962	9.932	9.968	HH	770	15017	0.55%	0.045%
158	9.973	9.968	9.996	HH	772	11434	0.42%	0.034%
159	10.010	9.996	10.027	HH	774	12496	0.46%	0.038%
160	10.064	10.027	10.072	HH	1091	20586	0.76%	0.062%
161	10.097	10.072	10.136	HH	100851	1034145	37.93%	3.110%
162	10.164	10.136	10.196	HH	1852	44306	1.63%	0.133%
163	10.230	10.196	10.283	HH	2278	62046	2.28%	0.187%
164	10.289	10.283	10.307	HH	727	9686	0.36%	0.029%
165	10.338	10.307	10.367	HH	1051	28437	1.04%	0.086%
166	10.391	10.367	10.418	HH	885	22856	0.84%	0.069%
167	10.422	10.418	10.429	HH	667	3977	0.15%	0.012%
168	10.432	10.429	10.436	HH	635	2441	0.09%	0.007%
169	10.447	10.436	10.471	HH	702	13845	0.51%	0.042%
170	10.481	10.471	10.496	HH	755	9615	0.35%	0.029%
171	10.511	10.496	10.522	HH	684	10070	0.37%	0.030%
172	10.535	10.522	10.541	HH	839	8270	0.30%	0.025%
173	10.571	10.541	10.596	HH	4246	62039	2.28%	0.187%
174	10.616	10.596	10.634	HH	1433	26458	0.97%	0.080%
175	10.656	10.634	10.694	HH	3406	64912	2.38%	0.195%
176	10.714	10.694	10.741	HH	1602	31310	1.15%	0.094%
177	10.782	10.741	10.802	HH	1530	42682	1.57%	0.128%
178	10.842	10.802	10.867	HH	1468	44347	1.63%	0.133%
179	10.873	10.867	10.879	HH	1166	7626	0.28%	0.023%
180	10.883	10.879	10.889	HH	1092	6121	0.22%	0.018%
181	10.896	10.889	10.905	HH	1112	10223	0.37%	0.031%
182	10.925	10.905	10.952	HH	3026	50269	1.84%	0.151%
183	10.970	10.952	10.990	HH	2493	40039	1.47%	0.120%
184	11.021	10.990	11.059	HH	2213	67848	2.49%	0.204%
185	11.066	11.059	11.089	HH	1521	23621	0.87%	0.071%
186	11.106	11.089	11.129	HH	1339	27972	1.03%	0.084%
187	11.147	11.129	11.170	HH	1554	32718	1.20%	0.098%
188	11.196	11.170	11.234	HH	12139	191547	7.03%	0.576%
189	11.248	11.234	11.289	HH	4309	89756	3.29%	0.270%
190	11.302	11.289	11.337	HH	2038	48931	1.79%	0.147%
191	11.340	11.337	11.376	HH	1578	32055	1.18%	0.096%
192	11.401	11.376	11.439	HH	1715	54076	1.98%	0.163%
193	11.449	11.439	11.469	HH	1430	23318	0.86%	0.070%
194	11.485	11.469	11.519	HH	1396	38026	1.39%	0.114%

					rteres			
195	11.533	11.519	11.571	HH	1421	38036	1.40%	0.114%
196	11.604	11.571	11.621	HH	1461	38378	1.41%	0.115%
197	11.647	11.621	11.661	HH	3082	50547	1.85%	0.152%
198	11.676	11.661	11.699	HH	2948	49931	1.83%	0.150%
199	11.707	11.699	11.729	HH	1655	27038	0.99%	0.081%
200	11.759	11.729	11.813	HH	2401	88184	3.23%	0.265%
201	11.830	11.813	11.842	HH	1454	24636	0.90%	0.074%
202	11.870	11.842	11.897	HH	7930	122097	4.48%	0.367%
203	11.937	11.897	11.969	HH	3373	104114	3.82%	0.313%
204	11.975	11.969	11.978	HH	2148	10779	0.40%	0.032%
205	11.988	11.978	12.014	HH	2343	43315	1.59%	0.130%
206	12.027	12.014	12.046	HH	1817	32170	1.18%	0.097%
207	12.098	12.046	12.145	HH	5147	166846	6.12%	0.502%
208	12.159	12.145	12.181	HH	2508	46569	1.71%	0.140%
209	12.200	12.181	12.252	HH	2269	83075	3.05%	0.250%
210	12.288	12.252	12.312	HH	2007	62951	2.31%	0.189%
211	12.346	12.312	12.377	HH	3865	107506	3.94%	0.323%
212	12.411	12.377	12.426	HH	3877	82357	3.02%	0.248%
213	12.443	12.426	12.487	HH	4145	107830	3.95%	0.324%
214	12.507	12.487	12.548	HH	4134	107393	3.94%	0.323%
215	12.603	12.548	12.665	HH	124745	1765722	64.76%	5.310%
216	12.678	12.665	12.695	HH	3890	63727	2.34%	0.192%
217	12.709	12.695	12.746	HH	3727	103450	3.79%	0.311%
218	12.751	12.746	12.792	HH	3066	76650	2.81%	0.230%
219	12.814	12.792	12.837	HH	3326	73430	2.69%	0.221%
220	12.846	12.837	12.869	HH	2582	47489	1.74%	0.143%
221	12.874	12.869	12.893	HH	2436	33732	1.24%	0.101%
222	12.923	12.893	12.965	HH	3474	125790	4.61%	0.378%
223	12.989	12.965	13.019	HH	6571	128968	4.73%	0.388%
224	13.071	13.019	13.101	HH	4773	169652	6.22%	0.510%
225	13.108	13.101	13.125	HH	2597	35552	1.30%	0.107%
226	13.131	13.125	13.153	HH	2398	38003	1.39%	0.114%
227	13.166	13.153	13.180	HH	2327	37845	1.39%	0.114%
228	13.186	13.180	13.196	HH	2471	22547	0.83%	0.068%
229	13.198	13.196	13.213	HH	2443	24401	0.89%	0.073%
230	13.238	13.213	13.297	HH	3433	142093	5.21%	0.427%
231	13.306	13.297	13.325	HH	2611	41072	1.51%	0.124%
232	13.350	13.325	13.368	HH	4384	84806	3.11%	0.255%
233	13.394	13.368	13.466	HH	6057	215218	7.89%	0.647%
234	13.512	13.466	13.524	HH	5723	129020	4.73%	0.388%
235	13.533	13.524	13.566	HH	5203	96317	3.53%	0.290%
236	13.572	13.566	13.576	HH	2472	14725	0.54%	0.044%
237	13.604	13.576	13.643	HH	6037	175709	6.44%	0.528%
238	13.665	13.643	13.698	HH	7927	182470	6.69%	0.549%
239	13.728	13.698	13.771	HH	7597	207771	7.62%	0.625%
240	13.792	13.771	13.807	HH	3594	73562	2.70%	0.221%
241	13.832	13.807	13.887	HH	17620	349061	12.80%	1.050%
242	13.908	13.887	13.931	HH	6353	125006	4.59%	0.376%
243	13.935	13.931	13.966	HH	3658	71341	2.62%	0.215%
244	13.982	13.966	13.992	HH	3404	51277	1.88%	0.154%
245	14.003	13.992	14.020	HH	3453	58064	2.13%	0.175%
246	14.049	14.020	14.077	HH	3815	116728	4.28%	0.351%

					rteres			
247	14.111	14.077	14.116	HH	3438	75083	2.75%	0.226%
248	14.142	14.116	14.166	HH	5956	132260	4.85%	0.398%
249	14.191	14.166	14.204	HH	7098	123792	4.54%	0.372%
250	14.215	14.204	14.241	HH	5769	99468	3.65%	0.299%
251	14.257	14.241	14.279	HH	3540	74880	2.75%	0.225%
252	14.299	14.279	14.325	HH	3294	89043	3.27%	0.268%
253	14.338	14.325	14.361	HH	3177	65672	2.41%	0.197%
254	14.397	14.361	14.425	HH	3619	128867	4.73%	0.388%
255	14.430	14.425	14.455	HH	3547	59845	2.19%	0.180%
256	14.469	14.455	14.485	HH	3382	59985	2.20%	0.180%
257	14.494	14.485	14.507	HH	3361	44102	1.62%	0.133%
258	14.519	14.507	14.526	HH	3301	35485	1.30%	0.107%
259	15.588	15.526	14.649	HH	13586	435806	15.98%	1.310%
260	14.690	14.649	14.731	HH	7143	239192	8.77%	0.719%
261	14.755	14.731	14.777	HH	10287	190669	6.99%	0.573%
262	14.791	14.777	14.804	HH	5747	87063	3.19%	0.262%
263	14.825	14.804	14.841	HH	10215	169740	6.23%	0.510%
264	14.857	14.841	14.909	HH	9261	235597	8.64%	0.708%
265	14.915	14.909	14.936	HH	4348	68034	2.50%	0.205%
266	14.965	14.936	15.006	HH	4988	183162	6.72%	0.551%
267	15.038	15.006	15.059	HH	5309	147248	5.40%	0.443%
268	15.094	15.059	15.127	HH	92258	1363828	50.02%	4.101%
269	15.148	15.127	15.174	HH	6794	158424	5.81%	0.476%
270	15.193	15.174	15.212	HH	5228	113697	4.17%	0.342%
271	15.256	15.212	15.278	HH	6750	232606	8.53%	0.699%
272	15.297	15.278	15.319	HH	10623	187600	6.88%	0.564%
273	15.342	15.319	15.392	HH	11821	317482	11.64%	0.955%
274	15.395	15.392	15.407	HH	4775	42345	1.55%	0.127%
275	15.432	15.407	15.455	HH	5853	147579	5.41%	0.444%
276	15.461	15.455	15.482	HH	4904	75199	2.76%	0.226%
277	15.491	15.482	15.505	HH	4799	66567	2.44%	0.200%
278	15.526	15.505	15.542	HH	5257	111756	4.10%	0.336%
279	15.581	15.542	15.585	HH	5168	129652	4.76%	0.390%
280	15.593	15.585	15.609	HH	5269	72484	2.66%	0.218%
281	15.634	15.609	15.647	HH	5312	118432	4.34%	0.356%
282	15.679	15.647	15.752	HH	156710	2726415	100.00%	8.198%
283	15.777	15.752	15.796	HH	9393	194629	7.14%	0.585%
284	15.820	15.796	15.847	HH	18727	345181	12.66%	1.038%
285	15.895	15.847	15.924	HH	26788	615236	22.57%	1.850%
286	15.951	15.924	15.977	HH	14038	291762	10.70%	0.877%
287	16.013	15.977	16.022	HH	6033	153468	5.63%	0.461%
288	16.042	16.022	16.056	HH	6124	126561	4.64%	0.381%
289	16.063	16.056	16.067	HH	6182	39981	1.47%	0.120%
290	16.073	16.067	16.105	HH	6272	141180	5.18%	0.425%
291	16.169	16.105	16.182	HH	12305	362338	13.29%	1.090%
292	16.202	16.182	16.237	HH	15021	348501	12.78%	1.048%
293	16.285	16.237	16.302	HH	13809	366217	13.43%	1.101%
294	16.322	16.302	16.351	HH	15442	305738	11.21%	0.919%
295	16.384	16.351	16.432	HH	22997	541965	19.88%	1.630%
296	16.450	16.432	16.480	HH	7155	195199	7.16%	0.587%
297	16.526	16.480	16.560	HH	7476	344607	12.64%	1.036%
298	16.635	16.560	16.659	HH	9409	484077	17.76%	1.456%
299	16.696	16.659	16.744	HH	136168	2460377	90.24%	7.398%

						rteres		
300	16.806	16.744	16.851	HH	37461	1157572	42.46%	3.481%
301	16.883	16.851	16.915	HH	26603	588769	21.59%	1.770%
302	16.935	16.915	16.955	HH	9146	219971	8.07%	0.661%
303	16.969	16.955	16.990	HH	9157	186794	6.85%	0.562%
304	17.029	16.990	17.044	HH	9337	293273	10.76%	0.882%
305	17.073	17.044	17.091	HH	10996	286991	10.53%	0.863%
306	17.113	17.091	17.144	HH	11565	342170	12.55%	1.029%
307	17.180	17.144	17.216	HH	20460	605947	22.23%	1.822%
308	17.274	17.216	17.302	HH	25461	842771	30.91%	2.534%
309	17.352	17.302	17.392	HH	32726	899083	32.98%	2.704%
310	17.422	17.392	17.427	HH	11212	230036	8.44%	0.692%
311	17.432	17.427	17.452	HH	11206	166706	6.11%	0.501%
312	17.480	17.452	17.489	HH	11973	255956	9.39%	0.770%
					Sum of corrected areas:		33255322	

FF071025.M Thu Jul 17 05:12:13 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/09/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-49	SDG No.:	Q2543
Lab Sample ID:	Q2543-02	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	73.9
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
FF016175.D	1	07/16/25 10:00	07/16/25 19:46	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	7390		229	2250	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	9.18		37 - 130	46%	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\FF071625\
Data File : FF016175.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:46
Operator : YP\AJ
Sample : Q2543-02
Misc :
ALS Vial : 79 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-49

Integration File: autoint1.e
Quant Time: Jul 17 03:39:18 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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...	15.092	894231	9.183 ug/mlm
Target Compounds			

(f)=RT Delta > 1/2 Window

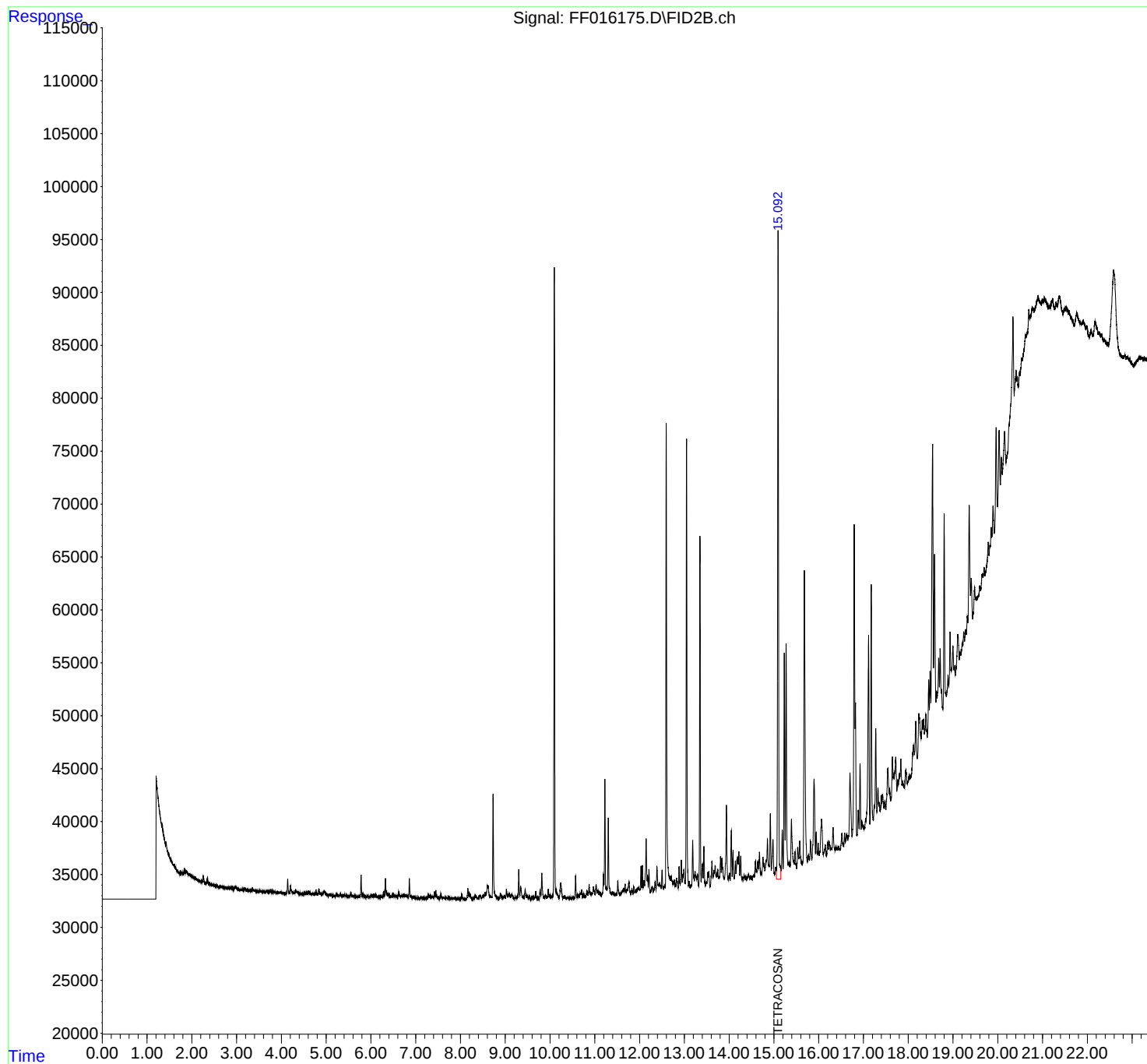
(m)=manual int.

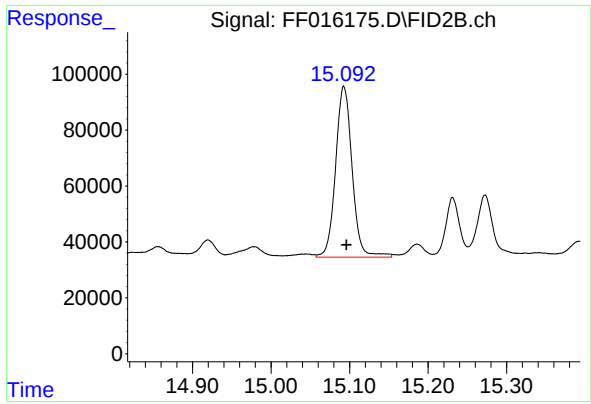
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016175.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:46
Operator : YP\AJ
Sample : Q2543-02
Misc :
ALS Vial : 79 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-49

Integration File: autoint1.e
Quant Time: Jul 17 03:39:18 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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.: 15.092 min
Delta R.T.: -0.004 min
Response: 894231
Conc: 9.18 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-49

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016175.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 19:46
Sample : Q2543-02
Misc :
ALS Vial : 79 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.206	4.177	4.250	HH	1192	34656	3.41%	0.175%
2	4.258	4.250	4.290	HH	669	13981	1.38%	0.071%
3	4.316	4.290	4.340	HH	903	21244	2.09%	0.107%
4	4.350	4.340	4.387	HH	699	16803	1.65%	0.085%
5	4.400	4.387	4.409	HH	631	7543	0.74%	0.038%
6	4.413	4.409	4.440	HH	552	9880	0.97%	0.050%
7	4.444	4.440	4.449	HH	587	2807	0.28%	0.014%
8	4.455	4.449	4.485	HH	568	10531	1.04%	0.053%
9	4.492	4.485	4.499	HH	519	3946	0.39%	0.020%
10	4.516	4.499	4.544	HH	662	15209	1.50%	0.077%
11	4.557	4.544	4.574	HH	607	10001	0.98%	0.051%
12	4.578	4.574	4.587	HH	553	3941	0.39%	0.020%
13	4.610	4.587	4.630	HH	782	16099	1.59%	0.081%
14	4.643	4.630	4.651	HH	630	6900	0.68%	0.035%
15	4.657	4.651	4.670	HH	556	5820	0.57%	0.029%
16	4.688	4.670	4.712	HH	563	12023	1.18%	0.061%
17	4.723	4.712	4.755	HH	499	12093	1.19%	0.061%
18	4.773	4.755	4.799	HH	867	16122	1.59%	0.081%
19	4.805	4.799	4.811	HH	495	3146	0.31%	0.016%
20	4.839	4.811	4.862	HH	935	19314	1.90%	0.098%
21	4.867	4.862	4.871	HH	527	2567	0.25%	0.013%
22	4.875	4.871	4.892	HH	567	6444	0.63%	0.033%
23	4.907	4.892	4.925	HH	581	10290	1.01%	0.052%
24	4.934	4.925	4.942	HH	597	5825	0.57%	0.029%
25	4.949	4.942	4.953	HH	689	4228	0.42%	0.021%
26	4.969	4.953	5.023	HH	758	22196	2.19%	0.112%
27	5.029	5.023	5.047	HH	433	5493	0.54%	0.028%
28	5.055	5.047	5.066	HH	408	4703	0.46%	0.024%
29	5.070	5.066	5.074	HH	467	2023	0.20%	0.010%
30	5.078	5.074	5.119	HH	421	9818	0.97%	0.050%
31	5.122	5.119	5.157	HH	371	7658	0.75%	0.039%
32	5.174	5.157	5.178	HH	361	4150	0.41%	0.021%
33	5.183	5.178	5.207	HH	365	5225	0.51%	0.026%
34	5.238	5.207	5.252	HH	475	10270	1.01%	0.052%
35	5.260	5.252	5.279	HH	476	6293	0.62%	0.032%
36	5.286	5.279	5.292	HH	327	2422	0.24%	0.012%

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37	5.297	5.292	5.312	HH	321	3759	0.37%	0.019%
38	5.322	5.312	5.363	HH	484	11389	1.12%	0.058%
39	5.377	5.363	5.384	HH	327	3891	0.38%	0.020%
40	5.406	5.384	5.448	HH	430	12508	1.23%	0.063%
41	5.457	5.448	5.472	HH	357	4154	0.41%	0.021%
42	5.475	5.472	5.516	HH	337	7662	0.75%	0.039%
43	5.519	5.516	5.533	HH	301	2983	0.29%	0.015%
44	5.555	5.533	5.575	HH	647	10850	1.07%	0.055%
45	5.580	5.575	5.619	HH	369	7904	0.78%	0.040%
46	5.622	5.619	5.642	HH	265	3508	0.35%	0.018%
47	5.645	5.642	5.677	HH	271	4940	0.49%	0.025%
48	5.683	5.677	5.739	HH	285	7691	0.76%	0.039%
49	5.752	5.739	5.760	HH	386	3711	0.37%	0.019%
50	5.781	5.760	5.807	HH	2301	26992	2.66%	0.136%
51	5.823	5.807	5.880	HH	537	12858	1.27%	0.065%
52	5.891	5.880	5.904	HH	233	2835	0.28%	0.014%
53	5.915	5.904	5.955	HH	316	7475	0.74%	0.038%
54	6.012	5.955	6.048	HH	381	14482	1.43%	0.073%
55	6.067	6.048	6.096	HH	472	8847	0.87%	0.045%
56	6.113	6.096	6.128	HH	360	5458	0.54%	0.028%
57	6.133	6.128	6.144	HH	292	2099	0.21%	0.011%
58	6.155	6.144	6.161	HH	205	1800	0.18%	0.009%
59	6.166	6.161	6.182	HH	233	2287	0.23%	0.012%
60	6.218	6.182	6.234	HH	289	7005	0.69%	0.035%
61	6.285	6.234	6.303	HH	698	14717	1.45%	0.074%
62	6.324	6.303	6.382	HH	1922	36819	3.63%	0.186%
63	6.394	6.382	6.410	HH	483	6433	0.63%	0.032%
64	6.422	6.410	6.462	HH	356	8194	0.81%	0.041%
65	6.487	6.462	6.552	HH	512	16345	1.61%	0.083%
66	6.570	6.552	6.595	HH	307	7257	0.71%	0.037%
67	6.622	6.595	6.669	HH	731	16222	1.60%	0.082%
68	6.676	6.669	6.692	HH	329	3893	0.38%	0.020%
69	6.700	6.692	6.759	HH	368	11999	1.18%	0.061%
70	6.767	6.759	6.835	HH	366	12671	1.25%	0.064%
71	6.858	6.835	6.908	HH	1927	26107	2.57%	0.132%
72	6.918	6.908	6.934	HH	234	2725	0.27%	0.014%
73	6.941	6.934	6.965	HH	182	2651	0.26%	0.013%
74	6.973	6.965	7.010	HH	222	3504	0.35%	0.018%
75	7.054	7.010	7.077	HH	168	4288	0.42%	0.022%
76	7.112	7.077	7.175	HH	238	6233	0.61%	0.031%
77	7.191	7.175	7.211	HH	142	1619	0.16%	0.008%
78	7.239	7.211	7.257	HH	136	2394	0.24%	0.012%
79	7.279	7.257	7.304	HH	404	7591	0.75%	0.038%
80	7.321	7.304	7.354	HH	379	7453	0.73%	0.038%
81	7.370	7.354	7.387	HH	246	3730	0.37%	0.019%
82	7.422	7.387	7.437	HH	703	9952	0.98%	0.050%
83	7.451	7.437	7.496	HH	816	12366	1.22%	0.062%
84	7.510	7.496	7.540	HH	275	3276	0.32%	0.017%
85	7.562	7.540	7.588	HH	536	6812	0.67%	0.034%
86	7.602	7.588	7.650	HH	180	3762	0.37%	0.019%
87	7.661	7.650	7.682	HH	128	1868	0.18%	0.009%
88	7.690	7.682	7.712	HH	120	1593	0.16%	0.008%
89	7.738	7.712	7.779	HH	237	3624	0.36%	0.018%

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90	7.868	7.868	7.892	M	-173	0	0.00%	0.000%
91	8.025	7.969	8.077	PH	520	6595	0.65%	0.033%
92	8.086	8.077	8.129	PH	41	343	0.03%	0.002%
93	8.165	8.129	8.184	PH	1024	13336	1.31%	0.067%
94	8.194	8.184	8.210	HH	704	7365	0.73%	0.037%
95	8.221	8.210	8.265	HH	440	6496	0.64%	0.033%
96	8.272	8.265	8.292	HH	109	438	0.04%	0.002%
97	8.327	8.292	8.398	PH	328	9649	0.95%	0.049%
98	8.440	8.398	8.472	HH	328	8491	0.84%	0.043%
99	8.510	8.472	8.527	HH	366	7366	0.73%	0.037%
100	8.546	8.527	8.559	HH	612	8203	0.81%	0.041%
101	8.614	8.559	8.666	HH	1284	44378	4.37%	0.224%
102	8.678	8.666	8.700	HH	313	4122	0.41%	0.021%
103	8.729	8.700	8.817	HH	9904	123976	12.21%	0.626%
104	8.820	8.817	8.835	HH	227	1475	0.15%	0.007%
105	8.864	8.835	8.872	HH	159	2272	0.22%	0.011%
106	8.891	8.872	8.959	HH	560	11962	1.18%	0.060%
107	8.983	8.959	9.005	HH	297	5692	0.56%	0.029%
108	9.028	9.005	9.060	HH	914	13419	1.32%	0.068%
109	9.088	9.060	9.131	HH	536	15436	1.52%	0.078%
110	9.147	9.131	9.195	HH	435	10084	0.99%	0.051%
111	9.224	9.195	9.249	HH	187	3883	0.38%	0.020%
112	9.272	9.249	9.284	HH	311	4116	0.41%	0.021%
113	9.302	9.284	9.324	HH	2820	31125	3.07%	0.157%
114	9.345	9.324	9.381	HH	1235	22557	2.22%	0.114%
115	9.393	9.381	9.419	HH	245	3995	0.39%	0.020%
116	9.446	9.419	9.469	HH	863	13235	1.30%	0.067%
117	9.484	9.469	9.515	HH	363	6398	0.63%	0.032%
118	9.539	9.515	9.558	PH	313	3603	0.35%	0.018%
119	9.594	9.558	9.614	PH	243	3572	0.35%	0.018%
120	9.630	9.614	9.649	PH	272	3233	0.32%	0.016%
121	9.682	9.649	9.715	HH	717	9765	0.96%	0.049%
122	9.732	9.715	9.757	HH	243	2581	0.25%	0.013%
123	9.779	9.757	9.799	PH	864	11750	1.16%	0.059%
124	9.818	9.799	9.859	HH	2454	35624	3.51%	0.180%
125	9.866	9.859	9.881	HH	223	2458	0.24%	0.012%
126	9.897	9.881	9.932	HH	385	7605	0.75%	0.038%
127	9.962	9.932	9.984	HH	858	13821	1.36%	0.070%
128	9.999	9.984	10.017	HH	348	5368	0.53%	0.027%
129	10.026	10.017	10.044	HH	231	3021	0.30%	0.015%
130	10.096	10.044	10.127	HH	59741	631512	62.19%	3.189%
131	10.140	10.127	10.209	HH	964	22173	2.18%	0.112%
132	10.241	10.209	10.285	HH	1496	35182	3.46%	0.178%
133	10.306	10.285	10.319	HH	264	3368	0.33%	0.017%
134	10.331	10.319	10.359	HH	242	3770	0.37%	0.019%
135	10.381	10.359	10.424	HH	177	4196	0.41%	0.021%
136	10.445	10.424	10.470	PH	146	2555	0.25%	0.013%
137	10.571	10.470	10.598	HH	2205	30927	3.05%	0.156%
138	10.618	10.598	10.637	HH	418	7095	0.70%	0.036%
139	10.674	10.637	10.689	HH	520	12126	1.19%	0.061%
140	10.705	10.689	10.729	HH	909	12233	1.20%	0.062%
141	10.747	10.729	10.779	HH	516	10371	1.02%	0.052%

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142	10.822	10.779	10.850	HH	805	19215	1.89%	0.097%
143	10.873	10.850	10.914	HH	1406	27211	2.68%	0.137%
144	10.922	10.914	10.934	HH	564	6269	0.62%	0.032%
145	10.971	10.934	11.006	HH	1177	30740	3.03%	0.155%
146	11.029	11.006	11.056	HH	1326	26933	2.65%	0.136%
147	11.069	11.056	11.088	HH	806	12928	1.27%	0.065%
148	11.102	11.088	11.111	HH	532	7226	0.71%	0.036%
149	11.122	11.111	11.140	HH	649	8924	0.88%	0.045%
150	11.194	11.140	11.205	HH	2299	37549	3.70%	0.190%
151	11.225	11.205	11.270	HH	11244	144056	14.19%	0.728%
152	11.301	11.270	11.384	HH	7674	124192	12.23%	0.627%
153	11.399	11.384	11.450	HH	695	20345	2.00%	0.103%
154	11.476	11.450	11.497	HH	545	12400	1.22%	0.063%
155	11.514	11.497	11.564	HH	1738	32652	3.22%	0.165%
156	11.643	11.564	11.659	HH	855	38425	3.78%	0.194%
157	11.677	11.659	11.697	HH	1407	22530	2.22%	0.114%
158	11.720	11.697	11.730	HH	927	15697	1.55%	0.079%
159	11.761	11.730	11.800	HH	1572	43265	4.26%	0.219%
160	11.830	11.800	11.850	HH	949	20729	2.04%	0.105%
161	11.872	11.850	11.897	HH	1138	23395	2.30%	0.118%
162	11.919	11.897	11.934	HH	917	16593	1.63%	0.084%
163	11.977	11.934	12.003	HH	1090	39300	3.87%	0.198%
164	12.032	12.003	12.049	HH	3114	46367	4.57%	0.234%
165	12.063	12.049	12.082	HH	3160	41238	4.06%	0.208%
166	12.097	12.082	12.112	HH	1714	27318	2.69%	0.138%
167	12.147	12.112	12.169	HH	5707	105104	10.35%	0.531%
168	12.179	12.169	12.195	HH	2290	29177	2.87%	0.147%
169	12.210	12.195	12.240	HH	2735	41863	4.12%	0.211%
170	12.283	12.240	12.309	HH	1167	36005	3.55%	0.182%
171	12.348	12.309	12.367	HH	1670	39850	3.92%	0.201%
172	12.389	12.367	12.424	HH	3062	62435	6.15%	0.315%
173	12.440	12.424	12.480	HH	1483	44707	4.40%	0.226%
174	12.503	12.480	12.525	HH	2720	46763	4.61%	0.236%
175	12.563	12.525	12.574	HH	1275	33246	3.27%	0.168%
176	12.596	12.574	12.667	HH	44937	609457	60.02%	3.078%
177	12.678	12.667	12.695	HH	2193	33927	3.34%	0.171%
178	12.709	12.695	12.747	HH	2173	55434	5.46%	0.280%
179	12.758	12.747	12.767	HH	1565	18585	1.83%	0.094%
180	12.777	12.767	12.800	HH	1606	28553	2.81%	0.144%
181	12.824	12.800	12.860	HH	1970	55144	5.43%	0.279%
182	12.883	12.860	12.908	HH	3025	54124	5.33%	0.273%
183	12.933	12.908	12.953	HH	3705	65071	6.41%	0.329%
184	12.990	12.953	13.012	HH	2773	77873	7.67%	0.393%
185	13.050	13.012	13.095	HH	43263	548889	54.05%	2.772%
186	13.111	13.095	13.130	HH	1638	29181	2.87%	0.147%
187	13.149	13.130	13.159	HH	1306	20919	2.06%	0.106%
188	13.187	13.159	13.223	HH	5562	108342	10.67%	0.547%
189	13.239	13.223	13.276	HH	2564	69042	6.80%	0.349%
190	13.292	13.276	13.322	HH	2362	49877	4.91%	0.252%
191	13.349	13.322	13.375	HH	34344	395546	38.95%	1.998%
192	13.403	13.375	13.420	HH	3256	68482	6.74%	0.346%
193	13.437	13.420	13.474	HH	4975	87796	8.65%	0.443%
194	13.490	13.474	13.499	HH	1549	23064	2.27%	0.116%

