

Cover Page

Order ID : Q2618

Project ID : 166 Belmont Ave Belleville

Client : Sciacca General Contractors, LLC

Lab Sample Number

Q2618-01
Q2618-02
Q2618-03
Q2618-04
Q2618-05
Q2618-06
Q2618-07
Q2618-08

Client Sample Number

WASTE
VOC
1
2
3
4
5
6

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: 7/24/2025

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 #: Q2618

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: 07/24/2025

LAB CHRONICLE

OrderID:	Q2618	OrderDate:	7/16/2025 12:13:00 PM
Client:	Sciacca General Contractors, LLC	Project:	166 Belmont Ave Belleville
Contact:	Rosanne Scirica	Location:	--Select--,O11,VOA Lab

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2618-01	WASTE	SOIL	TPH GC	8015D	07/16/25	07/17/25	07/18/25	07/16/25
Q2618-03	1	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25
Q2618-04	2	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25
Q2618-05	3	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25
Q2618-06	4	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25
Q2618-07	5	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25
Q2618-08	6	Solid	EPH_F2	NJEPH	07/16/25	07/18/25	07/18/25	07/16/25



QC SUMMARY



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

SOIL TPH GC SURROGATE RECOVERY

Lab Name: Alliance

Client: Sciacca General Contractors, LLC

Lab Code: ACE

SDG No.: Q2618

CLIENT ID	S1	S2	S3	S4	TOT
	TETRACOSANE-d50				OUT
PIBLK-FG016328.D	91				0
PIBLK-FG016335.D	91				0
PIBLK-FG016341.D	91				0
PB168895BL	93				0
PB168895BS	85				0
WC-SOIL-20250711MS	101				0
WC-SOIL-20250711MSD	72				0
WASTE	58				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 TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:	<u>Alliance</u>	Client:	<u>Sciacca General Contractors, LLC</u>
Lab Code:	<u>ACE</u>	SDG No:	<u>Q2618</u>
Client Sample ID :	<u>WC-SOIL-20250711MS</u>	Datafile:	<u>FG016339.D</u>

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	14747	139000	458000	2163%	*	68-131



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

SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Alliance

Client: Sciacca General Contractors, LLC

Lab Code: ACE

SDG No: Q2618

Client Sample ID : WC-SOIL-20250711MSD

Datafile: FG016340.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	14766	139000	450000	2106%	*	68-131

MS/MSD % Recovery RPD : 2.67

SOIL TPH GC LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

Lab Name: Alliance

Client: Sciacca General Contractors, LLC

Lab Code: ACE

SDG No: Q2618

Client Sample ID : PB168895BS

Datafile: FG016338.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS (%)
Petroleum Hydrocarbons	11322	0	9614	85	68-131

4B
METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PB168895BL

Lab Name: Alliance

Contract: SCIA01

Lab Code: ACE

SDG NO.: Q2618

Lab File ID: FG016337.D

Lab Sample ID: PB168895BL

Instrument ID: FG

Date Extracted: 07/18/2025

Matrix: (soil/water) Soil

Date Analyzed: 07/18/25

Level: (low/med) low

Time Analyzed: 13:23

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

CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
WASTE	Q2618-01	FG016334.D	07/18/25
PB168895BS	PB168895BS	FG016338.D	07/18/25
WC-SOIL-20250711MS	Q2592-01MS	FG016339.D	07/18/25
WC-SOIL-20250711MSD	Q2592-01MSD	FG016340.D	07/18/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Sciaccia General Contractors, LLC	Date Collected:	07/16/25
Project:	166 Belmont Ave Belleville	Date Received:	07/16/25
Client Sample ID:	WASTE	SDG No.:	Q2618
Lab Sample ID:	Q2618-01	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	94.5
Sample Wt/Vol:	30.1	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	TPH GC
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016334.D	5	07/17/25 08:25	07/18/25 11:54	PB168895

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	66900		2030	14900	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	2.34		37 - 130	58%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016334.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 11:54
Operator : YP\AJ
Sample : Q2618-01 5X
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: Jul 19 01:58:39 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	234312	2.343 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

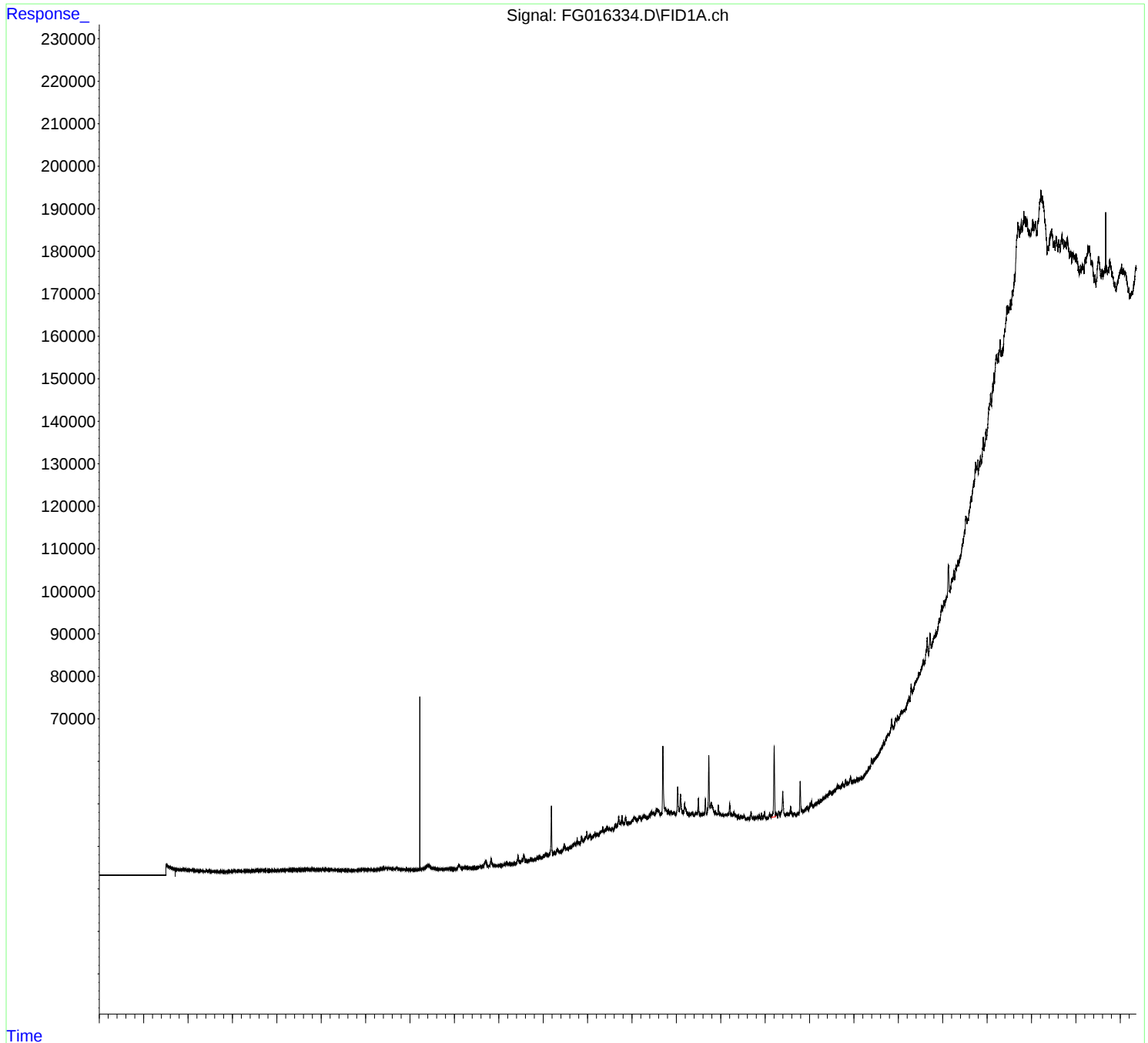
(m)=manual int.

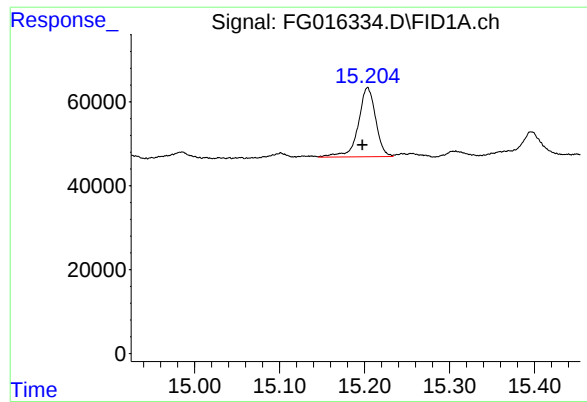
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016334.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 11:54
Operator : YP\AJ
Sample : Q2618-01 5X
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: Jul 19 01:58:39 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.: 15.204 min
Delta R.T.: 0.006 min
Response: 234312
Conc: 2.34 ug/ml

Instrument :
FID_G
ClientSampleId :
WASTE

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
 Data File : FG016334.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 11:54
 Sample : Q2618-01 5X
 Misc :
 ALS Vial : 24 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	2.036	2.006	2.051	BV	58	371	0.02%	0.001%
2	2.058	2.051	2.072	VV	196	1351	0.06%	0.003%
3	2.074	2.072	2.081	PV	133	425	0.02%	0.001%
4	2.087	2.081	2.109	VV	207	1268	0.06%	0.003%
5	2.125	2.109	2.162	PV	175	2645	0.13%	0.007%
6	2.168	2.162	2.174	PV	189	850	0.04%	0.002%
7	2.193	2.174	2.208	VV	195	2374	0.11%	0.006%
8	2.212	2.208	2.227	VV	161	1312	0.06%	0.003%
9	2.229	2.227	2.248	VV	191	1311	0.06%	0.003%
10	2.250	2.248	2.258	VV	187	543	0.03%	0.001%
11	2.282	2.258	2.297	VV	178	2527	0.12%	0.006%
12	2.323	2.297	2.355	VV	275	5853	0.28%	0.015%
13	2.359	2.355	2.377	VV	155	1248	0.06%	0.003%
14	2.408	2.377	2.436	PV	395	6579	0.31%	0.017%
15	2.442	2.436	2.452	VV	200	1825	0.09%	0.005%
16	2.458	2.452	2.470	VV	248	2770	0.13%	0.007%
17	2.476	2.470	2.498	VV	316	3736	0.18%	0.009%
18	2.502	2.498	2.537	VV	117	2275	0.11%	0.006%
19	2.540	2.537	2.572	VV	142	2094	0.10%	0.005%
20	2.574	2.572	2.584	VV	168	627	0.03%	0.002%
21	2.586	2.584	2.602	VV	156	1098	0.05%	0.003%
22	2.605	2.602	2.609	VV	91	380	0.02%	0.001%
23	2.612	2.609	2.615	VV	127	307	0.01%	0.001%
24	2.620	2.615	2.670	VV	102	2741	0.13%	0.007%
25	2.682	2.670	2.693	VV	127	949	0.05%	0.002%
26	2.706	2.693	2.722	VV	152	1838	0.09%	0.005%
27	2.736	2.722	2.760	VV	213	2964	0.14%	0.007%
28	2.764	2.760	2.769	VV	118	533	0.03%	0.001%
29	2.772	2.769	2.812	VV	179	3043	0.14%	0.008%
30	2.814	2.812	2.819	VV	179	428	0.02%	0.001%
31	2.827	2.819	2.832	VV	162	1087	0.05%	0.003%
32	2.837	2.832	2.861	VV	222	2138	0.10%	0.005%
33	2.883	2.861	2.890	PV	161	2042	0.10%	0.005%
34	2.907	2.890	2.912	VV	149	1337	0.06%	0.003%
35	2.920	2.912	2.934	VV	126	1614	0.08%	0.004%
36	2.952	2.934	2.961	VV	208	2061	0.10%	0.005%

					rt	er		
37	2.976	2.961	2.980	VV	168	1276	0.06%	0.003%
38	3.001	2.980	3.019	VV	194	2828	0.13%	0.007%
39	3.042	3.019	3.086	VV	331	7798	0.37%	0.020%
40	3.121	3.086	3.129	VV	247	4151	0.20%	0.010%
41	3.135	3.129	3.162	VV	229	3476	0.17%	0.009%
42	3.166	3.162	3.170	VV	181	761	0.04%	0.002%
43	3.177	3.170	3.193	VV	238	2208	0.10%	0.006%
44	3.199	3.193	3.224	VV	216	3303	0.16%	0.008%
45	3.234	3.224	3.247	VV	191	2231	0.11%	0.006%
46	3.256	3.247	3.267	VV	235	2466	0.12%	0.006%
47	3.272	3.267	3.280	VV	264	1598	0.08%	0.004%
48	3.291	3.280	3.299	VV	231	2151	0.10%	0.005%
49	3.320	3.299	3.325	VV	312	3435	0.16%	0.009%
50	3.340	3.325	3.354	VV	332	4076	0.19%	0.010%
51	3.359	3.354	3.368	VV	274	1992	0.09%	0.005%
52	3.371	3.368	3.377	VV	247	1135	0.05%	0.003%
53	3.385	3.377	3.394	VV	268	2329	0.11%	0.006%
54	3.401	3.394	3.420	VV	304	3644	0.17%	0.009%
55	3.444	3.420	3.455	VV	322	5339	0.25%	0.013%
56	3.460	3.455	3.467	VV	286	1855	0.09%	0.005%
57	3.471	3.467	3.474	VV	276	1034	0.05%	0.003%
58	3.479	3.474	3.499	VV	316	3940	0.19%	0.010%
59	3.532	3.499	3.539	VV	330	6301	0.30%	0.016%
60	3.547	3.539	3.554	VV	303	2112	0.10%	0.005%
61	3.557	3.554	3.564	VV	263	1409	0.07%	0.004%
62	3.629	3.564	3.635	VV	312	10916	0.52%	0.028%
63	3.639	3.635	3.644	VV	320	1459	0.07%	0.004%
64	3.649	3.644	3.653	VV	328	1445	0.07%	0.004%
65	3.658	3.653	3.664	VV	313	1953	0.09%	0.005%
66	3.669	3.664	3.673	VV	292	1356	0.06%	0.003%
67	3.678	3.673	3.692	VV	283	3083	0.15%	0.008%
68	3.694	3.692	3.702	VV	275	1499	0.07%	0.004%
69	3.728	3.702	3.760	VV	329	9894	0.47%	0.025%
70	3.767	3.760	3.790	VV	381	5314	0.25%	0.013%
71	3.794	3.790	3.814	VV	338	3674	0.17%	0.009%
72	3.822	3.814	3.845	VV	320	4623	0.22%	0.012%
73	3.850	3.845	3.867	VV	331	3489	0.17%	0.009%
74	3.873	3.867	3.898	VV	273	4401	0.21%	0.011%
75	3.914	3.898	3.942	VV	305	6711	0.32%	0.017%
76	3.947	3.942	3.954	VV	284	1946	0.09%	0.005%
77	4.000	3.954	4.012	VV	310	8632	0.41%	0.022%
78	4.021	4.012	4.041	VV	265	4348	0.21%	0.011%
79	4.054	4.041	4.062	VV	270	3012	0.14%	0.008%
80	4.079	4.062	4.099	VV	270	5420	0.26%	0.014%
81	4.126	4.099	4.140	VV	338	6638	0.32%	0.017%
82	4.149	4.140	4.192	VV	308	7923	0.38%	0.020%
83	4.219	4.192	4.255	VV	454	12119	0.58%	0.031%
84	4.277	4.255	4.305	VV	477	10299	0.49%	0.026%
85	4.319	4.305	4.374	VV	327	12553	0.60%	0.032%
86	4.403	4.374	4.460	VV	363	16415	0.78%	0.041%
87	4.486	4.460	4.519	VV	506	13724	0.65%	0.035%
88	4.525	4.519	4.555	VV	455	7831	0.37%	0.020%
89	4.566	4.555	4.592	VV	405	7395	0.35%	0.019%