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195	13.523	13.499	13.535	HH	2527	43304	4.26%	0.219%
196	13.547	13.535	13.576	HH	2537	46017	4.53%	0.232%
197	13.616	13.576	13.639	HH	3546	86353	8.50%	0.436%
198	13.663	13.639	13.674	HH	2712	51231	5.05%	0.259%
199	13.690	13.674	13.709	HH	3071	56190	5.53%	0.284%
200	13.721	13.709	13.732	HH	2321	31210	3.07%	0.158%
201	13.747	13.732	13.766	HH	2796	49197	4.84%	0.248%
202	13.811	13.766	13.826	HH	4011	98564	9.71%	0.498%
203	13.839	13.826	13.893	HH	3831	108946	10.73%	0.550%
204	13.940	13.893	13.979	HH	8814	200469	19.74%	1.012%
205	14.006	13.979	14.024	HH	2437	56556	5.57%	0.286%
206	14.048	14.024	14.070	HH	6415	109151	10.75%	0.551%
207	14.087	14.070	14.115	HH	4623	81934	8.07%	0.414%
208	14.141	14.115	14.156	HH	3587	66406	6.54%	0.335%
209	14.191	14.156	14.204	HH	3924	99682	9.82%	0.503%
210	14.218	14.204	14.239	HH	4479	72187	7.11%	0.365%
211	14.258	14.239	14.305	HH	4066	102916	10.14%	0.520%
212	14.335	14.305	14.355	HH	2196	61072	6.01%	0.308%
213	14.369	14.355	14.390	HH	2112	41334	4.07%	0.209%
214	14.433	14.390	14.460	HH	2284	87611	8.63%	0.442%
215	14.472	14.460	14.488	HH	2222	34463	3.39%	0.174%
216	14.498	14.488	14.514	HH	2075	29742	2.93%	0.150%
217	14.546	14.514	14.564	HH	2271	64016	6.30%	0.323%
218	14.587	14.564	14.617	HH	3551	91767	9.04%	0.463%
219	14.639	14.617	14.659	HH	3473	78141	7.70%	0.395%
220	14.677	14.659	14.717	HH	4419	110561	10.89%	0.558%
221	14.756	14.717	14.804	HH	3978	158867	15.65%	0.802%
222	14.856	14.804	14.893	HH	5704	204807	20.17%	1.034%
223	14.920	14.893	14.943	HH	8074	148586	14.63%	0.750%
224	14.978	14.943	15.015	HH	5589	160401	15.80%	0.810%
225	15.044	15.015	15.059	HH	3020	72140	7.10%	0.364%
226	15.093	15.059	15.162	HH	63139	1015436	100.00%	5.128%
227	15.186	15.162	15.205	HH	6552	115234	11.35%	0.582%
228	15.231	15.205	15.251	HH	23142	313682	30.89%	1.584%
229	15.273	15.251	15.328	HH	24109	420617	41.42%	2.124%
230	15.340	15.328	15.362	HH	3515	66488	6.55%	0.336%
231	15.392	15.362	15.454	HH	7602	255861	25.20%	1.292%
232	15.472	15.454	15.507	HH	4486	115998	11.42%	0.586%
233	15.534	15.507	15.557	HH	4923	120988	11.91%	0.611%
234	15.578	15.557	15.628	HH	5464	175830	17.32%	0.888%
235	15.681	15.628	15.745	HH	31033	746243	73.49%	3.769%
236	15.773	15.745	15.792	HH	4144	107739	10.61%	0.544%
237	15.819	15.792	15.847	HH	5411	146131	14.39%	0.738%
238	15.897	15.847	15.928	HH	11329	343658	33.84%	1.736%
239	15.945	15.928	15.971	HH	6372	131917	12.99%	0.666%
240	15.990	15.971	16.012	HH	5251	114098	11.24%	0.576%
241	16.066	16.012	16.107	HH	7486	317618	31.28%	1.604%
242	16.147	16.107	16.175	HH	5106	187042	18.42%	0.945%
243	16.201	16.175	16.216	HH	5335	118771	11.70%	0.600%
244	16.234	16.216	16.289	HH	5423	215838	21.26%	1.090%
245	16.323	16.289	16.369	HH	6748	255843	25.20%	1.292%
246	16.383	16.369	16.427	HH	4969	165885	16.34%	0.838%

						rteres		
247	16.444	16.427	16.479	HH	4992	150237	14.80%	0.759%
248	16.519	16.479	16.560	HH	6145	261477	25.75%	1.321%
249	16.579	16.560	16.595	HH	6241	119193	11.74%	0.602%
250	16.627	16.595	16.645	HH	6123	175303	17.26%	0.885%
251	16.701	16.645	16.745	HH	11847	470608	46.35%	2.377%
252	16.794	16.745	16.814	HH	35377	671003	66.08%	3.389%
253	16.822	16.814	16.855	HH	18494	281974	27.77%	1.424%
254	16.883	16.855	16.903	HH	8321	206837	20.37%	1.045%
255	16.925	16.903	16.949	HH	12787	255259	25.14%	1.289%
256	16.963	16.949	17.003	HH	7448	228886	22.54%	1.156%
257	17.015	17.003	17.025	HH	6850	89802	8.84%	0.454%
258	17.048	17.025	17.057	HH	7596	136628	13.46%	0.690%
259	17.115	17.057	17.144	HH	24969	676230	66.60%	3.415%
260	17.174	17.144	17.220	HH	29679	611460	60.22%	3.088%
261	17.276	17.220	17.301	HH	16154	500091	49.25%	2.526%
262	17.325	17.301	17.342	HH	10571	230242	22.67%	1.163%
263	17.350	17.342	17.377	HH	9142	182767	18.00%	0.923%
264	17.423	17.377	17.459	HH	9839	448725	44.19%	2.266%
265	17.481	17.459	17.500	HHA	9159	225616	22.22%	1.139%

Sum of corrected areas: 19800185

FF071025.M Thu Jul 17 05:13:09 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/09/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-23	SDG No.:	Q2543
Lab Sample ID:	Q2543-03	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85
Sample Wt/Vol:	30.04	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	Diesel Range Organics
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF016176.D	1	07/16/25 10:00	07/16/25 20:16	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	3800		199	1960	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	10.8		37 - 130	54%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016176.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:16
Operator : YP\AJ
Sample : Q2543-03
Misc :
ALS Vial : 80 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-23

Integration File: autoint1.e
Quant Time: Jul 17 03:39:30 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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...	15.093	1046339	10.745 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

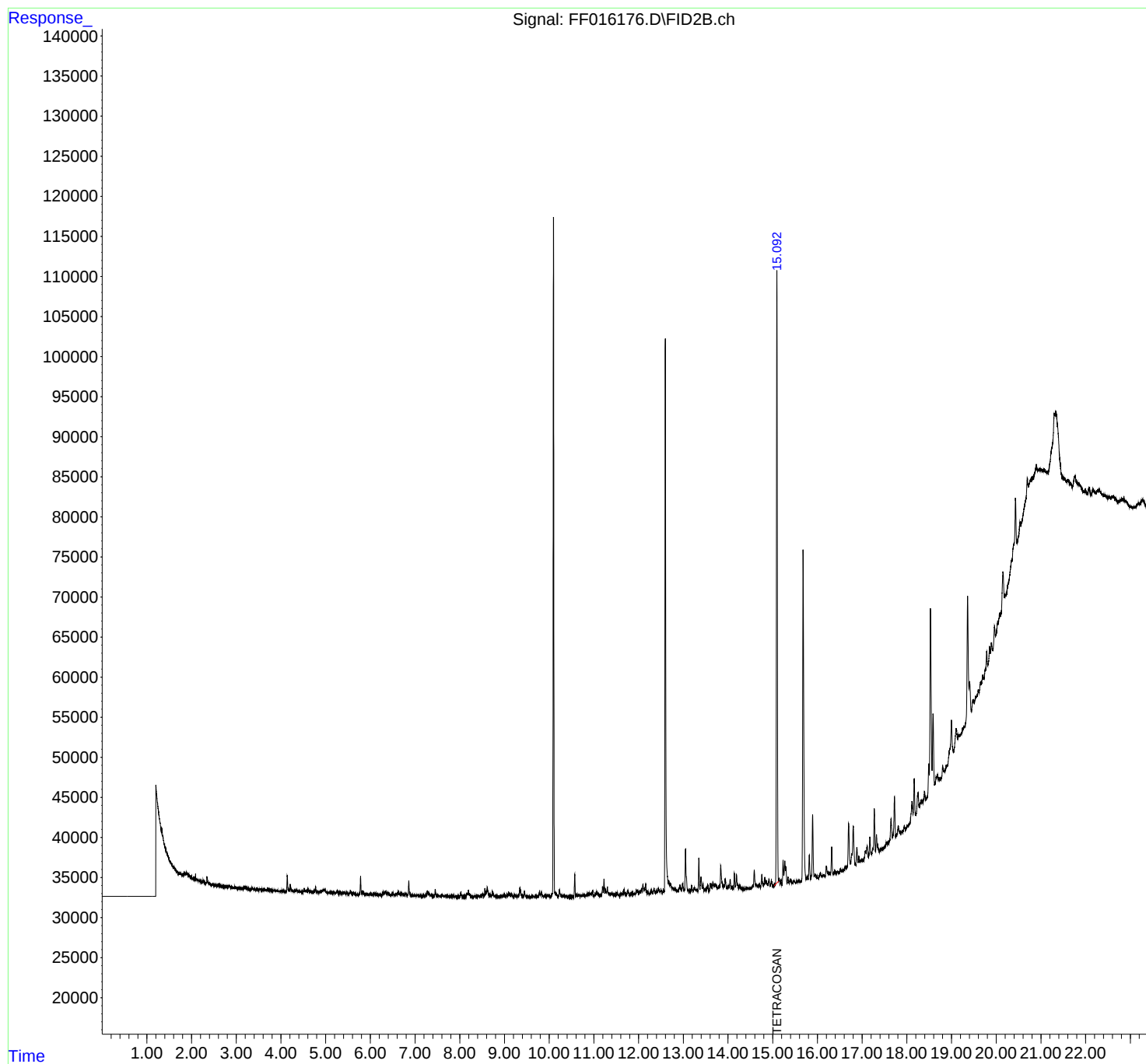
(m)=manual int.

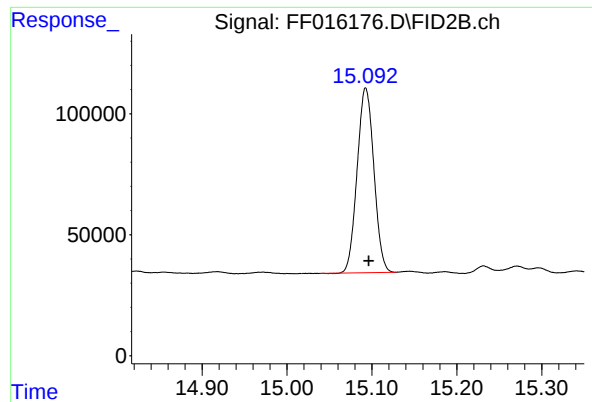
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016176.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:16
Operator : YP\AJ
Sample : Q2543-03
Misc :
ALS Vial : 80 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TP-23

Integration File: autoint1.e
Quant Time: Jul 17 03:39:30 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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.: 15.093 min
Delta R.T.: -0.003 min
Response: 1046339
Conc: 10.75 ug/ml

Instrument :
FID_F
ClientSampleId :
TP-23

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016176.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:16
Sample : Q2543-03
Misc :
ALS Vial : 80 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.141	4.116	4.187	HH	2550	48498	4.31%	0.396%
2	4.206	4.187	4.292	HH	1509	52691	4.68%	0.430%
3	4.322	4.292	4.334	HH	729	16245	1.44%	0.133%
4	4.358	4.334	4.389	HH	739	21923	1.95%	0.179%
5	4.406	4.389	4.462	HH	694	26802	2.38%	0.219%
6	4.518	4.462	4.537	HH	934	28785	2.56%	0.235%
7	4.554	4.537	4.581	HH	776	17326	1.54%	0.142%
8	4.609	4.581	4.636	HH	966	23116	2.05%	0.189%
9	4.642	4.636	4.686	HH	624	17255	1.53%	0.141%
10	4.689	4.686	4.709	HH	544	7372	0.65%	0.060%
11	4.734	4.709	4.752	HH	579	14373	1.28%	0.117%
12	4.774	4.752	4.821	HH	1189	27912	2.48%	0.228%
13	4.853	4.821	4.894	HH	621	23606	2.10%	0.193%
14	4.982	4.894	5.049	HH	861	58058	5.16%	0.474%
15	5.067	5.049	5.102	HH	529	14179	1.26%	0.116%
16	5.108	5.102	5.121	HH	407	4434	0.39%	0.036%
17	5.142	5.121	5.155	HH	472	8632	0.77%	0.071%
18	5.173	5.155	5.177	HH	460	5481	0.49%	0.045%
19	5.185	5.177	5.206	HH	464	6996	0.62%	0.057%
20	5.218	5.206	5.229	HH	461	5555	0.49%	0.045%
21	5.262	5.229	5.301	HH	565	19610	1.74%	0.160%
22	5.328	5.301	5.392	HH	502	22248	1.98%	0.182%
23	5.407	5.392	5.464	HH	542	15792	1.40%	0.129%
24	5.468	5.464	5.527	HH	374	11772	1.05%	0.096%
25	5.553	5.527	5.577	HH	712	13816	1.23%	0.113%
26	5.592	5.577	5.667	HH	446	16295	1.45%	0.133%
27	5.675	5.667	5.714	HH	300	6594	0.59%	0.054%
28	5.781	5.714	5.809	HH	2506	36831	3.27%	0.301%
29	5.824	5.809	5.861	HH	694	13465	1.20%	0.110%
30	5.873	5.861	5.884	HH	316	3822	0.34%	0.031%
31	5.894	5.884	5.931	HH	292	6862	0.61%	0.056%
32	5.937	5.931	5.959	HH	300	4122	0.37%	0.034%
33	5.980	5.959	5.994	HH	293	5037	0.45%	0.041%
34	6.012	5.994	6.044	HH	388	7867	0.70%	0.064%
35	6.066	6.044	6.099	HH	387	8161	0.73%	0.067%
36	6.114	6.099	6.141	HH	362	6247	0.56%	0.051%

					rteres			
37	6.157	6.141	6.174	HH	241	3176	0.28%	0.026%
38	6.202	6.174	6.227	HH	233	5337	0.47%	0.044%
39	6.236	6.227	6.246	HH	201	1620	0.14%	0.013%
40	6.285	6.246	6.306	HH	602	10829	0.96%	0.088%
41	6.336	6.306	6.376	HH	632	19392	1.72%	0.158%
42	6.394	6.376	6.442	HH	512	10811	0.96%	0.088%
43	6.471	6.442	6.482	HH	217	4185	0.37%	0.034%
44	6.500	6.482	6.554	HH	400	9172	0.81%	0.075%
45	6.574	6.554	6.596	HH	282	5373	0.48%	0.044%
46	6.622	6.596	6.681	HH	682	17036	1.51%	0.139%
47	6.704	6.681	6.769	HH	346	13280	1.18%	0.108%
48	6.786	6.769	6.834	HH	301	8552	0.76%	0.070%
49	6.859	6.834	6.922	HH	1919	26374	2.34%	0.215%
50	6.933	6.922	6.971	HH	165	3276	0.29%	0.027%
51	6.998	6.971	7.012	HH	124	2115	0.19%	0.017%
52	7.017	7.012	7.031	HH	80	875	0.08%	0.007%
53	7.043	7.031	7.099	HH	190	3898	0.35%	0.032%
54	7.114	7.099	7.123	HH	107	959	0.09%	0.008%
55	7.144	7.123	7.167	HH	144	1657	0.15%	0.014%
56	7.172	7.167	7.212	HH	61	1061	0.09%	0.009%
57	7.236	7.212	7.259	PH	138	2570	0.23%	0.021%
58	7.279	7.259	7.304	HH	563	9471	0.84%	0.077%
59	7.316	7.304	7.406	HH	355	9158	0.81%	0.075%
60	7.416	7.406	7.430	HH	139	925	0.08%	0.008%
61	7.451	7.430	7.496	PH	871	10416	0.93%	0.085%
62	7.511	7.496	7.552	PH	117	1111	0.10%	0.009%
63	7.576	7.552	7.590	PH	94	1032	0.09%	0.008%
64	7.602	7.590	7.622	PH	167	1610	0.14%	0.013%
65	7.724	7.712	7.752	PH	133	700	0.06%	0.006%
66	8.024	7.999	8.064	PH	515	5249	0.47%	0.043%
67	8.086	8.064	8.129	PH	-22	-2301	-0.20%	-0.019%
68	8.160	8.129	8.178	PH	403	4651	0.41%	0.038%
69	8.194	8.178	8.211	HH	753	8367	0.74%	0.068%
70	8.220	8.211	8.287	HH	305	3209	0.29%	0.026%
71	8.513	8.484	8.529	PH	304	3384	0.30%	0.028%
72	8.617	8.529	8.664	HH	1001	30146	2.68%	0.246%
73	8.676	8.664	8.707	HH	266	3051	0.27%	0.025%
74	8.730	8.707	8.787	PH	633	8660	0.77%	0.071%
75	8.986	8.963	9.019	PH	241	2574	0.23%	0.021%
76	9.056	9.019	9.072	PH	182	2363	0.21%	0.019%
77	9.091	9.072	9.141	HH	543	9298	0.83%	0.076%
78	9.156	9.141	9.195	HH	182	2181	0.19%	0.018%
79	9.224	9.195	9.294	PH	210	2010	0.18%	0.016%
80	9.345	9.294	9.416	PH	1067	20978	1.86%	0.171%
81	9.446	9.416	9.556	PH	635	5359	0.48%	0.044%
82	9.781	9.755	9.804	PH	450	5593	0.50%	0.046%
83	9.824	9.804	9.854	HH	428	6394	0.57%	0.052%
84	9.868	9.854	9.884	PH	93	658	0.06%	0.005%
85	9.900	9.884	9.927	PH	79	433	0.04%	0.004%
86	9.982	9.927	9.994	PH	93	1187	0.11%	0.010%
87	10.010	9.994	10.037	PH	124	-329	-0.03%	-0.003%
88	10.096	10.037	10.142	PH	84518	863637	76.73%	7.054%
89	10.148	10.142	10.204	HH	337	5444	0.48%	0.044%

					rteres			
90	10.230	10.204	10.292	PH	755	11414	1.01%	0.093%
91	10.335	10.309	10.359	PH	186	795	0.07%	0.006%
92	10.571	10.547	10.598	PH	2729	28526	2.53%	0.233%
93	10.615	10.598	10.636	PH	201	2933	0.26%	0.024%
94	10.650	10.636	10.662	HH	159	1909	0.17%	0.016%
95	10.670	10.662	10.693	HH	168	2224	0.20%	0.018%
96	10.707	10.693	10.737	PH	129	1570	0.14%	0.013%
97	10.751	10.737	10.772	PH	109	1478	0.13%	0.012%
98	10.789	10.772	10.801	HH	193	1916	0.17%	0.016%
99	10.856	10.801	10.882	PH	284	8039	0.71%	0.066%
100	10.896	10.882	10.911	HH	388	4959	0.44%	0.041%
101	10.923	10.911	10.942	HH	433	5530	0.49%	0.045%
102	10.970	10.942	11.002	HH	749	11498	1.02%	0.094%
103	11.028	11.002	11.035	HH	276	3293	0.29%	0.027%
104	11.068	11.035	11.096	HH	611	11983	1.06%	0.098%
105	11.105	11.096	11.142	HH	271	4218	0.37%	0.034%
106	11.194	11.142	11.207	HH	1103	16222	1.44%	0.133%
107	11.226	11.207	11.243	HH	2164	24669	2.19%	0.201%
108	11.255	11.243	11.280	HH	872	13931	1.24%	0.114%
109	11.301	11.280	11.327	HH	1103	18191	1.62%	0.149%
110	11.338	11.327	11.357	HH	378	5640	0.50%	0.046%
111	11.403	11.357	11.452	HH	396	12629	1.12%	0.103%
112	11.481	11.452	11.496	HH	267	4625	0.41%	0.038%
113	11.516	11.496	11.579	HH	457	10276	0.91%	0.084%
114	11.608	11.579	11.629	HH	396	6873	0.61%	0.056%
115	11.645	11.629	11.659	HH	392	6055	0.54%	0.049%
116	11.675	11.659	11.732	HH	917	17677	1.57%	0.144%
117	11.756	11.732	11.814	HH	715	18257	1.62%	0.149%
118	11.834	11.814	11.854	HH	367	6746	0.60%	0.055%
119	11.870	11.854	11.891	HH	486	7661	0.68%	0.063%
120	11.910	11.891	11.927	HH	324	5666	0.50%	0.046%
121	11.949	11.927	11.972	HH	704	15162	1.35%	0.124%
122	11.981	11.972	12.009	HH	651	10938	0.97%	0.089%
123	12.031	12.009	12.049	HH	701	12457	1.11%	0.102%
124	12.064	12.049	12.076	HH	987	12153	1.08%	0.099%
125	12.096	12.076	12.119	HH	1474	26507	2.36%	0.217%
126	12.159	12.119	12.190	HH	1542	37657	3.35%	0.308%
127	12.209	12.190	12.247	HH	538	13379	1.19%	0.109%
128	12.284	12.247	12.311	HH	776	17926	1.59%	0.146%
129	12.346	12.311	12.372	HH	960	22808	2.03%	0.186%
130	12.397	12.372	12.421	HH	705	15908	1.41%	0.130%
131	12.442	12.421	12.482	HH	956	27772	2.47%	0.227%
132	12.504	12.482	12.529	HH	752	17108	1.52%	0.140%
133	12.560	12.529	12.574	HH	721	15363	1.36%	0.125%
134	12.598	12.574	12.663	HH	69392	891649	79.22%	7.283%
135	12.676	12.663	12.694	HH	1951	32217	2.86%	0.263%
136	12.707	12.694	12.864	HH	1684	102693	9.12%	0.839%
137	12.926	12.864	12.959	HH	1396	52609	4.67%	0.430%
138	12.987	12.959	13.024	HH	1602	40079	3.56%	0.327%
139	13.050	13.024	13.099	HH	5932	108661	9.65%	0.888%
140	13.109	13.099	13.159	HH	806	24500	2.18%	0.200%
141	13.188	13.159	13.219	HH	1331	31285	2.78%	0.256%

					rteres			
142	13.248	13.219	13.321	HH	1003	50309	4.47%	0.411%
143	13.349	13.321	13.371	HH	4694	64496	5.73%	0.527%
144	13.396	13.371	13.422	HH	2413	50608	4.50%	0.413%
145	13.437	13.422	13.466	HH	1471	29196	2.59%	0.238%
146	13.490	13.466	13.499	HH	830	15266	1.36%	0.125%
147	13.521	13.499	13.530	HH	1054	16742	1.49%	0.137%
148	13.547	13.530	13.572	HH	1466	26352	2.34%	0.215%
149	13.607	13.572	13.634	HH	1558	42336	3.76%	0.346%
150	13.664	13.634	13.681	HH	1674	38381	3.41%	0.313%
151	13.689	13.681	13.705	HH	1356	19004	1.69%	0.155%
152	13.720	13.705	13.765	HH	1487	45731	4.06%	0.374%
153	13.804	13.765	13.821	HH	1329	38946	3.46%	0.318%
154	13.838	13.821	13.907	HH	3854	102195	9.08%	0.835%
155	13.940	13.907	13.984	HH	2164	63817	5.67%	0.521%
156	14.007	13.984	14.023	HH	1236	27153	2.41%	0.222%
157	14.048	14.023	14.072	HH	2090	43757	3.89%	0.357%
158	14.089	14.072	14.112	HH	1308	26220	2.33%	0.214%
159	14.142	14.112	14.166	HH	2870	55971	4.97%	0.457%
160	14.190	14.166	14.237	HH	2621	69404	6.17%	0.567%
161	14.256	14.237	14.282	HH	1330	31384	2.79%	0.256%
162	14.290	14.282	14.322	HH	1122	23918	2.13%	0.195%
163	14.334	14.322	14.357	HH	1003	19761	1.76%	0.161%
164	14.371	14.357	14.387	HH	969	16499	1.47%	0.135%
165	14.423	14.387	14.496	HH	1106	64191	5.70%	0.524%
166	14.551	14.496	14.564	HH	1284	44985	4.00%	0.367%
167	14.587	14.564	14.657	HH	3174	101177	8.99%	0.826%
168	14.702	14.657	14.724	HH	1432	52901	4.70%	0.432%
169	14.756	14.724	14.799	HH	2739	77018	6.84%	0.629%
170	14.822	14.799	14.840	HH	2372	46960	4.17%	0.384%
171	14.855	14.840	14.889	HH	1902	48102	4.27%	0.393%
172	14.917	14.889	14.942	HH	2106	52975	4.71%	0.433%
173	14.971	14.942	15.012	HH	1899	63262	5.62%	0.517%
174	15.025	15.012	15.049	HH	1445	30029	2.67%	0.245%
175	15.093	15.049	15.129	HH	78097	1125535	100.00%	9.193%
176	15.144	15.129	15.167	HH	2257	44486	3.95%	0.363%
177	15.186	15.167	15.209	HH	2092	43866	3.90%	0.358%
178	15.232	15.209	15.249	HH	4520	72252	6.42%	0.590%
179	15.271	15.249	15.286	HH	4422	77922	6.92%	0.636%
180	15.296	15.286	15.319	HH	3676	56520	5.02%	0.462%
181	15.341	15.319	15.366	HH	2424	55676	4.95%	0.455%
182	15.392	15.366	15.437	HH	2128	77803	6.91%	0.635%
183	15.473	15.437	15.514	HH	1977	82928	7.37%	0.677%
184	15.534	15.514	15.570	HH	1902	60855	5.41%	0.497%
185	15.583	15.570	15.624	HH	1953	59602	5.30%	0.487%
186	15.680	15.624	15.756	HH	43002	832672	73.98%	6.801%
187	15.775	15.756	15.792	HH	2401	50725	4.51%	0.414%
188	15.818	15.792	15.853	HH	5141	120062	10.67%	0.981%
189	15.893	15.853	15.927	HH	10217	214814	19.09%	1.755%
190	15.945	15.927	15.977	HH	2792	77341	6.87%	0.632%
191	15.988	15.977	16.024	HH	2520	65873	5.85%	0.538%
192	16.069	16.024	16.097	HH	2904	112581	10.00%	0.920%
193	16.143	16.097	16.174	HH	2678	118426	10.52%	0.967%
194	16.201	16.174	16.227	HH	3733	101235	8.99%	0.827%

					rteres			
195	16.246	16.227	16.267	HH	2950	67379	5.99%	0.550%
196	16.284	16.267	16.293	HH	2944	44871	3.99%	0.366%
197	16.320	16.293	16.352	HH	6147	141902	12.61%	1.159%
198	16.386	16.352	16.432	HH	3202	143360	12.74%	1.171%
199	16.454	16.432	16.481	HH	3135	87232	7.75%	0.712%
200	16.516	16.481	16.549	HH	3385	129989	11.55%	1.062%
201	16.579	16.549	16.597	HH	3305	93029	8.27%	0.760%
202	16.621	16.597	16.646	HH	3656	101792	9.04%	0.831%
203	16.699	16.646	16.739	HH	9069	298650	26.53%	2.439%
204	16.802	16.739	16.854	HH	8704	379800	33.74%	3.102%
205	16.883	16.854	16.911	HH	6050	165127	14.67%	1.349%
206	16.927	16.911	16.951	HH	4983	110366	9.81%	0.901%
207	16.964	16.951	16.979	HH	4516	75334	6.69%	0.615%
208	17.001	16.979	17.024	HH	4538	120800	10.73%	0.987%
209	17.071	17.024	17.084	HH	5583	179922	15.99%	1.470%
210	17.114	17.084	17.140	HH	6243	189583	16.84%	1.548%
211	17.173	17.140	17.212	HH	7377	253805	22.55%	2.073%
212	17.273	17.212	17.299	HH	10891	361515	32.12%	2.953%
213	17.322	17.299	17.341	HH	7630	168173	14.94%	1.374%
214	17.350	17.341	17.381	HH	6383	140865	12.52%	1.151%
215	17.433	17.381	17.454	HH	5998	255975	22.74%	2.091%
216	17.489	17.454	17.501	HHA	6096	171279	15.22%	1.399%
					Sum of corrected areas:	12243146		

FF071025.M Thu Jul 17 05:14:31 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/09/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-23-99	SDG No.:	Q2543
Lab Sample ID:	Q2543-04	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.4
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
FG016310.D	1	07/16/25 10:00	07/16/25 18:16	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	4230		197	1950	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	15.1		37 - 130	76%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016310.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 18:16
Operator : YP\AJ
Sample : Q2543-04
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-23-99

Integration File: Sample.e
Quant Time: Jul 17 02:36:00 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.200	1513854	15.141 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

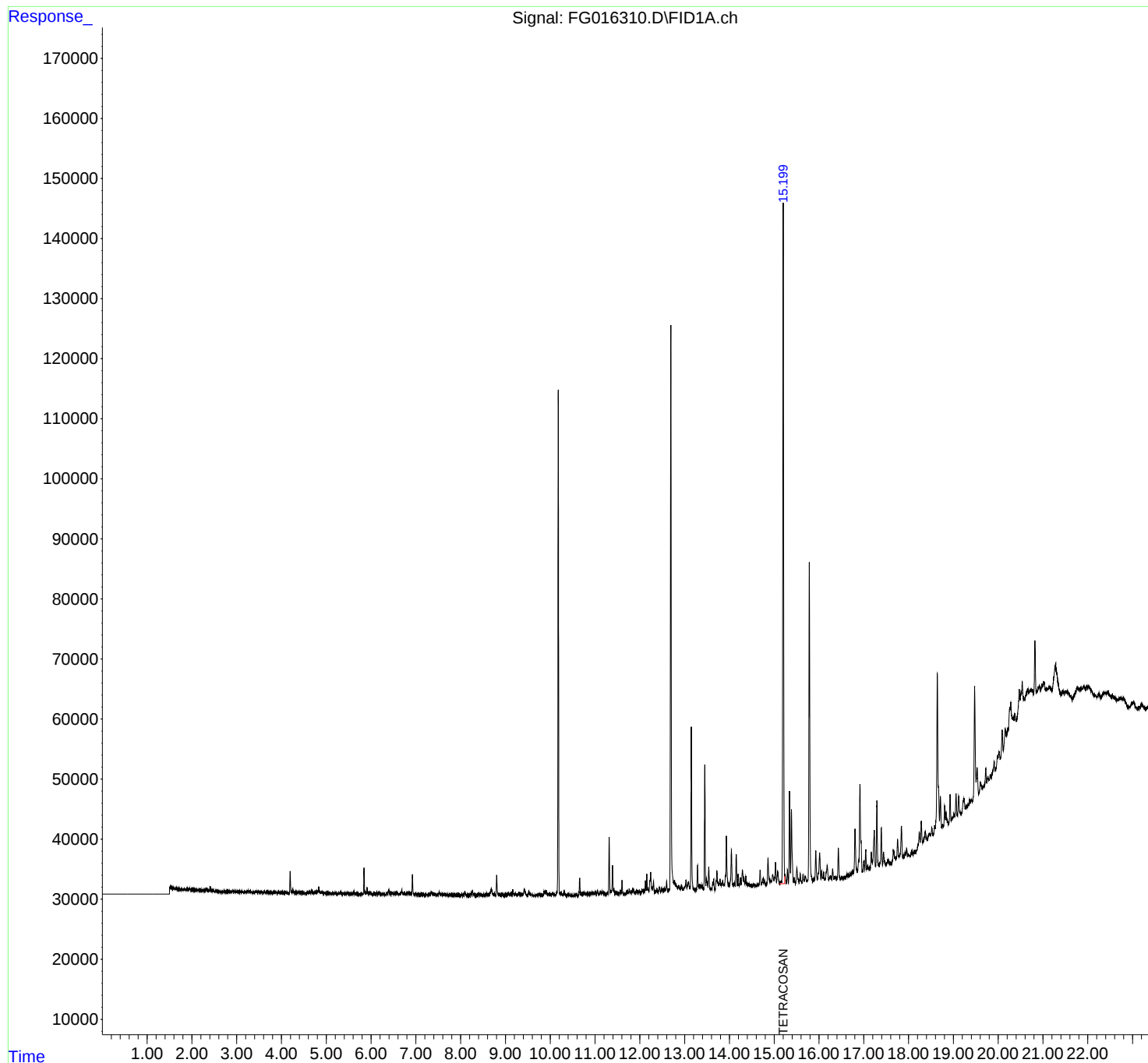
(m)=manual int.

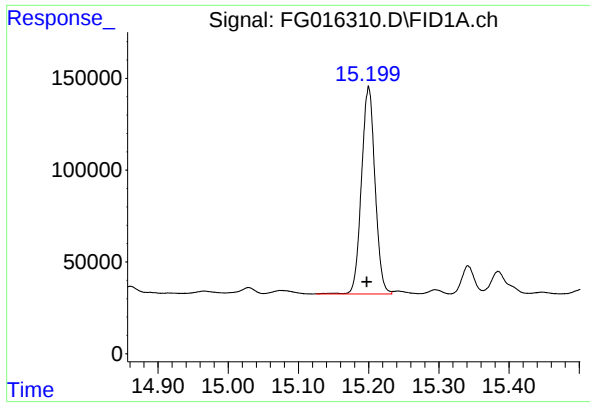
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016310.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 18:16
Operator : YP\AJ
Sample : Q2543-04
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-23-99

Integration File: Sample.e
Quant Time: Jul 17 02:36:00 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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.: 15.200 min
Delta R.T.: 0.002 min
Response: 1513854
Conc: 15.14 ug/ml

Instrument :
FID_G
ClientSampleId :
TP-23-99

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016310.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 18:16
Sample : Q2543-04
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.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	4.306	4.363	HH	180	4865	0.31%	0.035%
2	4.371	4.363	4.375	HH	204	947	0.06%	0.007%
3	4.381	4.375	4.385	HH	220	1030	0.07%	0.007%
4	4.395	4.385	4.419	HH	248	3796	0.24%	0.027%
5	4.424	4.419	4.431	HH	223	1403	0.09%	0.010%
6	4.434	4.431	4.446	HH	192	1368	0.09%	0.010%
7	4.454	4.446	4.467	HH	167	1580	0.10%	0.011%
8	4.472	4.467	4.546	HH	219	4945	0.31%	0.035%
9	4.556	4.546	4.561	HH	130	674	0.04%	0.005%
10	4.581	4.561	4.609	HH	270	3989	0.25%	0.029%
11	4.623	4.609	4.651	HH	364	5496	0.35%	0.039%
12	4.672	4.651	4.691	HH	602	7424	0.47%	0.053%
13	4.704	4.691	4.729	HH	320	4488	0.28%	0.032%
14	4.750	4.729	4.759	HH	240	2849	0.18%	0.020%
15	4.796	4.759	4.807	HH	280	6508	0.41%	0.047%
16	4.833	4.807	4.888	HH	1103	17644	1.12%	0.126%
17	4.897	4.888	4.941	HH	224	3758	0.24%	0.027%
18	4.944	4.941	4.949	HH	89	285	0.02%	0.002%
19	4.958	4.949	4.979	HH	103	843	0.05%	0.006%
20	4.984	4.979	5.014	HH	95	620	0.04%	0.004%
21	5.018	5.014	5.024	PH	52	222	0.01%	0.002%
22	5.045	5.024	5.053	HH	145	1412	0.09%	0.010%
23	5.067	5.053	5.105	HH	99	1357	0.09%	0.010%
24	5.325	5.294	5.359	PH	291	3280	0.21%	0.023%
25	5.616	5.592	5.641	PH	409	2812	0.18%	0.020%
26	5.842	5.822	5.864	PH	4282	37705	2.39%	0.270%
27	5.875	5.864	5.893	HH	266	2027	0.13%	0.014%
28	5.911	5.893	5.944	PH	1006	8388	0.53%	0.060%
29	5.963	5.944	6.029	PH	309	1586	0.10%	0.011%
30	6.129	6.109	6.162	PH	347	91	0.01%	0.001%
31	6.179	6.162	6.202	PH	327	1524	0.10%	0.011%
32	6.391	6.367	6.436	PH	532	7270	0.46%	0.052%
33	6.461	6.436	6.504	PH	269	194	0.01%	0.001%
34	6.568	6.547	6.597	HH	225	2580	0.16%	0.018%
35	6.685	6.661	6.725	PH	576	6151	0.39%	0.044%
36	6.922	6.898	6.979	PH	3172	27777	1.76%	0.199%

					rteres			
37	7.520	7.474	7.567	PH	347	-3923	-0.25%	-0.028%
38	8.093	8.067	8.141	PH	402	-5885	-0.37%	-0.042%
39	8.265	8.247	8.286	PH	613	3340	0.21%	0.024%
40	8.689	8.602	8.732	PH	658	6798	0.43%	0.049%
41	8.804	8.774	8.849	PH	3069	27864	1.77%	0.199%
42	9.165	9.145	9.192	PH	618	3284	0.21%	0.023%
43	9.419	9.361	9.487	PH	694	3734	0.24%	0.027%
44	9.523	9.487	9.550	PH	503	-1127	-0.07%	-0.008%
45	9.862	9.844	9.883	PH	430	3299	0.21%	0.024%
46	9.903	9.883	9.933	HH	447	4887	0.31%	0.035%
47	10.179	10.116	10.216	PH	84147	837903	53.13%	5.989%
48	10.226	10.216	10.235	PH	55	103	0.01%	0.001%
49	10.244	10.235	10.285	PH	88	-4294	-0.27%	-0.031%
50	10.310	10.285	10.341	PH	470	730	0.05%	0.005%
51	10.656	10.610	10.682	PH	2548	19482	1.24%	0.139%
52	10.917	10.886	10.933	PH	160	154	0.01%	0.001%
53	10.958	10.933	10.982	PH	237	2148	0.14%	0.015%
54	11.008	10.982	11.025	PH	363	2506	0.16%	0.018%
55	11.055	11.025	11.096	PH	536	3533	0.22%	0.025%
56	11.120	11.096	11.142	PH	238	2453	0.16%	0.018%
57	11.157	11.142	11.185	PH	339	3867	0.25%	0.028%
58	11.193	11.185	11.234	HH	152	-607	-0.04%	-0.004%
59	11.315	11.265	11.339	PH	9393	96785	6.14%	0.692%
60	11.347	11.339	11.362	HH	527	4294	0.27%	0.031%
61	11.390	11.362	11.454	HH	4705	59434	3.77%	0.425%
62	11.475	11.454	11.504	PH	124	1340	0.08%	0.010%
63	11.562	11.542	11.581	PH	554	4830	0.31%	0.035%
64	11.602	11.581	11.664	PH	2137	18947	1.20%	0.135%
65	11.728	11.664	11.744	PH	439	5877	0.37%	0.042%
66	11.765	11.744	11.787	HH	680	8719	0.55%	0.062%
67	11.805	11.787	11.818	HH	246	3454	0.22%	0.025%
68	11.843	11.818	11.897	HH	819	16692	1.06%	0.119%
69	11.924	11.897	11.944	PH	484	7087	0.45%	0.051%
70	11.960	11.944	11.980	HH	443	6241	0.40%	0.045%
71	11.995	11.980	12.017	HH	429	5701	0.36%	0.041%
72	12.042	12.017	12.054	HH	341	5625	0.36%	0.040%
73	12.072	12.054	12.096	HH	631	10837	0.69%	0.077%
74	12.125	12.096	12.139	HH	2174	26791	1.70%	0.191%
75	12.156	12.139	12.174	HH	3259	36807	2.33%	0.263%
76	12.184	12.174	12.204	HH	954	11558	0.73%	0.083%
77	12.242	12.204	12.264	HH	3555	69313	4.40%	0.495%
78	12.274	12.264	12.287	HH	1207	13010	0.82%	0.093%
79	12.305	12.287	12.330	HH	2066	26116	1.66%	0.187%
80	12.347	12.330	12.358	HH	380	4225	0.27%	0.030%
81	12.382	12.358	12.412	HH	840	14428	0.91%	0.103%
82	12.439	12.412	12.464	HH	1000	18704	1.19%	0.134%
83	12.485	12.464	12.509	HH	757	15238	0.97%	0.109%
84	12.535	12.509	12.544	HH	729	12045	0.76%	0.086%
85	12.556	12.544	12.574	HH	774	12618	0.80%	0.090%
86	12.598	12.574	12.627	HH	1927	32888	2.09%	0.235%
87	12.693	12.627	12.759	HH	93317	1201920	76.21%	8.591%
88	12.775	12.759	12.792	HH	2233	36956	2.34%	0.264%
89	12.804	12.792	12.842	HH	1623	38239	2.42%	0.273%

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90	12.871	12.842	12.902	HH	1252	36255	2.30%	0.259%
91	12.922	12.902	12.964	HH	1264	33300	2.11%	0.238%
92	13.032	12.964	13.049	HH	2241	62297	3.95%	0.445%
93	13.085	13.049	13.119	HH	1906	57574	3.65%	0.412%
94	13.149	13.119	13.192	HH	27622	340905	21.62%	2.437%
95	13.208	13.192	13.236	HH	897	17824	1.13%	0.127%
96	13.245	13.236	13.258	HH	640	8250	0.52%	0.059%
97	13.288	13.258	13.327	HH	4697	78086	4.95%	0.558%
98	13.341	13.327	13.359	HH	1399	23778	1.51%	0.170%
99	13.366	13.359	13.379	HH	1196	13985	0.89%	0.100%
100	13.392	13.379	13.422	HH	1463	27022	1.71%	0.193%
101	13.451	13.422	13.473	HH	21420	244335	15.49%	1.746%
102	13.487	13.473	13.521	HH	2494	53727	3.41%	0.384%
103	13.539	13.521	13.582	HH	4437	72820	4.62%	0.521%
104	13.589	13.582	13.609	HH	842	12174	0.77%	0.087%
105	13.625	13.609	13.636	HH	1836	22295	1.41%	0.159%
106	13.648	13.636	13.677	HH	2297	35544	2.25%	0.254%
107	13.722	13.677	13.767	HH	3750	104429	6.62%	0.746%
108	13.791	13.767	13.814	HH	2431	51190	3.25%	0.366%
109	13.850	13.814	13.872	HH	2147	57196	3.63%	0.409%
110	13.932	13.872	13.988	HH	9516	212827	13.50%	1.521%
111	14.044	13.988	14.086	HH	7315	164852	10.45%	1.178%
112	14.112	14.086	14.129	HH	1813	39651	2.51%	0.283%
113	14.152	14.129	14.176	HH	6502	100726	6.39%	0.720%
114	14.193	14.176	14.217	HH	3213	52480	3.33%	0.375%
115	14.244	14.217	14.262	HH	2608	50809	3.22%	0.363%
116	14.291	14.262	14.312	HH	3904	85011	5.39%	0.608%
117	14.324	14.312	14.344	HH	2625	41848	2.65%	0.299%
118	14.365	14.344	14.404	HH	2842	70295	4.46%	0.502%
119	14.420	14.404	14.430	HH	1717	25574	1.62%	0.183%
120	14.440	14.430	14.456	HH	1633	23018	1.46%	0.165%
121	14.474	14.456	14.499	HH	1548	35407	2.25%	0.253%
122	14.508	14.499	14.519	HH	1422	16045	1.02%	0.115%
123	14.547	14.519	14.566	HH	1532	39943	2.53%	0.286%
124	14.580	14.566	14.599	HH	1513	27361	1.73%	0.196%
125	14.627	14.599	14.640	HH	1397	33151	2.10%	0.237%
126	14.684	14.640	14.712	HH	3926	94795	6.01%	0.678%
127	14.748	14.712	14.771	HH	2441	71486	4.53%	0.511%
128	14.782	14.771	14.821	HH	2094	52323	3.32%	0.374%
129	14.861	14.821	14.906	HH	5812	149975	9.51%	1.072%
130	14.916	14.906	14.936	HH	2157	36878	2.34%	0.264%
131	14.966	14.936	14.996	HH	3176	91137	5.78%	0.651%
132	15.029	14.996	15.051	HH	5142	106598	6.76%	0.762%
133	15.076	15.051	15.119	HH	3503	104332	6.62%	0.746%
134	15.151	15.119	15.164	HH	2001	51394	3.26%	0.367%
135	15.200	15.164	15.234	HH	114403	1577038	100.00%	11.273%
136	15.242	15.234	15.272	HH	3249	58593	3.72%	0.419%
137	15.295	15.272	15.316	HH	3938	70908	4.50%	0.507%
138	15.342	15.316	15.363	HH	16801	233807	14.83%	1.671%
139	15.384	15.363	15.428	HH	13976	265375	16.83%	1.897%
140	15.447	15.428	15.474	HH	2627	59198	3.75%	0.423%
141	15.505	15.474	15.554	HH	4261	131164	8.32%	0.938%

					rt	eres		
142	15.581	15.554	15.622	HH	3298	94715	6.01%	0.677%
143	15.643	15.622	15.668	HH	3183	67539	4.28%	0.483%
144	15.692	15.668	15.731	HH	2824	92206	5.85%	0.659%
145	15.783	15.731	15.867	HH	54750	904213	57.34%	6.463%
146	15.887	15.867	15.901	HH	2547	46671	2.96%	0.334%
147	15.928	15.901	15.961	HH	7136	148328	9.41%	1.060%
148	16.014	15.961	16.041	HH	6776	195682	12.41%	1.399%
149	16.059	16.041	16.086	HH	3797	81235	5.15%	0.581%
150	16.105	16.086	16.129	HH	3619	73777	4.68%	0.527%
151	16.183	16.129	16.216	HH	4725	171655	10.88%	1.227%
152	16.260	16.216	16.282	HH	2875	103860	6.59%	0.742%
153	16.305	16.282	16.329	HH	4132	87599	5.55%	0.626%
154	16.347	16.329	16.386	HH	2841	89378	5.67%	0.639%
155	16.394	16.386	16.402	HH	2563	25406	1.61%	0.182%
156	16.433	16.402	16.476	HH	7603	177560	11.26%	1.269%
157	16.502	16.476	16.517	HH	2796	65085	4.13%	0.465%
158	16.524	16.517	16.542	HH	2705	38980	2.47%	0.279%
159	16.561	16.542	16.589	HH	2719	73712	4.67%	0.527%
160	16.626	16.589	16.650	HH	3259	106139	6.73%	0.759%
161	16.665	16.650	16.679	HH	3008	52167	3.31%	0.373%
162	16.697	16.679	16.716	HH	3396	69792	4.43%	0.499%
163	16.741	16.716	16.764	HH	3685	100047	6.34%	0.715%
164	16.805	16.764	16.859	HH	10768	316593	20.08%	2.263%
165	16.915	16.859	16.969	HH	18210	520806	33.02%	3.723%
166	17.002	16.969	17.021	HH	5218	138121	8.76%	0.987%
167	17.044	17.021	17.067	HH	7268	149328	9.47%	1.067%
168	17.081	17.067	17.101	HH	4521	86302	5.47%	0.617%
169	17.109	17.101	17.123	HH	4215	56507	3.58%	0.404%
170	17.168	17.123	17.194	HH	6885	221031	14.02%	1.580%
171	17.234	17.194	17.261	HH	10561	289822	18.38%	2.072%
172	17.293	17.261	17.336	HH	15311	339183	21.51%	2.424%
173	17.391	17.336	17.417	HH	10903	315679	20.02%	2.256%
174	17.441	17.417	17.492	HH	6867	248189	15.74%	1.774%
					Sum of corrected areas:	13990135		

FG070925.M Thu Jul 17 03:24:24 2025



CALIBRATION SUMMARY

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Alliance

Contract: CAMP02

ProjectID: South River WM Replacement

Lab Code: ACE

SDG No.: Q2543

Calibration Sequence : FF071025		Test : Diesel Range Organics	
Concentration (PPM)	Area Count	Reference Factor	File ID
1000	104463293	104463	FF016130.D
500	56348110	112696	FF016131.D
200	23430036	117150	FF016132.D
100	12876046	128760	FF016133.D
50	5695447	113909	FF016134.D
AVG RF : 115396		% RSD : 7.638	AVG RT : 15.1002

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Alliance

Contract: CAMP02

ProjectID: South River WM Replacement

Lab Code: ACE

SDG No.: Q2543

Calibration Sequence : FG070925			Test : Diesel Range Organics	
Concentration	(PPM)	Area Count	Reference Factor	File ID
1000		107457449	107457	FG016264.D
500		53927299	107855	FG016265.D
200		23004292	115021	FG016266.D
100		12319443	123194	FG016267.D
50		6076250	121525	FG016268.D
AVG RF : 115010			% RSD : 6.414	AVG RT : 15.201

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: ACE SDG No.: Q2543
DataFile: FF016171.D Analyst Name: YP\AJ Analyst Date: 07-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	57646303	115293	115396	0.089

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
 Data File : FF016171.D
 Signal(s) : FID2B.ch
 Acq On : 16 Jul 2025 17:16
 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: Jul 17 03:38:32 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
 Quant Title :
 QLast Update : Thu Jul 10 12:51:11 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...	15.097	4770505	48.991 ug/ml
Target Compounds			
2) N-DECANE	4.611	6193460	49.765 ug/ml
3) N-DODECANE	6.791	6261435	51.384 ug/ml
4) N-TETRADECANE	8.624	6169874	51.321 ug/ml
5) N-HEXADECANE	10.235	6039798	51.923 ug/ml
6) N-OCTADECANE	11.681	5955245	51.247 ug/ml
7) N-EICOSANE	12.995	5781462	49.434 ug/ml
8) N-DOCOSANE	14.195	5466856	48.757 ug/ml
10) N-TETRACOSANE	15.302	5344929	48.192 ug/ml
11) N-HEXACOSANE	16.326	5242291	48.822 ug/ml
12) N-OCTACOSANE	17.279	5190953	48.273 ug/ml

(f)=RT Delta > 1/2 Window

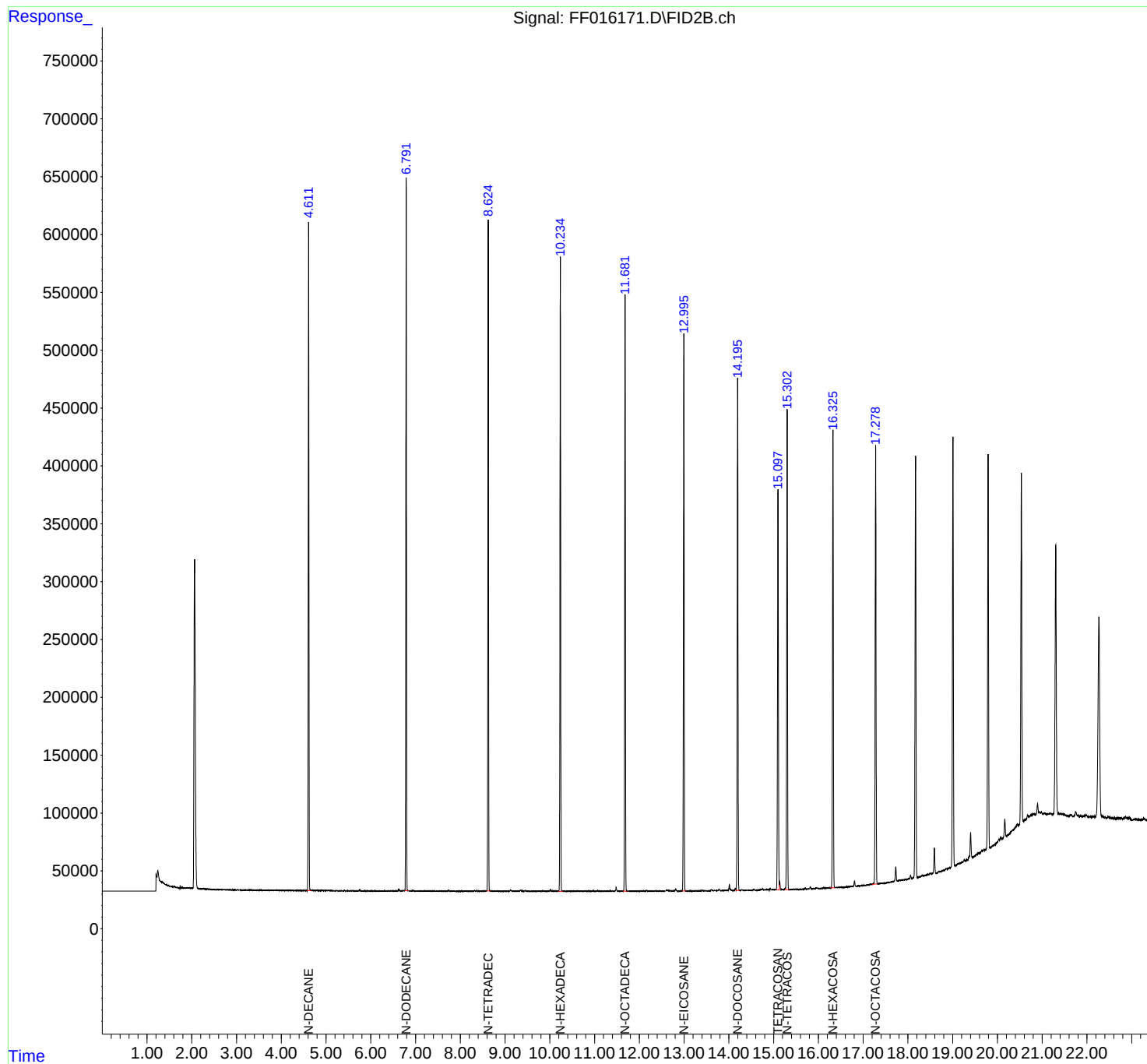
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016171.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 17:16
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: Jul 17 03:38:32 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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\FF071625\
Data File : FF016171.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 17:16
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.611	4.574	4.671	BB	577639	6193460	98.91%	9.923%
2	6.791	6.756	6.842	BB	615737	6261435	100.00%	10.032%
3	8.624	8.587	8.676	BB	579698	6169874	98.54%	9.885%
4	10.235	10.191	10.297	BB	547936	6039798	96.46%	9.677%
5	11.681	11.631	11.722	BB	514171	5955245	95.11%	9.541%
6	12.995	12.956	13.047	BB	482620	5781462	92.33%	9.263%
7	14.195	14.160	14.237	VB	442107	5466856	87.31%	8.759%
8	15.097	15.056	15.128	BV	346622	4770505	76.19%	7.643%
9	15.302	15.264	15.359	VB	414747	5344929	85.36%	8.563%
10	16.326	16.266	16.366	BB	396133	5242291	83.72%	8.399%
11	17.279	17.201	17.317	BV	378186	5190953	82.90%	8.317%
Sum of corrected areas:						62416807		

FF071025.M Thu Jul 17 04:53:06 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: ACE SDG No.: Q2543
DataFile: FF016178.D Analyst Name: YP\AJ Analyst Date: 07-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	63725868	127452	115396	10.448

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
 Data File : FF016178.D
 Signal(s) : FID2B.ch
 Acq On : 16 Jul 2025 22:44
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 41 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Jul 17 04:44:17 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
 Quant Title :
 QLast Update : Thu Jul 10 12:51:11 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...	15.094	5256551	53.983 ug/ml
Target Compounds			
2) N-DECANE	4.609	6916669	55.576 ug/ml
3) N-DODECANE	6.787	6904964	56.665 ug/ml
4) N-TETRADECANE	8.622	6823153	56.755 ug/ml
5) N-HEXADECANE	10.232	6604354	56.776 ug/ml
6) N-OCTADECANE	11.677	6514246	56.057 ug/ml
7) N-EICOSANE	12.991	6446710	55.122 ug/ml
8) N-DOCOSANE	14.193	6088493	54.301 ug/ml
10) N-TETRACOSANE	15.299	5959529	53.733 ug/ml
11) N-HEXACOSANE	16.324	5733957	53.401 ug/ml
12) N-OCTACOSANE	17.275	5733793	53.321 ug/ml

(f)=RT Delta > 1/2 Window

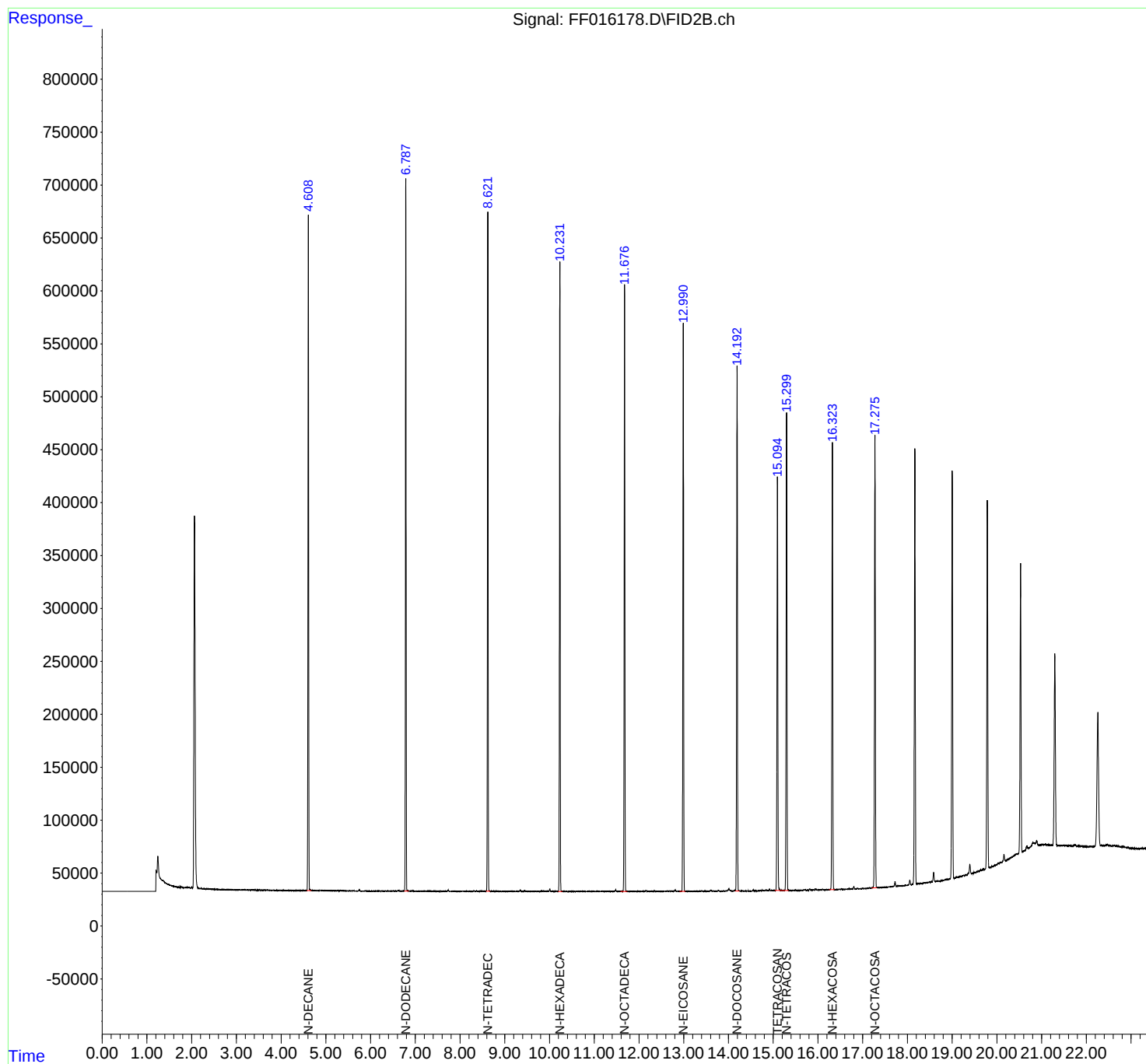
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016178.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 22:44
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 41 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jul 17 04:44:17 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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\FF071625\
Data File : FF016178.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 22:44
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 41 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.609	4.572	4.679	BB	638346	6916669	100.00%	10.027%
2	6.787	6.754	6.852	BB	672406	6904964	99.83%	10.010%
3	8.622	8.582	8.674	BB	641845	6823153	98.65%	9.891%
4	10.232	10.192	10.289	BB	595955	6604354	95.48%	9.574%
5	11.677	11.587	11.730	BB	573924	6514246	94.18%	9.443%
6	12.991	12.905	13.037	BB	537200	6446710	93.21%	9.345%
7	14.193	14.155	14.240	VB	495709	6088493	88.03%	8.826%
8	15.094	15.034	15.167	BV	390762	5256551	76.00%	7.620%
9	15.299	15.167	15.340	PB	451207	5959529	86.16%	8.639%
10	16.324	16.247	16.370	BV	422978	5733957	82.90%	8.312%
11	17.275	17.200	17.320	BV	427143	5733793	82.90%	8.312%
Sum of corrected areas:						68982421		

FF071025.M Thu Jul 17 04:54:24 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: ACE SDG No.: Q2543
DataFile: FG016301.D Analyst Name: YP\AJ Analyst Date: 07-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	54750916	109502	115010	4.789

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016301.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:40
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: Sample.e
Quant Time: Jul 17 02:34:09 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.204	4879996	48.807 ug/ml
Target Compounds			
2) N-DECANE	4.669	5281701	45.858 ug/ml
3) N-DODECANE	6.854	5396519	46.545 ug/ml
4) N-TETRADECANE	8.695	5456436	46.228 ug/ml
5) N-HEXADECANE	10.315	5526060	47.776 ug/ml
6) N-OCTADECANE	11.770	5671140	48.315 ug/ml
7) N-EICOSANE	13.090	5714977	47.771 ug/ml
8) N-DOCOSANE	14.297	5551928	48.177 ug/ml
10) N-TETRACOSANE	15.409	5508796	48.216 ug/ml
11) N-HEXACOSANE	16.437	5387890	48.963 ug/ml
12) N-OCTACOSANE	17.395	5255469	48.327 ug/ml

(f)=RT Delta > 1/2 Window

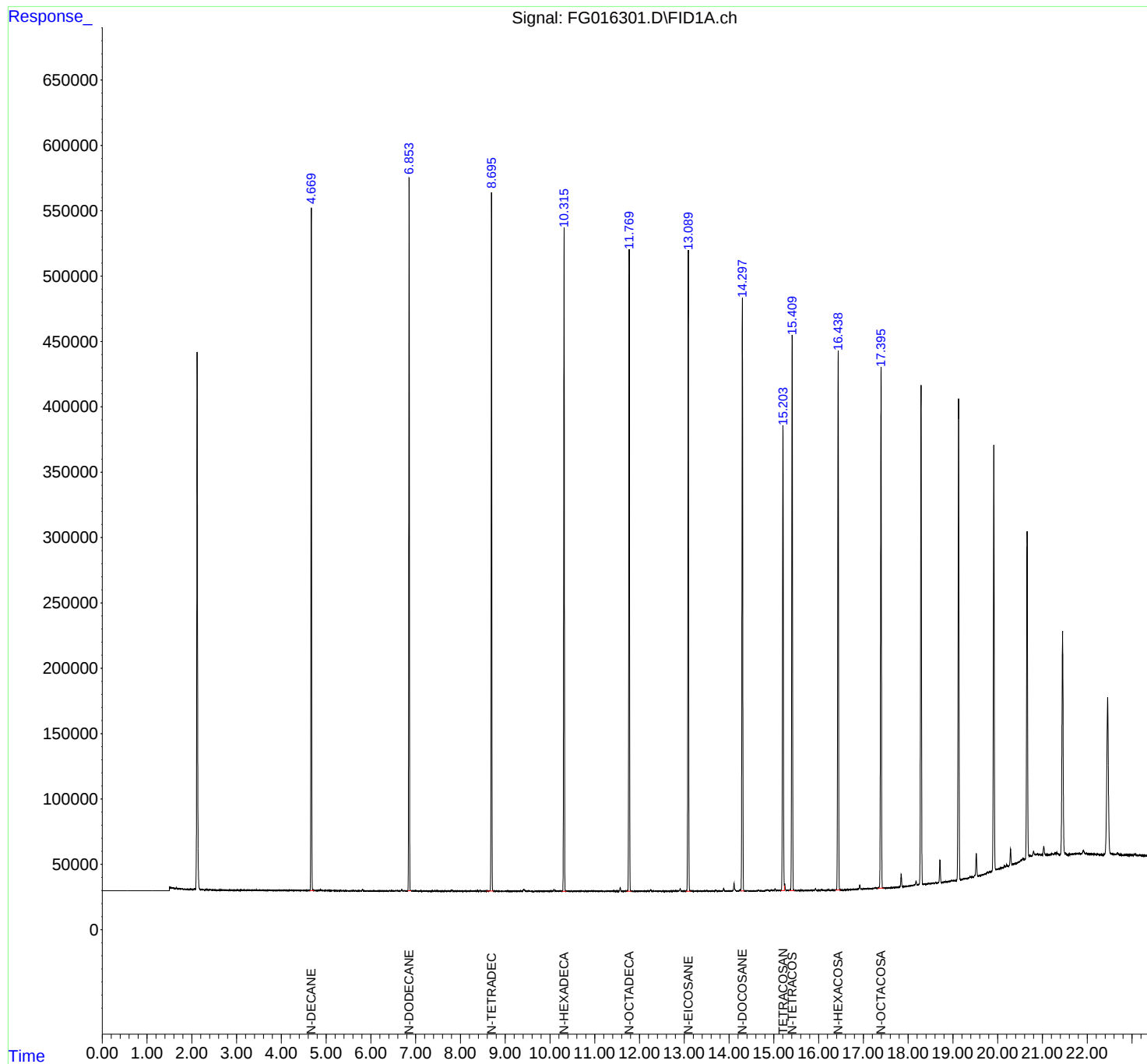
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016301.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:40
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: Sample.e
Quant Time: Jul 17 02:34:09 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
Data File : FG016301.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:40
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.669	4.635	4.733	BB	521661	5281701	92.42%	8.857%
2	6.854	6.820	6.903	BB	545059	5396519	94.43%	9.050%
3	8.695	8.581	8.742	BB	533981	5456436	95.48%	9.150%
4	10.315	10.265	10.369	BB	506997	5526060	96.69%	9.267%
5	11.770	11.717	11.823	BB	490749	5671140	99.23%	9.510%
6	13.090	13.040	13.148	BB	490632	5714977	100.00%	9.584%
7	14.297	14.262	14.343	VB	453657	5551928	97.15%	9.310%
8	15.204	15.152	15.235	BV	355574	4879996	85.39%	8.184%
9	15.409	15.343	15.463	BB	424296	5508796	96.39%	9.238%
10	16.437	16.373	16.493	BB	411817	5387890	94.28%	9.035%
11	17.395	17.318	17.458	BB	398548	5255469	91.96%	8.813%
Sum of corrected areas:						59630913		

FG070925.M Thu Jul 17 03:09:37 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: ACE SDG No.: Q2543
DataFile: FG016309.D Analyst Name: YP\AJ Analyst Date: 07-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	56207865	112416	115010	2.255

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
 Data File : FG016309.D
 Signal(s) : FID1A.ch
 Acq On : 16 Jul 2025 17:16
 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: Sample.e
 Quant Time: Jul 17 02:35:47 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
 Quant Title :
 QLast Update : Wed Jul 09 12:46:24 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...	15.203	4970369	49.711 ug/ml
Target Compounds			
2) N-DECANE	4.670	5496594	47.724 ug/ml
3) N-DODECANE	6.853	5598576	48.288 ug/ml
4) N-TETRADECANE	8.694	5637250	47.760 ug/ml
5) N-HEXADECANE	10.314	5691274	49.205 ug/ml
6) N-OCTADECANE	11.769	5815706	49.546 ug/ml
7) N-EICOSANE	13.089	5839934	48.816 ug/ml
8) N-DOCOSANE	14.297	5663520	49.146 ug/ml
10) N-TETRACOSANE	15.410	5601157	49.024 ug/ml
11) N-HEXACOSANE	16.437	5495684	49.943 ug/ml
12) N-OCTACOSANE	17.393	5368170	49.363 ug/ml

(f)=RT Delta > 1/2 Window

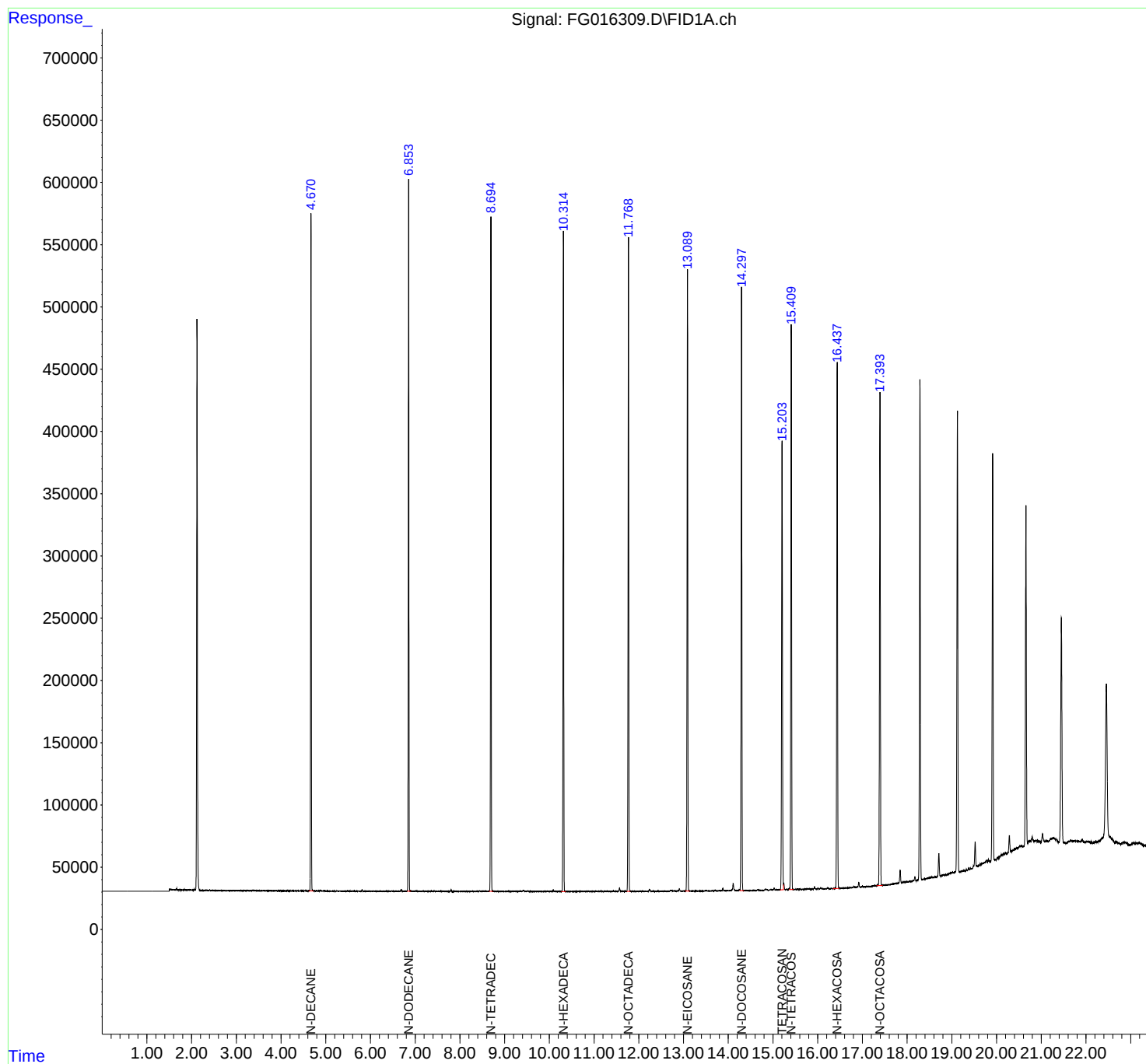
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016309.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 17:16
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: Sample.e
Quant Time: Jul 17 02:35:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
Data File : FG016309.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 17:16
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.670	4.625	4.724	BB	544139	5496594	94.12%	8.985%
2	6.853	6.820	6.903	BB	570346	5598576	95.87%	9.151%
3	8.694	8.655	8.736	BB	541626	5637250	96.53%	9.214%
4	10.314	10.269	10.367	BB	527469	5691274	97.45%	9.303%
5	11.769	11.730	11.810	BB	525517	5815706	99.59%	9.506%
6	13.090	13.036	13.140	BB	498187	5839934	100.00%	9.546%
7	14.297	14.260	14.347	VB	484684	5663520	96.98%	9.257%
8	15.203	15.155	15.235	BV	359513	4970369	85.11%	8.124%
9	15.410	15.372	15.460	VB	450901	5601157	95.91%	9.155%
10	16.437	16.337	16.484	BB	421813	5495684	94.11%	8.983%
11	17.393	17.314	17.454	BV	396277	5368170	91.92%	8.775%
Sum of corrected areas:						61178232		