					rteres			
90	4.619	4.592	4.654	VV	415	13340	0.63%	0.034%
91	4.672	4.654	4.692	VV	453	8858	0.42%	0.022%
92	4.725	4.692	4.765	VV	469	17642	0.84%	0.045%
93	4.795	4.765	4.820	VV	576	14750	0.70%	0.037%
94	4.838	4.820	4.877	VV	484	13230	0.63%	0.033%
95	4.897	4.877	4.947	VV	441	14756	0.70%	0.037%
96	4.972	4.947	4.979	VV	396	6584	0.31%	0.017%
97	4.986	4.979	5.003	VV	389	4956	0.24%	0.013%
98	5.038	5.003	5.050	VV	400	9806	0.47%	0.025%
99	5.095	5.050	5.155	VV	401	20609	0.98%	0.052%
100	5.169	5.155	5.263	VV	309	16567	0.79%	0.042%
101	5.275	5.263	5.288	VV	243	2951	0.14%	0.007%
102	5.295	5.288	5.381	VV	207	9379	0.45%	0.024%
103	5.396	5.381	5.415	VV	165	2929	0.14%	0.007%
104	5.426	5.415	5.461	VV	155	3508	0.17%	0.009%
105	5.484	5.461	5.531	VV	253	6480	0.31%	0.016%
106	5.535	5.531	5.542	VV	225	683	0.03%	0.002%
107	5.557	5.542	5.571	VV	73	1270	0.06%	0.003%
108	5.575	5.571	5.603	VV	131	1386	0.07%	0.003%
109	5.616	5.603	5.644	VV	183	2401	0.11%	0.006%
110	5.689	5.644	5.728	VV	100	2609	0.12%	0.007%
111	5.767	5.728	5.781	VV	105	1954	0.09%	0.005%
112	5.812	5.781	5.835	VV	108	2884	0.14%	0.007%
113	5.851	5.835	5.881	VV	187	4234	0.20%	0.011%
114	5.901	5.881	5.988	VV	261	12027	0.57%	0.030%
115	6.000	5.988	6.059	VV	310	8599	0.41%	0.022%
116	6.082	6.059	6.170	VV	246	11371	0.54%	0.029%
117	6.182	6.170	6.196	VV	169	1825	0.09%	0.005%
118	6.260	6.196	6.273	VV	232	6063	0.29%	0.015%
119	6.282	6.273	6.287	VV	226	1807	0.09%	0.005%
120	6.364	6.287	6.378	VV	371	16090	0.76%	0.041%
121	6.413	6.378	6.435	VV	538	15225	0.72%	0.038%
122	6.449	6.435	6.486	VV	488	14567	0.69%	0.037%
123	6.510	6.486	6.604	VV	517	28059	1.33%	0.071%
124	6.641	6.604	6.660	VV	289	8487	0.40%	0.021%
125	6.699	6.660	6.817	VV	561	26365	1.25%	0.067%
126	6.826	6.817	6.865	VV	228	4753	0.23%	0.012%
127	6.877	6.865	6.904	VV	131	2700	0.13%	0.007%
128	6.929	6.904	6.950	VV	389	4956	0.24%	0.013%
129	6.961	6.950	6.992	VV	92	1030	0.05%	0.003%
130	7.001	6.992	7.069	VV	89	1429	0.07%	0.004%
131	7.122	7.069	7.131	PV	140	1553	0.07%	0.004%
132	7.164	7.131	7.195	VV	95	2248	0.11%	0.006%
133	7.221	7.195	7.251	VV	13994	29986	1.42%	0.076%
134	7.258	7.251	7.268	VV	127	1272	0.06%	0.003%
135	7.405	7.268	7.417	VV	1023	47773	2.27%	0.121%
136	7.430	7.417	7.655	VV	1010	52025	2.47%	0.131%
137	7.673	7.655	7.698	VV	128	1954	0.09%	0.005%
138	7.778	7.698	7.818	VV	183	6818	0.32%	0.017%
139	7.856	7.818	7.916	VV	193	6721	0.32%	0.017%
140	7.930	7.916	7.960	VV	109	1792	0.09%	0.005%
141	7.970	7.960	7.997	PV	66	631	0.03%	0.002%

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142	8.025	7.997	8.041	PV	79	1553	0.07%	0.004%
143	8.101	8.041	8.182	VV	1043	34788	1.65%	0.088%
144	8.237	8.182	8.258	VV	413	11096	0.53%	0.028%
145	8.270	8.258	8.355	VV	385	9717	0.46%	0.025%
146	8.368	8.355	8.390	VV	107	1052	0.05%	0.003%
147	8.441	8.390	8.486	PV	112	3177	0.15%	0.008%
148	8.586	8.486	8.601	PV	363	10931	0.52%	0.028%
149	8.612	8.601	8.634	VV	248	4382	0.21%	0.011%
150	8.707	8.634	8.767	VV	1466	57067	2.71%	0.144%
151	8.827	8.767	8.895	VV	1913	50942	2.42%	0.129%
152	8.903	8.895	8.914	VV	224	2056	0.10%	0.005%
153	8.927	8.914	8.951	VV	163	2390	0.11%	0.006%
154	8.977	8.951	9.018	PV	142	3382	0.16%	0.009%
155	9.040	9.018	9.058	VV	106	1973	0.09%	0.005%
156	9.135	9.058	9.148	VV	401	10962	0.52%	0.028%
157	9.170	9.148	9.215	VV	554	13197	0.63%	0.033%
158	9.234	9.215	9.255	VV	423	6460	0.31%	0.016%
159	9.273	9.255	9.301	VV	160	2956	0.14%	0.007%
160	9.347	9.301	9.371	PV	260	6630	0.32%	0.017%
161	9.432	9.371	9.466	VV	1834	37858	1.80%	0.096%
162	9.475	9.466	9.494	VV	402	5911	0.28%	0.015%
163	9.526	9.494	9.541	VV	822	16708	0.79%	0.042%
164	9.565	9.541	9.605	VV	1777	35133	1.67%	0.089%
165	9.617	9.605	9.654	VV	310	7426	0.35%	0.019%
166	9.714	9.654	9.730	VV	611	16699	0.79%	0.042%
167	9.740	9.730	9.785	VV	501	11492	0.55%	0.029%
168	9.869	9.785	9.891	VV	660	23529	1.12%	0.059%
169	9.911	9.891	9.960	VV	806	24471	1.16%	0.062%
170	10.063	9.960	10.117	VV	1239	76421	3.63%	0.193%
171	10.185	10.117	10.226	VV	12227	186757	8.87%	0.471%
172	10.258	10.226	10.279	VV	1135	33210	1.58%	0.084%
173	10.316	10.279	10.355	VV	1913	61946	2.94%	0.156%
174	10.361	10.355	10.388	VV	1223	21947	1.04%	0.055%
175	10.476	10.388	10.508	VV	2368	110056	5.23%	0.278%
176	10.525	10.508	10.541	VV	1577	30038	1.43%	0.076%
177	10.558	10.541	10.572	VV	1516	27657	1.31%	0.070%
178	10.595	10.572	10.607	VV	1845	33749	1.60%	0.085%
179	10.624	10.607	10.642	VV	1746	35601	1.69%	0.090%
180	10.712	10.642	10.734	VV	2423	120193	5.71%	0.303%
181	10.764	10.734	10.783	VV	2882	71051	3.38%	0.179%
182	10.804	10.783	10.825	VV	2613	59212	2.81%	0.149%
183	10.868	10.825	10.900	VV	3828	127975	6.08%	0.323%
184	10.984	10.900	11.006	VV	4688	213507	10.15%	0.539%
185	11.032	11.006	11.040	VV	3430	65879	3.13%	0.166%
186	11.059	11.040	11.078	VV	3901	79546	3.78%	0.201%
187	11.164	11.078	11.188	VV	3979	227215	10.80%	0.573%
188	11.208	11.188	11.218	VV	3652	64282	3.05%	0.162%
189	11.230	11.218	11.257	VV	3635	82031	3.90%	0.207%
190	11.346	11.257	11.371	VV	5191	287527	13.66%	0.726%
191	11.427	11.371	11.438	VV	4898	176736	8.40%	0.446%
192	11.450	11.438	11.475	VV	4694	98789	4.69%	0.249%
193	11.495	11.475	11.508	VV	4561	89155	4.24%	0.225%
194	11.517	11.508	11.527	VV	4276	47991	2.28%	0.121%

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195	11.567	11.527	11.585	VV	4353	147126	6.99%	0.371%
196	11.627	11.585	11.650	VV	5366	185327	8.81%	0.468%
197	11.699	11.650	11.728	VV	6904	252620	12.00%	0.638%
198	11.745	11.728	11.758	VV	5538	96172	4.57%	0.243%
199	11.773	11.758	11.827	VV	6969	236289	11.23%	0.596%
200	11.858	11.827	11.900	VV	6487	241954	11.50%	0.611%
201	12.010	11.900	12.023	VV	5548	376254	17.88%	0.950%
202	12.044	12.023	12.111	VV	6254	308423	14.66%	0.778%
203	12.184	12.111	12.211	VV	6123	339105	16.11%	0.856%
204	12.261	12.211	12.274	VV	6185	217670	10.34%	0.549%
205	12.284	12.274	12.306	VV	6164	112339	5.34%	0.284%
206	12.315	12.306	12.331	VV	5710	85712	4.07%	0.216%
207	12.346	12.331	12.362	VV	5611	100165	4.76%	0.253%
208	12.446	12.362	12.478	VV	6864	424777	20.19%	1.072%
209	12.487	12.478	12.509	VV	6553	117896	5.60%	0.298%
210	12.555	12.509	12.572	VV	7185	247164	11.75%	0.624%
211	12.582	12.572	12.638	VV	6881	252773	12.01%	0.638%
212	12.697	12.638	12.743	VV	21464	591479	28.11%	1.493%
213	12.756	12.743	12.799	VV	7015	217145	10.32%	0.548%
214	12.821	12.799	12.845	VV	6488	165181	7.85%	0.417%
215	12.856	12.845	12.865	VV	5984	70139	3.33%	0.177%
216	12.881	12.865	12.900	VV	6245	125278	5.95%	0.316%
217	12.942	12.900	12.988	VV	5772	287131	13.64%	0.725%
218	13.029	12.988	13.067	VV	11496	342207	16.26%	0.864%
219	13.093	13.067	13.138	VV	9651	295268	14.03%	0.745%
220	13.148	13.138	13.155	VV	5512	53555	2.54%	0.135%
221	13.186	13.155	13.283	VV	7275	425718	20.23%	1.074%
222	13.302	13.283	13.324	VV	4753	110504	5.25%	0.279%
223	13.365	13.324	13.387	VV	4950	176281	8.38%	0.445%
224	13.429	13.387	13.436	VV	4596	127220	6.05%	0.321%
225	13.458	13.436	13.470	VV	4713	90907	4.32%	0.229%
226	13.496	13.470	13.566	VV	7957	287699	13.67%	0.726%
227	13.579	13.566	13.596	VV	4376	73282	3.48%	0.185%
228	13.655	13.596	13.681	VV	7629	251030	11.93%	0.634%
229	13.732	13.681	13.764	VV	17611	390714	18.57%	0.986%
230	13.785	13.764	13.867	VV	6451	319374	15.18%	0.806%
231	13.886	13.867	13.918	VV	4022	113922	5.41%	0.288%
232	13.943	13.918	13.981	VV	5611	156148	7.42%	0.394%
233	13.991	13.981	14.040	VV	3522	115687	5.50%	0.292%
234	14.051	14.040	14.078	VV	3211	68023	3.23%	0.172%
235	14.089	14.078	14.102	VV	3143	42537	2.02%	0.107%
236	14.109	14.102	14.130	VV	3054	51672	2.46%	0.130%
237	14.141	14.130	14.151	VV	3161	36822	1.75%	0.093%
238	14.201	14.151	14.231	VV	5573	174236	8.28%	0.440%
239	14.247	14.231	14.273	VV	2904	69573	3.31%	0.176%
240	14.296	14.273	14.348	VV	3389	121444	5.77%	0.306%
241	14.354	14.348	14.376	VV	2468	35713	1.70%	0.090%
242	14.398	14.376	14.428	VV	2398	60414	2.87%	0.152%
243	14.455	14.428	14.478	VV	2308	57093	2.71%	0.144%
244	14.492	14.478	14.507	VV	1980	31556	1.50%	0.080%
245	14.527	14.507	14.575	VV	2124	64440	3.06%	0.163%
246	14.601	14.575	14.617	VV	1375	32541	1.55%	0.082%

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247	14.633	14.617	14.647	VV	1428	22331	1.06%	0.056%
248	14.683	14.647	14.714	VV	2655	65601	3.12%	0.166%
249	14.745	14.714	14.757	VV	1215	29225	1.39%	0.074%
250	14.773	14.757	14.785	VV	1257	18825	0.89%	0.048%
251	14.790	14.785	14.802	VV	1119	11482	0.55%	0.029%
252	14.824	14.802	14.845	VV	1372	29567	1.41%	0.075%
253	14.864	14.845	14.907	VV	1616	38625	1.84%	0.097%
254	14.923	14.907	14.943	VV	1394	22918	1.09%	0.058%
255	14.984	14.943	15.022	VV	2067	52627	2.50%	0.133%
256	15.101	15.022	15.118	VV	1636	43358	2.06%	0.109%
257	15.204	15.118	15.234	VV	16972	277180	13.17%	0.700%
258	15.246	15.234	15.283	VV	1217	26902	1.28%	0.068%
259	15.306	15.283	15.335	VV	1669	32758	1.56%	0.083%
260	15.397	15.335	15.471	VV	6134	149607	7.11%	0.378%
261	15.488	15.471	15.511	VV	852	16030	0.76%	0.040%
262	15.521	15.511	15.535	VV	520	7048	0.33%	0.018%
263	15.575	15.535	15.628	VV	2301	51247	2.44%	0.129%
264	15.654	15.628	15.694	VV	488	11105	0.53%	0.028%
265	15.789	15.694	15.855	PV	7545	114987	5.46%	0.290%
266	15.934	15.855	15.972	VV	929	24988	1.19%	0.063%
267	16.045	15.972	16.069	PV	1590	38731	1.84%	0.098%
268	16.135	16.069	16.145	VV	431	11233	0.53%	0.028%
269	16.202	16.145	16.227	VV	616	19852	0.94%	0.050%
270	16.373	16.227	16.381	VV	830	48037	2.28%	0.121%
271	16.400	16.381	16.418	VV	846	16808	0.80%	0.042%
272	16.440	16.418	16.511	VV	1385	50429	2.40%	0.127%
273	16.566	16.511	16.578	VV	1088	33109	1.57%	0.084%
274	16.629	16.578	16.675	VV	1730	69197	3.29%	0.175%
275	16.745	16.675	16.775	VV	1476	63144	3.00%	0.159%
276	16.812	16.775	16.838	VV	1830	43035	2.05%	0.109%
277	16.861	16.838	16.877	VV	923	18596	0.88%	0.047%
278	16.923	16.877	16.951	VV	1894	47916	2.28%	0.121%
279	16.959	16.951	16.979	VV	713	9571	0.45%	0.024%
280	17.009	16.979	17.029	VV	685	13593	0.65%	0.034%
281	17.062	17.029	17.081	VV	594	12669	0.60%	0.032%
282	17.106	17.081	17.128	VV	587	9446	0.45%	0.024%
283	17.183	17.128	17.204	VV	258	8215	0.39%	0.021%
284	17.394	17.204	17.416	PV	1557	30358	1.44%	0.077%
285	17.446	17.416	17.458	VV	814	9513	0.45%	0.024%
286	17.509	17.458	17.522	VV	362	9900	0.47%	0.025%
287	17.667	17.522	17.688	PV	1097	33123	1.57%	0.084%
288	17.848	17.688	17.877	VV	3056	124086	5.90%	0.313%
289	17.943	17.877	17.962	VV	1682	53800	2.56%	0.136%
290	17.985	17.962	18.021	VV	1398	35855	1.70%	0.090%
291	18.071	18.021	18.087	VV	1467	39714	1.89%	0.100%
292	18.099	18.087	18.113	VV	847	10209	0.49%	0.026%
293	18.132	18.113	18.145	VV	637	8580	0.41%	0.022%
294	18.239	18.145	18.263	PV	1429	40999	1.95%	0.103%
295	18.289	18.263	18.311	PV	3278	47211	2.24%	0.119%
296	18.479	18.311	18.492	VV	1187	106140	5.04%	0.268%
297	18.558	18.492	18.575	VV	1905	55637	2.64%	0.140%
298	18.586	18.575	18.595	VV	809	6985	0.33%	0.018%
299	18.651	18.595	18.685	VV	4847	111603	5.30%	0.282%