FG070925.M Thu Jul 17 03:11:53 2025

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: CAMP02
ProjectID: South River WM Replacement
Lab Code: ACE SDG No.: Q2543
DataFile: FG016314.D Analyst Name: YP\AJ Analyst Date: 07-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	56814336	113629	115010	1.201

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016314.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 20:45
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: Sample.e
Quant Time: Jul 17 02:36:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.201	4963656	49.643 ug/ml
Target Compounds				
2)	N-DECANE	4.669	5625808	48.846 ug/ml
3)	N-DODECANE	6.852	5724424	49.374 ug/ml
4)	N-TETRADECANE	8.693	5758251	48.785 ug/ml
5)	N-HEXADECANE	10.313	5790605	50.063 ug/ml
6)	N-OCTADECANE	11.768	5891686	50.194 ug/ml
7)	N-EICOSANE	13.088	5886422	49.204 ug/ml
8)	N-DOCOSANE	14.295	5679858	49.287 ug/ml
10)	N-TETRACOSANE	15.407	5610681	49.107 ug/ml
11)	N-HEXACOSANE	16.435	5483028	49.828 ug/ml
12)	N-OCTACOSANE	17.392	5363573	49.321 ug/ml

(f)=RT Delta > 1/2 Window

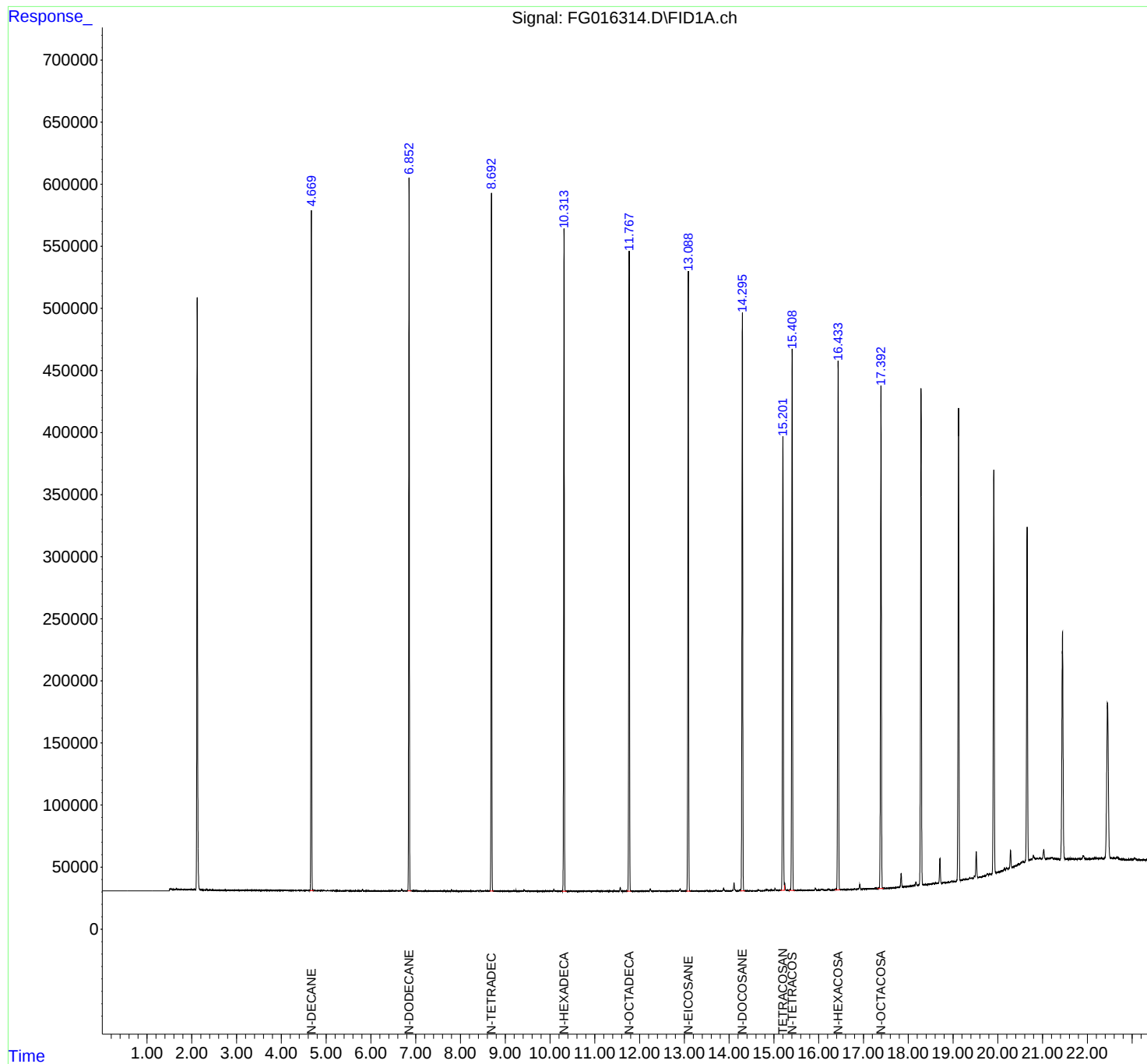
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016314.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 20:45
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: Sample.e
Quant Time: Jul 17 02:36:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
Data File : FG016314.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 20:45
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.669	4.635	4.723	BB	547837	5625808	95.49%	9.106%
2	6.852	6.820	6.899	BB	573605	5724424	97.16%	9.266%
3	8.693	8.650	8.743	BB	560409	5758251	97.74%	9.321%
4	10.313	10.265	10.370	BB	533401	5790605	98.28%	9.373%
5	11.768	11.717	11.810	BB	512679	5891686	100.00%	9.537%
6	13.088	13.049	13.140	BB	498585	5886422	99.91%	9.528%
7	14.295	14.259	14.354	VB	465406	5679858	96.40%	9.194%
8	15.201	15.143	15.232	BV	364373	4963656	84.25%	8.035%
9	15.407	15.326	15.468	BB	432200	5610681	95.23%	9.082%
10	16.435	16.357	16.480	BB	421442	5483028	93.06%	8.875%
11	17.392	17.312	17.453	BB	404144	5363573	91.04%	8.682%
Sum of corrected areas:						61777991		

FG070925.M Thu Jul 17 03:13:02 2025

Analytical Sequence

Client: CDM Smith

SDG No.: Q2543

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 15.1002					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	16 Jul 2025 16:47	FF016170.D	15.096	
50 PPM TRPH STD	50 PPM TRPH STD	16 Jul 2025 17:16	FF016171.D	15.097	
TP-41	Q2543-01	16 Jul 2025 19:16	FF016174.D	15.094	
TP-49	Q2543-02	16 Jul 2025 19:46	FF016175.D	15.092	
TP-23	Q2543-03	16 Jul 2025 20:16	FF016176.D	15.093	
PIBLK02	LBLK02	16 Jul 2025 20:45	FF016177.D	15.093	
50 PPM TRPH STD	50 PPM TRPH STD	16 Jul 2025 22:44	FF016178.D	15.094	
PIBLK03	LBLK03	16 Jul 2025 12:08	FG016300.D	15.201	
50 PPM TRPH STD	50 PPM TRPH STD	16 Jul 2025 12:40	FG016301.D	15.204	
PB168878BL	PB168878BL	16 Jul 2025 14:18	FG016303.D	15.198	
PB168878BS	PB168878BS	16 Jul 2025 14:47	FG016304.D	15.199	
PIBLK04	LBLK04	16 Jul 2025 16:47	FG016308.D	15.201	
50 PPM TRPH STD	50 PPM TRPH STD	16 Jul 2025 17:16	FG016309.D	15.203	
TP-23-99	Q2543-04	16 Jul 2025 18:16	FG016310.D	15.200	
TP-23-99MS	Q2543-04MS	16 Jul 2025 18:46	FG016311.D	15.199	
TP-23-99MSD	Q2543-04MSD	16 Jul 2025 19:16	FG016312.D	15.199	
PIBLK05	LBLK05	16 Jul 2025 19:46	FG016313.D	15.198	
50 PPM TRPH STD	50 PPM TRPH STD	16 Jul 2025 20:45	FG016314.D	15.201	



QC SAMPLE DATA

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168878BL	SDG No.:	Q2543
Lab Sample ID:	PB168878BL	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
FG016303.D	1	07/16/25 10:00	07/16/25 14:18	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	169	U	169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	17.6		37 - 130	88%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016303.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 14:18
Operator : YP\AJ
Sample : PB168878BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168878BL

Integration File: Sample.e
Quant Time: Jul 17 02:34:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.198	1761209	17.615 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

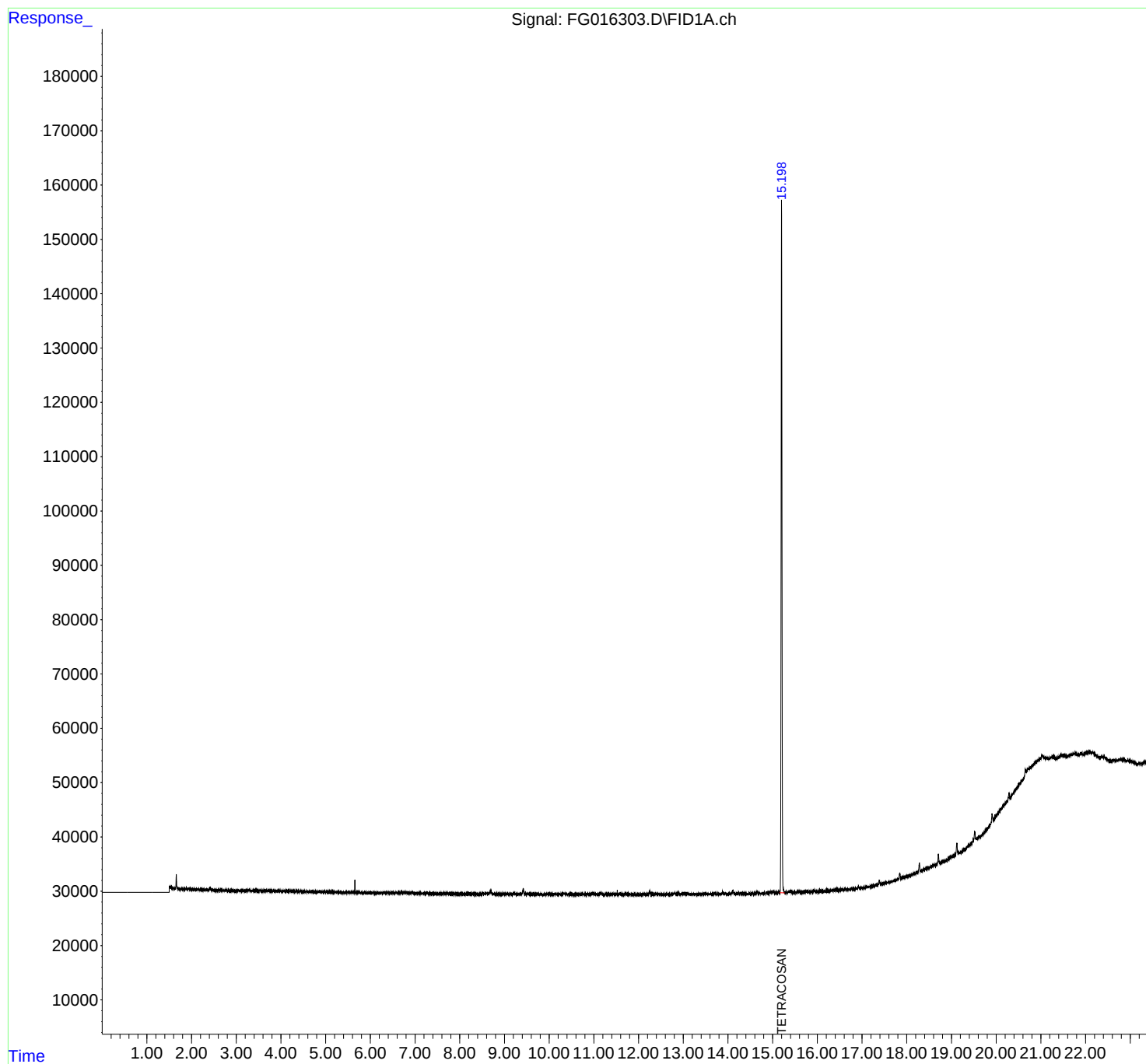
(m)=manual int.

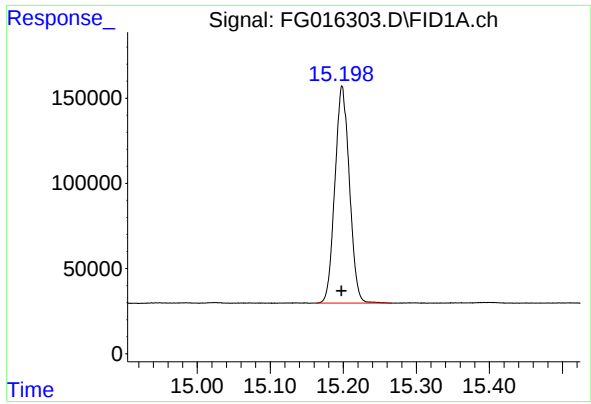
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016303.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 14:18
Operator : YP\AJ
Sample : PB168878BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168878BL

Integration File: Sample.e
Quant Time: Jul 17 02:34:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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.: 15.198 min
Delta R.T.: 0.000 min
Response: 1761209
Conc: 17.61 ug/ml

Instrument :
FID_G
ClientSampleId :
PB168878BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016303.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 14:18
Sample : PB168878BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.198	15.163	15.266	BB	127264	1761209	100.00%	100.000%
Sum of corrected areas:						1761209		

FG070925.M Thu Jul 17 03:10:29 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/16/25
Project:	South River WM Replacement	Date Received:	07/16/25
Client Sample ID:	PIBLK-FF016170.D	SDG No.:	Q2543
Lab Sample ID:	I.BLK-FF016170.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
FF016170.D	1		07/16/25	FF071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.5		29 - 130	92%	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\FF071625\
Data File : FF016170.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 16:47
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: Jul 17 03:38:21 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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...	15.096	1798771	18.473 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

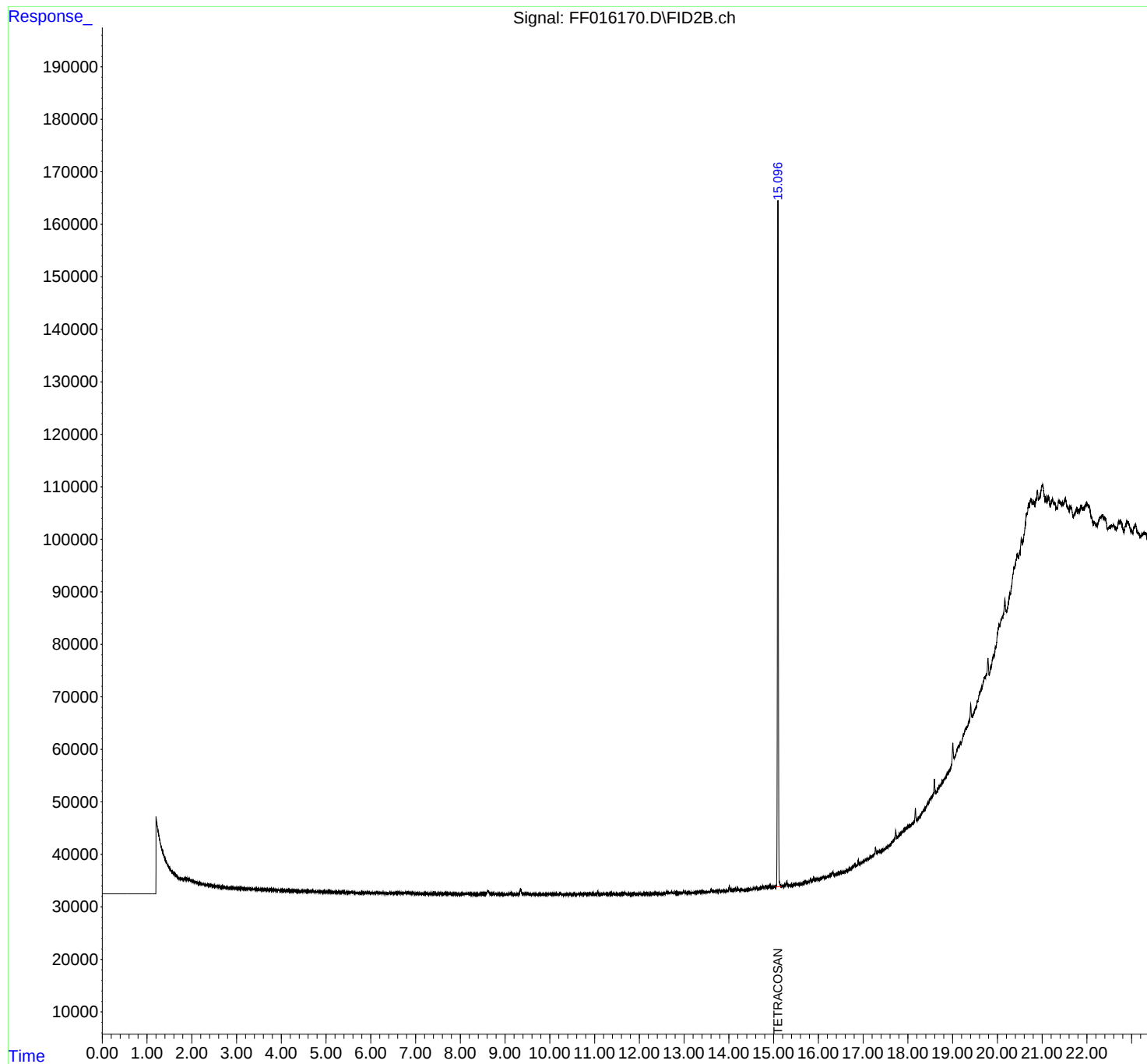
(m)=manual int.

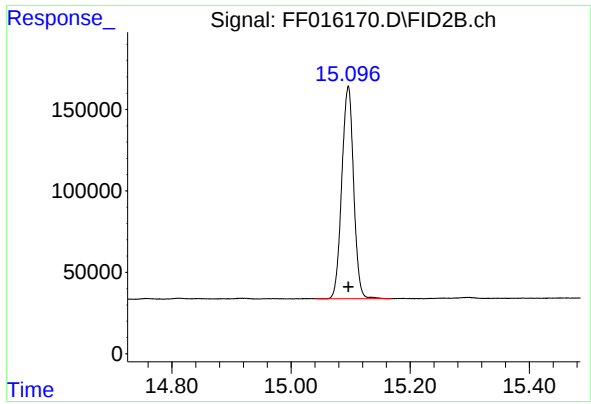
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016170.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 16:47
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 17 03:38:21 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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.: 15.096 min
Delta R.T.: 0.000 min
Response: 1798771
Conc: 18.47 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016170.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 16:47
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.096	15.042	15.169	BB	130340	1798771	100.00%	100.000%
Sum of corrected areas:						1798771		

FF071025.M Thu Jul 17 04:52:16 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/16/25
Project:	South River WM Replacement	Date Received:	07/16/25
Client Sample ID:	PIBLK-FF016177.D	SDG No.:	Q2543
Lab Sample ID:	I.BLK-FF016177.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
FF016177.D	1		07/16/25	FF071625

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	20.2		29 - 130	101%	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\FF071625\
Data File : FF016177.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:45
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: Jul 17 03:39:41 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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...	15.092	1968919	20.220 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

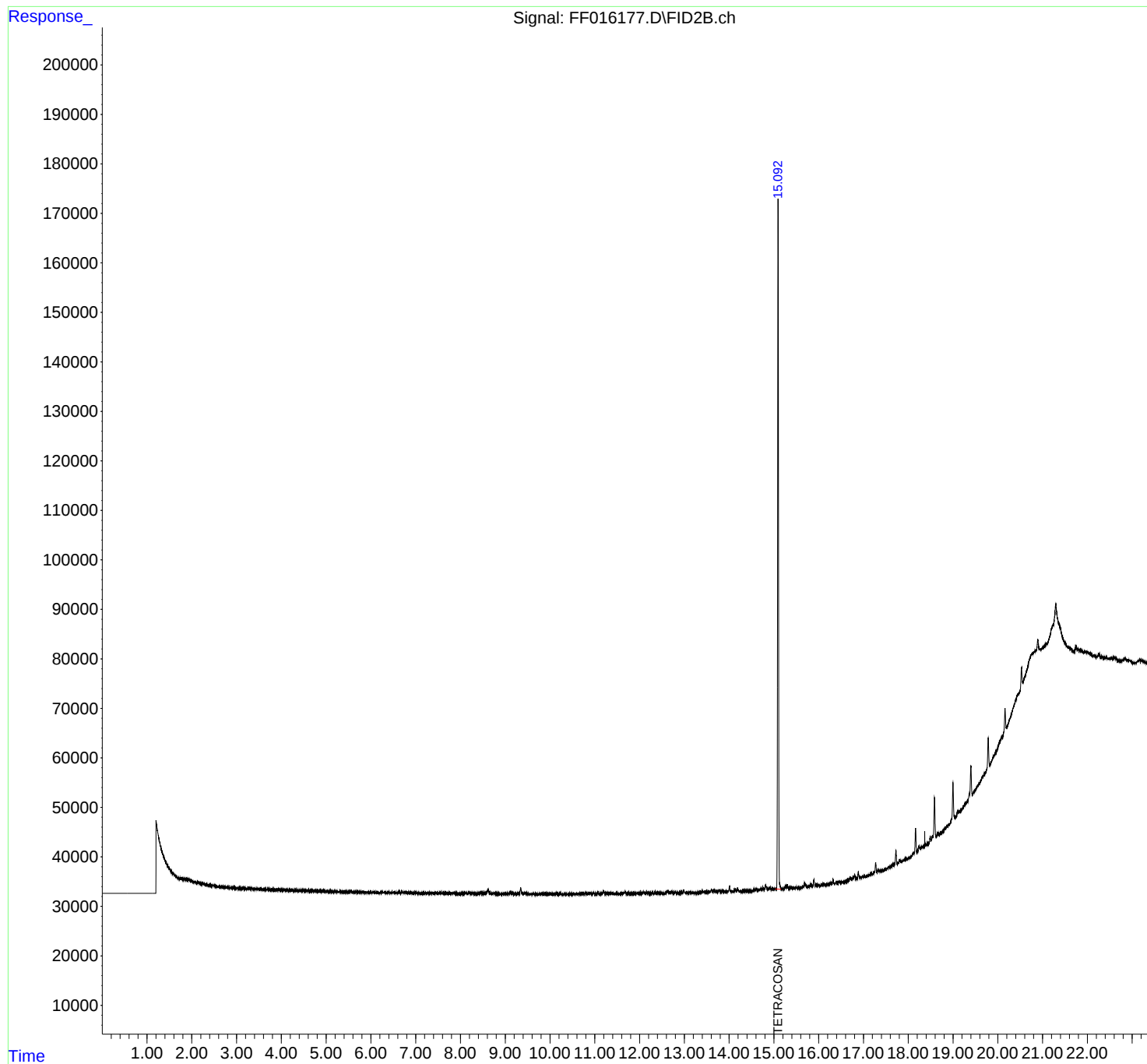
(m)=manual int.

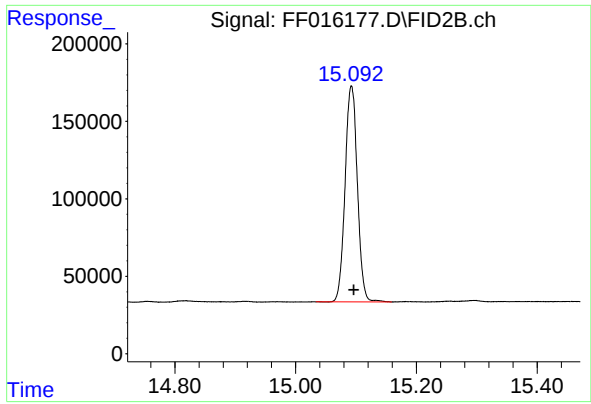
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016177.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:45
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 17 03:39:41 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Quant Title :
QLast Update : Thu Jul 10 12:51:11 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.: 15.092 min
Delta R.T.: -0.004 min
Response: 1968919
Conc: 20.22 ug/ml

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF071625\
Data File : FF016177.D
Signal(s) : FID2B.ch
Acq On : 16 Jul 2025 20:45
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF071025.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.093	15.034	15.159	BB	139441	1968919	100.00%	100.000%
Sum of corrected areas:						1968919		

FF071025.M Thu Jul 17 04:53:45 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/16/25
Project:	South River WM Replacement	Date Received:	07/16/25
Client Sample ID:	PIBLK-FG016300.D	SDG No.:	Q2543
Lab Sample ID:	I.BLK-FG016300.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
FG016300.D	1		07/16/25	FG071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.3		29 - 130	91%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016300.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:08
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:33:58 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.201	1827698	18.280 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

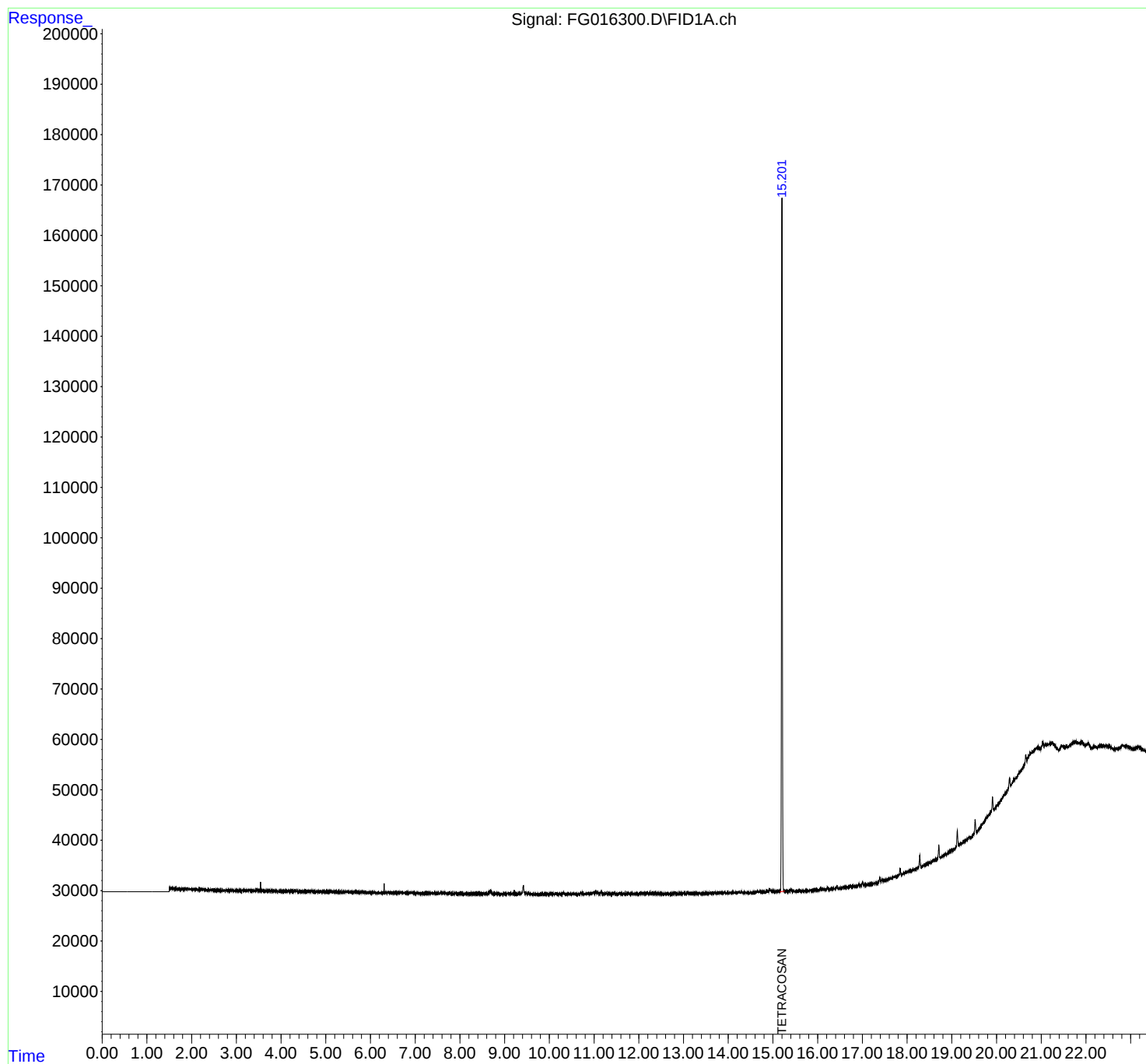
(m)=manual int.

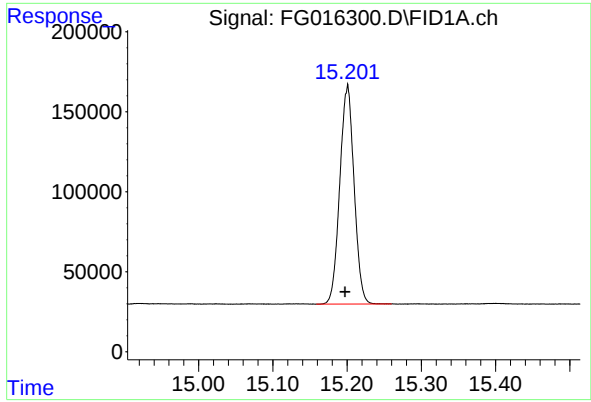
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016300.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:08
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:33:58 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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.: 15.201 min
Delta R.T.: 0.003 min
Response: 1827698
Conc: 18.28 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016300.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 12:08
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.201	15.158	15.260	BB	137181	1827698	100.00%	100.000%
Sum of corrected areas:						1827698		

FG070925.M Thu Jul 17 03:09:02 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/16/25
Project:	South River WM Replacement	Date Received:	07/16/25
Client Sample ID:	PIBLK-FG016308.D	SDG No.:	Q2543
Lab Sample ID:	I.BLK-FG016308.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
FG016308.D	1		07/16/25	FG071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.7		29 - 130	93%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016308.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 16:47
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:35:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.201	1865649	18.659 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

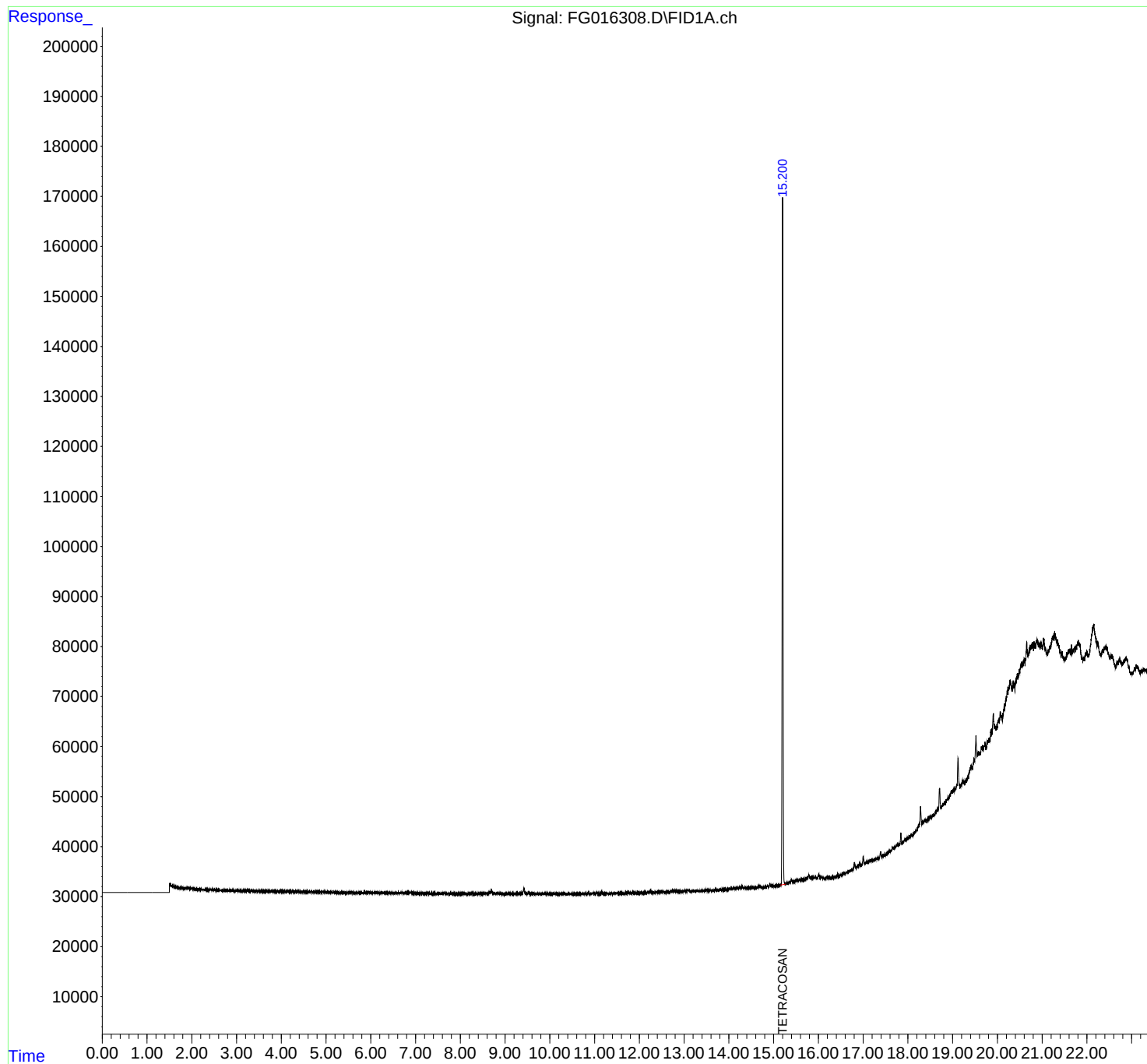
(m)=manual int.

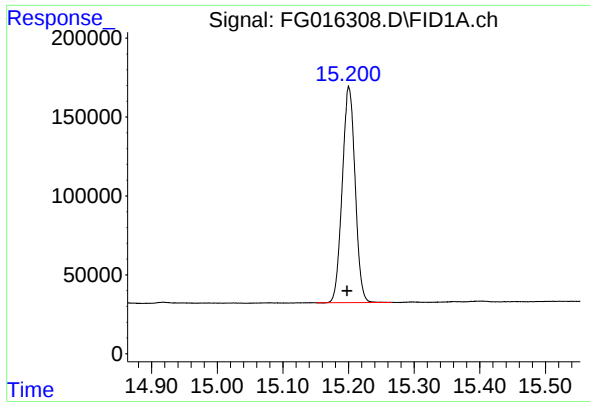
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016308.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 16:47
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:35:36 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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.: 15.201 min
Delta R.T.: 0.003 min
Response: 1865649
Conc: 18.66 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016308.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 16:47
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.201	15.151	15.266	BB	136466	1865649	100.00%	100.000%
Sum of corrected areas:						1865649		

FG070925.M Thu Jul 17 03:11:17 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/16/25
Project:	South River WM Replacement	Date Received:	07/16/25
Client Sample ID:	PIBLK-FG016313.D	SDG No.:	Q2543
Lab Sample ID:	I.BLK-FG016313.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
FG016313.D	1		07/16/25	FG071625

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	6.00	U	6.00	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.6		29 - 130	93%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016313.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 19:46
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:36:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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...	15.198	1857827	18.581 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window

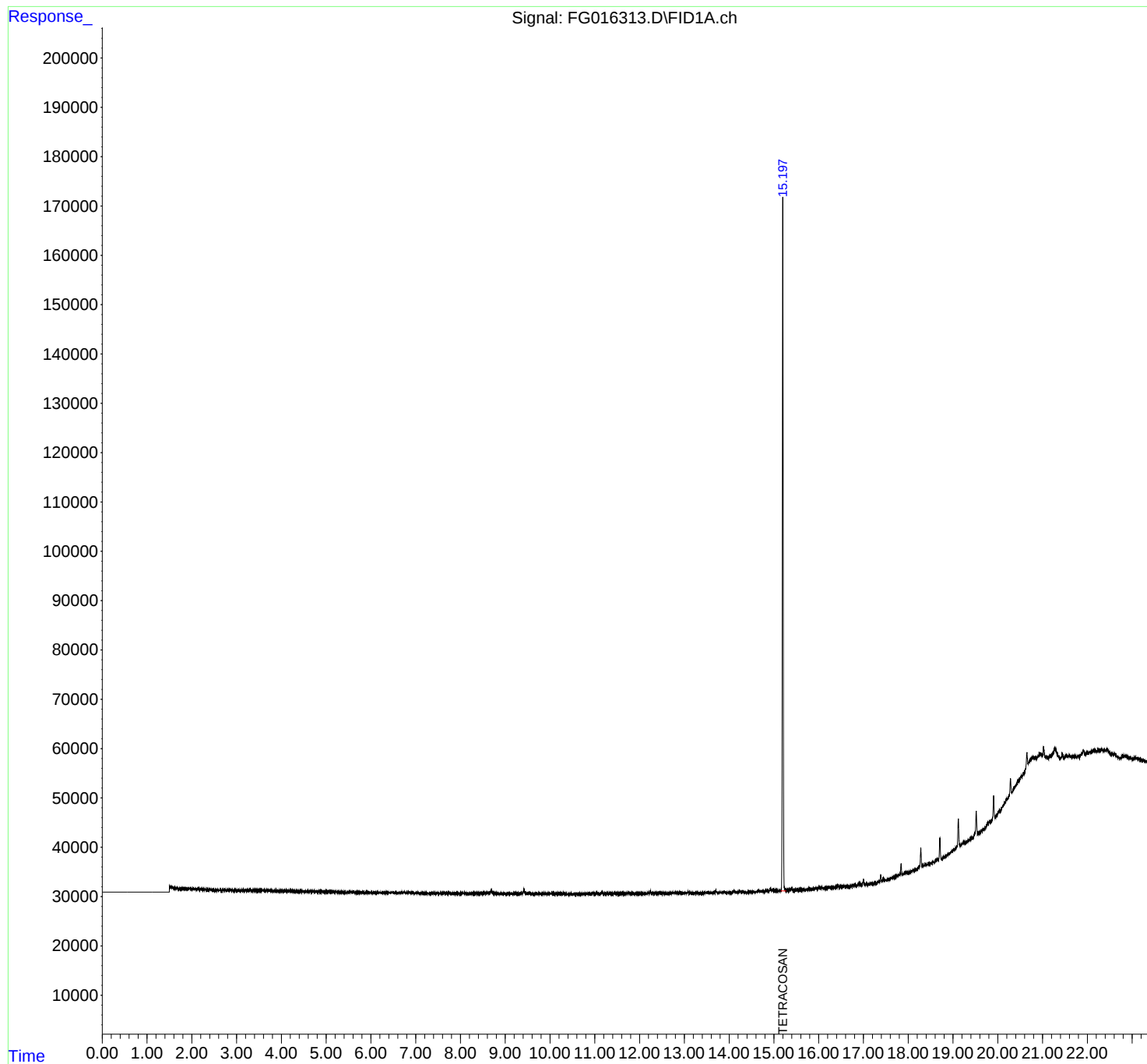
(m)=manual int.

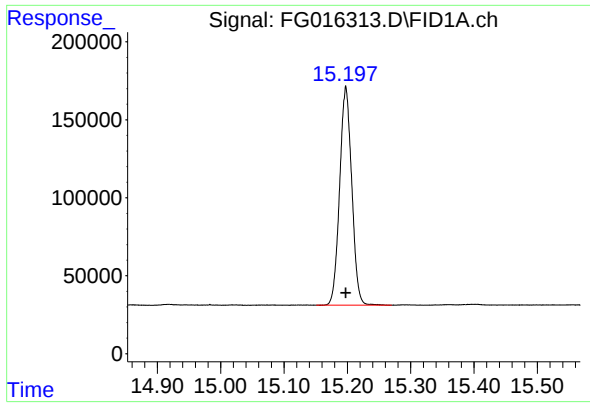
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016313.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 19:46
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: Sample.e
Quant Time: Jul 17 02:36:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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.: 15.198 min
Delta R.T.: 0.000 min
Response: 1857827
Conc: 18.58 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016313.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 19:46
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.198	15.151	15.270	BB	140486	1857827	100.00%	100.000%
Sum of corrected areas:						1857827		

FG070925.M Thu Jul 17 03:12:15 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	
Project:	South River WM Replacement	Date Received:	
Client Sample ID:	PB168878BS	SDG No.:	Q2543
Lab Sample ID:	PB168878BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100 Decanted:
Sample Wt/Vol:	30.03 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :		PH :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016304.D	1	07/16/25 10:00	07/16/25 14:47	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	5500		169	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	17.0		37 - 130	85%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
 Data File : FG016304.D
 Signal(s) : FID1A.ch
 Acq On : 16 Jul 2025 14:47
 Operator : YP\AJ
 Sample : PB168878BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB168878BS

Integration File: Sample.e
 Quant Time: Jul 17 02:34:45 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
 Quant Title :
 QLast Update : Wed Jul 09 12:46:24 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...	15.199	1697457	16.977 ug/ml
Target Compounds			
2) N-DECANE	4.669	1836085	15.942 ug/ml
3) N-DODECANE	6.851	1882697	16.238 ug/ml
4) N-TETRADECANE	8.691	1915701	16.230 ug/ml
5) N-HEXADECANE	10.311	1912454	16.534 ug/ml
6) N-OCTADECANE	11.765	1956667	16.670 ug/ml
7) N-EICOSANE	13.085	1999886	16.717 ug/ml
8) N-DOCOSANE	14.293	1934376	16.786 ug/ml
10) N-TETRACOSANE	15.404	1912707	16.741 ug/ml
11) N-HEXACOSANE	16.433	1832304	16.651 ug/ml
12) N-OCTACOSANE	17.390	1806547	16.612 ug/ml

(f)=RT Delta > 1/2 Window

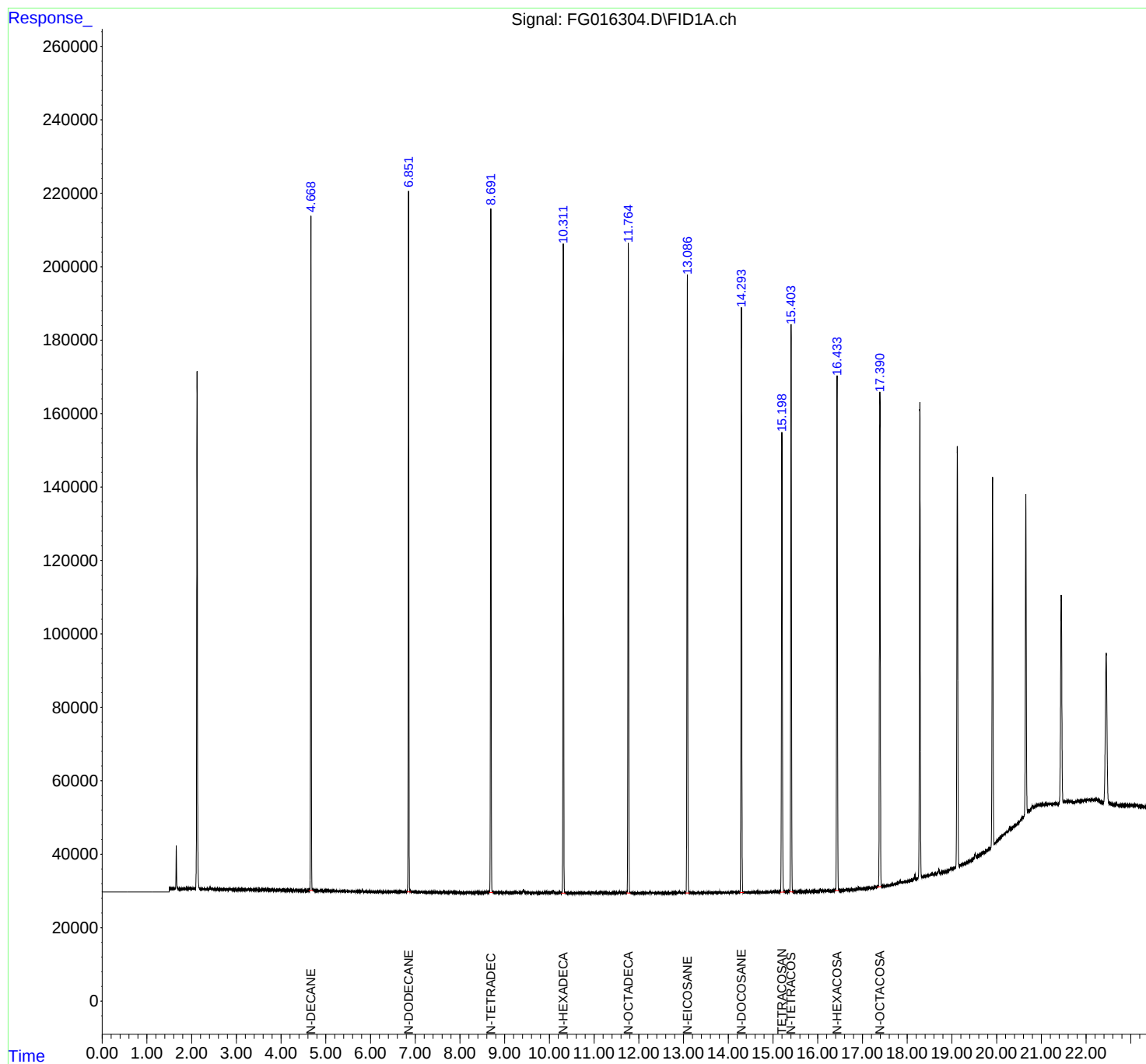
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016304.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 14:47
Operator : YP\AJ
Sample : PB168878BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168878BS

Integration File: Sample.e
Quant Time: Jul 17 02:34:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
Data File : FG016304.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 14:47
Sample : PB168878BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.669	4.627	4.715	BB	183525	1836085	91.81%	8.876%
2	6.851	6.817	6.901	BB	190610	1882697	94.14%	9.101%
3	8.691	8.652	8.740	BB	186063	1915701	95.79%	9.260%
4	10.311	10.268	10.355	BB	176669	1912454	95.63%	9.245%
5	11.765	11.720	11.814	BB	176295	1956667	97.84%	9.458%
6	13.085	13.042	13.135	BB	168456	1999886	100.00%	9.667%
7	14.293	14.258	14.346	BB	158803	1934376	96.72%	9.351%
8	15.199	15.160	15.267	BB	125109	1697457	84.88%	8.205%
9	15.404	15.366	15.458	BB	153345	1912707	95.64%	9.246%
10	16.433	16.387	16.474	BB	139188	1832304	91.62%	8.857%
11	17.390	17.321	17.426	BB	134776	1806547	90.33%	8.733%
Sum of corrected areas:						20686881		

FG070925.M Thu Jul 17 03:10:51 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/09/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-23-99MS	SDG No.:	Q2543
Lab Sample ID:	Q2543-04MS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.4
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
FG016311.D	1	07/16/25 10:00	07/16/25 18:46	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	10600		198	1950	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	12.3		37 - 130	62%	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\FG071625\
 Data File : FG016311.D
 Signal(s) : FID1A.ch
 Acq On : 16 Jul 2025 18:46
 Operator : YP\AJ
 Sample : Q2543-04MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 TP-23-99MS

Integration File: Sample.e
 Quant Time: Jul 17 02:36:12 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
 Quant Title :
 QLast Update : Wed Jul 09 12:46:24 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...	15.199	1231338	12.315 ug/ml
Target Compounds			
2) N-DECANE	4.668	1835317	15.935 ug/ml
3) N-DODECANE	6.851	1896351	16.356 ug/ml
4) N-TETRADECANE	8.691	1979191	16.768 ug/ml
5) N-HEXADECANE	10.311	1988906	17.195 ug/ml
6) N-OCTADECANE	11.765	2034632	17.334 ug/ml
7) N-EICOSANE	13.085	2091843	17.486 ug/ml
8) N-DOCOSANE	14.293	2035867	17.666 ug/ml
10) N-TETRACOSANE	15.405	2116925	18.528 ug/ml
11) N-HEXACOSANE	16.434	1950133	17.722 ug/ml
12) N-OCTACOSANE	17.390	1938925	17.829 ug/ml

(f)=RT Delta > 1/2 Window

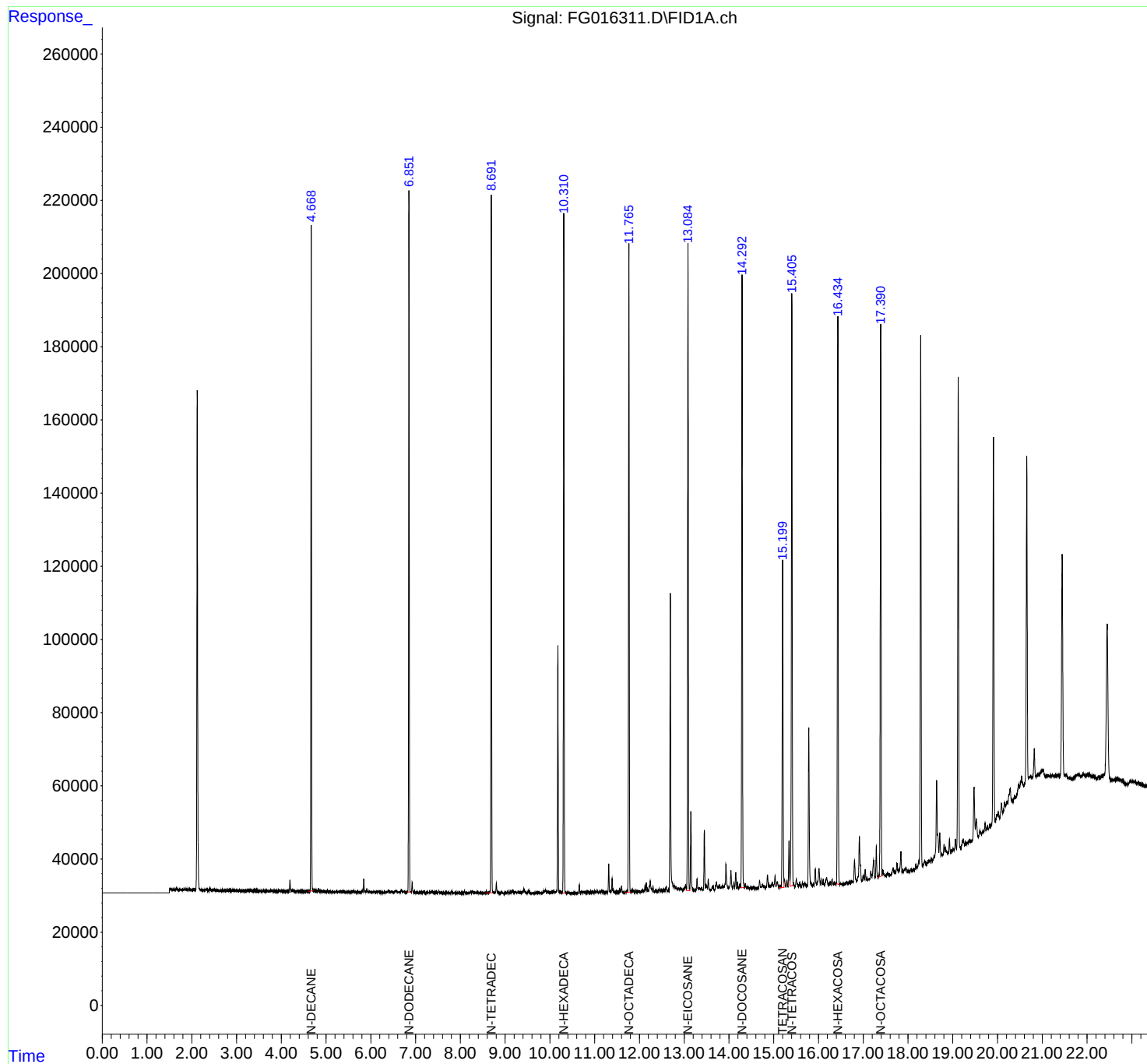
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016311.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 18:46
Operator : YP\AJ
Sample : Q2543-04MS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-23-99MS

Integration File: Sample.e
Quant Time: Jul 17 02:36:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
 Data File : FG016311.D
 Signal(s) : FID1A.ch
 Acq On : 16 Jul 2025 18:46
 Sample : Q2543-04MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.249	4.235	4.312	HH	819	26151	1.19%	0.081%
2	4.322	4.312	4.327	HH	510	4159	0.19%	0.013%
3	4.337	4.327	4.344	HH	441	4328	0.20%	0.013%
4	4.355	4.344	4.364	HH	482	5079	0.23%	0.016%
5	4.373	4.364	4.379	HH	502	4070	0.18%	0.013%
6	4.399	4.379	4.405	HH	535	7731	0.35%	0.024%
7	4.410	4.405	4.414	HH	520	2466	0.11%	0.008%
8	4.419	4.414	4.435	HH	512	6001	0.27%	0.018%
9	4.440	4.435	4.454	HH	518	4837	0.22%	0.015%
10	4.469	4.454	4.512	HH	536	14767	0.67%	0.045%
11	4.517	4.512	4.524	HH	390	2586	0.12%	0.008%
12	4.544	4.524	4.563	HH	443	8790	0.40%	0.027%
13	4.583	4.563	4.601	HH	585	10483	0.48%	0.032%
14	4.606	4.601	4.610	HH	462	2162	0.10%	0.007%
15	4.623	4.610	4.639	HH	592	8686	0.39%	0.027%
16	4.668	4.639	4.699	HH	182452	1851913	83.98%	5.703%
17	4.705	4.699	4.727	HH	756	10527	0.48%	0.032%
18	4.746	4.727	4.753	HH	576	8183	0.37%	0.025%
19	4.758	4.753	4.764	HH	641	3668	0.17%	0.011%
20	4.768	4.764	4.802	HH	564	11236	0.51%	0.035%
21	4.804	4.802	4.809	HH	451	1610	0.07%	0.005%
22	4.833	4.809	4.856	HH	1236	18618	0.84%	0.057%
23	4.864	4.856	4.872	HH	485	3745	0.17%	0.012%
24	4.884	4.872	4.892	HH	440	4362	0.20%	0.013%
25	4.903	4.892	4.909	HH	486	4386	0.20%	0.014%
26	4.920	4.909	4.930	HH	388	4539	0.21%	0.014%
27	4.957	4.930	4.971	HH	414	8878	0.40%	0.027%
28	4.981	4.971	5.020	HH	420	10125	0.46%	0.031%
29	5.036	5.020	5.054	HH	470	7338	0.33%	0.023%
30	5.066	5.054	5.077	HH	335	4107	0.19%	0.013%
31	5.080	5.077	5.087	HH	328	1815	0.08%	0.006%
32	5.090	5.087	5.099	HH	366	2286	0.10%	0.007%
33	5.102	5.099	5.106	HH	302	1100	0.05%	0.003%
34	5.110	5.106	5.117	HH	307	1754	0.08%	0.005%
35	5.121	5.117	5.132	HH	308	2565	0.12%	0.008%
36	5.135	5.132	5.142	HH	339	1864	0.08%	0.006%

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37	5.146	5.142	5.154	HH	308	1928	0.09%	0.006%
38	5.164	5.154	5.176	HH	327	4014	0.18%	0.012%
39	5.179	5.176	5.185	HH	316	1542	0.07%	0.005%
40	5.188	5.185	5.207	HH	348	3391	0.15%	0.010%
41	5.220	5.207	5.252	HH	294	6480	0.29%	0.020%
42	5.255	5.252	5.259	HH	252	1015	0.05%	0.003%
43	5.276	5.259	5.293	HH	341	4931	0.22%	0.015%
44	5.304	5.293	5.309	HH	346	2807	0.13%	0.009%
45	5.325	5.309	5.342	HH	479	7179	0.33%	0.022%
46	5.347	5.342	5.352	HH	250	1291	0.06%	0.004%
47	5.375	5.352	5.409	HH	440	9943	0.45%	0.031%
48	5.424	5.409	5.460	HH	294	6715	0.30%	0.021%
49	5.474	5.460	5.482	HH	341	3603	0.16%	0.011%
50	5.486	5.482	5.537	HH	306	7043	0.32%	0.022%
51	5.543	5.537	5.546	HH	208	976	0.04%	0.003%
52	5.557	5.546	5.567	HH	281	2483	0.11%	0.008%
53	5.573	5.567	5.577	HH	239	984	0.04%	0.003%
54	5.588	5.577	5.595	HH	213	1896	0.09%	0.006%
55	5.615	5.595	5.640	HH	582	9684	0.44%	0.030%
56	5.648	5.640	5.666	HH	275	3469	0.16%	0.011%
57	5.678	5.666	5.700	HH	310	3973	0.18%	0.012%
58	5.710	5.700	5.721	HH	182	1810	0.08%	0.006%
59	5.724	5.721	5.729	HH	190	685	0.03%	0.002%
60	5.734	5.729	5.740	HH	189	1067	0.05%	0.003%
61	5.746	5.740	5.764	HH	235	2431	0.11%	0.007%
62	5.767	5.764	5.796	HH	251	3141	0.14%	0.010%
63	5.813	5.796	5.824	HH	681	7558	0.34%	0.023%
64	5.842	5.824	5.864	HH	3807	38783	1.76%	0.119%
65	5.873	5.864	5.894	HH	487	6034	0.27%	0.019%
66	5.911	5.894	5.947	HH	1153	15026	0.68%	0.046%
67	5.966	5.947	6.014	HH	435	11164	0.51%	0.034%
68	6.022	6.014	6.034	HH	224	1943	0.09%	0.006%
69	6.064	6.034	6.082	HH	354	6458	0.29%	0.020%
70	6.084	6.082	6.089	HH	238	716	0.03%	0.002%
71	6.094	6.089	6.110	HH	194	1783	0.08%	0.005%
72	6.127	6.110	6.163	HH	538	6857	0.31%	0.021%
73	6.178	6.163	6.242	HH	488	8643	0.39%	0.027%
74	6.249	6.242	6.259	HH	171	1079	0.05%	0.003%
75	6.266	6.259	6.271	HH	138	640	0.03%	0.002%
76	6.290	6.271	6.297	HH	179	1585	0.07%	0.005%
77	6.321	6.297	6.330	HH	161	2104	0.10%	0.006%
78	6.344	6.330	6.370	HH	262	4257	0.19%	0.013%
79	6.391	6.370	6.429	HH	723	14364	0.65%	0.044%
80	6.434	6.429	6.446	HH	257	2112	0.10%	0.007%
81	6.461	6.446	6.485	HH	436	6672	0.30%	0.021%
82	6.494	6.485	6.517	HH	286	3558	0.16%	0.011%
83	6.538	6.517	6.549	HH	372	4641	0.21%	0.014%
84	6.559	6.549	6.604	HH	518	10560	0.48%	0.033%
85	6.619	6.604	6.625	HH	235	2250	0.10%	0.007%
86	6.631	6.625	6.635	HH	238	1280	0.06%	0.004%
87	6.642	6.635	6.660	HH	258	3052	0.14%	0.009%
88	6.685	6.660	6.720	HH	820	14724	0.67%	0.045%
89	6.736	6.720	6.760	HH	338	5901	0.27%	0.018%

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90	6.766	6.760	6.778	HH	215	1925	0.09%	0.006%
91	6.785	6.778	6.813	HH	255	4485	0.20%	0.014%
92	6.851	6.813	6.897	HH	191144	1907114	86.48%	5.873%
93	6.922	6.897	6.990	HH	2912	35309	1.60%	0.109%
94	6.994	6.990	6.997	HH	175	573	0.03%	0.002%
95	7.003	6.997	7.032	HH	202	2915	0.13%	0.009%
96	7.038	7.032	7.051	HH	125	1082	0.05%	0.003%
97	7.059	7.051	7.095	HH	124	2299	0.10%	0.007%
98	7.109	7.095	7.114	HH	142	1099	0.05%	0.003%
99	7.130	7.114	7.180	HH	182	3918	0.18%	0.012%
100	7.183	7.180	7.194	HH	151	729	0.03%	0.002%
101	7.208	7.194	7.234	HH	125	1170	0.05%	0.004%
102	7.240	7.234	7.247	HH	83	434	0.02%	0.001%
103	7.263	7.247	7.289	PH	146	1384	0.06%	0.004%
104	7.303	7.289	7.330	PH	113	1482	0.07%	0.005%
105	7.343	7.330	7.369	PH	381	5775	0.26%	0.018%
106	7.379	7.369	7.404	HH	309	4549	0.21%	0.014%
107	7.408	7.404	7.414	HH	155	555	0.03%	0.002%
108	7.426	7.414	7.439	PH	147	1354	0.06%	0.004%
109	7.445	7.439	7.462	HH	106	707	0.03%	0.002%
110	7.472	7.462	7.487	PH	155	1232	0.06%	0.004%
111	7.492	7.487	7.503	PH	112	948	0.04%	0.003%
112	7.521	7.503	7.541	HH	510	5494	0.25%	0.017%
113	7.545	7.541	7.559	HH	132	541	0.02%	0.002%
114	7.565	7.559	7.609	HH	49	444	0.02%	0.001%
115	7.758	7.754	7.771	HH	63	66	0.00%	0.000%
116	7.803	7.771	7.825	PH	416	3793	0.17%	0.012%
117	8.095	8.073	8.140	PH	520	3356	0.15%	0.010%
118	8.226	8.197	8.246	PH	264	2039	0.09%	0.006%
119	8.265	8.246	8.290	PH	629	6698	0.30%	0.021%
120	8.382	8.363	8.410	PH	226	1427	0.06%	0.004%
121	8.414	8.410	8.421	HH	59	118	0.01%	0.000%
122	8.544	8.542	8.547	PH	25	-81	-0.00%	-0.000%
123	8.581	8.547	8.617	PH	277	3979	0.18%	0.012%
124	8.619	8.617	8.640	HH	130	1156	0.05%	0.004%
125	8.691	8.640	8.735	HH	190567	1975407	89.58%	6.083%
126	8.750	8.735	8.777	HH	244	2272	0.10%	0.007%
127	8.804	8.777	8.849	PH	2652	30323	1.38%	0.093%
128	8.924	8.905	8.969	PH	215	-515	-0.02%	-0.002%
129	9.060	9.038	9.077	PH	204	1974	0.09%	0.006%
130	9.086	9.077	9.094	PH	22	10	0.00%	0.000%
131	9.105	9.094	9.122	PH	190	1755	0.08%	0.005%
132	9.131	9.122	9.146	HH	168	1731	0.08%	0.005%
133	9.165	9.146	9.187	HH	699	8258	0.37%	0.025%
134	9.193	9.187	9.213	HH	147	1361	0.06%	0.004%
135	9.237	9.213	9.252	HH	273	2903	0.13%	0.009%
136	9.257	9.252	9.266	HH	76	252	0.01%	0.001%
137	9.269	9.266	9.281	PH	66	155	0.01%	0.000%
138	9.301	9.281	9.338	PH	403	5014	0.23%	0.015%
139	9.346	9.338	9.352	PH	111	246	0.01%	0.001%
140	9.382	9.352	9.394	PH	150	1866	0.08%	0.006%
141	9.420	9.394	9.478	HH	1047	18290	0.83%	0.056%

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142	9.524	9.489	9.550	PH	717	7783	0.35%	0.024%
143	9.762	9.748	9.795	PH	201	738	0.03%	0.002%
144	9.863	9.841	9.883	PH	590	6731	0.31%	0.021%
145	9.904	9.883	9.930	HH	870	12548	0.57%	0.039%
146	9.949	9.930	9.962	HH	353	3526	0.16%	0.011%
147	9.979	9.962	10.020	HH	160	1660	0.08%	0.005%
148	10.047	10.020	10.069	PH	355	4252	0.19%	0.013%
149	10.088	10.069	10.115	HH	792	7529	0.34%	0.023%
150	10.178	10.115	10.220	PH	67618	696349	31.58%	2.144%
151	10.225	10.220	10.229	HH	246	1090	0.05%	0.003%
152	10.245	10.229	10.277	HH	375	4527	0.21%	0.014%
153	10.311	10.277	10.358	PH	185098	1985015	90.01%	6.113%
154	10.656	10.634	10.685	PH	2187	23273	1.06%	0.072%
155	10.702	10.685	10.718	PH	234	1834	0.08%	0.006%
156	10.733	10.718	10.742	HH	251	2113	0.10%	0.007%
157	10.752	10.742	10.772	HH	304	3044	0.14%	0.009%
158	10.790	10.772	10.814	HH	227	2114	0.10%	0.007%
159	10.836	10.814	10.856	PH	234	2552	0.12%	0.008%
160	10.860	10.856	10.886	HH	159	1589	0.07%	0.005%
161	10.919	10.886	10.930	PH	237	2939	0.13%	0.009%
162	10.957	10.930	10.974	HH	337	5386	0.24%	0.017%
163	10.984	10.974	10.988	HH	207	1135	0.05%	0.003%
164	11.008	10.988	11.024	HH	498	6123	0.28%	0.019%
165	11.029	11.024	11.033	HH	218	841	0.04%	0.003%
166	11.054	11.033	11.092	HH	658	10020	0.45%	0.031%
167	11.121	11.092	11.144	PH	369	7293	0.33%	0.022%
168	11.158	11.144	11.174	HH	509	6239	0.28%	0.019%
169	11.189	11.174	11.228	HH	320	5585	0.25%	0.017%
170	11.238	11.228	11.241	PH	79	371	0.02%	0.001%
171	11.247	11.241	11.253	HH	162	624	0.03%	0.002%
172	11.256	11.253	11.262	HH	94	369	0.02%	0.001%
173	11.278	11.262	11.290	HH	212	2283	0.10%	0.007%
174	11.314	11.290	11.337	HH	7939	82699	3.75%	0.255%
175	11.347	11.337	11.362	HH	528	5638	0.26%	0.017%
176	11.390	11.362	11.409	HH	4001	47266	2.14%	0.146%
177	11.417	11.409	11.456	HH	798	11439	0.52%	0.035%
178	11.483	11.456	11.506	HH	340	6038	0.27%	0.019%
179	11.516	11.506	11.529	HH	190	2050	0.09%	0.006%
180	11.535	11.529	11.541	HH	120	929	0.04%	0.003%
181	11.563	11.541	11.582	HH	935	12210	0.55%	0.038%
182	11.601	11.582	11.657	HH	1779	22087	1.00%	0.068%
183	11.672	11.657	11.675	HH	94	516	0.02%	0.002%
184	11.695	11.675	11.713	HH	337	5250	0.24%	0.016%
185	11.728	11.713	11.735	HH	495	5318	0.24%	0.016%
186	11.765	11.735	11.824	HH	176984	2041064	92.56%	6.285%
187	11.841	11.824	11.861	HH	856	13292	0.60%	0.041%
188	11.868	11.861	11.897	HH	573	6997	0.32%	0.022%
189	11.923	11.897	11.944	HH	598	9805	0.44%	0.030%
190	11.960	11.944	11.982	HH	524	8551	0.39%	0.026%
191	11.994	11.982	12.016	HH	563	8173	0.37%	0.025%
192	12.023	12.016	12.026	HH	275	1464	0.07%	0.005%
193	12.072	12.026	12.089	HH	662	18262	0.83%	0.056%
194	12.125	12.089	12.139	HH	1994	28259	1.28%	0.087%