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300	18.716	18.685	18.745	PV	4102	64629	3.07%	0.163%
301	18.809	18.745	18.817	PV	931	27813	1.32%	0.070%
302	18.852	18.817	18.864	VV	906	13912	0.66%	0.035%
303	18.917	18.864	18.930	PV	1868	29865	1.42%	0.075%
304	18.976	18.930	18.995	VV	3075	68445	3.25%	0.173%
305	19.022	18.995	19.048	VV	2774	63591	3.02%	0.160%
306	19.127	19.048	19.165	VV	7897	192187	9.13%	0.485%
307	19.176	19.165	19.181	VV	1320	8484	0.40%	0.021%
308	19.252	19.181	19.270	VV	2624	84843	4.03%	0.214%
309	19.299	19.270	19.311	PV	2110	30777	1.46%	0.078%
310	19.340	19.311	19.360	VV	1999	38525	1.83%	0.097%
311	19.439	19.360	19.448	VV	2815	73060	3.47%	0.184%
312	19.521	19.448	19.551	VV	6424	260943	12.40%	0.659%
313	19.640	19.551	19.655	VV	7405	339325	16.12%	0.856%
314	19.696	19.655	19.705	VV	9245	235573	11.19%	0.595%
315	19.742	19.705	19.751	VV	12229	277048	13.17%	0.699%
316	19.761	19.751	19.771	VV	10593	122788	5.83%	0.310%
317	19.786	19.771	19.801	VV	11220	174189	8.28%	0.440%
318	19.832	19.801	19.840	VV	9271	203685	9.68%	0.514%
319	19.851	19.840	19.877	VV	10092	191680	9.11%	0.484%
320	19.914	19.877	19.931	VV	12388	331957	15.77%	0.838%
321	19.976	19.931	19.991	VV	12312	374018	17.77%	0.944%
322	20.080	19.991	20.099	VV	17202	916611	43.56%	2.313%
323	20.128	20.099	20.137	VV	18075	371746	17.67%	0.938%
324	20.156	20.137	20.167	VV	19701	331419	15.75%	0.836%
325	20.214	20.167	20.232	VV	21842	807543	38.37%	2.038%
326	20.248	20.232	20.257	VV	21367	293595	13.95%	0.741%
327	20.293	20.257	20.331	VV	23185	906093	43.06%	2.287%
328	20.338	20.331	20.347	VV	19585	186723	8.87%	0.471%
329	20.444	20.347	20.455	VV	26148	1423889	67.66%	3.594%
330	20.466	20.455	20.478	VV	25284	331151	15.74%	0.836%
331	20.523	20.478	20.533	VV	24653	790893	37.58%	1.996%
332	20.570	20.533	20.585	VV	25706	749047	35.59%	1.890%
333	20.616	20.585	20.627	VV	27784	664526	31.58%	1.677%
334	20.692	20.627	20.732	VV	37675	2104394	100.00%	5.311%
335	20.772	20.732	20.793	VV	35614	1242371	59.04%	3.135%
336	20.828	20.793	20.841	VV	35773	989601	47.03%	2.498%
337	20.851	20.841	20.891	VV	33788	967100	45.96%	2.441%
338	20.900	20.891	20.981	VV	31121	1513520	71.92%	3.820%
339	21.026	20.981	21.059	VV	27771	1198442	56.95%	3.025%
340	21.069	21.059	21.112	VV	24783	770692	36.62%	1.945%
341	21.122	21.112	21.128	VV	21785	197911	9.40%	0.499%
342	21.211	21.128	21.237	VV	28199	1654118	78.60%	4.175%
343	21.247	21.237	21.349	VV	25965	1289589	61.28%	3.255%
344	21.359	21.349	21.385	VV	10037	206641	9.82%	0.522%
345	21.455	21.385	21.489	VV	11400	617658	29.35%	1.559%
346	21.519	21.489	21.532	VV	6685	151732	7.21%	0.383%
347	21.551	21.532	21.598	VV	6443	174401	8.29%	0.440%
348	21.614	21.598	21.645	VV	3599	53503	2.54%	0.135%
349	21.689	21.645	21.701	VBA	2582	191555	9.10%	0.483%
Sum of corrected areas:						39622961		

FG070925.M Sat Jul 19 08:36:15 2025

rteres



CALIBRATION SUMMARY

TPH GC INITIAL CALIBRATION SUMMARY

Lab Name: Alliance

Contract: SCIA01

ProjectID: 166 Belmont Ave Belleville

Lab Code: ACE

SDG No.: Q2618

Calibration Sequence : FG070925		Test : TPH GC	
Concentration (PPM)	Area Count	Reference Factor	File ID
1700	164717398	96893	FG016264.D
850	83171210	97848	FG016265.D
340	35101863	103241	FG016266.D
170	18639349	109643	FG016267.D
85	9352448	110029	FG016268.D
AVG RF : 103531		% RSD : 6.032	AVG RT : 15.201

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: SCIA01
ProjectID: 166 Belmont Ave Belleville
Lab Code: ACE SDG No.: Q2618
DataFile: FG016329.D Analyst Name: YP\AJ Analyst Date: 07-18-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	88196784	103761	103531	0.222

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
 Data File : FG016329.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 09:24
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 07/21/2025
 Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
 Quant Time: Jul 18 11:31:34 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...	15.207	5008719	50.094 ug/ml
Target Compounds			
1) N-OCTANE	2.120	4993123	44.217 ug/ml
2) N-DECANE	4.670	5345593	46.413 ug/ml
3) N-DODECANE	6.854	5466474	47.149 ug/ml
4) N-TETRADECANE	8.696	5570268	47.192 ug/ml
5) N-HEXADECANE	10.316	5648246	48.833 ug/ml
6) N-OCTADECANE	11.770	5812904	49.522 ug/ml
7) N-EICOSANE	13.092	5909763	49.399 ug/ml
8) N-DOCOSANE	14.300	5700225	49.464 ug/ml
10) N-TETRACOSANE	15.412	5721499	50.077 ug/ml
11) N-HEXACOSANE	16.442	5569725	50.616 ug/ml
12) N-OCTACOSANE	17.399	5452560	50.139 ug/ml
13) N-TRIACONTANE	18.293	5530703	51.756 ug/ml
14) N-DOTRIACONTANE	19.130	5383602	53.239 ug/ml
15) N-TETRATRIACONTANE	19.920	4886621	53.707 ug/ml
16) N-HEXATRIACONTANE	20.663	4277354	56.797 ug/ml
17) N-OCTATRIACONTANE	21.457	3498078	53.748 ug/mlm
18) N-TETRACONTANE	22.464	3430046	59.513 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016329.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 09:24
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

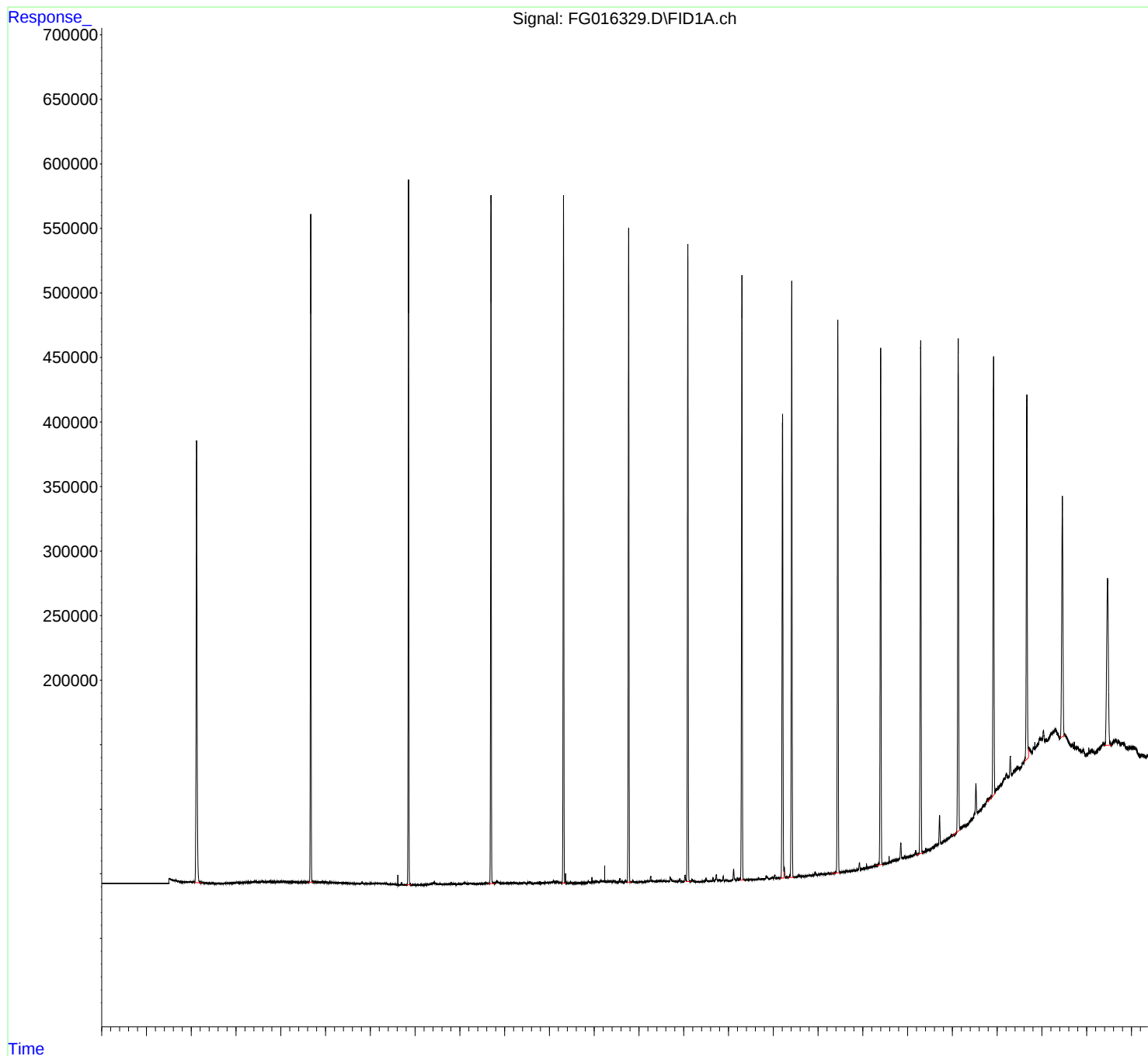
Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Manual Integrations
APPROVED

Reviewed By : Yogesh Patel 07/21/2025
Supervised By : mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 18 11:31:34 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

Instrument :
FID_G
LabSampleId :
50 PPM TRPH STD
Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/21/2025
Supervised By :mohammad ahmed 07/23/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG07182
Data File : FG016329.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 09:24
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	2.120	2.076	2.224	VB	342479	4993123	84.49%	5.309%
2	4.670	4.627	4.729	BB	517464	5345593	90.45%	5.684%
3	6.854	6.810	6.911	BB	545618	5466474	92.50%	5.813%
4	8.696	8.647	8.768	BB	532355	5570268	94.26%	5.923%
5	10.316	10.270	10.358	BV	528350	5648246	95.57%	6.006%
6	11.770	11.733	11.820	BB	506287	5812904	98.36%	6.181%
7	13.092	13.055	13.146	VV	493936	5909763	100.00%	6.284%
8	14.300	14.264	14.355	VB	467722	5700225	96.45%	6.061%
9	15.207	15.143	15.237	BV	359004	5008719	84.75%	5.326%
10	15.412	15.334	15.469	BB	459568	5721499	96.81%	6.084%
11	16.442	16.289	16.486	BB	427962	5569725	94.25%	5.923%
12	17.399	17.303	17.440	BV	399447	5452560	92.26%	5.798%
13	18.293	18.209	18.344	PV	394345	5530703	93.59%	5.881%
14	19.130	19.002	19.167	PV	376866	5383602	91.10%	5.725%
15	19.920	19.797	19.953	VV	339680	4886621	82.69%	5.196%
16	20.663	20.600	20.701	BV	279687	4277354	72.38%	4.548%
17	21.457	21.397	21.654	VV	191737	4233937	71.64%	4.502%
18	22.466	22.405	22.550	VV	129925	3531325	59.75%	3.755%
Sum of corrected areas:						94042640		

FG070925.M Fri Jul 18 11:43:06 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: SCIA01
ProjectID: 166 Belmont Ave Belleville
Lab Code: ACE SDG No.: Q2618
DataFile: FG016336.D Analyst Name: YP\AJ Analyst Date: 07-18-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	85294134	100346	103531	3.076

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
 Data File : FG016336.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 12:53
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Jul 19 01:59:18 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...	15.207	4774495	47.752 ug/ml
Target Compounds			
1) N-OCTANE	2.120	4880777	43.222 ug/ml
2) N-DECANE	4.671	5229290	45.403 ug/ml
3) N-DODECANE	6.855	5346585	46.115 ug/ml
4) N-TETRADECANE	8.696	5441010	46.097 ug/ml
5) N-HEXADECANE	10.317	5501843	47.567 ug/ml
6) N-OCTADECANE	11.771	5639046	48.041 ug/ml
7) N-EICOSANE	13.092	5695634	47.610 ug/ml
8) N-DOCOSANE	14.301	5451035	47.302 ug/ml
10) N-TETRACOSANE	15.413	5453309	47.730 ug/ml
11) N-HEXACOSANE	16.442	5267070	47.865 ug/ml
12) N-OCTACOSANE	17.398	5179697	47.630 ug/ml
13) N-TRIACONTANE	18.293	5298093	49.580 ug/ml
14) N-DOTRIACONTANE	19.132	5237612	51.796 ug/ml
15) N-TETRATRIACONTANE	19.921	4605678	50.619 ug/ml
16) N-HEXATRIACONTANE	20.664	4244515	56.361 ug/ml
17) N-OCTATRIACONTANE	21.457	3570810	54.866 ug/ml
18) N-TETRACONTANE	22.466	3252130	56.426 ug/ml