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195	12.156	12.139	12.174	HH	2749	33280	1.51%	0.102%
196	12.184	12.174	12.203	HH	976	12471	0.57%	0.038%
197	12.222	12.203	12.228	HH	1944	18961	0.86%	0.058%
198	12.242	12.228	12.269	HH	3300	51223	2.32%	0.158%
199	12.273	12.269	12.289	HH	1110	10926	0.50%	0.034%
200	12.304	12.289	12.332	HH	1802	24805	1.12%	0.076%
201	12.347	12.332	12.363	HH	542	7171	0.33%	0.022%
202	12.380	12.363	12.409	HH	823	15003	0.68%	0.046%
203	12.439	12.409	12.469	HH	1039	21997	1.00%	0.068%
204	12.484	12.469	12.505	HH	822	13414	0.61%	0.041%
205	12.530	12.505	12.542	HH	771	12732	0.58%	0.039%
206	12.552	12.542	12.561	HH	745	7498	0.34%	0.023%
207	12.599	12.561	12.619	HH	1751	33586	1.52%	0.103%
208	12.635	12.619	12.642	HH	624	7991	0.36%	0.025%
209	12.655	12.642	12.663	HH	804	9288	0.42%	0.029%
210	12.691	12.663	12.760	HH	81470	1026384	46.54%	3.161%
211	12.774	12.760	12.792	HH	2151	35842	1.63%	0.110%
212	12.802	12.792	12.844	HH	1647	41098	1.86%	0.127%
213	12.870	12.844	12.890	HH	1252	30779	1.40%	0.095%
214	12.919	12.890	12.962	HH	1345	44253	2.01%	0.136%
215	13.003	12.962	13.007	HH	1179	23508	1.07%	0.072%
216	13.030	13.007	13.049	HH	1999	37174	1.69%	0.114%
217	13.085	13.049	13.123	HH	176664	2119395	96.11%	6.526%
218	13.150	13.123	13.198	HH	22302	284377	12.90%	0.876%
219	13.209	13.198	13.225	HH	989	12332	0.56%	0.038%
220	13.249	13.225	13.262	HH	712	14301	0.65%	0.044%
221	13.288	13.262	13.325	HH	3837	67564	3.06%	0.208%
222	13.341	13.325	13.357	HH	1346	21958	1.00%	0.068%
223	13.368	13.357	13.382	HH	1167	16530	0.75%	0.051%
224	13.392	13.382	13.423	HH	1294	24889	1.13%	0.077%
225	13.450	13.423	13.472	HH	17091	202353	9.18%	0.623%
226	13.486	13.472	13.500	HH	2260	31603	1.43%	0.097%
227	13.504	13.500	13.520	HH	1798	17972	0.81%	0.055%
228	13.538	13.520	13.605	HH	3758	76497	3.47%	0.236%
229	13.625	13.605	13.635	HH	1680	21763	0.99%	0.067%
230	13.648	13.635	13.679	HH	2063	34356	1.56%	0.106%
231	13.721	13.679	13.767	HH	2949	93822	4.25%	0.289%
232	13.790	13.767	13.815	HH	2146	48939	2.22%	0.151%
233	13.827	13.815	13.835	HH	1513	16386	0.74%	0.050%
234	13.851	13.835	13.865	HH	1982	30931	1.40%	0.095%
235	13.878	13.865	13.894	HH	1938	29514	1.34%	0.091%
236	13.932	13.894	13.989	HH	7818	168862	7.66%	0.520%
237	14.044	13.989	14.082	HH	6212	142512	6.46%	0.439%
238	14.111	14.082	14.130	HH	2749	55953	2.54%	0.172%
239	14.151	14.130	14.177	HH	5588	88122	4.00%	0.271%
240	14.194	14.177	14.216	HH	2828	45159	2.05%	0.139%
241	14.242	14.216	14.259	HH	2475	46363	2.10%	0.143%
242	14.293	14.259	14.342	HH	166806	2107033	95.55%	6.488%
243	14.364	14.342	14.395	HH	2441	57124	2.59%	0.176%
244	14.419	14.395	14.434	HH	1600	33565	1.52%	0.103%
245	14.442	14.434	14.460	HH	1480	21195	0.96%	0.065%
246	14.475	14.460	14.494	HH	1449	26001	1.18%	0.080%

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247	14.504	14.494	14.510	HH	1262	12383	0.56%	0.038%
248	14.512	14.510	14.516	HH	1294	4262	0.19%	0.013%
249	14.546	14.516	14.567	HH	1482	40757	1.85%	0.126%
250	14.581	14.567	14.604	HH	1367	27934	1.27%	0.086%
251	14.607	14.604	14.619	HH	1310	11544	0.52%	0.036%
252	14.634	14.619	14.642	HH	1318	17078	0.77%	0.053%
253	14.656	14.642	14.661	HH	1435	14943	0.68%	0.046%
254	14.684	14.661	14.716	HH	3285	69801	3.17%	0.215%
255	14.746	14.716	14.770	HH	2157	59942	2.72%	0.185%
256	14.782	14.770	14.817	HH	1832	44600	2.02%	0.137%
257	14.861	14.817	14.907	HH	4730	135312	6.14%	0.417%
258	14.921	14.907	14.939	HH	1953	35545	1.61%	0.109%
259	14.964	14.939	14.997	HH	2691	77175	3.50%	0.238%
260	15.029	14.997	15.050	HH	4670	92792	4.21%	0.286%
261	15.078	15.050	15.128	HH	2988	99678	4.52%	0.307%
262	15.144	15.128	15.152	HH	1809	24848	1.13%	0.077%
263	15.199	15.152	15.232	HH	90645	1297593	58.84%	3.996%
264	15.240	15.232	15.274	HH	3689	65431	2.97%	0.201%
265	15.295	15.274	15.315	HH	3404	60693	2.75%	0.187%
266	15.342	15.315	15.363	HH	14166	196809	8.92%	0.606%
267	15.405	15.363	15.438	HH	163743	2205239	100.00%	6.791%
268	15.449	15.438	15.477	HH	2444	47243	2.14%	0.145%
269	15.505	15.477	15.557	HH	3602	119447	5.42%	0.368%
270	15.581	15.557	15.619	HH	2943	79982	3.63%	0.246%
271	15.642	15.619	15.669	HH	2893	66237	3.00%	0.204%
272	15.691	15.669	15.739	HH	2537	91318	4.14%	0.281%
273	15.783	15.739	15.867	HH	45007	744220	33.75%	2.292%
274	15.885	15.867	15.900	HH	2405	44862	2.03%	0.138%
275	15.928	15.900	15.961	HH	6512	136928	6.21%	0.422%
276	16.012	15.961	16.040	HH	6582	187893	8.52%	0.579%
277	16.059	16.040	16.083	HH	3421	72448	3.29%	0.223%
278	16.105	16.083	16.126	HH	3644	69926	3.17%	0.215%
279	16.182	16.126	16.216	HH	4142	163212	7.40%	0.503%
280	16.258	16.216	16.279	HH	2701	94382	4.28%	0.291%
281	16.303	16.279	16.328	HH	3656	85257	3.87%	0.263%
282	16.344	16.328	16.380	HH	2647	76710	3.48%	0.236%
283	16.433	16.380	16.476	HH	156848	2088071	94.69%	6.430%
284	16.498	16.476	16.503	HH	2527	38402	1.74%	0.118%
285	16.505	16.503	16.514	HH	2523	16398	0.74%	0.050%
286	16.520	16.514	16.527	HH	2456	19435	0.88%	0.060%
287	16.530	16.527	16.542	HH	2445	20036	0.91%	0.062%
288	16.561	16.542	16.584	HH	2499	59751	2.71%	0.184%
289	16.628	16.584	16.632	HH	2938	75183	3.41%	0.232%
290	16.635	16.632	16.649	HH	2934	27481	1.25%	0.085%
291	16.655	16.649	16.675	HH	2642	41687	1.89%	0.128%
292	16.695	16.675	16.713	HH	2899	62518	2.83%	0.193%
293	16.736	16.713	16.768	HH	3268	98112	4.45%	0.302%
294	16.805	16.768	16.856	HH	8893	254055	11.52%	0.782%
295	16.886	16.856	16.890	HH	4512	77559	3.52%	0.239%
296	16.915	16.890	16.974	HH	15342	381518	17.30%	1.175%
297	17.000	16.974	17.022	HH	4764	114052	5.17%	0.351%
298	17.044	17.022	17.064	HH	6408	121730	5.52%	0.375%
299	17.079	17.064	17.102	HH	4036	86423	3.92%	0.266%

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300	17.117	17.102	17.137	HH	3770	77904	3.53%	0.240%
301	17.168	17.137	17.199	HH	5810	174888	7.93%	0.539%
302	17.233	17.199	17.259	HH	9010	231460	10.50%	0.713%
303	17.293	17.259	17.339	HH	12736	307639	13.95%	0.947%
304	17.390	17.339	17.422	HH	155550	2163153	98.09%	6.661%
305	17.440	17.422	17.491	HH	6238	214473	9.73%	0.660%

Sum of corrected areas: 32474395

FG070925.M Thu Jul 17 03:26:09 2025

Report of Analysis

Client:	CDM Smith	Date Collected:	07/09/25
Project:	South River WM Replacement	Date Received:	07/09/25
Client Sample ID:	TP-23-99MSD	SDG No.:	Q2543
Lab Sample ID:	Q2543-04MSD	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.4
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
FG016312.D	1	07/16/25 10:00	07/16/25 19:16	PB168878

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	10600		198	1950	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\FG071625\
 Data File : FG016312.D
 Signal(s) : FID1A.ch
 Acq On : 16 Jul 2025 19:16
 Operator : YP\AJ
 Sample : Q2543-04MSD
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 TP-23-99MSD

Integration File: Sample.e
 Quant Time: Jul 17 02:36:25 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
 Quant Title :
 QLast Update : Wed Jul 09 12:46:24 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...	15.199	1174725	11.749 ug/ml
Target Compounds			
2) N-DECANE	4.668	1783984	15.489 ug/ml
3) N-DODECANE	6.850	1842142	15.889 ug/ml
4) N-TETRADECANE	8.691	1918503	16.254 ug/ml
5) N-HEXADECANE	10.311	1930838	16.693 ug/ml
6) N-OCTADECANE	11.764	1968114	16.767 ug/ml
7) N-EICOSANE	13.085	2027489	16.948 ug/ml
8) N-DOCOSANE	14.293	1976001	17.147 ug/ml
10) N-TETRACOSANE	15.404	2050695	17.949 ug/ml
11) N-HEXACOSANE	16.432	1908737	17.346 ug/ml
12) N-OCTACOSANE	17.390	1893213	17.409 ug/ml

(f)=RT Delta > 1/2 Window

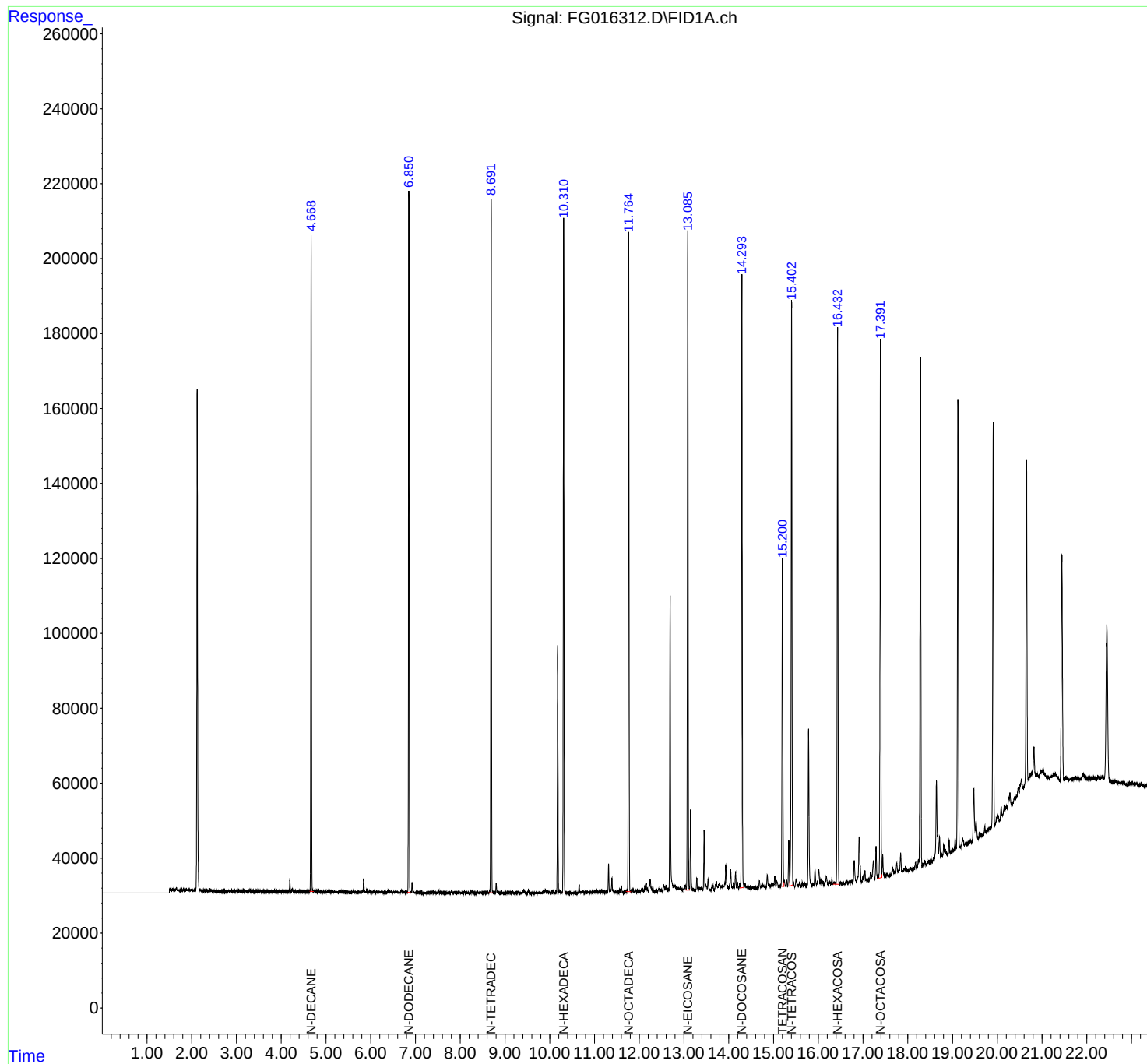
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071625\
Data File : FG016312.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 19:16
Operator : YP\AJ
Sample : Q2543-04MSD
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
TP-23-99MSD

Integration File: Sample.e
Quant Time: Jul 17 02:36:25 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Quant Title :
QLast Update : Wed Jul 09 12:46:24 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\FG071625\
Data File : FG016312.D
Signal(s) : FID1A.ch
Acq On : 16 Jul 2025 19:16
Sample : Q2543-04MSD
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG070925.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.038	4.035	4.050	HH	336	3109	0.15%	0.010%
2	4.055	4.050	4.075	HH	383	4516	0.21%	0.014%
3	4.079	4.075	4.088	HH	340	2450	0.11%	0.008%
4	4.092	4.088	4.104	HH	432	3301	0.15%	0.010%
5	4.114	4.104	4.128	HH	409	4785	0.22%	0.015%
6	4.138	4.128	4.147	HH	387	3844	0.18%	0.012%
7	4.150	4.147	4.168	HH	343	3679	0.17%	0.011%
8	4.193	4.168	4.220	HH	3357	38838	1.82%	0.120%
9	4.248	4.220	4.274	HH	770	16839	0.79%	0.052%
10	4.277	4.274	4.312	HH	475	8487	0.40%	0.026%
11	4.314	4.312	4.345	HH	389	6405	0.30%	0.020%
12	4.373	4.345	4.379	HH	367	6563	0.31%	0.020%
13	4.387	4.379	4.392	HH	409	2986	0.14%	0.009%
14	4.395	4.392	4.410	HH	420	4076	0.19%	0.013%
15	4.414	4.410	4.421	HH	402	2659	0.12%	0.008%
16	4.428	4.421	4.436	HH	414	3029	0.14%	0.009%
17	4.440	4.436	4.453	HH	407	3246	0.15%	0.010%
18	4.463	4.453	4.479	HH	342	4968	0.23%	0.015%
19	4.483	4.479	4.507	HH	322	5085	0.24%	0.016%
20	4.511	4.507	4.523	HH	326	2505	0.12%	0.008%
21	4.529	4.523	4.548	HH	382	3750	0.18%	0.012%
22	4.564	4.548	4.570	HH	312	3379	0.16%	0.010%
23	4.581	4.570	4.595	HH	467	5627	0.26%	0.017%
24	4.599	4.595	4.606	HH	300	1876	0.09%	0.006%
25	4.624	4.606	4.640	HH	492	7582	0.35%	0.023%
26	4.668	4.640	4.699	HH	174867	1795551	83.94%	5.535%
27	4.703	4.699	4.747	HH	585	12525	0.59%	0.039%
28	4.764	4.747	4.777	HH	486	7307	0.34%	0.023%
29	4.781	4.777	4.805	HH	490	6284	0.29%	0.019%
30	4.832	4.805	4.885	HH	1002	19673	0.92%	0.061%
31	4.891	4.885	4.897	HH	306	1839	0.09%	0.006%
32	4.904	4.897	4.916	HH	329	3023	0.14%	0.009%
33	4.928	4.916	4.938	HH	287	2916	0.14%	0.009%
34	4.958	4.938	4.965	HH	292	3956	0.18%	0.012%
35	4.986	4.965	4.996	HH	279	4390	0.21%	0.014%
36	5.000	4.996	5.009	HH	273	1449	0.07%	0.004%

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37	5.044	5.009	5.058	HH	350	7313	0.34%	0.023%
38	5.062	5.058	5.073	HH	240	1730	0.08%	0.005%
39	5.084	5.073	5.096	HH	283	2856	0.13%	0.009%
40	5.100	5.096	5.110	HH	239	1663	0.08%	0.005%
41	5.125	5.110	5.153	HH	275	5049	0.24%	0.016%
42	5.162	5.153	5.174	HH	229	2426	0.11%	0.007%
43	5.176	5.174	5.182	HH	228	928	0.04%	0.003%
44	5.187	5.182	5.237	HH	206	5065	0.24%	0.016%
45	5.252	5.237	5.269	HH	219	2875	0.13%	0.009%
46	5.285	5.269	5.291	HH	179	2012	0.09%	0.006%
47	5.327	5.291	5.361	HH	408	9410	0.44%	0.029%
48	5.372	5.361	5.391	HH	303	4193	0.20%	0.013%
49	5.395	5.391	5.405	HH	196	1355	0.06%	0.004%
50	5.413	5.405	5.432	HH	195	2308	0.11%	0.007%
51	5.436	5.432	5.441	HH	153	688	0.03%	0.002%
52	5.446	5.441	5.466	HH	183	2211	0.10%	0.007%
53	5.475	5.466	5.517	HH	323	4954	0.23%	0.015%
54	5.521	5.517	5.524	HH	123	372	0.02%	0.001%
55	5.529	5.524	5.537	HH	145	763	0.04%	0.002%
56	5.543	5.537	5.566	HH	172	1671	0.08%	0.005%
57	5.615	5.566	5.634	HH	564	8088	0.38%	0.025%
58	5.651	5.634	5.664	HH	216	2759	0.13%	0.009%
59	5.690	5.664	5.717	HH	148	2786	0.13%	0.009%
60	5.745	5.717	5.752	PH	178	1876	0.09%	0.006%
61	5.757	5.752	5.763	HH	132	520	0.02%	0.002%
62	5.769	5.763	5.794	HH	109	1298	0.06%	0.004%
63	5.812	5.794	5.825	PH	627	6033	0.28%	0.019%
64	5.842	5.825	5.862	HH	3583	35325	1.65%	0.109%
65	5.873	5.862	5.889	HH	351	4028	0.19%	0.012%
66	5.911	5.889	5.937	HH	957	11194	0.52%	0.035%
67	5.968	5.937	6.041	HH	339	10198	0.48%	0.031%
68	6.067	6.041	6.080	HH	275	4267	0.20%	0.013%
69	6.084	6.080	6.114	HH	162	2018	0.09%	0.006%
70	6.130	6.114	6.156	HH	390	4713	0.22%	0.015%
71	6.180	6.156	6.220	HH	394	5581	0.26%	0.017%
72	6.222	6.220	6.232	HH	61	166	0.01%	0.001%
73	6.242	6.232	6.262	PH	131	1271	0.06%	0.004%
74	6.267	6.262	6.273	HH	106	410	0.02%	0.001%
75	6.285	6.273	6.291	HH	124	820	0.04%	0.003%
76	6.294	6.291	6.305	HH	77	352	0.02%	0.001%
77	6.331	6.305	6.335	PH	99	980	0.05%	0.003%
78	6.343	6.335	6.364	HH	204	2388	0.11%	0.007%
79	6.392	6.364	6.446	HH	668	13351	0.62%	0.041%
80	6.460	6.446	6.485	HH	351	4723	0.22%	0.015%
81	6.489	6.485	6.494	HH	128	673	0.03%	0.002%
82	6.499	6.494	6.507	HH	171	878	0.04%	0.003%
83	6.542	6.507	6.547	HH	273	3488	0.16%	0.011%
84	6.568	6.547	6.597	HH	385	7114	0.33%	0.022%
85	6.618	6.597	6.631	HH	138	1741	0.08%	0.005%
86	6.641	6.631	6.664	HH	164	2298	0.11%	0.007%
87	6.684	6.664	6.701	HH	718	9113	0.43%	0.028%
88	6.706	6.701	6.725	HH	200	2217	0.10%	0.007%
89	6.732	6.725	6.746	HH	190	1549	0.07%	0.005%

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90	6.751	6.746	6.769	HH	151	1533	0.07%	0.005%
91	6.782	6.769	6.799	HH	156	1628	0.08%	0.005%
92	6.810	6.799	6.822	HH	166	1606	0.08%	0.005%
93	6.850	6.822	6.902	HH	187508	1846069	86.30%	5.691%
94	6.922	6.902	6.953	HH	2720	28043	1.31%	0.086%
95	6.961	6.953	6.986	HH	97	626	0.03%	0.002%
96	7.006	6.986	7.012	PH	126	605	0.03%	0.002%
97	7.018	7.012	7.036	HH	103	225	0.01%	0.001%
98	7.040	7.036	7.047	PH	-31	-241	-0.01%	-0.001%
99	7.058	7.047	7.068	PH	56	-34	-0.00%	-0.000%
100	7.076	7.068	7.092	PH	32	-354	-0.02%	-0.001%
101	7.097	7.092	7.120	PH	40	-297	-0.01%	-0.001%
102	7.131	7.120	7.161	PH	75	-638	-0.03%	-0.002%
103	7.185	7.161	7.204	PH	13	-1235	-0.06%	-0.004%
104	7.209	7.204	7.219	PH	14	-491	-0.02%	-0.002%
105	7.238	7.219	7.279	PH	11	-1989	-0.09%	-0.006%
106	7.304	7.279	7.309	PH	41	-858	-0.04%	-0.003%
107	7.313	7.309	7.324	PH	39	-288	-0.01%	-0.001%
108	7.342	7.324	7.369	PH	438	6299	0.29%	0.019%
109	7.376	7.369	7.394	HH	280	2709	0.13%	0.008%
110	7.404	7.394	7.431	HH	122	1313	0.06%	0.004%
111	7.434	7.431	7.437	PH	59	144	0.01%	0.000%
112	7.441	7.437	7.462	HH	92	-43	-0.00%	-0.000%
113	7.475	7.462	7.484	PH	52	7	0.00%	0.000%
114	7.490	7.484	7.505	PH	46	213	0.01%	0.001%
115	7.520	7.505	7.550	PH	421	4133	0.19%	0.013%
116	7.555	7.550	7.566	PH	27	-60	-0.00%	-0.000%
117	7.569	7.566	7.592	PH	43	-204	-0.01%	-0.001%
118	7.595	7.592	7.614	PH	-2	-696	-0.03%	-0.002%
119	7.637	7.614	7.657	PH	36	-719	-0.03%	-0.002%
120	7.669	7.657	7.694	PH	35	-324	-0.02%	-0.001%
121	7.696	7.694	7.699	PH	24	-146	-0.01%	-0.000%
122	7.702	7.699	7.734	PH	-50	-1183	-0.06%	-0.004%
123	7.739	7.734	7.751	PH	12	-287	-0.01%	-0.001%
124	7.758	7.751	7.768	PH	47	-235	-0.01%	-0.001%
125	7.773	7.768	7.780	PH	10	-359	-0.02%	-0.001%
126	7.802	7.780	7.823	PH	372	2630	0.12%	0.008%
127	7.829	7.823	7.847	PH	36	-1043	-0.05%	-0.003%
128	7.853	7.847	7.866	PH	8	-390	-0.02%	-0.001%
129	7.870	7.866	7.886	PH	10	-559	-0.03%	-0.002%
130	7.897	7.886	7.911	PH	-35	-1100	-0.05%	-0.003%
131	7.924	7.911	7.951	PH	31	-955	-0.04%	-0.003%
132	7.956	7.951	7.962	PH	13	-471	-0.02%	-0.001%
133	7.965	7.962	7.969	PH	-55	-323	-0.02%	-0.001%
134	7.982	7.969	8.006	PH	-23	-1702	-0.08%	-0.005%
135	8.020	8.006	8.034	PH	9	-870	-0.04%	-0.003%
136	8.039	8.034	8.045	PH	-27	-486	-0.02%	-0.001%
137	8.050	8.045	8.063	PH	-31	-884	-0.04%	-0.003%
138	8.094	8.063	8.129	PH	462	1737	0.08%	0.005%
139	8.138	8.129	8.144	PH	-61	-800	-0.04%	-0.002%
140	8.153	8.144	8.162	PH	-65	-927	-0.04%	-0.003%
141	8.173	8.162	8.192	PH	-63	-1844	-0.09%	-0.006%

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142	8.200	8.192	8.210	PH	-99	-1339	-0.06%	-0.004%
143	8.232	8.210	8.243	PH	191	1093	0.05%	0.003%
144	8.265	8.243	8.283	HH	634	5141	0.24%	0.016%
145	8.305	8.283	8.323	PH	69	-507	-0.02%	-0.002%
146	8.330	8.323	8.351	PH	-28	-1798	-0.08%	-0.006%
147	8.384	8.351	8.407	PH	128	-1408	-0.07%	-0.004%
148	8.412	8.407	8.422	PH	16	-312	-0.01%	-0.001%
149	8.440	8.422	8.457	PH	58	-309	-0.01%	-0.001%
150	8.463	8.457	8.502	PH	35	-1735	-0.08%	-0.005%
151	8.515	8.502	8.529	PH	70	-406	-0.02%	-0.001%
152	8.534	8.529	8.541	PH	-31	-516	-0.02%	-0.002%
153	8.546	8.541	8.556	PH	-52	-669	-0.03%	-0.002%
154	8.580	8.556	8.597	PH	244	1999	0.09%	0.006%
155	8.605	8.597	8.615	PH	67	388	0.02%	0.001%
156	8.620	8.615	8.646	HH	92	928	0.04%	0.003%
157	8.691	8.646	8.734	HH	184348	1918306	89.68%	5.913%
158	8.753	8.734	8.783	PH	210	1315	0.06%	0.004%
159	8.804	8.783	8.904	PH	2532	26059	1.22%	0.080%
160	8.922	8.904	8.969	PH	138	-2359	-0.11%	-0.007%
161	8.973	8.969	8.979	PH	-139	-801	-0.04%	-0.002%
162	8.999	8.979	9.034	PH	84	-964	-0.05%	-0.003%
163	9.061	9.034	9.086	PH	170	622	0.03%	0.002%
164	9.091	9.086	9.095	PH	7	-153	-0.01%	-0.000%
165	9.103	9.095	9.145	PH	95	1310	0.06%	0.004%
166	9.164	9.145	9.185	PH	623	6169	0.29%	0.019%
167	9.198	9.185	9.218	PH	76	148	0.01%	0.000%
168	9.231	9.218	9.252	PH	118	262	0.01%	0.001%
169	9.260	9.252	9.282	PH	-1	-1220	-0.06%	-0.004%
170	9.299	9.282	9.335	PH	276	829	0.04%	0.003%
171	9.360	9.335	9.366	PH	-33	-1272	-0.06%	-0.004%
172	9.381	9.366	9.389	PH	28	23	0.00%	0.000%
173	9.420	9.389	9.501	HH	685	10721	0.50%	0.033%
174	9.523	9.501	9.586	PH	641	5225	0.24%	0.016%
175	9.595	9.586	9.631	PH	-54	-3066	-0.14%	-0.009%
176	9.646	9.631	9.684	PH	-94	-4144	-0.19%	-0.013%
177	9.713	9.684	9.734	PH	49	-2027	-0.09%	-0.006%
178	9.763	9.734	9.792	PH	127	-1226	-0.06%	-0.004%
179	9.804	9.792	9.816	PH	-21	-791	-0.04%	-0.002%
180	9.822	9.816	9.840	PH	13	-820	-0.04%	-0.003%
181	9.861	9.840	9.884	PH	520	6584	0.31%	0.020%
182	9.903	9.884	9.931	HH	815	11756	0.55%	0.036%
183	9.945	9.931	9.967	HH	314	3156	0.15%	0.010%
184	9.983	9.967	10.011	PH	112	1156	0.05%	0.004%
185	10.043	10.011	10.069	PH	313	3643	0.17%	0.011%
186	10.088	10.069	10.112	PH	747	6810	0.32%	0.021%
187	10.178	10.112	10.217	PH	65846	673324	31.48%	2.076%
188	10.243	10.217	10.277	HH	338	5023	0.23%	0.015%
189	10.311	10.277	10.384	PH	180031	1926596	90.07%	5.939%
190	10.414	10.384	10.439	PH	163	569	0.03%	0.002%
191	10.461	10.439	10.477	PH	14	-1024	-0.05%	-0.003%
192	10.481	10.477	10.514	PH	12	-1904	-0.09%	-0.006%
193	10.525	10.514	10.576	PH	-22	-2803	-0.13%	-0.009%
194	10.581	10.576	10.626	PH	3	-1857	-0.09%	-0.006%

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195	10.656	10.626	10.691	PH	2197	22928	1.07%	0.071%
196	10.702	10.691	10.719	PH	197	2299	0.11%	0.007%
197	10.738	10.719	10.774	HH	256	4788	0.22%	0.015%
198	10.789	10.774	10.816	PH	206	1739	0.08%	0.005%
199	10.839	10.816	10.857	PH	231	2800	0.13%	0.009%
200	10.862	10.857	10.889	HH	166	1674	0.08%	0.005%
201	10.914	10.889	10.936	HH	196	3506	0.16%	0.011%
202	10.958	10.936	10.982	HH	371	5578	0.26%	0.017%
203	11.007	10.982	11.024	HH	426	6200	0.29%	0.019%
204	11.055	11.024	11.093	HH	580	9985	0.47%	0.031%
205	11.116	11.093	11.141	PH	398	6280	0.29%	0.019%
206	11.157	11.141	11.234	HH	489	12544	0.59%	0.039%
207	11.249	11.234	11.262	HH	192	1822	0.09%	0.006%
208	11.280	11.262	11.290	HH	231	2607	0.12%	0.008%
209	11.314	11.290	11.367	HH	7733	93254	4.36%	0.287%
210	11.389	11.367	11.457	HH	3913	57340	2.68%	0.177%
211	11.480	11.457	11.501	HH	258	5173	0.24%	0.016%
212	11.514	11.501	11.534	HH	209	2485	0.12%	0.008%
213	11.563	11.534	11.582	HH	899	11605	0.54%	0.036%
214	11.601	11.582	11.647	HH	1882	21227	0.99%	0.065%
215	11.700	11.647	11.715	PH	332	7087	0.33%	0.022%
216	11.764	11.715	11.815	HH	175448	1985880	92.84%	6.122%
217	11.842	11.815	11.889	HH	893	23548	1.10%	0.073%
218	11.924	11.889	11.943	HH	622	11906	0.56%	0.037%
219	11.960	11.943	11.979	HH	583	8685	0.41%	0.027%
220	11.994	11.979	12.022	HH	530	9666	0.45%	0.030%
221	12.043	12.022	12.057	HH	696	11791	0.55%	0.036%
222	12.072	12.057	12.096	HH	759	13983	0.65%	0.043%
223	12.124	12.096	12.138	HH	1971	26768	1.25%	0.083%
224	12.155	12.138	12.176	HH	2580	34666	1.62%	0.107%
225	12.183	12.176	12.202	HH	915	11137	0.52%	0.034%
226	12.244	12.202	12.287	HH	3559	90656	4.24%	0.279%
227	12.304	12.287	12.329	HH	1755	24643	1.15%	0.076%
228	12.346	12.329	12.359	HH	472	6739	0.32%	0.021%
229	12.381	12.359	12.404	HH	798	14643	0.68%	0.045%
230	12.439	12.404	12.461	HH	1032	21464	1.00%	0.066%
231	12.481	12.461	12.512	HH	824	18409	0.86%	0.057%
232	12.540	12.512	12.581	HH	2202	53727	2.51%	0.166%
233	12.598	12.581	12.624	HH	1977	32337	1.51%	0.100%
234	12.629	12.624	12.644	HH	786	8377	0.39%	0.026%
235	12.655	12.644	12.664	HH	861	9644	0.45%	0.030%
236	12.690	12.664	12.758	HH	79583	989348	46.25%	3.050%
237	12.775	12.758	12.794	HH	2239	41369	1.93%	0.128%
238	12.801	12.794	12.844	HH	1769	41932	1.96%	0.129%
239	12.870	12.844	12.893	HH	1258	32903	1.54%	0.101%
240	12.918	12.893	12.964	HH	1317	44194	2.07%	0.136%
241	13.030	12.964	13.047	HH	2067	60859	2.85%	0.188%
242	13.085	13.047	13.124	HH	176063	2060291	96.32%	6.351%
243	13.148	13.124	13.196	HH	22165	276856	12.94%	0.853%
244	13.207	13.196	13.229	HH	940	16241	0.76%	0.050%
245	13.244	13.229	13.257	HH	811	12111	0.57%	0.037%
246	13.286	13.257	13.324	HH	3931	69098	3.23%	0.213%