(f)=RT Delta > 1/2 Window

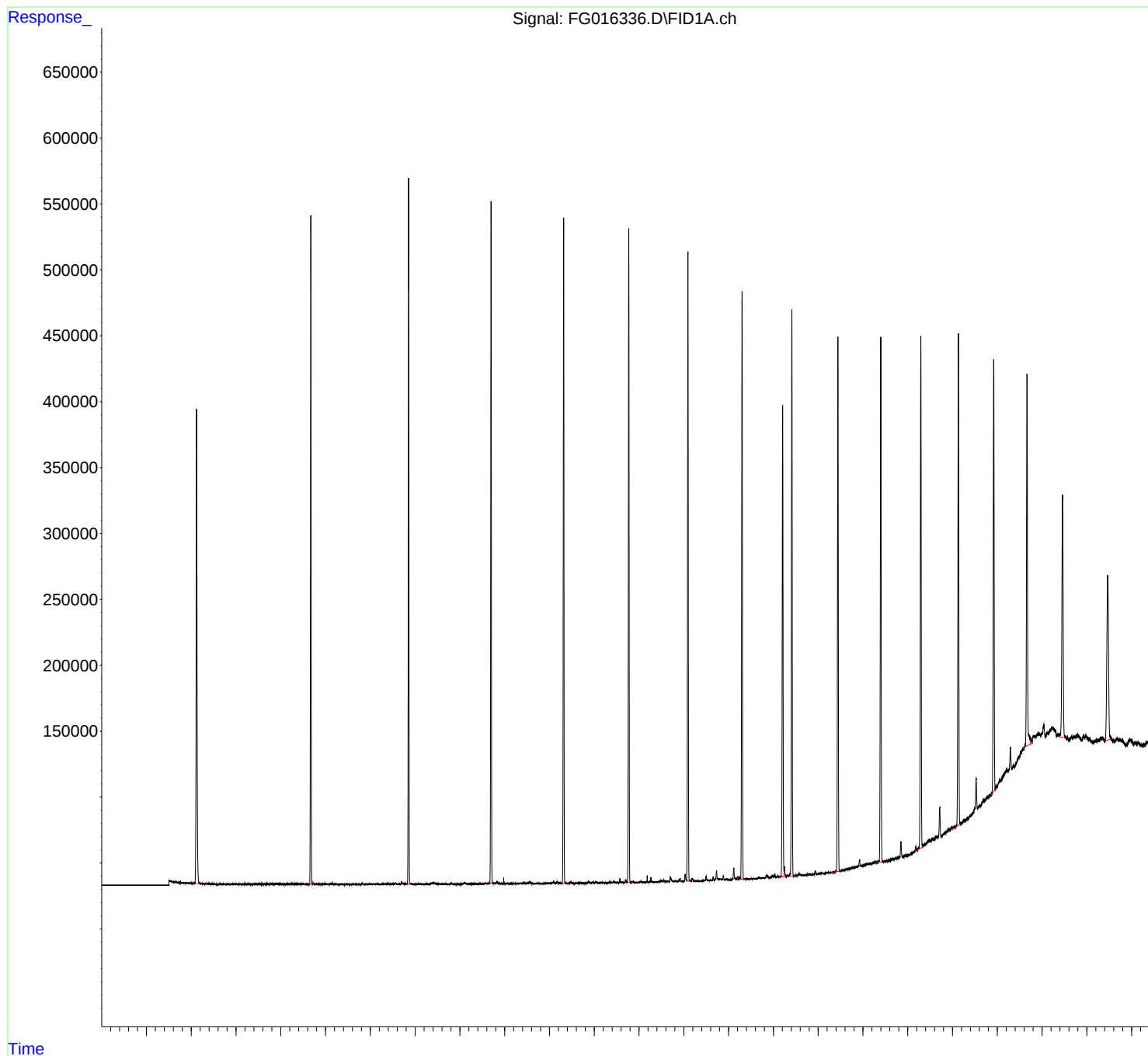
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016336.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 12:53
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jul 19 01:59:18 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\FG071825\
Data File : FG016336.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 12:53
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	2.120	2.082	2.209	BB	359947	4880777	85.69%	5.419%
2	4.671	4.627	4.725	BB	506633	5229290	91.81%	5.806%
3	6.855	6.809	6.910	BB	534874	5346585	93.87%	5.936%
4	8.696	8.640	8.760	BB	517217	5441010	95.53%	6.041%
5	10.317	10.270	10.380	BB	504968	5501843	96.60%	6.109%
6	11.771	11.733	11.809	VB	497010	5639046	99.01%	6.261%
7	13.092	13.057	13.155	VB	477403	5695634	100.00%	6.324%
8	14.301	14.265	14.342	VB	444485	5451035	95.71%	6.052%
9	15.207	15.120	15.237	BV	357205	4774495	83.83%	5.301%
10	15.413	15.342	15.450	BV	429693	5453309	95.75%	6.055%
11	16.442	16.274	16.488	BB	404826	5267070	92.48%	5.848%
12	17.398	17.306	17.460	BV	398334	5179697	90.94%	5.751%
13	18.293	18.208	18.328	PV	387201	5298093	93.02%	5.882%
14	19.132	18.993	19.171	VV	373342	5237612	91.96%	5.815%
15	19.921	19.849	19.952	PV	327242	4605678	80.86%	5.114%
16	20.664	20.601	20.737	BV	282151	4244515	74.52%	4.713%
17	21.457	21.401	21.514	VV	183379	3570810	62.69%	3.965%
18	22.466	22.404	22.547	PV	125021	3252130	57.10%	3.611%
Sum of corrected areas:							90068630	

FG070925.M Sat Jul 19 05:08:25 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: SCIA01
ProjectID: 166 Belmont Ave Belleville
Lab Code: ACE SDG No.: Q2618
DataFile: FG016342.D Analyst Name: YP\AJ Analyst Date: 07-18-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	86883822	102216	103531	1.27

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
 Data File : FG016342.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 15:51
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: Jul 19 02:01:08 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...	15.212	4769042	47.697 ug/ml
Target Compounds			
1) N-OCTANE	2.120	4897603	43.371 ug/ml
2) N-DECANE	4.673	5253598	45.614 ug/ml
3) N-DODECANE	6.857	5372344	46.337 ug/ml
4) N-TETRADECANE	8.699	5475752	46.392 ug/ml
5) N-HEXADECANE	10.320	5529021	47.802 ug/ml
6) N-OCTADECANE	11.775	5665186	48.264 ug/ml
7) N-EICOSANE	13.096	5718873	47.804 ug/ml
8) N-DOCOSANE	14.305	5456486	47.349 ug/ml
10) N-TETRACOSANE	15.417	5537420	48.466 ug/ml
11) N-HEXACOSANE	16.447	5239579	47.615 ug/ml
12) N-OCTACOSANE	17.403	5209495	47.904 ug/ml
13) N-TRIACONTANE	18.298	5332718	49.904 ug/ml
14) N-DOTRIACONTANE	19.137	5292730	52.341 ug/ml
15) N-TETRATRIACONTANE	19.926	4844121	53.240 ug/ml
16) N-HEXATRIACONTANE	20.671	4256596	56.521 ug/ml
17) N-OCTATRIACONTANE	21.465	3939248	60.527 ug/ml
18) N-TETRACONTANE	22.478	3863052	67.026 ug/ml

(f)=RT Delta > 1/2 Window

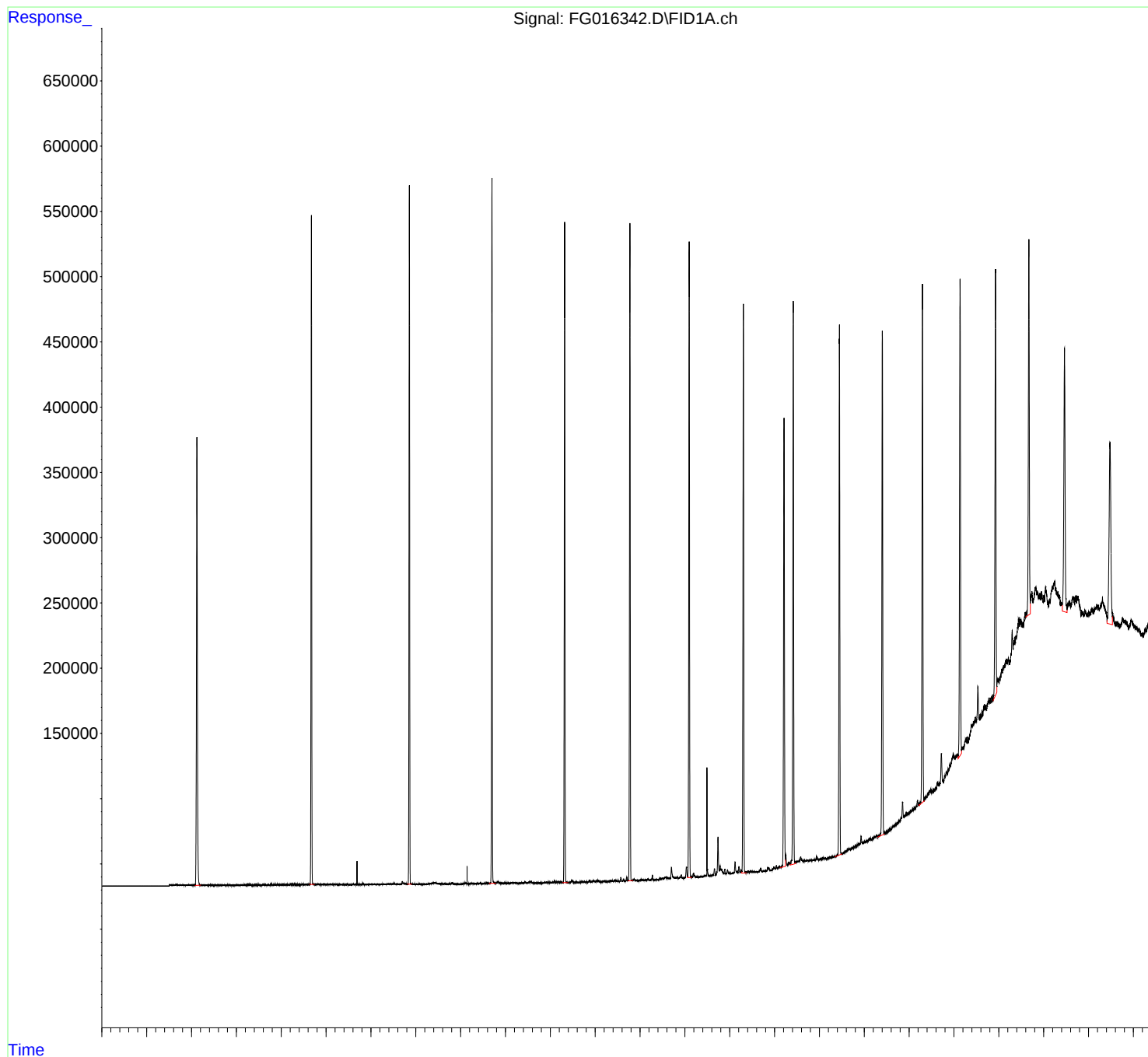
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016342.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 15:51
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jul 19 02:01:08 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\FG071825\
 Data File : FG016342.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 15:51
 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	2.120	2.080	2.208	VB	343372	4897603	85.64%	5.344%
2	4.673	4.630	4.728	BB	512949	5253598	91.86%	5.732%
3	6.857	6.812	6.911	BB	535149	5372344	93.94%	5.862%
4	8.699	8.637	8.773	BB	539755	5475752	95.75%	5.974%
5	10.320	10.272	10.383	BB	505354	5529021	96.68%	6.033%
6	11.775	11.735	11.832	VB	503696	5665186	99.06%	6.181%
7	13.096	13.062	13.156	VB	487060	5718873	100.00%	6.240%
8	14.305	14.269	14.378	VV	434457	5456486	95.41%	5.953%
9	15.212	15.124	15.241	VV	343494	4769042	83.39%	5.203%
10	15.417	15.345	15.466	VV	431290	5537420	96.83%	6.042%
11	16.447	16.348	16.493	PV	400944	5239579	91.62%	5.717%
12	17.403	17.302	17.447	VV	384645	5209495	91.09%	5.684%
13	18.298	18.224	18.334	VV	397471	5332718	93.25%	5.818%
14	19.137	19.094	19.168	VV	364123	5292730	92.55%	5.775%
15	19.926	19.869	19.956	PV	323669	4844121	84.70%	5.285%
16	20.671	20.600	20.702	BV	287064	4256596	74.43%	4.644%
17	21.465	21.415	21.522	VV	201889	3939248	68.88%	4.298%
18	22.478	22.413	22.533	VV	139481	3863052	67.55%	4.215%
Sum of corrected areas:							91652865	

FG070925.M Sat Jul 19 05:19:38 2025

Analytical Sequence

Client: Sciacca General Contractors, LLC

SDG No.: Q2618

Project: 166 Belmont Ave Belleville

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 15.201					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	18 Jul 2025 08:55	FG016328.D	15.207	
50 PPM TRPH STD	50 PPM TRPH STD	18 Jul 2025 09:24	FG016329.D	15.207	
WASTE	Q2618-01	18 Jul 2025 11:54	FG016334.D	15.204	
PIBLK02	LBLK02	18 Jul 2025 12:24	FG016335.D	15.204	
50 PPM TRPH STD	50 PPM TRPH STD	18 Jul 2025 12:53	FG016336.D	15.207	
PB168895BL	PB168895BL	18 Jul 2025 13:23	FG016337.D	15.202	
PB168895BS	PB168895BS	18 Jul 2025 13:52	FG016338.D	15.202	
WC-SOIL-20250711MS	Q2592-01MS	18 Jul 2025 14:22	FG016339.D	15.138	
WC-SOIL-20250711MSD	Q2592-01MSD	18 Jul 2025 14:52	FG016340.D	15.149	
PIBLK03	LBLK03	18 Jul 2025 15:21	FG016341.D	15.208	
50 PPM TRPH STD	50 PPM TRPH STD	18 Jul 2025 15:51	FG016342.D	15.212	



QC SAMPLE DATA

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:		
Project:	166 Belmont Ave Belleville		Date Received:		
Client Sample ID:	PB168895BL		SDG No.:	Q2618	
Lab Sample ID:	PB168895BL		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	100	Decanted:
Sample Wt/Vol:	30.01	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	TPH GC	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016337.D	1	07/17/25 08:25	07/18/25 13:23	PB168895

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	384	U	384	2830	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	18.6		37 - 130	93%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016337.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 13:23
Operator : YP\AJ
Sample : PB168895BL
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168895BL

Integration File: autoint1.e
Quant Time: Jul 19 01:59:40 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...	15.202	1858479	18.587 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

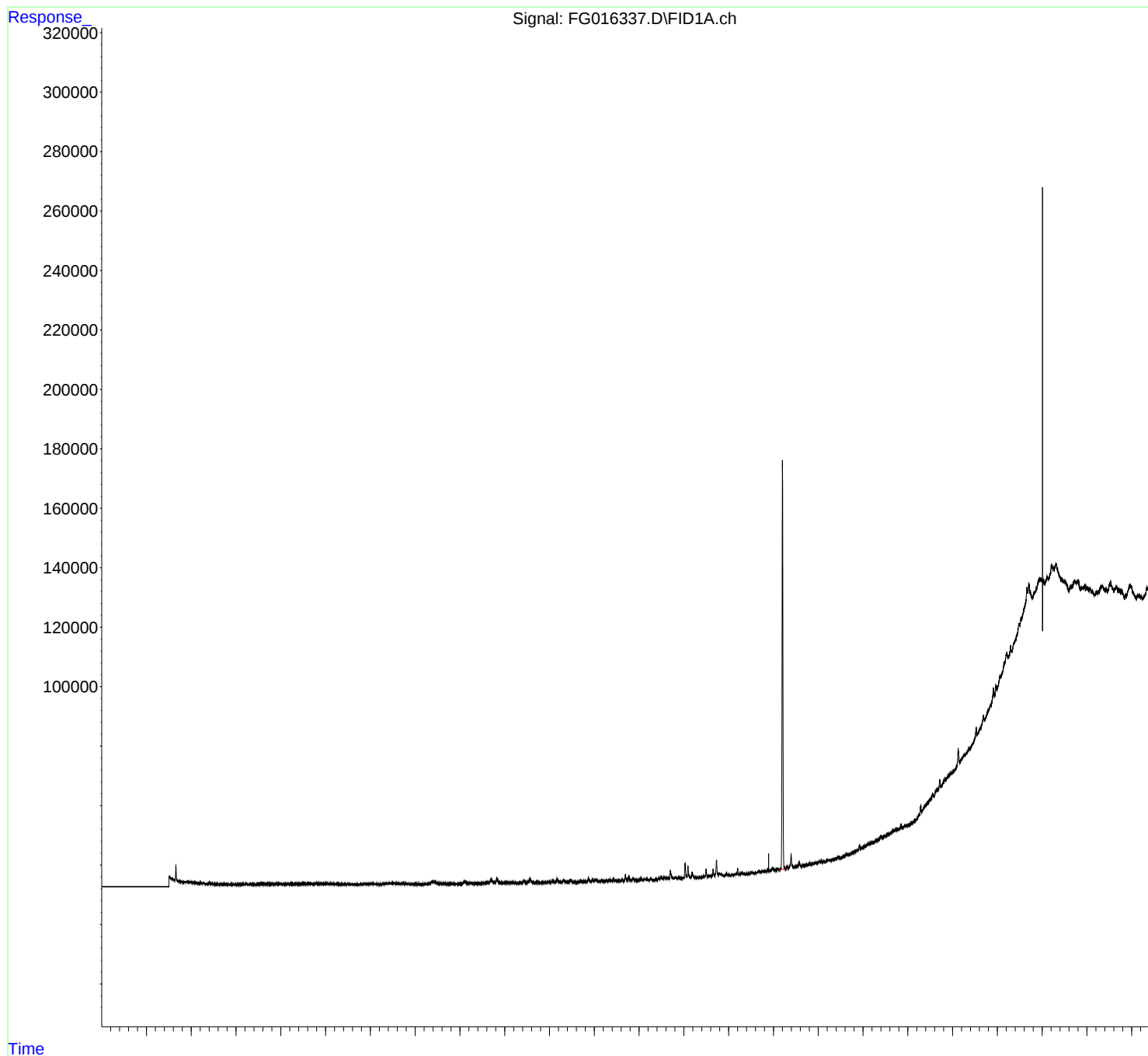
(m)=manual int.

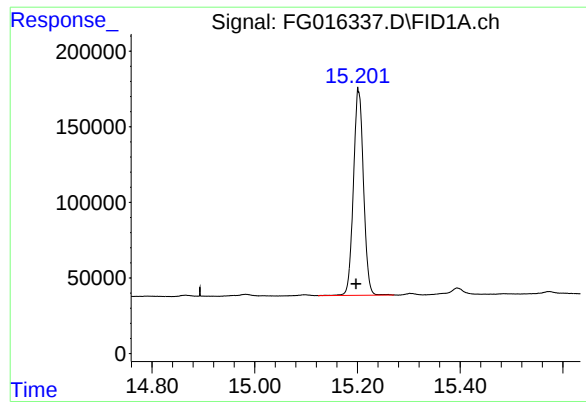
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016337.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 13:23
Operator : YP\AJ
Sample : PB168895BL
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB168895BL

Integration File: autoint1.e
Quant Time: Jul 19 01:59:40 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.: 15.202 min
Delta R.T.: 0.004 min
Response: 1858479
Conc: 18.59 ug/ml

Instrument :
FID_G
ClientSampleId :
PB168895BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016337.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 13:23
Sample : PB168895BL
Misc :
ALS Vial : 25 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	15.202	15.124	15.270	BB	134551	1858479	100.00%	100.000%
Sum of corrected areas:						1858479		

FG070925.M Sat Jul 19 05:09:16 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	07/18/25
Project:	166 Belmont Ave Belleville	Date Received:	07/18/25
Client Sample ID:	PIBLK-FG016328.D	SDG No.:	Q2618
Lab Sample ID:	I.BLK-FG016328.D	Matrix:	Water
Analytical Method:	8015D TPH	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	TPH GC
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016328.D	1		07/18/25	FG071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
PHC	Petroleum Hydrocarbons	12.0	U	12.0	85.0	ug/L
SURROGATES						
16416-32-3	TETRACOSANE-d50	18.1		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\FG071825\
Data File : FG016328.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 08:55
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 18 11:31:13 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...	15.207	1810552	18.108 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

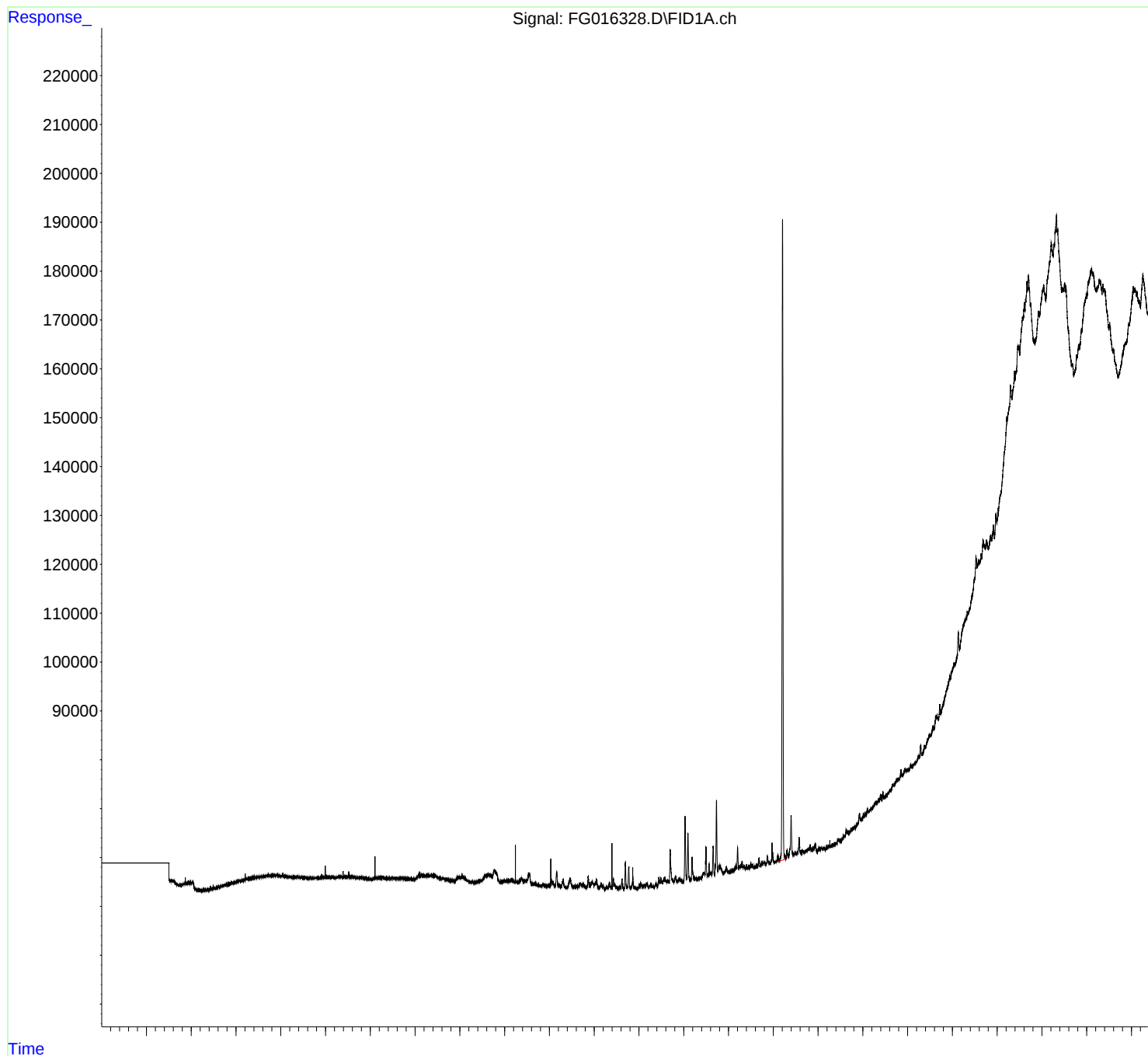
(m)=manual int.

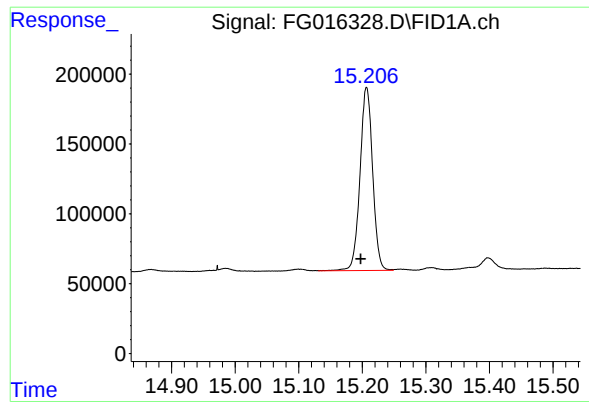
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016328.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 08:55
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 18 11:31:13 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.: 15.207 min
Delta R.T.: 0.009 min
Response: 1810552
Conc: 18.11 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016328.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 08:55
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	15.207	15.131	15.249	VV	131225	1810552	100.00%	100.000%
Sum of corrected areas:						1810552		

FG070925.M Fri Jul 18 11:41:37 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	07/18/25
Project:	166 Belmont Ave Belleville	Date Received:	07/18/25
Client Sample ID:	PIBLK-FG016335.D	SDG No.:	Q2618
Lab Sample ID:	I.BLK-FG016335.D	Matrix:	Water
Analytical Method:	8015D TPH	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	TPH GC
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016335.D	1		07/18/25	FG071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
PHC	Petroleum Hydrocarbons	12.0	U	12.0	85.0	ug/L
SURROGATES						
16416-32-3	TETRACOSANE-d50	18.1		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\FG071825\
Data File : FG016335.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 12:24
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 07/21/2025
Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 19 01:58:58 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...	15.205	1814055	18.143 ug/mlm

Target Compounds

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016335.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 12:24
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

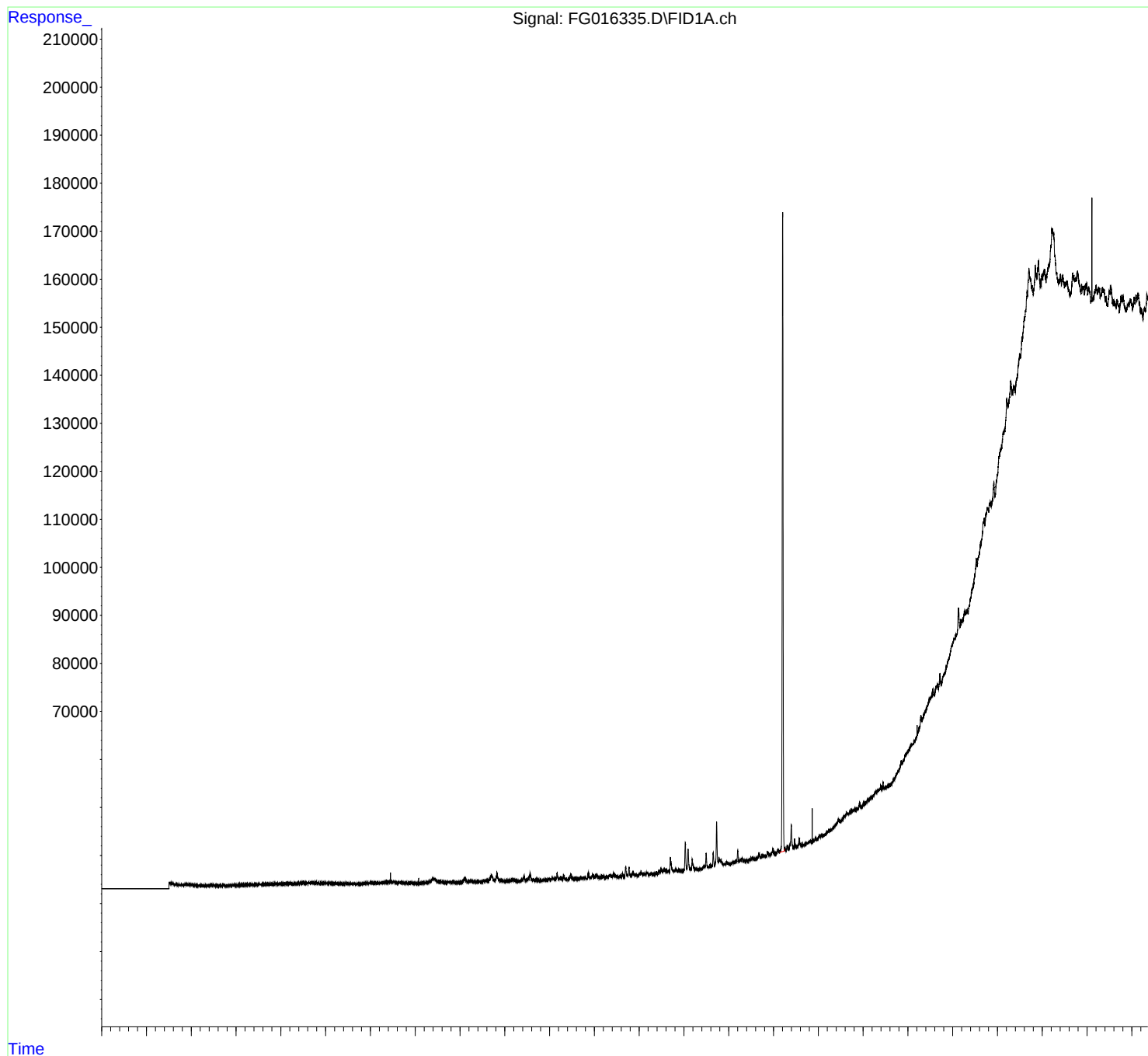
Instrument :
FID_G
ClientSampleId :
I.BLK

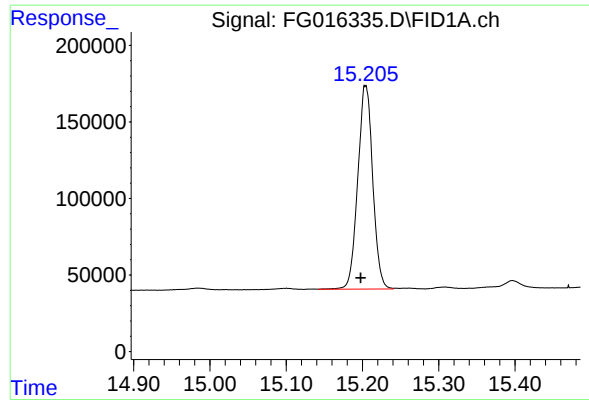
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 07/21/2025
Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 19 01:58:58 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.: 15.205 min
Delta R.T.: 0.007 min
Response: 1814055
Conc: 18.14 ug/ml

Instrument :

FID_G

ClientSampleId :

I.BLK

Manual Integrations

APPROVED

Reviewed By :Yogesh Patel 07/21/2025

Supervised By :mohammad ahmed 07/23/2025

rteres

Instrument :

FID_G

LabSampleId :

I.BLK

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/21/2025

Supervised By :mohammad ahmed 07/23/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG07182

Data File : FG016335.D

Signal(s) : FID1A.ch

Acq On : 18 Jul 2025 12:24

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	15.204	15.124	15.283	VB	132585	1829074	100.00%	100.000%
Sum of corrected areas:						1829074		

FG070925.M Sat Jul 19 05:02:58 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	07/18/25
Project:	166 Belmont Ave Belleville	Date Received:	07/18/25
Client Sample ID:	PIBLK-FG016341.D	SDG No.:	Q2618
Lab Sample ID:	I.BLK-FG016341.D	Matrix:	Water
Analytical Method:	8015D TPH	% Solid:	0
Sample Wt/Vol:	1000 Units: mL	Decanted:	
Soil Aliquot Vol:	uL	Final Vol:	1 mL
Extraction Type:		Test:	TPH GC
GPC Factor :	PH :	Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016341.D	1		07/18/25	FG071825