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247	13.340	13.324	13.355	HH	1340	21747	1.02%	0.067%
248	13.366	13.355	13.379	HH	1211	16335	0.76%	0.050%
249	13.391	13.379	13.423	HH	1269	26305	1.23%	0.081%
250	13.450	13.423	13.472	HH	16799	196573	9.19%	0.606%
251	13.486	13.472	13.518	HH	2184	46828	2.19%	0.144%
252	13.538	13.518	13.575	HH	3699	62159	2.91%	0.192%
253	13.585	13.575	13.606	HH	807	14274	0.67%	0.044%
254	13.625	13.606	13.634	HH	1529	20743	0.97%	0.064%
255	13.648	13.634	13.675	HH	1980	32491	1.52%	0.100%
256	13.720	13.675	13.761	HH	3092	93053	4.35%	0.287%
257	13.788	13.761	13.817	HH	2428	64595	3.02%	0.199%
258	13.850	13.817	13.867	HH	2002	48916	2.29%	0.151%
259	13.878	13.867	13.891	HH	1735	22566	1.05%	0.070%
260	13.932	13.891	13.987	HH	7219	165310	7.73%	0.510%
261	14.043	13.987	14.081	HH	6160	142459	6.66%	0.439%
262	14.110	14.081	14.127	HH	2445	51145	2.39%	0.158%
263	14.152	14.127	14.176	HH	5426	89691	4.19%	0.276%
264	14.193	14.176	14.217	HH	2729	47247	2.21%	0.146%
265	14.243	14.217	14.258	HH	2356	44479	2.08%	0.137%
266	14.293	14.258	14.344	HH	163555	2045644	95.63%	6.306%
267	14.364	14.344	14.389	HH	2464	50468	2.36%	0.156%
268	14.418	14.389	14.434	HH	1550	40747	1.90%	0.126%
269	14.441	14.434	14.457	HH	1465	18649	0.87%	0.057%
270	14.476	14.457	14.496	HH	1451	30846	1.44%	0.095%
271	14.509	14.496	14.519	HH	1336	17800	0.83%	0.055%
272	14.542	14.519	14.565	HH	1425	36510	1.71%	0.113%
273	14.581	14.565	14.617	HH	1374	39806	1.86%	0.123%
274	14.684	14.617	14.714	HH	3177	101041	4.72%	0.311%
275	14.749	14.714	14.771	HH	2184	63024	2.95%	0.194%
276	14.782	14.771	14.817	HH	1843	44094	2.06%	0.136%
277	14.860	14.817	14.906	HH	4794	132208	6.18%	0.408%
278	14.918	14.906	14.934	HH	1891	30925	1.45%	0.095%
279	14.966	14.934	14.998	HH	2657	83650	3.91%	0.258%
280	15.028	14.998	15.052	HH	4392	91135	4.26%	0.281%
281	15.074	15.052	15.119	HH	2982	89015	4.16%	0.274%
282	15.147	15.119	15.162	HH	1796	43784	2.05%	0.135%
283	15.199	15.162	15.231	HH	88774	1245837	58.24%	3.840%
284	15.241	15.231	15.272	HH	3351	62800	2.94%	0.194%
285	15.294	15.272	15.315	HH	3389	60531	2.83%	0.187%
286	15.341	15.315	15.362	HH	13920	191360	8.95%	0.590%
287	15.404	15.362	15.437	HH	156514	2139033	100.00%	6.594%
288	15.448	15.437	15.477	HH	2407	48411	2.26%	0.149%
289	15.503	15.477	15.557	HH	3474	117330	5.49%	0.362%
290	15.580	15.557	15.616	HH	2774	76153	3.56%	0.235%
291	15.642	15.616	15.669	HH	2844	68370	3.20%	0.211%
292	15.691	15.669	15.730	HH	2505	79365	3.71%	0.245%
293	15.783	15.730	15.859	HH	43309	723228	33.81%	2.229%
294	15.885	15.859	15.900	HH	2344	54134	2.53%	0.167%
295	15.927	15.900	15.962	HH	6303	135490	6.33%	0.418%
296	16.011	15.962	16.040	HH	6192	177523	8.30%	0.547%
297	16.058	16.040	16.084	HH	3444	74070	3.46%	0.228%
298	16.103	16.084	16.127	HH	3107	68765	3.21%	0.212%
299	16.182	16.127	16.216	HH	4176	160291	7.49%	0.494%

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300	16.259	16.216	16.282	HH	2802	100940	4.72%	0.311%
301	16.305	16.282	16.330	HH	3626	82403	3.85%	0.254%
302	16.346	16.330	16.387	HH	2685	87520	4.09%	0.270%
303	16.432	16.387	16.477	HH	149291	2023029	94.58%	6.236%
304	16.497	16.477	16.542	HH	2624	96130	4.49%	0.296%
305	16.562	16.542	16.584	HH	2505	60741	2.84%	0.187%
306	16.634	16.584	16.652	HH	2955	107935	5.05%	0.333%
307	16.661	16.652	16.674	HH	2655	35569	1.66%	0.110%
308	16.694	16.674	16.716	HH	2910	67947	3.18%	0.209%
309	16.739	16.716	16.765	HH	3116	85291	3.99%	0.263%
310	16.804	16.765	16.854	HH	8524	243520	11.38%	0.751%
311	16.914	16.854	16.969	HH	15001	433521	20.27%	1.336%
312	17.001	16.969	17.021	HH	4379	112538	5.26%	0.347%
313	17.043	17.021	17.067	HH	5933	121092	5.66%	0.373%
314	17.080	17.067	17.101	HH	3594	69801	3.26%	0.215%
315	17.123	17.101	17.133	HH	3464	65065	3.04%	0.201%
316	17.168	17.133	17.199	HH	5400	171754	8.03%	0.529%
317	17.232	17.199	17.259	HH	8561	217469	10.17%	0.670%
318	17.292	17.259	17.336	HH	12356	286931	13.41%	0.884%
319	17.390	17.336	17.421	HH	148006	2095145	97.95%	6.458%
320	17.440	17.421	17.494	HH	10121	268985	12.58%	0.829%
321	17.548	17.494	17.572	HH	5040	221342	10.35%	0.682%
322	17.597	17.572	17.617	HH	4797	126583	5.92%	0.390%
323	17.661	17.617	17.697	HH	6341	265587	12.42%	0.819%
324	17.705	17.697	17.717	HH	5434	64520	3.02%	0.199%
325	17.754	17.717	17.782	HH	7893	246459	11.52%	0.760%

Sum of corrected areas: 32440328

FG070925.M Thu Jul 17 03:31:57 2025

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2473-04MS		FF016140.D	FF071025	N-OCTACOSANE	mohammad	7/11/2025 9:10:05 AM	Peak Integrated by Software incorrectly
Q2473-04MSD		FF016141.D	FF071025	N-HEXATRIACONTANE	mohammad	7/11/2025 9:10:05 AM	Peak Integrated by Software incorrectly
Q2473-04MSD		FF016141.D	FF071025	N-OCTACOSANE	mohammad	7/11/2025 9:10:05 AM	Peak Integrated by Software incorrectly
Q2486-01		FF016142.D	FF071025	TETRACOSANE-d50 (SURROGA	mohammad	7/11/2025 9:10:05 AM	Peak Integrated by Software incorrectly
.BLK		FF016144.D	FF071025	TETRACOSANE-d50 (SURROGA	mohammad	7/11/2025 9:10:05 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
.BLK		FF016162.D	FF071625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q2529-08		FF016169.D	FF071625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q2543-02		FF016175.D	FF071625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071025

Review By	yogesh	Review On	7/10/2025 3:10:07 PM
Supervise By	mohammad	Supervise On	7/11/2025 9:10:05 AM
SubDirectory	FF071025	HP Acquire Method	HP Processing Method FF071025
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM	PP24469		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF016128.D	10 Jul 2025 08:46	YP\AJ	Ok
2	I.BLK	FF016129.D	10 Jul 2025 09:16	YP\AJ	Ok
3	100 TRPH STD	FF016130.D	10 Jul 2025 09:46	YP\AJ	Ok
4	50 TRPH STD	FF016131.D	10 Jul 2025 10:15	YP\AJ	Ok
5	20 TRPH STD	FF016132.D	10 Jul 2025 10:45	YP\AJ	Ok
6	10 TRPH STD	FF016133.D	10 Jul 2025 11:15	YP\AJ	Ok
7	5 TRPH STD	FF016134.D	10 Jul 2025 12:44	YP\AJ	Ok
8	FF071025ICV	FF016135.D	10 Jul 2025 13:13	YP\AJ	Ok
9	I.BLK	FF016136.D	10 Jul 2025 13:43	YP\AJ	Ok
10	50 PPM TRPH STD	FF016137.D	10 Jul 2025 15:12	YP\AJ	Ok
11	RT MARKER	FF016138.D	10 Jul 2025 15:42	YP\AJ	Ok
12	Q2473-04	FF016139.D	10 Jul 2025 16:12	YP\AJ	Ok
13	Q2473-04MS	FF016140.D	10 Jul 2025 16:42	YP\AJ	Ok,M
14	Q2473-04MSD	FF016141.D	10 Jul 2025 17:12	YP\AJ	Ok,M
15	Q2486-01	FF016142.D	10 Jul 2025 17:42	YP\AJ	Ok,M
16	Q2504-01	FF016143.D	10 Jul 2025 18:12	YP\AJ	Ok
17	I.BLK	FF016144.D	10 Jul 2025 18:41	YP\AJ	Ok,M
18	50 PPM TRPH STD	FF016145.D	10 Jul 2025 20:11	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071625

Review By	yogesh	Review On	7/16/2025 1:35:39 PM
Supervise By		Supervise On	
SubDirectory	FF071625	HP Acquire Method	HP Processing Method FF071025
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM	PP24469		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF016161.D	16 Jul 2025 11:07	YP\AJ	Ok
2	I.BLK	FF016162.D	16 Jul 2025 12:08	YP\AJ	Ok,NS
3	50 PPM TRPH STD	FF016163.D	16 Jul 2025 12:40	YP\AJ	Ok
4	RT MARKER	FF016164.D	16 Jul 2025 13:18	YP\AJ	Ok
5	Q2529-04	FF016165.D	16 Jul 2025 14:18	YP\AJ	Ok
6	Q2529-05	FF016166.D	16 Jul 2025 14:47	YP\AJ	Ok
7	Q2529-06	FF016167.D	16 Jul 2025 15:17	YP\AJ	Dilution
8	Q2529-07	FF016168.D	16 Jul 2025 15:47	YP\AJ	Ok
9	Q2529-08	FF016169.D	16 Jul 2025 16:17	YP\AJ	Ok,NS
10	I.BLK	FF016170.D	16 Jul 2025 16:47	YP\AJ	Ok
11	50 PPM TRPH STD	FF016171.D	16 Jul 2025 17:16	YP\AJ	Ok
12	Q2529-09	FF016172.D	16 Jul 2025 18:16	YP\AJ	Ok
13	Q2529-10	FF016173.D	16 Jul 2025 18:46	YP\AJ	Ok
14	Q2543-01	FF016174.D	16 Jul 2025 19:16	YP\AJ	Ok
15	Q2543-02	FF016175.D	16 Jul 2025 19:46	YP\AJ	Ok,NS
16	Q2543-03	FF016176.D	16 Jul 2025 20:16	YP\AJ	Ok
17	I.BLK	FF016177.D	16 Jul 2025 20:45	YP\AJ	Ok
18	50 PPM TRPH STD	FF016178.D	16 Jul 2025 22:44	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG070925

Review By	yogesh	Review On	7/9/2025 12:27:07 PM
Supervise By	mohammad	Supervise On	7/11/2025 1:37:09 AM
SubDirectory	FG070925	HP Acquire Method	HP Processing Method FG070925
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	FG016262.D	09 Jul 2025 09:03	YP\AJ	Ok
2	I.BLK	FG016263.D	09 Jul 2025 09:32	YP\AJ	Ok
3	100 TRPH STD	FG016264.D	09 Jul 2025 10:02	YP\AJ	Ok
4	50 TRPH STD	FG016265.D	09 Jul 2025 11:05	YP\AJ	Ok
5	20 TRPH STD	FG016266.D	09 Jul 2025 11:34	YP\AJ	Ok
6	10 TRPH STD	FG016267.D	09 Jul 2025 12:04	YP\AJ	Ok
7	5 TRPH STD	FG016268.D	09 Jul 2025 12:34	YP\AJ	Ok
8	FG070925ICV	FG016269.D	09 Jul 2025 13:04	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG071625

Review By	yogesh	Review On	7/16/2025 1:37:53 PM
Supervise By		Supervise On	
SubDirectory	FG071625	HP Acquire Method	HP Processing Method FG070925
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM	PP24469		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FG016299.D	16 Jul 2025 11:07	YP\AJ	Ok
2	I.BLK	FG016300.D	16 Jul 2025 12:08	YP\AJ	Ok
3	50 PPM TRPH STD	FG016301.D	16 Jul 2025 12:40	YP\AJ	Ok
4	RT MARKER	FG016302.D	16 Jul 2025 13:18	YP\AJ	Ok
5	PB168878BL	FG016303.D	16 Jul 2025 14:18	YP\AJ	Ok
6	PB168878BS	FG016304.D	16 Jul 2025 14:47	YP\AJ	Ok
7	Q2529-01	FG016305.D	16 Jul 2025 15:17	YP\AJ	Ok
8	Q2529-02	FG016306.D	16 Jul 2025 15:47	YP\AJ	Ok
9	Q2529-03	FG016307.D	16 Jul 2025 16:17	YP\AJ	Ok
10	I.BLK	FG016308.D	16 Jul 2025 16:47	YP\AJ	Ok
11	50 PPM TRPH STD	FG016309.D	16 Jul 2025 17:16	YP\AJ	Ok
12	Q2543-04	FG016310.D	16 Jul 2025 18:16	YP\AJ	Ok
13	Q2543-04MS	FG016311.D	16 Jul 2025 18:46	YP\AJ	Ok
14	Q2543-04MSD	FG016312.D	16 Jul 2025 19:16	YP\AJ	Ok
15	I.BLK	FG016313.D	16 Jul 2025 19:46	YP\AJ	Ok
16	50 PPM TRPH STD	FG016314.D	16 Jul 2025 20:45	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071025

Review By	yogesh	Review On	7/10/2025 3:10:07 PM
Supervise By	mohammad	Supervise On	7/11/2025 9:10:05 AM
SubDirectory	FF071025	HP Acquire Method	HP Processing Method
			FF071025
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC	PP24469		
Internal Standard/PEM			
ICV/I.BLK	PP24468,PP24473		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF016128.D	10 Jul 2025 08:46		YPIAJ	Ok
2	I.BLK		FF016129.D	10 Jul 2025 09:16		YPIAJ	Ok
3	100 TRPH STD		FF016130.D	10 Jul 2025 09:46		YPIAJ	Ok
4	50 TRPH STD		FF016131.D	10 Jul 2025 10:15		YPIAJ	Ok
5	20 TRPH STD		FF016132.D	10 Jul 2025 10:45		YPIAJ	Ok
6	10 TRPH STD		FF016133.D	10 Jul 2025 11:15		YPIAJ	Ok
7	5 TRPH STD		FF016134.D	10 Jul 2025 12:44		YPIAJ	Ok
8	FF071025ICV		FF016135.D	10 Jul 2025 13:13		YPIAJ	Ok
9	I.BLK		FF016136.D	10 Jul 2025 13:43		YPIAJ	Ok
10	50 PPM TRPH STD		FF016137.D	10 Jul 2025 15:12		YPIAJ	Ok
11	RT MARKER		FF016138.D	10 Jul 2025 15:42		YPIAJ	Ok
12	Q2473-04		FF016139.D	10 Jul 2025 16:12		YPIAJ	Ok
13	Q2473-04MS		FF016140.D	10 Jul 2025 16:42		YPIAJ	Ok,M
14	Q2473-04MSD		FF016141.D	10 Jul 2025 17:12		YPIAJ	Ok,M
15	Q2486-01		FF016142.D	10 Jul 2025 17:42		YPIAJ	Ok,M
16	Q2504-01		FF016143.D	10 Jul 2025 18:12		YPIAJ	Ok
17	I.BLK		FF016144.D	10 Jul 2025 18:41		YPIAJ	Ok,M
18	50 PPM TRPH STD		FF016145.D	10 Jul 2025 20:11		YPIAJ	Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071025

Review By	yogesh	Review On	7/10/2025 3:10:07 PM	
Supervise By	mohammad	Supervise On	7/11/2025 9:10:05 AM	
SubDirectory	FF071025	HP Acquire Method	HP Processing Method	FF071025
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			

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071625

Review By	yogesh	Review On	7/16/2025 1:35:39 PM
Supervise By		Supervise On	
SubDirectory	FF071625	HP Acquire Method	HP Processing Method FF071025
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC	PP24469		
Internal Standard/PEM			
ICV/I.BLK	PP24468,PP24473		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF016161.D	16 Jul 2025 11:07		YP\AJ	Ok
2	I.BLK		FF016162.D	16 Jul 2025 12:08		YP\AJ	Ok,NS
3	50 PPM TRPH STD		FF016163.D	16 Jul 2025 12:40		YP\AJ	Ok
4	RT MARKER		FF016164.D	16 Jul 2025 13:18		YP\AJ	Ok
5	Q2529-04		FF016165.D	16 Jul 2025 14:18		YP\AJ	Ok
6	Q2529-05		FF016166.D	16 Jul 2025 14:47		YP\AJ	Ok
7	Q2529-06		FF016167.D	16 Jul 2025 15:17	need 2x dilution	YP\AJ	Dilution
8	Q2529-07		FF016168.D	16 Jul 2025 15:47		YP\AJ	Ok
9	Q2529-08		FF016169.D	16 Jul 2025 16:17		YP\AJ	Ok,NS
10	I.BLK		FF016170.D	16 Jul 2025 16:47		YP\AJ	Ok
11	50 PPM TRPH STD		FF016171.D	16 Jul 2025 17:16		YP\AJ	Ok
12	Q2529-09		FF016172.D	16 Jul 2025 18:16		YP\AJ	Ok
13	Q2529-10		FF016173.D	16 Jul 2025 18:46		YP\AJ	Ok
14	Q2543-01		FF016174.D	16 Jul 2025 19:16		YP\AJ	Ok
15	Q2543-02		FF016175.D	16 Jul 2025 19:46		YP\AJ	Ok,NS
16	Q2543-03		FF016176.D	16 Jul 2025 20:16		YP\AJ	Ok
17	I.BLK		FF016177.D	16 Jul 2025 20:45		YP\AJ	Ok
18	50 PPM TRPH STD		FF016178.D	16 Jul 2025 22:44		YP\AJ	Ok

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF071625

Review By	yogesh	Review On	7/16/2025 1:35:39 PM
Supervise By		Supervise On	
SubDirectory	FF071625	HP Acquire Method	HP Processing Method FF071025
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		

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG070925

Review By	yogesh	Review On	7/9/2025 12:27:07 PM
Supervise By	mohammad	Supervise On	7/11/2025 1:37:09 AM
SubDirectory	FG070925	HP Acquire Method	HP Processing Method FG070925

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		FG016262.D	09 Jul 2025 09:03		YP\AJ	Ok
2	I.BLK		FG016263.D	09 Jul 2025 09:32		YP\AJ	Ok
3	100 TRPH STD		FG016264.D	09 Jul 2025 10:02		YP\AJ	Ok
4	50 TRPH STD		FG016265.D	09 Jul 2025 11:05		YP\AJ	Ok
5	20 TRPH STD		FG016266.D	09 Jul 2025 11:34		YP\AJ	Ok
6	10 TRPH STD		FG016267.D	09 Jul 2025 12:04		YP\AJ	Ok
7	5 TRPH STD		FG016268.D	09 Jul 2025 12:34		YP\AJ	Ok
8	FG070925ICV		FG016269.D	09 Jul 2025 13:04		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG071625

Review By	yogesh	Review On	7/16/2025 1:37:53 PM
Supervise By		Supervise On	
SubDirectory	FG071625	HP Acquire Method	HP Processing Method FG070925
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC	PP24469		
Internal Standard/PEM			
ICV/I.BLK	PP24468,PP24473		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG016299.D	16 Jul 2025 11:07		YPIAJ	Ok
2	I.BLK		FG016300.D	16 Jul 2025 12:08		YPIAJ	Ok
3	50 PPM TRPH STD		FG016301.D	16 Jul 2025 12:40		YPIAJ	Ok
4	RT MARKER		FG016302.D	16 Jul 2025 13:18		YPIAJ	Ok
5	PB168878BL		FG016303.D	16 Jul 2025 14:18		YPIAJ	Ok
6	PB168878BS		FG016304.D	16 Jul 2025 14:47		YPIAJ	Ok
7	Q2529-01		FG016305.D	16 Jul 2025 15:17		YPIAJ	Ok
8	Q2529-02		FG016306.D	16 Jul 2025 15:47		YPIAJ	Ok
9	Q2529-03		FG016307.D	16 Jul 2025 16:17		YPIAJ	Ok
10	I.BLK		FG016308.D	16 Jul 2025 16:47		YPIAJ	Ok
11	50 PPM TRPH STD		FG016309.D	16 Jul 2025 17:16		YPIAJ	Ok
12	Q2543-04		FG016310.D	16 Jul 2025 18:16		YPIAJ	Ok
13	Q2543-04MS		FG016311.D	16 Jul 2025 18:46		YPIAJ	Ok
14	Q2543-04MSD		FG016312.D	16 Jul 2025 19:16		YPIAJ	Ok
15	I.BLK		FG016313.D	16 Jul 2025 19:46		YPIAJ	Ok
16	50 PPM TRPH STD		FG016314.D	16 Jul 2025 20:45		YPIAJ	Ok

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/10/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:10
In Date: 07/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC:LB136409

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
Q2534-01	VNJ-206#1	8	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-02	VNJ-206#2	9	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-03	VNJ-224#1	10	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-04	VNJ-224#2	11	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-05	VNJ-232#1	12	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-06	VNJ-232#2	13	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-07	VNJ-227#1	14	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2534-08	VNJ-227#2	15	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2535-03	70225-PIPE	1	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2535-04	70725-PIPE	2	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2537-01	TR-04-7.9-2025	42	1.18	10.34	11.52	10.54	90.5	
Q2537-02	TR-04-7.9-2025	43	1.15	10.83	11.98	10.83	89.4	
Q2538-01	70325-A	3	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2538-02	70325-B	4	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2538-03	70325-C	5	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2539-01	HACKENSACK	6	1.14	10.40	11.54	10.9	93.8	
Q2539-02	HACKENSACK-EPH 2	7	1.15	10.84	11.99	11.31	93.7	
Q2541-01	HED664T-1-1	16	1.00	1.00	2.00	2.00	100.0	PILC
Q2541-02	HED664T-1-2	17	1.00	1.00	2.00	2.00	100.0	PILC
Q2542-01	VNJ-245	18	1.15	10.18	11.33	10.88	95.6	
Q2542-02	VNJ-245-E2	19	1.18	10.32	11.5	10.84	93.6	
Q2543-01	TP-41	20	1.16	10.61	11.77	9.86	82.0	
Q2543-02	TP-49	21	1.19	10.08	11.27	8.64	73.9	
Q2543-03	TP-23	22	1.15	10.00	11.15	9.65	85.0	
Q2543-04	TP-23-99	23	1.13	10.32	11.45	9.94	85.4	
Q2544-01	Y 2307-0174-1-1	24	1.00	1.00	2.00	2.00	100.0	PILC
Q2544-02	Y 2307-0174-1-2	25	1.00	1.00	2.00	2.00	100.0	PILC
Q2544-03	BC 258874-1-1	26	1.00	1.00	2.00	2.00	100.0	PILC

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 7/10/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:10
In Date: 07/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:25
Out Date: 07/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC:LB136409

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
Q2544-04	BC 258874-1-2	27	1.00	1.00	2.00	2.00	100.0	PILC
Q2544-05	BC 274857-1-1	28	1.00	1.00	2.00	2.00	100.0	PILC
Q2544-06	BC 274857-1-2	29	1.00	1.00	2.00	2.00	100.0	PILC
Q2546-01	HD-02-7-9-2025	44	1.19	10.57	11.76	11.15	94.2	
Q2546-02	HD-02-7-9-2025	45	1.12	10.64	11.76	11.19	94.6	
Q2546-03	HD-02-7-9-2025	46	1.14	10.85	11.99	11.66	97.0	
Q2549-01	BC271242-1-1	30	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-02	BC271242-1-2	31	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-03	BC226734-1-1	32	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-04	BC226734-1-2	33	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-05	BC226734-2-1	34	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-06	BC226734-2-2	35	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-07	JEI484M-1-1	36	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-08	JEI484M-1-2	37	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-09	HZA852R-1-1	38	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-10	HZA852R-1-2	39	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-11	HZA852R-2-1	40	1.00	1.00	2.00	2.00	100.0	PILC
Q2549-12	HZA852R-2-2	41	1.00	1.00	2.00	2.00	100.0	PILC
Q2551-02	VNJ-204	47	1.11	10.49	11.6	10.8	92.4	
Q2551-03	VNJ-204-EPH	48	1.15	11.19	12.34	11.26	90.3	

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

WORKLIST(Hardcopy Internal Chain)

VB 136409

Worklist Name : %1-070925

Worklist ID : 190592

Department : Wet-Chemistry

Date : 07-09-2025 07:49:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2534-01	VNJ-206#1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-02	VNJ-206#2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-03	VNJ-224#1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-04	VNJ-224#2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-05	VNJ-232#1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-06	VNJ-232#2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-07	VNJ-227#1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2534-08	VNJ-227#2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O31	07/09/2025	Chemtech -SO
Q2535-03	70225-PIPE	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/09/2025	Chemtech -SO
Q2535-04	70725-PIPE	Solid	Percent Solids	Cool 4 deg C	PSEG03	O21	07/09/2025	Chemtech -SO
Q2537-01	TR-04-7.9-2025	Solid	Percent Solids	Cool 4 deg C	PSEG03	O33	07/09/2025	Chemtech -SO
Q2537-02	TR-04-7.9-2025	Solid	Percent Solids	Cool 4 deg C	PSEG03	O33	07/09/2025	Chemtech -SO
Q2538-01	70325-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2538-02	70325-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2538-03	70325-C	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2539-01	HACKENSACK	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2539-02	HACKENSACK-EPH 2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2541-01	HED664T-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2541-02	HED664T-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O41	07/09/2025	Chemtech -SO
Q2542-01	VNJ-245	Solid	Percent Solids	Cool 4 deg C	PSEG03	O32	07/09/2025	Chemtech -SO
Q2542-02	VNJ-245-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O32	07/09/2025	Chemtech -SO

Date/Time 07/09/25 15:00

Raw Sample Received by: SP wley

Raw Sample Relinquished by: JDCsm

Date/Time 07/09/25

Raw Sample Received by: JDCsm

Raw Sample Relinquished by: SP wley

WORKLIST(Hardcopy Internal Chain)

183136409

WorkList Name : %1-070925

WorkList ID : 190592

Department : Wet-Chemistry

Date : 07-09-2025 07:49:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2543-01	TP-41	Solid	Percent Solids	Cool 4 deg C	CAMP02	O42	07/08/2025	Chemtech -SO
Q2543-02	TP-49	Solid	Percent Solids	Cool 4 deg C	CAMP02	O42	07/09/2025	Chemtech -SO
Q2543-03	TP-23	Solid	Percent Solids	Cool 4 deg C	CAMP02	O42	07/09/2025	Chemtech -SO
Q2543-04	TP-23-99	Solid	Percent Solids	Cool 4 deg C	CAMP02	O42	07/09/2025	Chemtech -SO
Q2544-01	Y 2307-0174-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2544-02	Y 2307-0174-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2544-03	BC 258874-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2544-04	BC 258874-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2544-05	BC 274857-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2544-06	BC 274857-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	O22	07/09/2025	Chemtech -SO
Q2546-01	HD-02-7-9-2025	Solid	Percent Solids	Cool 4 deg C	PSEG05	O23	07/09/2025	Chemtech -SO
Q2546-02	HD-02-7-9-2025	Solid	Percent Solids	Cool 4 deg C	PSEG05	O23	07/09/2025	Chemtech -SO
Q2546-03	HD-02-7-9-2025	Solid	Percent Solids	Cool 4 deg C	PSEG05	O23	07/09/2025	Chemtech -SO
Q2549-01	BC271242-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-02	BC271242-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-03	BC226734-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-04	BC226734-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-05	BC226734-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-06	BC226734-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-07	JEI484M-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-08	JEI484M-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO

Date/Time 07/09/25 15:00

Raw Sample Received by: R CWC

Raw Sample Relinquished by: JDCSM

Date/Time 07/09/25 17:20

Raw Sample Received by: JDCSM

Raw Sample Relinquished by: R CWC

WORKLIST(Hardcopy Internal Chain)

136409

WorkList Name : %1-070925

WorkList ID : 190592

Department : Wet-Chemistry

Date : 07-09-2025 07:49:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2549-09	HZA852R-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-10	HZA852R-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-11	HZA852R-2-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2549-12	HZA852R-2-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	--Sele	07/09/2025	Chemtech -SO
Q2551-02	VNJ-204	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/09/2025	Chemtech -SO
Q2551-03	VNJ-204-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	O11	07/09/2025	Chemtech -SO

Date/Time 07/09/25 15:00

Raw Sample Received by: se wcy

Raw Sample Relinquished by: JDC Sm

Date/Time 07/09/25 17:20

Raw Sample Received by: JDC Sm

Raw Sample Relinquished by: se wcy

SOP ID: M3541-ASE Extraction-15

Clean Up SOP #: N/A

Extraction Start Date : 07/16/2025

Matrix : Solid

Extraction Start Time : 10:00

Weigh By: EH

Extraction By: RJ

Extraction End Date : 07/16/2025

Balance check: EH

Filter By: RJ

Extraction End Time : 13:10

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 ☐ Continuous Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	PP24583
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	EP2626
Baked Na2SO4	N/A	EP2625
Methylene Chloride	N/A	E3954
Sand	N/A	E3951
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210673.

KD Bath ID: N/A

Envap ID: NEVAP-02

KD Bath Temperature: N/A

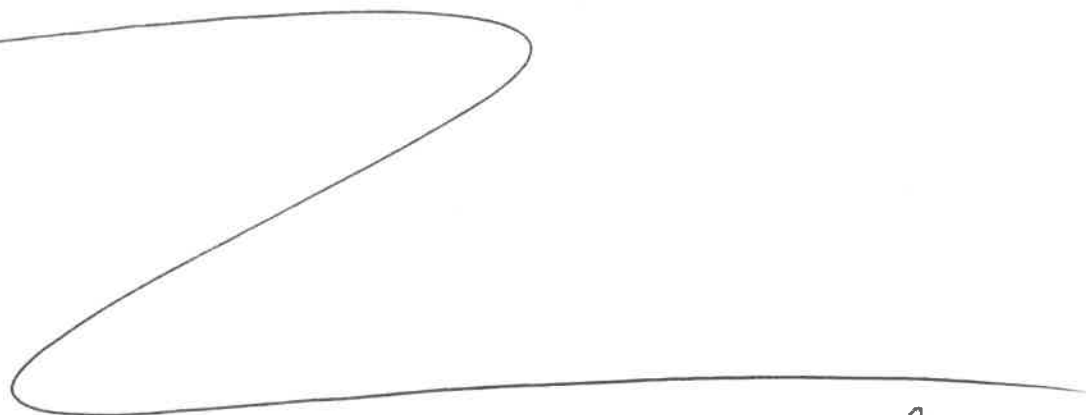
Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
7/16/25 13:15	RS (Ext Lab)	Y.P. Peshiy
	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-15

Concentration Date: 07/16/2025

Sample ID	Client Sample ID	Test	g/ mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB168878BL	PB168878BL	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1			U3-1
PB168878BS	PB168878BS	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1			2
Q2529-01	TP-91	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		3
Q2529-02	TP-80	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		4
Q2529-03	TP-79	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		5
Q2529-04	TP-95	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		6
Q2529-05	TP-98	Diesel Range Organics	30.08	N/A	ritesh	Evelyn	1	E		U6-1
Q2529-06	TP-102	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		2
Q2529-07	TP-101	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		3
Q2529-08	TP-89	Diesel Range Organics	30.07	N/A	ritesh	Evelyn	1	E		4
Q2529-09	TP-33	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		5
Q2529-10	TP-30	Diesel Range Organics	30.01	N/A	ritesh	Evelyn	1	E		6
Q2543-01	TP-41	Diesel Range Organics	30.03	N/A	ritesh	Evelyn	1	E		U1-1
Q2543-02	TP-49	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		2
Q2543-03	TP-23	Diesel Range Organics	30.04	N/A	ritesh	Evelyn	1	E		3
Q2543-04	TP-23-99	Diesel Range Organics	30.06	N/A	ritesh	Evelyn	1	E		4
Q2543-04MS	TP-23-99MS	Diesel Range Organics	30.05	N/A	ritesh	Evelyn	1	E		5
Q2543-04MS D	TP-23-99MSD	Diesel Range Organics	30.02	N/A	ritesh	Evelyn	1	E		6



 Rs
 7/16

1656-78
10:00

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2843 WorkList ID : 190761 Department : Extraction Date : 07-16-2025 09:03:51

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2529-01	TP-91	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/03/2025	8015D
Q2529-02	TP-80	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-03	TP-79	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-04	TP-95	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-05	TP-98	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-06	TP-102	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-07	TP-101	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-08	TP-89	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/07/2025	8015D
Q2529-09	TP-33	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/08/2025	8015D
Q2529-10	TP-30	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/08/2025	8015D
Q2543-01	TP-41	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O11	07/08/2025	8015D
Q2543-02	TP-49	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O42	07/08/2025	8015D
Q2543-03	TP-23	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O42	07/09/2025	8015D
Q2543-04	TP-23-99	Solid	Diesel Range Organics	Cool 4 deg C	CAMP02	O42	07/09/2025	8015D

Date/Time 07/16/25 9:55
Raw Sample Received by: RS CERA-026
Raw Sample Relinquished by: SD CSM

Date/Time 07/16/25 10:20
Raw Sample Received by: SD CSM
Raw Sample Relinquished by: RS CERA-026

Prep Standard - Chemical Standard Summary

Order ID : Q2543

Test : Diesel Range Organics

Prepbatch ID : PB168878,

Sequence ID/Qc Batch ID: FG071625,FF071625,

Standard ID :

EP2625,EP2626,PP24467,PP24468,PP24469,PP24470,PP24471,PP24472,PP24473,PP24583,PP24596,

Chemical ID :

E3551,E3926,E3930,E3931,E3949,E3951,E3954,P11951,P11952,P13106,P13108,P13477,P13479,P13483,P13484,P13485,P13486,P13938,P13945,

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>
3923	Baked Sodium Sulfate	EP2625	07/15/2025	12/04/2025	RUPESHKUMAR SHAH	Extraction_SC ALE_2 (EX-SC-2)	None	Riteshkumar Patel 07/15/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2626	07/15/2025	01/15/2026	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 07/15/2025

FROM 8000.00000ml of E3949 + 8000.00000ml of E3954 = Final Quantity: 16000.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
433	100/100 PPM DRO (Restek)	PP24467	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 1.00000ml of P11951 + 1.00000ml of P11952 + 1.00000ml of P13477 + 7.00000ml of E3926 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3979	100/100 PPM DRO ICV (RESTEK)	PP24468	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 1.00000ml of P13106 + 1.00000ml of P13108 + 1.00000ml of P13479 + 7.00000ml of E3926 = Final Quantity: 10.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
435	50 PPM ICC DRO STD (Restek)	PP24469	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.50000ml of E3926 + 0.50000ml of PP24467 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
437	20 PPM ICC DRO STD (Restek)	PP24470	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.80000ml of E3926 + 0.20000ml of PP24467 = Final Quantity: 1.000 ml

Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
438	10 PPM ICC DRO STD (Restek)	PP24471	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.90000ml of E3926 + 0.10000ml of PP24467 = Final Quantity: 1.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
439	5 PPM ICC DRO STD (Restek)	PP24472	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza
								05/08/2025

FROM 0.90000ml of E3926 + 0.10000ml of PP24469 = Final Quantity: 1.000 ml

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>
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>
3609	20 PPM DRO SPIKE SOLUTION (RESTEK)	PP24583	05/16/2025	11/16/2025	Rahul Chavli	None	None	Yogesh Patel
								05/22/2025

FROM 0.70000ml of P13945 + 1.30000ml of P13938 + 48.00000ml of E3930 = Final Quantity: 50.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
147	20 PPM DRO Surrogate Spike Solution	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 #
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	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

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)	24H2762008	04/18/2027	07/08/2025 / RITESHKUMAR	07/03/2025 / RUPESH	E3949

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)	25A2756718	12/31/2028	07/09/2025 / RUPESH	04/28/2020 / RUPESH	E3951

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25B1862001	03/19/2026	07/14/2025 / RUPESH	06/11/2025 / RUPESH	E3954

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	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	10/22/2025	04/22/2025 / yogesh	07/24/2024 / yogesh	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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0217113	11/16/2025	05/16/2025 / Rahul	03/07/2025 / yogesh	P13938

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	A0217113	11/16/2025	05/16/2025 / Rahul	03/07/2025 / yogesh	P13945



**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)

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.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 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 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Reed on 7/2/25

E3949

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



Material	BDH9274-2.5KG
Material Description	BDH SAND STDD OTTAWA W+I 2.5KG
Grade	NOT APPLICABLE
Batch	25A2756718
Reassay Date	12/31/2028
CAS Number	14808-60-7
Molecular Formula	SiO ₂
Molecular Mass	60.09
Date of Manufacture	12/05/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	Beige granules.	Beige granules.
Moisture	<= 0.1 %	0.1 %
Particle Size 30-40 mesh	>= 80 %	99 %
CUSTOMER PART # BDH9274-2.5KG		

Received on 1/12/25.