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
PHC	Petroleum Hydrocarbons	12.0	U	12.0	85.0	ug/L
SURROGATES						
16416-32-3	TETRACOSANE-d50	18.1		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\FG071825\
Data File : FG016341.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 15:21
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 19 02:00:48 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...	15.208	1814124	18.144 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

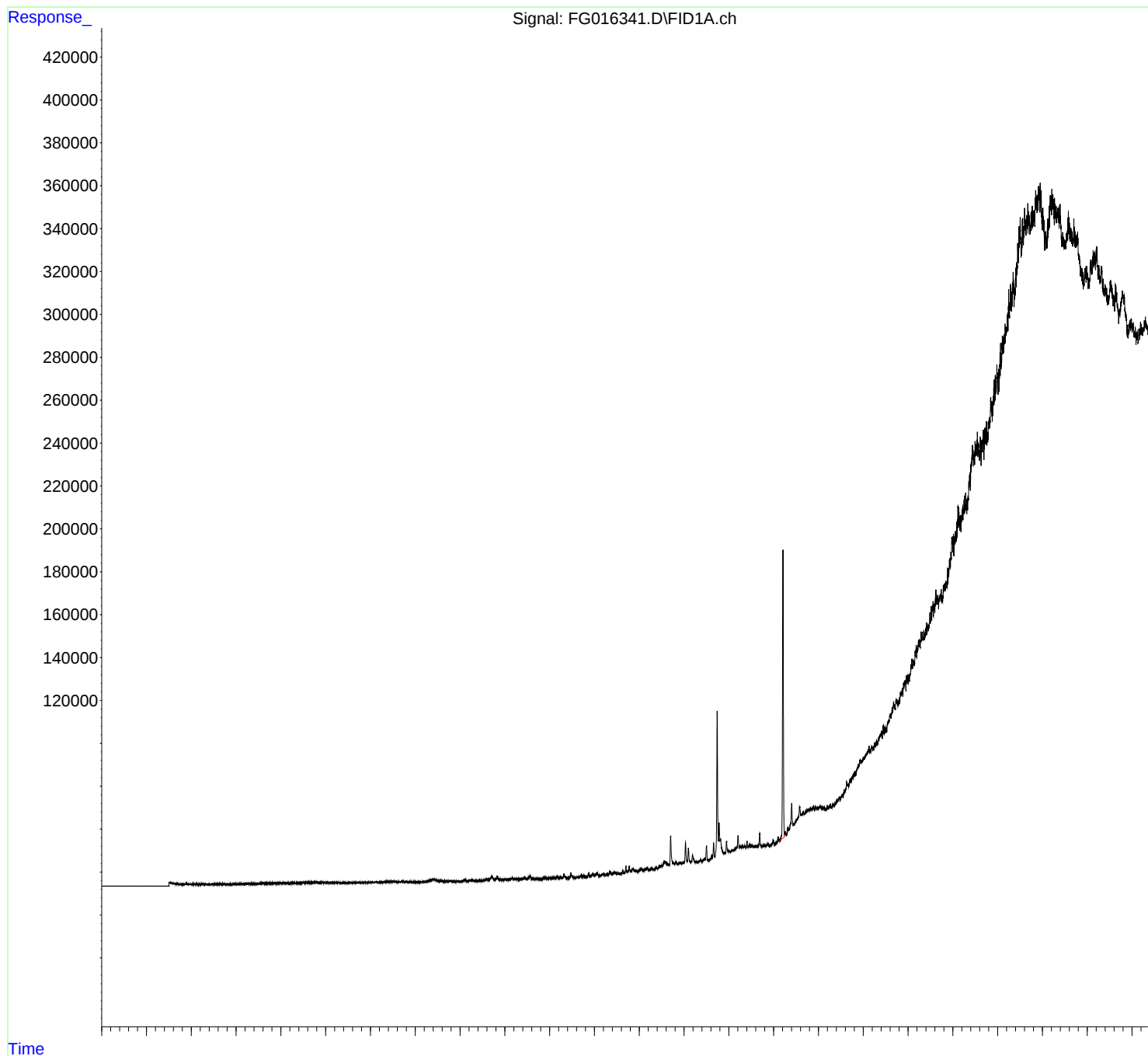
(m)=manual int.

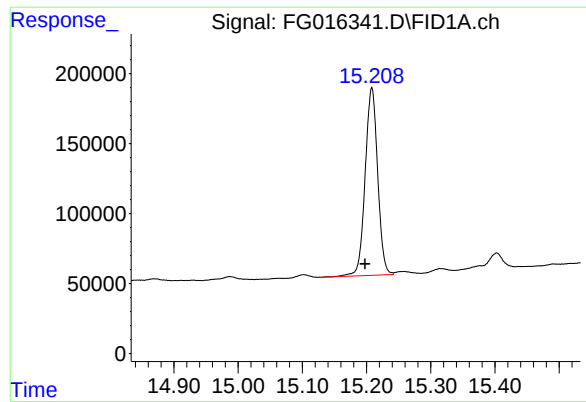
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016341.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 15:21
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jul 19 02:00:48 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.: 15.208 min
Delta R.T.: 0.011 min
Response: 1814124
Conc: 18.14 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016341.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 15:21
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	15.208	15.125	15.242	PV	134265	1814124	100.00%	100.000%
Sum of corrected areas:						1814124		

FG070925.M Sat Jul 19 05:13:18 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:		
Project:	166 Belmont Ave Belleville		Date Received:		
Client Sample ID:	PB168895BS		SDG No.:	Q2618	
Lab Sample ID:	PB168895BS		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	100	Decanted:
Sample Wt/Vol:	30.03	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	TPH GC	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016338.D	1	07/17/25 08:25	07/18/25 13:52	PB168895

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	9610		384	2830	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	17.1		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\FG071825\
 Data File : FG016338.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 13:52
 Operator : YP\AJ
 Sample : PB168895BS
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB168895BS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 07/21/2025
 Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
 Quant Time: Jul 19 01:59:59 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...	15.202	1705185	17.054 ug/ml
Target Compounds			
1) N-OCTANE	2.120	1541234	13.649 ug/ml
2) N-DECANE	4.669	1839228	15.969 ug/ml
3) N-DODECANE	6.852	1893054	16.328 ug/ml
4) N-TETRADECANE	8.693	1952993	16.546 ug/ml
5) N-HEXADECANE	10.313	1948406	16.845 ug/ml
6) N-OCTADECANE	11.767	2004029	17.073 ug/ml
7) N-EICOSANE	13.088	2084438	17.424 ug/ml
8) N-DOCOSANE	14.297	1975026	17.138 ug/ml
10) N-TETRACOSANE	15.409	2013264	17.621 ug/ml
11) N-HEXACOSANE	16.437	1876724	17.055 ug/ml
12) N-OCTACOSANE	17.395	1853659	17.045 ug/ml
13) N-TRIACONTANE	18.289	1837765	17.198 ug/ml
14) N-DOTRIACONTANE	19.127	1735679	17.164 ug/mlm
15) N-TETRATRIACONTANE	19.916	1542300	16.951 ug/mlm
16) N-HEXATRIACONTANE	20.661	1412667	18.758 ug/ml
17) N-OCTATRIACONTANE	21.453	1309156	20.115 ug/ml
18) N-TETRACONTANE	22.460	1154022	20.023 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016338.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 13:52
Operator : YP\AJ
Sample : PB168895BS
Misc :
ALS Vial : 26 Sample Multiplier: 1

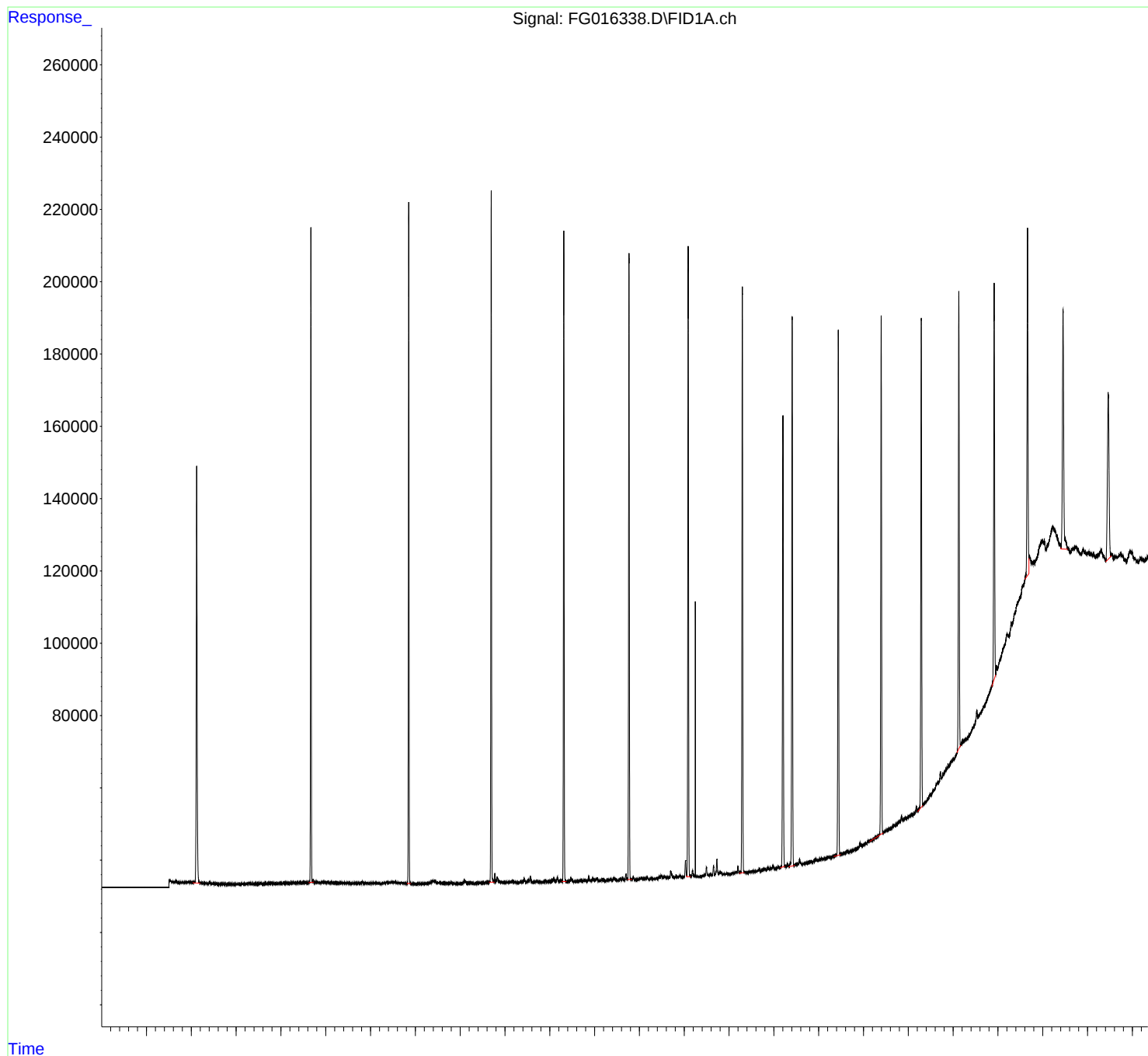
Instrument :
FID_G
ClientSampleId :
PB168895BS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 07/21/2025
Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 19 01:59:59 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

Instrument :
FID_G
ClientSampleId :
PB168895BS
Area Percent Report

Manual IntegrationsAPPROVED

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG07182
Data File : FG016338.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 13:52
Sample : PB168895BS
Misc :
ALS Vial : 26 Sample Multiplier: 1

Reviewed By :Yogesh
Patel
07/21/2025
Supervised By :mohammad
ahmed
07/23/2025

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	2.120	2.035	2.200	BB	115384	1541234	73.94%	4.878%
2	4.669	4.625	4.721	BB	181140	1839228	88.24%	5.821%
3	6.852	6.814	6.900	BB	188145	1893054	90.82%	5.992%
4	8.693	8.647	8.763	BB	190724	1952993	93.69%	6.181%
5	10.313	10.269	10.370	BB	179970	1948406	93.47%	6.167%
6	11.767	11.733	11.818	BB	171121	2004029	96.14%	6.343%
7	13.088	13.055	13.144	VB	174263	2084438	100.00%	6.598%
8	14.297	14.235	14.339	BB	161056	1975026	94.75%	6.251%
9	15.202	15.139	15.245	BV	124705	1705185	81.81%	5.397%
10	15.409	15.334	15.466	BB	151951	2013264	96.59%	6.372%
11	16.437	16.336	16.490	BB	144996	1876724	90.03%	5.940%
12	17.395	17.140	17.440	BB	143228	1853659	88.93%	5.867%
13	18.289	18.214	18.325	BV	135012	1837765	88.17%	5.817%
14	19.127	18.738	19.169	PV	126518	1744995	83.72%	5.523%
15	19.916	19.620	19.949	BV	109305	1448455	69.49%	4.585%
16	20.661	20.601	20.692	BV	95669	1412667	67.77%	4.471%
17	21.453	21.407	21.561	VV	66164	1309156	62.81%	4.144%
18	22.460	22.406	22.521	PV	45744	1154022	55.36%	3.653%
Sum of corrected areas:						31594299		

FG070925.M Sat Jul 19 05:12:27 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	07/11/25
Project:	166 Belmont Ave Belleville	Date Received:	07/11/25
Client Sample ID:	WC-SOIL-20250711MS	SDG No.:	Q2618
Lab Sample ID:	Q2592-01MS	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	76.7
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TPH GC
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016339.D	1	07/17/25 08:25	07/18/25 14:22	PB168895

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	458000	E	500	3690	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	20.2		37 - 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_G\Data\FG071825\
 Data File : FG016339.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 14:22
 Operator : YP\AJ
 Sample : Q2592-01MS
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 WC-SOIL-20250711MS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 07/22/2025
 Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
 Quant Time: Jul 19 05:43:39 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...	15.213	1451326	14.515 ug/mlm
Target Compounds			
1) N-OCTANE	2.116	1068257	9.460 ug/ml
2) N-DECANE	4.668	1635891	14.204 ug/ml
3) N-DODECANE	6.851	1901051	16.397 ug/ml
4) N-TETRADECANE	8.693	2006184	16.997 ug/ml
5) N-HEXADECANE	10.313	2001209	17.302 ug/ml
6) N-OCTADECANE	11.770	2104139	17.926 ug/ml
7) N-EICOSANE	13.095	2329122	19.469 ug/mlm
8) N-DOCOSANE	14.303	2190672	19.010 ug/mlm
10) N-TETRACOSANE	15.416	4494603	39.339 ug/mlm
11) N-HEXACOSANE	16.452	1988004	18.066 ug/mlm
12) N-OCTACOSANE	17.410	3713536	34.148 ug/mlm
13) N-TRIACONTANE	18.309	3017222	28.235 ug/mlm
14) N-DOTRIACONTANE	19.150	3404926	33.672 ug/ml
15) N-TETRATRIACONTANE	19.941	2280585	25.065 ug/ml
16) N-HEXATRIACONTANE	20.691	1907661	25.331 ug/mlm
17) N-OCTATRIACONTANE	21.486	1730529	26.590 ug/mlm
18) N-TETRACONTANE	22.506	1994449	34.605 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016339.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 14:22
Operator : YP\AJ
Sample : Q2592-01MS
Misc :
ALS Vial : 27 Sample Multiplier: 1