E3951

Internal ID #: 793

Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.

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



Material No.: 9266-A4
Batch No.: 25B1862001
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 HeptachlorEpoxide) 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

RS
7/14/25

E3954

Jamie Croak
Director Quality Operations, Bioscience Production



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

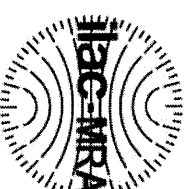
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description :

Florida TRPH Standard

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

Container Size :

2 mL

Pkg Amt: > 1 mL

Expiration Date :

July 31, 2029

Storage: 25°C nominal

Handling:

Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

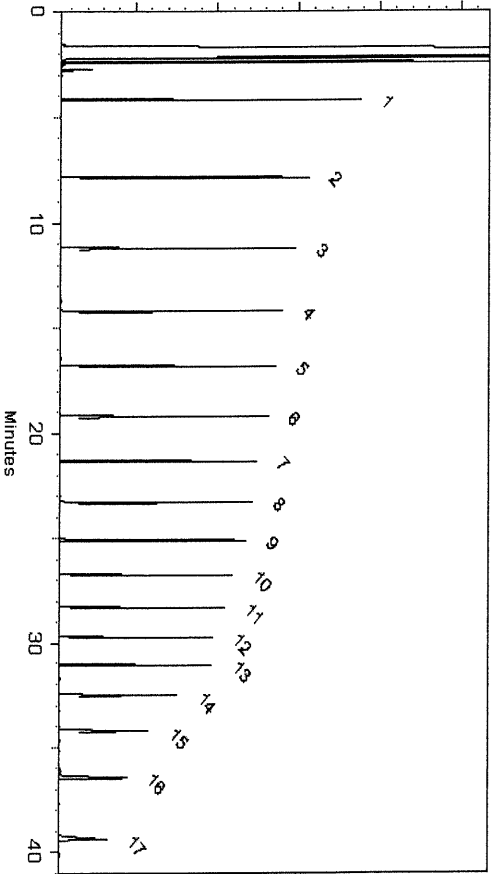
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

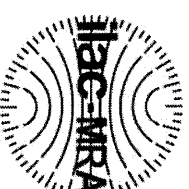
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

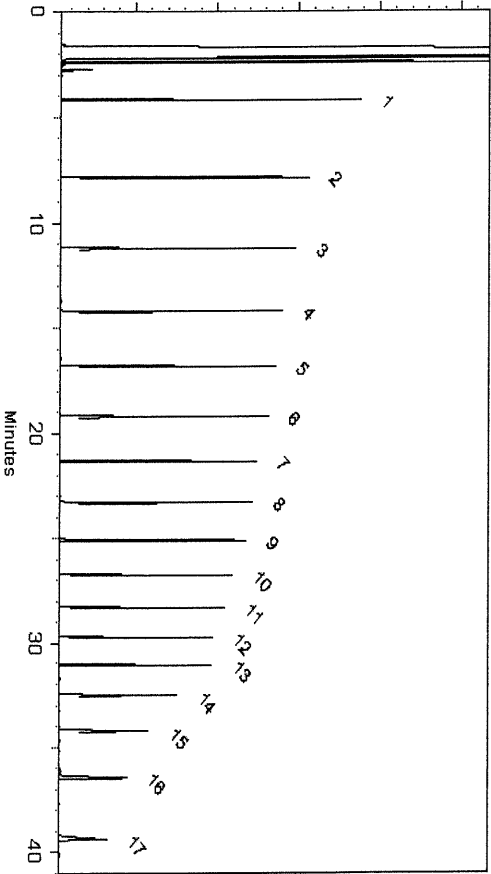
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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.)

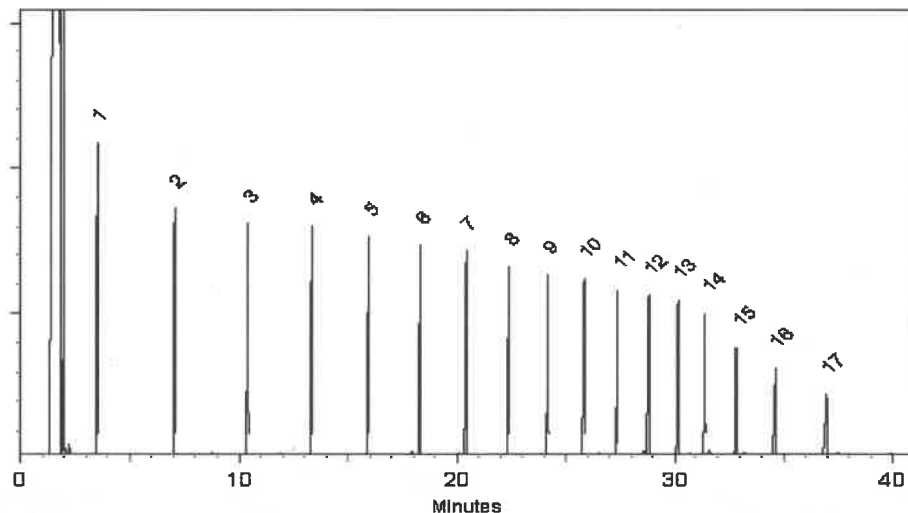
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

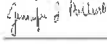


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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.)

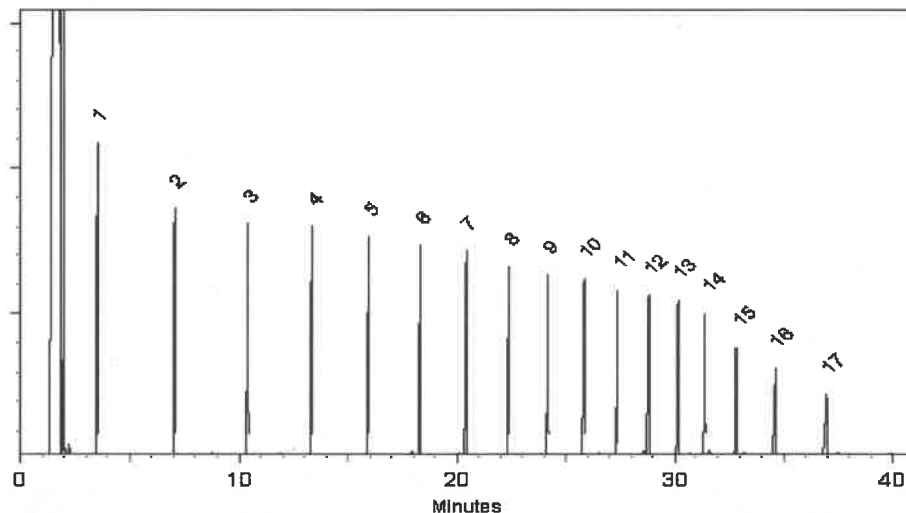
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

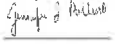


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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 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

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

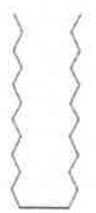
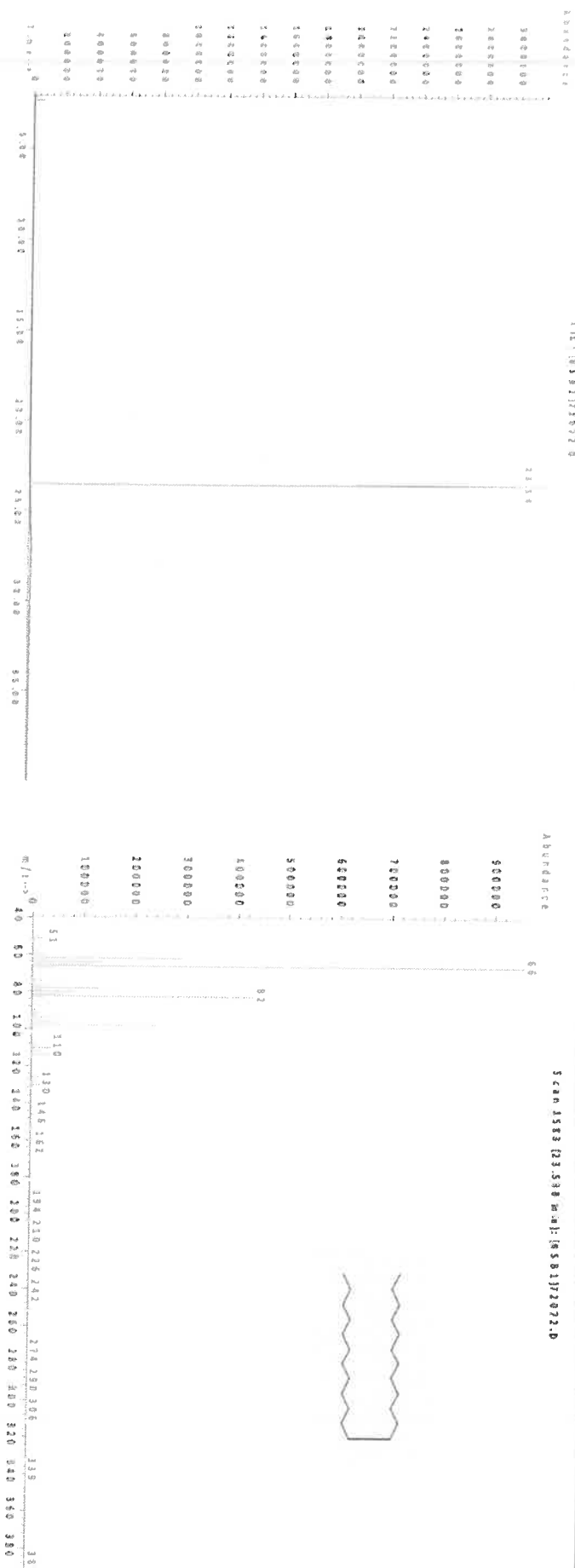


CERTIFIED WEIGHT REPORT

Part Number: 72072		Solvent(s): Methylene chloride		Lot# 105345
Lot Number: 101122				
Description: n-Tetracosane-d50				
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		Balance Uncertainty 5E-05		
		Flask Uncertainty 0.058		
Handwritten: P13437, 13496, 07/24/24, Y.F.				
Formulated By: Prashant Chauhan		DATE 101122		
Reviewed By: Pedro L. Rentas		DATE 101122		

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

DATE: 070716
DATE: 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

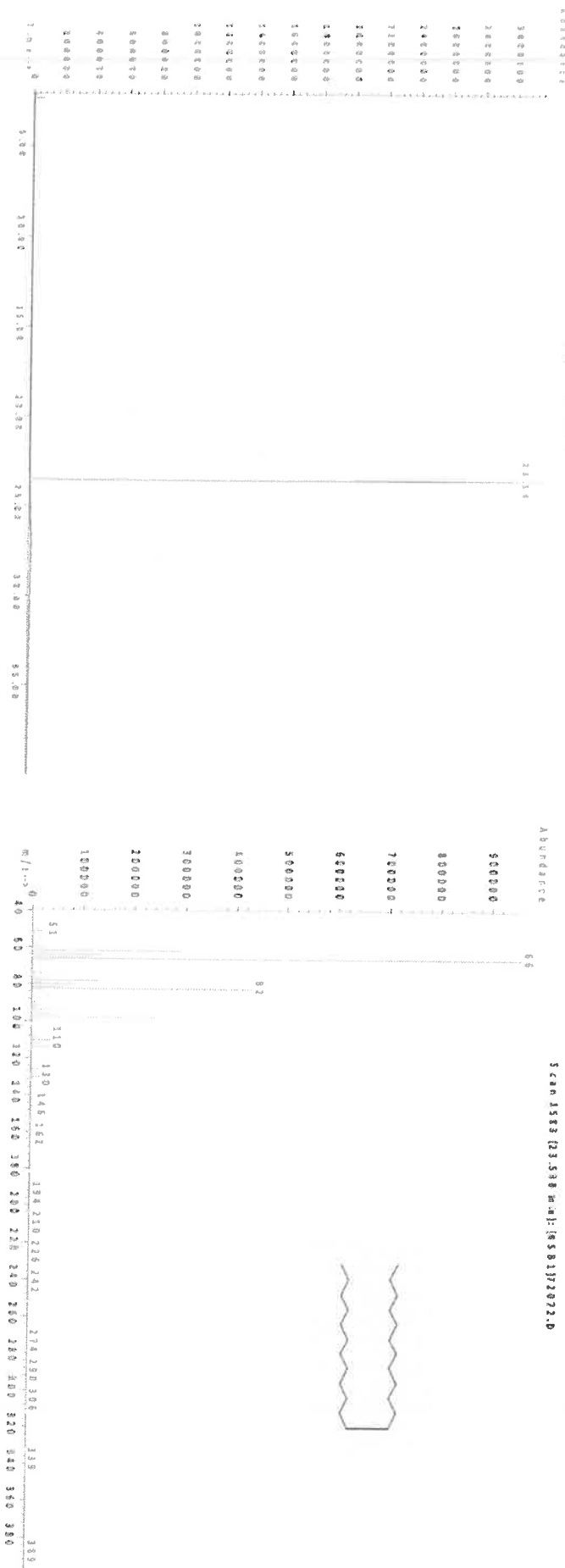
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 070716

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

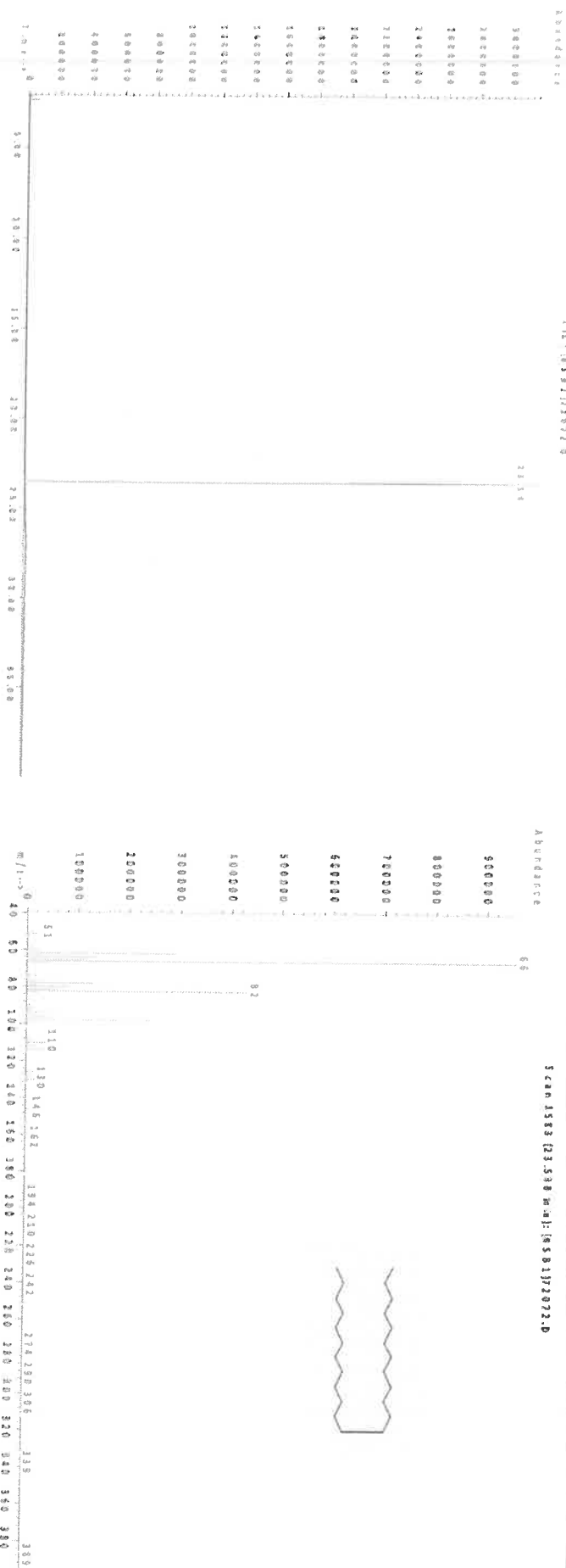
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

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.

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www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

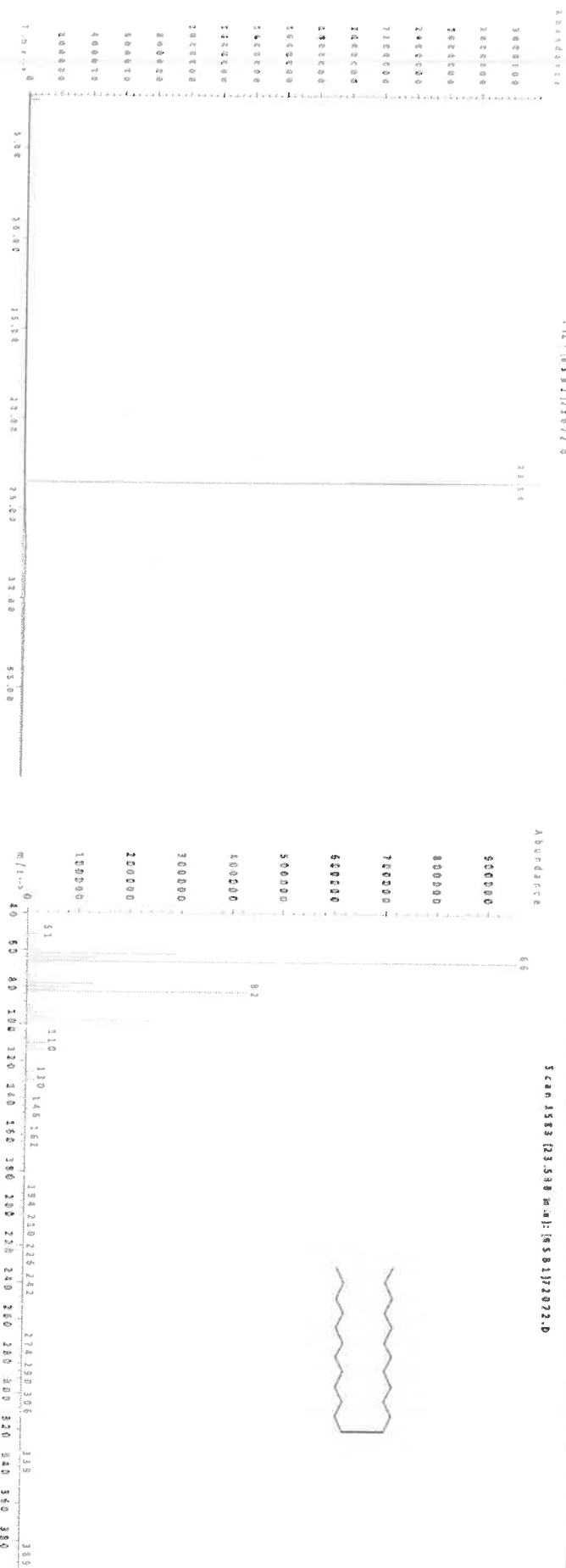
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

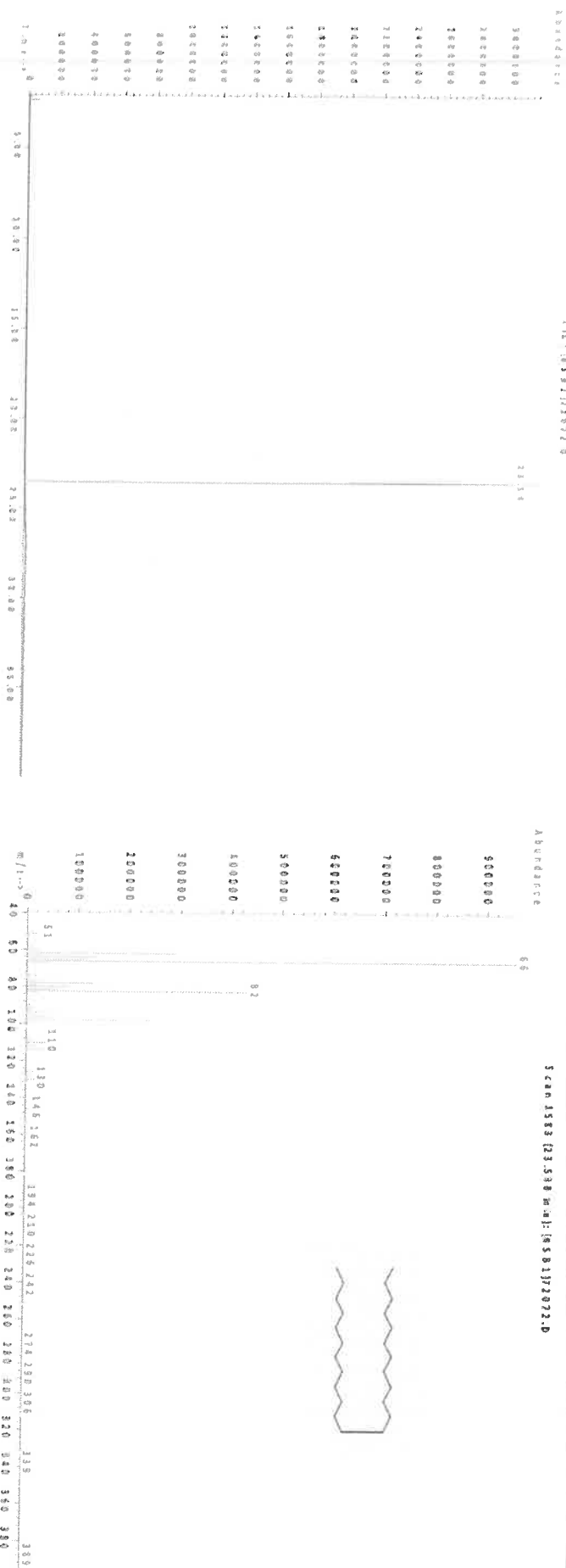
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

Absolute Standards, Inc.
800-368-1131
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/MS2", Method "GC-MS2".
Analyzed using Method "GC-MS2".

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

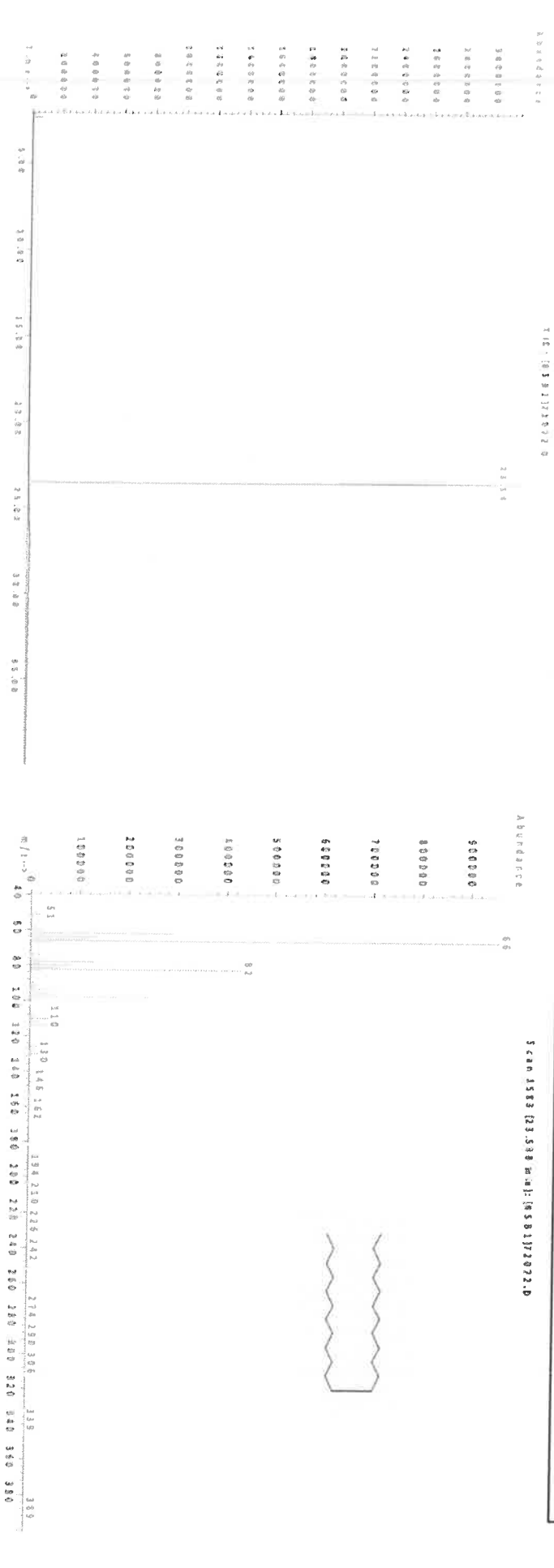
Page 2 of 2



CERTIFIED WEIGHT REPORT

Part Number: 72072		Solvent(s): Methylene chloride		Lot# 105345
Lot Number: 101122				
Description: n-Tetracosane-d50				
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		Balance Uncertainty 5E-05		
		Flask Uncertainty 0.058		
Handwritten: 13437, 13496, 07/24/24, Y.F.				
Formulated By: Prashant Chauhan		DATE 101122		
Reviewed By: Pedro L. Rentas		DATE 101122		

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).



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.: A0217113

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : October 31, 2031

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

P031937
*
P031946
Y.P.
03/07/25

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	SHBR0789	99%	502.0 µg/mL	+/- 12.9685
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	501.5 µg/mL	+/- 12.9555
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	502.5 µg/mL	+/- 12.9814
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	500.5 µg/mL	+/- 12.9297
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	500.0 µg/mL	+/- 12.9168
6	n-Octadecane (C18)	593-45-3	UB5NG	99%	500.5 µg/mL	+/- 12.9297
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	500.0 µg/mL	+/- 12.9177
8	n-Docosane (C22)	629-97-0	MKCQ3882	99%	500.5 µg/mL	+/- 12.9297
9	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	500.5 µg/mL	+/- 12.9297
10	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	502.0 µg/mL	+/- 12.9685
11	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	501.0 µg/mL	+/- 12.9426
12	n-Triacontane (C30)	638-68-6	MKCV7007	98%	499.8 µg/mL	+/- 12.9116
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	500.0 µg/mL	+/- 12.9168
14	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	501.5 µg/mL	+/- 12.9555
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	500.5 µg/mL	+/- 12.9297
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	500.2 µg/mL	+/- 12.9209
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.5 µg/mL	+/- 13.0072

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.)

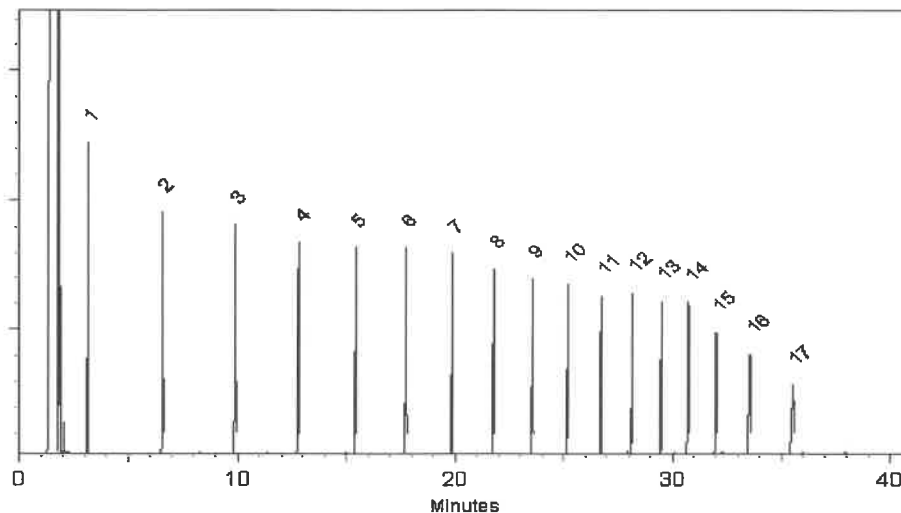
Inj. Temp:
250°C

Det. Temp:
330°C

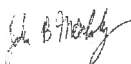
Det. Type:
FID

Split Vent:
2 ml/min.

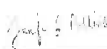
Inj. Vol
1µl



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.


Josh McCloskey - Operations Technician I

Date Mixed: 26-Sep-2024 **Balance Serial #** 1128353505


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 10-Oct-2024

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.: A0217113

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : October 31, 2031

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

P031937
*
P031946
Y.P.
03/07/25

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	SHBR0789	99%	502.0 µg/mL	+/- 12.9685
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	501.5 µg/mL	+/- 12.9555
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	502.5 µg/mL	+/- 12.9814
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	500.5 µg/mL	+/- 12.9297
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	500.0 µg/mL	+/- 12.9168
6	n-Octadecane (C18)	593-45-3	UB5NG	99%	500.5 µg/mL	+/- 12.9297
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	500.0 µg/mL	+/- 12.9177
8	n-Docosane (C22)	629-97-0	MKCQ3882	99%	500.5 µg/mL	+/- 12.9297
9	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	500.5 µg/mL	+/- 12.9297
10	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	502.0 µg/mL	+/- 12.9685
11	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	501.0 µg/mL	+/- 12.9426
12	n-Triacontane (C30)	638-68-6	MKCV7007	98%	499.8 µg/mL	+/- 12.9116
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	500.0 µg/mL	+/- 12.9168
14	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	501.5 µg/mL	+/- 12.9555
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	500.5 µg/mL	+/- 12.9297
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	500.2 µg/mL	+/- 12.9209
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.5 µg/mL	+/- 13.0072

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.)

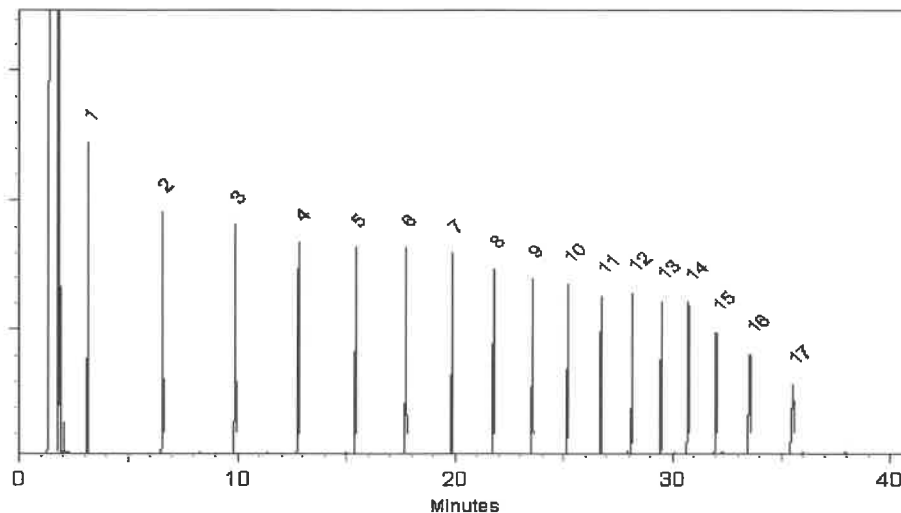
Inj. Temp:
250°C

Det. Temp:
330°C

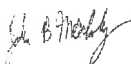
Det. Type:
FID

Split Vent:
2 ml/min.

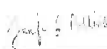
Inj. Vol
1µl



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.


Josh McCloskey - Operations Technician I

Date Mixed: 26-Sep-2024 **Balance Serial #** 1128353505


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 10-Oct-2024

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.



SHIPPING DOCUMENTS

CLIENT INFORMATION

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

CLIENT PROJECT INFORMATION

PROJECT NAME: **SOUTH RIVER WMA REPLACEMENT**
PROJECT NO.: **302781** LOCATION: **SOUTH RIVER, NJ**
PROJECT MANAGER: **FELIPE CONTRERAS**
e-mail: **ENCINASMA@CDMSMITH.COM**
PHONE: **7325904679** FAX:

CLIENT BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

TCL VIX
TCL SVIX
PCB
METALS
PEST
DO/GKO
HERBICIDES

PRESERVATIVES

COMMENTS

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	
1.	TP-41	5		X	7/8/25	1240	6	X	X	X	X	X	X	X			E
2.	TP-47	5		X	7/9/25	0755	6	X	X	X	X	X	X	X			E
3.	TP-23	5		X	7/9/25	0915	6	X	X	X	X	X	X	X			E
4.	TP-23-99	5		X	7/9/25	0920	6	X	X	X	X	X	X	X			E
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt:	COMPLIANT	NON COMPLIANT	COOLER TEMP	3.7 °C
1. <i>[Signature]</i>	7/9/25/1102	<i>[Signature]</i>	Comments:				
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:					
2. <i>[Signature]</i>							
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:					
3. <i>[Signature]</i>	7-9-25						

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



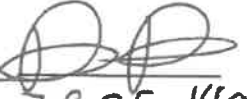
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

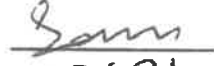
Order ID : Q2543	CAMP02	Order Date : 7/9/2025 12:26:00 PM	Project Mgr : Level 2
Client Name : CDM Smith		Project Name : South River WM Replacem	Report Type : Level 1
Client Contact : Marcie Ann Encinas		Receive DateTime : 7/9/2025 2:00:00 PM	EDD Type : EXCEL NOCLEANUP
Invoice Name : CDM Smith		Purchase Order : 13030	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
Q2543-01	TP-41	Solid	07/08/2025	12:40	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2543-02	TP-49	Solid	07/09/2025	07:55	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2543-03	TP-23	Solid	07/09/2025	09:15	VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2543-04	TP-23-99	Solid	07/09/2025	09:20	VOC-TCLVOA-10		8260D	10 Bus. Days	

DP 07/11/2025

Relinquished By: 

Date / Time: 7-9-25 1400

Received By: 

Date / Time: 07/09/25 14:00

Storage Area : VOA Refridgerator Room

Ag #6
I22