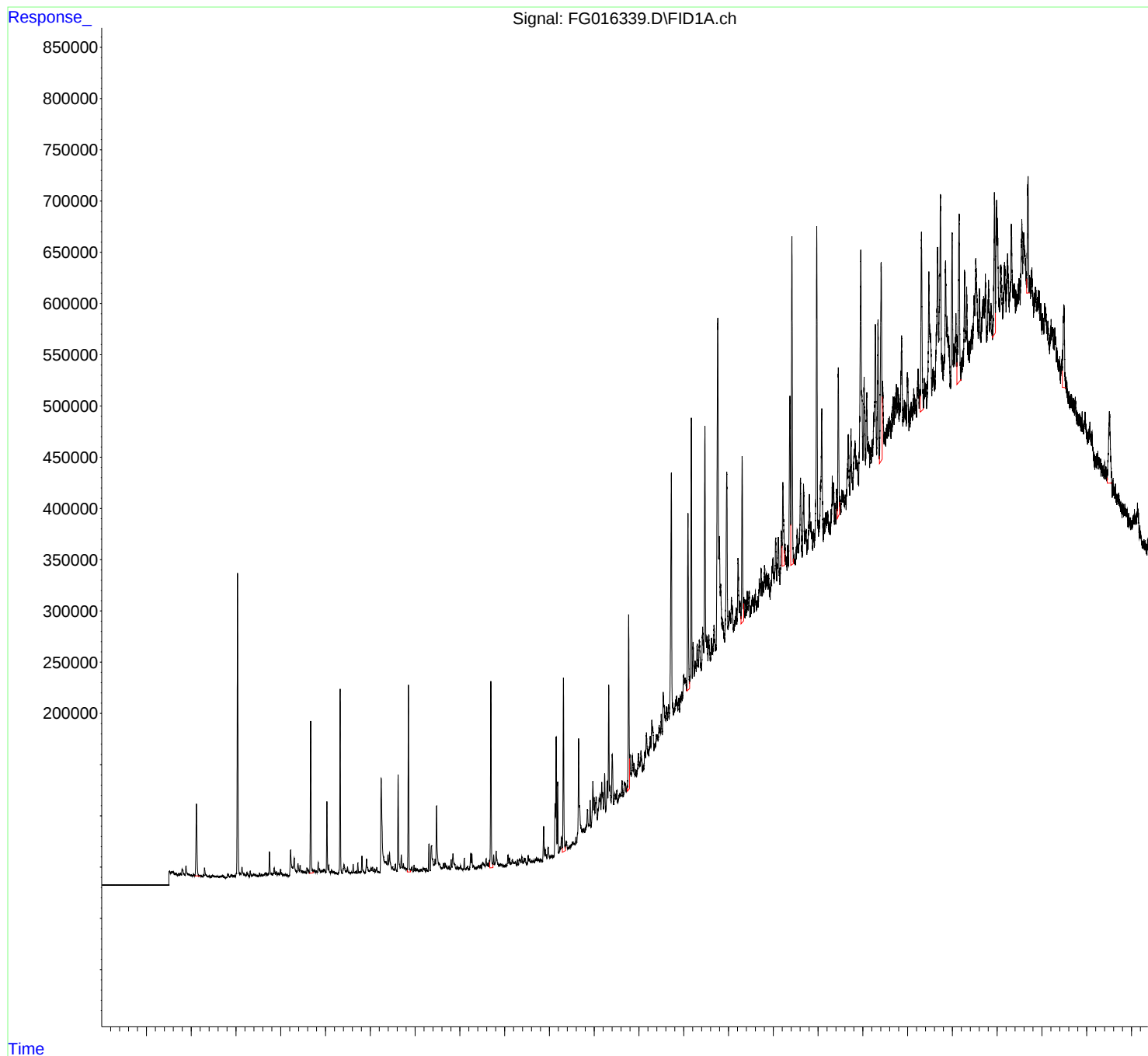
Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 19 05:43:39 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

Instrument :

FID_G

ClientSampleId :

WC-SOIL-20250711MS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025

Supervised By :mohammad ahmed 07/23/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG07182
Data File : FG016339.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 14:22
Sample : Q2592-01MS
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	2.048	2.018	2.081	BV	1303	23577	0.14%	0.002%
2	2.116	2.081	2.182	VV	70632	1090150	6.45%	0.100%
3	2.195	2.182	2.209	VV	692	9360	0.06%	0.001%
4	2.220	2.209	2.253	VV	773	10915	0.06%	0.001%
5	2.267	2.253	2.284	PV	1889	23667	0.14%	0.002%
6	2.296	2.284	2.380	VV	8719	145380	0.86%	0.013%
7	2.404	2.380	2.436	VV	1105	17785	0.11%	0.002%
8	2.474	2.436	2.499	PV	1780	39446	0.23%	0.004%
9	2.506	2.499	2.528	VV	1283	16285	0.10%	0.001%
10	2.541	2.528	2.548	VV	763	7496	0.04%	0.001%
11	2.563	2.548	2.579	VV	1223	19362	0.11%	0.002%
12	2.588	2.579	2.610	VV	1051	12812	0.08%	0.001%
13	2.649	2.610	2.665	VV	947	24950	0.15%	0.002%
14	2.668	2.665	2.681	VV	972	8708	0.05%	0.001%
15	2.701	2.681	2.723	VV	2311	35659	0.21%	0.003%
16	2.730	2.723	2.784	VV	671	8431	0.05%	0.001%
17	2.820	2.784	2.866	PV	3603	78661	0.47%	0.007%
18	2.890	2.866	2.910	VV	2665	45286	0.27%	0.004%
19	2.928	2.910	2.955	VV	1793	39248	0.23%	0.004%
20	2.969	2.955	2.990	VV	1642	26601	0.16%	0.002%
21	3.035	2.990	3.079	VV	296754	3520345	20.83%	0.321%
22	3.094	3.079	3.110	VV	4113	66700	0.39%	0.006%
23	3.133	3.110	3.176	VV	9291	195229	1.16%	0.018%
24	3.187	3.176	3.213	VV	2892	51327	0.30%	0.005%
25	3.218	3.213	3.224	VV	1741	10650	0.06%	0.001%
26	3.247	3.224	3.300	VV	4061	101759	0.60%	0.009%
27	3.316	3.300	3.344	VV	5904	78757	0.47%	0.007%
28	3.348	3.344	3.365	VV	1635	18215	0.11%	0.002%
29	3.392	3.365	3.414	VV	2587	57340	0.34%	0.005%
30	3.424	3.414	3.446	VV	2040	30797	0.18%	0.003%
31	3.451	3.446	3.463	VV	1356	12245	0.07%	0.001%
32	3.473	3.463	3.493	VV	1119	14687	0.09%	0.001%
33	3.523	3.493	3.544	VV	3663	53335	0.32%	0.005%
34	3.566	3.544	3.590	VV	2327	40258	0.24%	0.004%
35	3.608	3.590	3.615	VV	1626	20441	0.12%	0.002%
36	3.651	3.615	3.670	VV	3669	79303	0.47%	0.007%

				riteres				
37	3.683	3.670	3.710	VV	2698	52206	0.31%	0.005%
38	3.748	3.710	3.780	VV	23944	324737		
39	3.793	3.780	3.810	VV	2864	40942		
40	3.826	3.810	3.832	VV	2656	28182		
41	3.852	3.832	3.880	VV	8224	138153		
42	3.897	3.880	3.915	VV	4317	62965		
43	3.925	3.915	3.934	VV	2192	23619	0.14%	0.002%
44	3.944	3.934	3.961	VV	2808	36612	0.22%	0.003%
45	3.992	3.961	4.069	VV	6415	160932	0.95%	0.015%
46	4.098	4.069	4.117	VV	1529	33038	0.20%	0.003%
47	4.119	4.117	4.124	VV	1645	3859	0.02%	0.000%
48	4.132	4.124	4.180	VV	780	12453	0.07%	0.001%
49	4.218	4.180	4.266	PV	25367	525756	3.11%	0.048%
50	4.299	4.266	4.353	VV	16949	468345	2.77%	0.043%
51	4.384	4.353	4.415	VV	11691	259471	1.54%	0.024%
52	4.431	4.415	4.458	VV	9549	159390	0.94%	0.015%
53	4.472	4.458	4.490	VV	4499	78219	0.46%	0.007%
54	4.500	4.490	4.519	VV	3725	57641	0.34%	0.005%
55	4.532	4.519	4.575	VV	3218	96324	0.57%	0.009%
56	4.585	4.575	4.600	VV	7169	80721	0.48%	0.007%
57	4.609	4.600	4.641	VV	5055	95015	0.56%	0.009%
58	4.668	4.641	4.724	VV	150783	1740448	10.30%	0.159%
59	4.743	4.724	4.773	VV	5122	115271	0.68%	0.011%
60	4.790	4.773	4.813	VV	3966	79026	0.47%	0.007%
61	4.836	4.813	4.855	VV	11597	176880	1.05%	0.016%
62	4.863	4.855	4.890	VV	5662	92206	0.55%	0.008%
63	4.903	4.890	4.912	VV	3539	44013	0.26%	0.004%
64	4.928	4.912	4.941	VV	3876	61081	0.36%	0.006%
65	4.960	4.941	4.975	VV	5441	89430	0.53%	0.008%
66	4.980	4.975	5.000	VV	4473	51667	0.31%	0.005%
67	5.031	5.000	5.057	VV	71600	767351	4.54%	0.070%
68	5.071	5.057	5.107	VV	9297	142809	0.84%	0.013%
69	5.135	5.107	5.160	VV	3735	90728	0.54%	0.008%
70	5.186	5.160	5.216	VV	2452	66976	0.40%	0.006%
71	5.219	5.216	5.271	VV	1595	32416	0.19%	0.003%
72	5.326	5.271	5.367	VV	180394	1796017	10.63%	0.164%
73	5.413	5.367	5.453	VV	9386	243943	1.44%	0.022%
74	5.492	5.453	5.514	VV	6817	129197	0.76%	0.012%
75	5.524	5.514	5.549	VV	1449	23886	0.14%	0.002%
76	5.564	5.549	5.568	VV	1083	11502	0.07%	0.001%
77	5.582	5.568	5.598	VV	1738	24774	0.15%	0.002%
78	5.617	5.598	5.646	VV	9597	116697	0.69%	0.011%
79	5.659	5.646	5.676	VV	1860	24502	0.14%	0.002%
80	5.691	5.676	5.706	VV	2638	27830	0.16%	0.003%
81	5.720	5.706	5.745	VV	10580	108737	0.64%	0.010%
82	5.760	5.745	5.770	VV	1771	21932	0.13%	0.002%
83	5.777	5.770	5.790	VV	1991	20844	0.12%	0.002%
84	5.813	5.790	5.878	VV	17226	239803	1.42%	0.022%
85	5.917	5.878	5.977	VV	13816	275416	1.63%	0.025%
86	6.013	5.977	6.031	VV	5090	110084	0.65%	0.010%
87	6.046	6.031	6.065	VV	5734	74782	0.44%	0.007%
88	6.083	6.065	6.103	VV	3996	61059	0.36%	0.006%
89	6.144	6.103	6.161	VV	5095	101437	0.60%	0.009%

Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

90	6.175	6.161	6.212	VV	1394	23818	0.14%	0.002%
91	6.243	6.212	6.313	PV	92026	2005218	11.06%	0.002%
92	6.318	6.313	6.336	VV	11261	146348	0.08%	0.002%
93	6.348	6.336	6.374	VV	10697	215087	0.05%	0.002%
94	6.393	6.374	6.409	VV	16792	246344	0.07%	0.002%
95	6.430	6.409	6.480	VV	19415	433492	0.05%	0.002%
96	6.494	6.480	6.532	VV	5647	113062	0.67%	0.010%
97	6.561	6.532	6.595	VV	7848	143450	0.85%	0.013%
98	6.621	6.595	6.670	VV	95327	1094577	6.48%	0.100%
99	6.692	6.670	6.723	VV	16757	270595	1.60%	0.025%
100	6.740	6.723	6.756	VV	8367	115017	0.68%	0.011%
101	6.769	6.756	6.798	VV	4358	90369	0.53%	0.008%
102	6.807	6.798	6.827	VV	3162	48927	0.29%	0.004%
103	6.851	6.827	6.900	VV	182186	1903544	11.26%	0.174%
104	6.929	6.900	6.956	VV	4694	84108	0.50%	0.008%
105	6.976	6.956	6.993	VV	6422	67944	0.40%	0.006%
106	7.009	6.993	7.030	VV	3363	46698	0.28%	0.004%
107	7.046	7.030	7.064	VV	2568	38083	0.23%	0.003%
108	7.078	7.064	7.093	VV	1459	14955	0.09%	0.001%
109	7.111	7.093	7.128	PV	2000	27029	0.16%	0.002%
110	7.139	7.128	7.156	VV	1871	18551	0.11%	0.002%
111	7.176	7.156	7.190	VV	3129	42420	0.25%	0.004%
112	7.205	7.190	7.228	VV	3050	44939	0.27%	0.004%
113	7.249	7.228	7.283	VV	3160	40124	0.24%	0.004%
114	7.309	7.283	7.336	VV	26705	271904	1.61%	0.025%
115	7.365	7.336	7.414	VV	24725	600492	3.55%	0.055%
116	7.422	7.414	7.431	VV	6396	62393	0.37%	0.006%
117	7.445	7.431	7.459	VV	11182	146059	0.86%	0.013%
118	7.478	7.459	7.523	VV	63683	946589	5.60%	0.086%
119	7.527	7.523	7.590	VV	7574	194831	1.15%	0.018%
120	7.599	7.590	7.610	VV	2492	28248	0.17%	0.003%
121	7.634	7.610	7.651	VV	7004	110216	0.65%	0.010%
122	7.671	7.651	7.688	VV	6872	102403	0.61%	0.009%
123	7.702	7.688	7.730	VV	4292	77803	0.46%	0.007%
124	7.756	7.730	7.776	VV	4148	70299	0.42%	0.006%
125	7.805	7.776	7.820	VV	10462	127282	0.75%	0.012%
126	7.846	7.820	7.922	VV	16191	400937	2.37%	0.037%
127	7.940	7.922	7.963	VV	3406	54307	0.32%	0.005%
128	7.980	7.963	7.989	VV	1983	23752	0.14%	0.002%
129	8.017	7.989	8.076	VV	4324	87466	0.52%	0.008%
130	8.098	8.076	8.132	VV	11381	133194	0.79%	0.012%
131	8.154	8.132	8.158	VV	2103	22064	0.13%	0.002%
132	8.170	8.158	8.209	VV	3325	44248	0.26%	0.004%
133	8.242	8.209	8.256	PV	15405	195394	1.16%	0.018%
134	8.269	8.256	8.287	VV	14489	166588	0.99%	0.015%
135	8.302	8.287	8.335	VV	3538	59493	0.35%	0.005%
136	8.347	8.335	8.361	VV	1364	13168	0.08%	0.001%
137	8.382	8.361	8.395	VV	1884	24079	0.14%	0.002%
138	8.421	8.395	8.442	VV	3192	62671	0.37%	0.006%
139	8.466	8.442	8.482	VV	2866	41434	0.25%	0.004%
140	8.511	8.482	8.561	VV	5510	165364	0.98%	0.015%
141	8.585	8.561	8.608	VV	8601	147918	0.88%	0.014%

Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MS
0.14% 0.002%

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

							WC-SOIL-20250711M	
							Manual Integration	
							Reviewed By :Yogesh	
							Supervised By :m	
142	8.624	8.608	8.640	VV	5006	63099	0.37%	0.006%
143	8.659	8.640	8.668	VV	7490	85965	0.00%	0.000%
144	8.693	8.668	8.739	VV	180727	2007297	11.00%	0.000%
145	8.755	8.739	8.774	VV	12300	146478	0.00%	0.000%
146	8.811	8.774	8.885	VV	15540	378568	2.39%	0.000%
147	8.903	8.885	8.924	VV	3300	52705	0.00%	0.000%
148	8.940	8.924	8.965	VV	2454	39072	0.23%	0.004%
149	8.976	8.965	8.992	VV	1023	8968	0.05%	0.001%
150	9.006	8.992	9.025	PV	1217	14152	0.08%	0.001%
151	9.075	9.025	9.094	VV	11051	165381	0.98%	0.015%
152	9.109	9.094	9.125	VV	7735	88409	0.52%	0.008%
153	9.137	9.125	9.154	VV	3298	44387	0.26%	0.004%
154	9.170	9.154	9.203	VV	5916	115983	0.69%	0.011%
155	9.210	9.203	9.219	VV	3047	26683	0.16%	0.002%
156	9.238	9.219	9.267	VV	3632	66459	0.39%	0.006%
157	9.287	9.267	9.309	PV	5585	64241	0.38%	0.006%
158	9.329	9.309	9.333	VV	5832	59272	0.35%	0.005%
159	9.336	9.333	9.362	VV	5753	77429	0.46%	0.007%
160	9.384	9.362	9.412	VV	8298	135528	0.80%	0.012%
161	9.437	9.412	9.450	VV	6390	99056	0.59%	0.009%
162	9.462	9.450	9.488	VV	6027	74821	0.44%	0.007%
163	9.525	9.488	9.543	PV	8781	117570	0.70%	0.011%
164	9.556	9.543	9.586	VV	5147	89610	0.53%	0.008%
165	9.602	9.586	9.614	VV	2722	33671	0.20%	0.003%
166	9.617	9.614	9.634	VV	2181	22271	0.13%	0.002%
167	9.642	9.634	9.663	VV	2425	29290	0.17%	0.003%
168	9.683	9.663	9.695	VV	3806	50187	0.30%	0.005%
169	9.714	9.695	9.734	VV	4649	83746	0.50%	0.008%
170	9.740	9.734	9.751	VV	2851	28146	0.17%	0.003%
171	9.760	9.751	9.781	VV	2974	36287	0.21%	0.003%
172	9.800	9.781	9.840	VV	2987	53549	0.32%	0.005%
173	9.872	9.840	9.892	PV	34132	432268	2.56%	0.039%
174	9.905	9.892	9.944	VV	11091	188369	1.11%	0.017%
175	9.971	9.944	10.016	VV	11941	236076	1.40%	0.022%
176	10.028	10.016	10.035	VV	1806	16306	0.10%	0.001%
177	10.054	10.035	10.075	VV	2572	40037	0.24%	0.004%
178	10.090	10.075	10.101	PV	1651	17765	0.11%	0.002%
179	10.128	10.101	10.135	VV	51556	503963	2.98%	0.046%
180	10.150	10.135	10.169	VV	115624	1312924	7.77%	0.120%
181	10.185	10.169	10.210	VV	71269	737633	4.36%	0.067%
182	10.234	10.210	10.249	VV	6606	100912	0.60%	0.009%
183	10.269	10.249	10.290	VV	14706	224879	1.33%	0.021%
184	10.313	10.290	10.359	VV	169296	1998863	11.83%	0.183%
185	10.377	10.359	10.408	VV	8294	145043	0.86%	0.013%
186	10.421	10.408	10.434	VV	1679	17097	0.10%	0.002%
187	10.447	10.434	10.458	PV	1575	13636	0.08%	0.001%
188	10.475	10.458	10.480	VV	1690	15189	0.09%	0.001%
189	10.523	10.480	10.545	VV	3956	82933	0.49%	0.008%
190	10.552	10.545	10.563	VV	1894	12820	0.08%	0.001%
191	10.593	10.563	10.610	VV	6277	72838	0.43%	0.007%
192	10.653	10.610	10.670	VV	99237	1293945	7.66%	0.118%
193	10.673	10.670	10.721	VV	35127	574394	3.40%	0.052%
194	10.732	10.721	10.744	VV	8219	110042	0.65%	0.010%

195	10.760	10.744	10.784	VV	9564	189737	1.12%	0.017%
196	10.850	10.784	10.870	VV	25588	629753		
197	10.881	10.870	10.892	VV	10312	130861		
198	10.911	10.892	10.934	VV	32755	446031		
199	10.971	10.934	10.988	VV	49902	845334		
200	11.000	10.988	11.015	VV	32784	423846		
201	11.043	11.015	11.072	VV	32321	785275	4.65%	0.072%
202	11.089	11.072	11.094	VV	19424	199509	1.18%	0.018%
203	11.113	11.094	11.122	VV	27992	410783	2.43%	0.038%
204	11.135	11.122	11.151	VV	32273	456110	2.70%	0.042%
205	11.169	11.151	11.183	VV	43015	598960	3.54%	0.055%
206	11.191	11.183	11.212	VV	31595	442035	2.62%	0.040%
207	11.234	11.212	11.257	VV	49312	758847	4.49%	0.069%
208	11.291	11.257	11.306	VV	39550	764922	4.53%	0.070%
209	11.325	11.306	11.343	VV	132412	1596445	9.45%	0.146%
210	11.352	11.343	11.378	VV	33855	543132	3.21%	0.050%
211	11.402	11.378	11.433	VV	62945	1218667	7.21%	0.111%
212	11.460	11.433	11.469	VV	22963	399956	2.37%	0.037%
213	11.472	11.469	11.488	VV	22381	220972	1.31%	0.020%
214	11.504	11.488	11.526	VV	24611	448369	2.65%	0.041%
215	11.558	11.526	11.569	VV	18920	415164	2.46%	0.038%
216	11.578	11.569	11.586	VV	19635	184805	1.09%	0.017%
217	11.593	11.586	11.603	VV	17693	169437	1.00%	0.015%
218	11.622	11.603	11.654	VV	30366	646171	3.82%	0.059%
219	11.677	11.654	11.716	VV	27486	845240	5.00%	0.077%
220	11.735	11.716	11.742	VV	23040	322898	1.91%	0.029%
221	11.770	11.742	11.790	VV	188372	2612516	15.46%	0.239%
222	11.797	11.790	11.828	VV	50560	920966	5.45%	0.084%
223	11.851	11.828	11.875	VV	47725	1090003	6.45%	0.100%
224	11.887	11.875	11.913	VV	39062	781124	4.62%	0.071%
225	11.931	11.913	11.948	VV	32098	615023	3.64%	0.056%
226	11.987	11.948	12.008	VV	46499	1296613	7.67%	0.118%
227	12.016	12.008	12.026	VV	37487	393229	2.33%	0.036%
228	12.045	12.026	12.080	VV	47550	1202581	7.12%	0.110%
229	12.097	12.080	12.111	VV	31868	546829	3.24%	0.050%
230	12.134	12.111	12.145	VV	42542	791847	4.69%	0.072%
231	12.168	12.145	12.217	VV	61257	2025266	11.98%	0.185%
232	12.254	12.217	12.268	VV	55067	1417134	8.39%	0.129%
233	12.288	12.268	12.301	VV	69660	1206620	7.14%	0.110%
234	12.307	12.301	12.334	VV	62355	1044281	6.18%	0.095%
235	12.342	12.334	12.347	VV	44111	334652	1.98%	0.031%
236	12.369	12.347	12.375	VV	44863	711065	4.21%	0.065%
237	12.392	12.375	12.409	VV	52747	1019078	6.03%	0.093%
238	12.414	12.409	12.427	VV	51978	528286	3.13%	0.048%
239	12.451	12.427	12.462	VV	59617	1130958	6.69%	0.103%
240	12.474	12.462	12.479	VV	55254	553235	3.27%	0.051%
241	12.497	12.479	12.521	VV	69053	1472017	8.71%	0.134%
242	12.542	12.521	12.560	VV	89002	1706372	10.10%	0.156%
243	12.562	12.560	12.592	VV	76208	1275625	7.55%	0.116%
244	12.611	12.592	12.638	VV	73209	1858964	11.00%	0.170%
245	12.662	12.638	12.675	VV	74348	1467003	8.68%	0.134%
246	12.723	12.675	12.774	VV	297593	7379414	43.66%	0.674%

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					rters			
247	12.820	12.774	12.829	VV	73107	2250914	13.32%	0.206%
248	12.843	12.829	12.868	VV	77130	1624272		
249	12.890	12.868	12.907	VV	73670	1571070		
250	12.921	12.907	12.925	VV	74935	755251		
251	12.930	12.925	12.940	VV	73170	609608		
252	12.958	12.940	12.968	VV	76744	1250880		
253	13.002	12.968	13.022	VV	92802	2702755	15.99%	0.247%
254	13.025	13.022	13.069	VV	88364	2343766	13.87%	0.214%
255	13.095	13.069	13.131	VV	247472	5125718	30.33%	0.468%
256	13.170	13.131	13.190	VV	338587	5883096	34.81%	0.537%
257	13.209	13.190	13.234	VV	115115	2647062	15.66%	0.242%
258	13.251	13.234	13.259	VV	98883	1432988	8.48%	0.131%
259	13.265	13.259	13.278	VV	97365	1063113	6.29%	0.097%
260	13.301	13.278	13.323	VV	114029	2687409	15.90%	0.245%
261	13.348	13.323	13.395	VV	116654	4262060	25.22%	0.389%
262	13.422	13.395	13.447	VV	126590	3397631	20.10%	0.310%
263	13.473	13.447	13.513	VV	321739	6623454	39.19%	0.605%
264	13.526	13.513	13.540	VV	114991	1741205	10.30%	0.159%
265	13.561	13.540	13.600	VV	113717	3612845	21.38%	0.330%
266	13.618	13.600	13.637	VV	108311	2238572	13.25%	0.204%
267	13.678	13.637	13.710	VV	120821	4564173	27.01%	0.417%
268	13.715	13.710	13.723	VV	101558	778824	4.61%	0.071%
269	13.760	13.723	13.784	VV	416425	9406563	55.66%	0.859%
270	13.798	13.784	13.814	VV	203855	3330591	19.71%	0.304%
271	13.825	13.814	13.855	VV	156992	3339608	19.76%	0.305%
272	13.858	13.855	13.862	VV	118338	492281	2.91%	0.045%
273	13.869	13.862	13.881	VV	121018	1355311	8.02%	0.124%
274	13.889	13.881	13.913	VV	112668	2041773	12.08%	0.186%
275	13.961	13.913	13.990	VV	261178	7399288	43.78%	0.676%
276	14.020	13.990	14.026	VV	124473	2568682	15.20%	0.235%
277	14.033	14.026	14.047	VV	121849	1467924	8.69%	0.134%
278	14.065	14.047	14.111	VV	137113	4652250	27.53%	0.425%
279	14.116	14.111	14.123	VV	107450	723804	4.28%	0.066%
280	14.149	14.123	14.156	VV	115474	2194089	12.98%	0.200%
281	14.171	14.156	14.192	VV	123569	2474277	14.64%	0.226%
282	14.213	14.192	14.243	VV	170328	4274805	25.29%	0.390%
283	14.254	14.243	14.270	VV	124974	2014149	11.92%	0.184%
284	14.305	14.270	14.337	VV	264363	6430461	38.05%	0.587%
285	14.342	14.337	14.362	VV	127604	1803215	10.67%	0.165%
286	14.366	14.362	14.370	VV	112619	503431	2.98%	0.046%
287	14.384	14.370	14.397	VV	124611	1918008	11.35%	0.175%
288	14.414	14.397	14.439	VV	131473	3100463	18.35%	0.283%
289	14.463	14.439	14.476	VV	131115	2675582	15.83%	0.244%
290	14.487	14.476	14.495	VV	116355	1211766	7.17%	0.111%
291	14.535	14.495	14.544	VV	124414	3415708	20.21%	0.312%
292	14.551	14.544	14.568	VV	120472	1690768	10.00%	0.154%
293	14.571	14.568	14.578	VV	114187	662850	3.92%	0.061%
294	14.601	14.578	14.622	VV	125898	3117007	18.44%	0.285%
295	14.632	14.622	14.639	VV	114966	1112398	6.58%	0.102%
296	14.653	14.639	14.663	VV	119932	1662687	9.84%	0.152%
297	14.686	14.663	14.695	VV	134998	2327850	13.77%	0.213%
298	14.700	14.695	14.710	VV	129363	1135107	6.72%	0.104%
299	14.728	14.710	14.748	VV	144469	3048106	18.04%	0.278%

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300	14.753	14.748	14.759	VV	128920	822033	4.86%	0.075%
301	14.762	14.759	14.784	VV	130021	1933918	11.70%	0.180%
302	14.806	14.784	14.832	VV	145046	3788194	22.33%	0.345%
303	14.846	14.832	14.859	VV	136203	2149127	12.74%	0.582%
304	14.869	14.859	14.883	VV	131698	1851207	10.84%	0.167%
305	14.899	14.883	14.912	VV	133257	2171265	12.03%	0.432%
306	14.922	14.912	14.930	VV	120971	1287075	7.62%	0.118%
307	14.949	14.930	14.958	VV	126791	1976735	11.70%	0.180%
308	14.972	14.958	14.976	VV	138525	1474330	8.72%	0.135%
309	14.995	14.976	15.017	VV	147880	3338185	19.75%	0.305%
310	15.053	15.017	15.077	VV	165004	5067396	29.98%	0.463%
311	15.114	15.077	15.132	VV	159963	4736533	28.03%	0.432%
312	15.138	15.132	15.153	VV	132892	1583788	9.37%	0.145%
313	15.182	15.153	15.196	VV	165625	3773888	22.33%	0.345%
314	15.214	15.196	15.257	VV	214614	6378061	37.74%	0.582%
315	15.262	15.257	15.278	VV	152371	1832024	10.84%	0.167%
316	15.284	15.278	15.306	VV	139132	2289793	13.55%	0.209%
317	15.320	15.306	15.339	VV	150157	2676871	15.84%	0.244%
318	15.371	15.339	15.391	VV	294004	6711659	39.71%	0.613%
319	15.416	15.391	15.447	VV	447697	8800541	52.07%	0.804%
320	15.452	15.447	15.482	VV	135633	2754208	16.30%	0.251%
321	15.487	15.482	15.494	VV	130704	924886	5.47%	0.084%
322	15.503	15.494	15.508	VV	136940	1108051	6.56%	0.101%
323	15.534	15.508	15.559	VV	156369	4365031	25.83%	0.399%
324	15.609	15.559	15.646	VV	203647	8292829	49.07%	0.757%
325	15.676	15.646	15.710	VV	197162	6176002	36.54%	0.564%
326	15.720	15.710	15.726	VV	150894	1442773	8.54%	0.132%
327	15.734	15.726	15.756	VV	152665	2559214	15.14%	0.234%
328	15.806	15.756	15.830	VV	185241	6884225	40.73%	0.629%
329	15.840	15.830	15.855	VV	157818	2242717	13.27%	0.205%
330	15.864	15.855	15.880	VV	147145	2105809	12.46%	0.192%
331	15.904	15.880	15.920	VV	147019	3331633	19.71%	0.304%
332	15.971	15.920	16.009	VV	441613	11536204	68.26%	1.053%
333	16.014	16.009	16.024	VV	152347	1249123	7.39%	0.114%
334	16.056	16.024	16.059	VV	190461	3504894	20.74%	0.320%
335	16.083	16.059	16.113	VV	257412	6425299	38.02%	0.587%
336	16.136	16.113	16.146	VV	151054	2744358	16.24%	0.251%
337	16.167	16.146	16.179	VV	156346	2886824	17.08%	0.264%
338	16.192	16.179	16.198	VV	156582	1722569	10.19%	0.157%
339	16.218	16.198	16.232	VV	156143	3078208	18.21%	0.281%
340	16.236	16.232	16.241	VV	145820	779069	4.61%	0.071%
341	16.247	16.241	16.258	VV	141862	1385968	8.20%	0.127%
342	16.268	16.258	16.277	VV	144111	1596635	9.45%	0.146%
343	16.318	16.277	16.332	VV	185867	5237692	30.99%	0.478%
344	16.347	16.332	16.364	VV	179422	3197131	18.92%	0.292%
345	16.377	16.364	16.397	VV	158731	2919930	17.28%	0.267%
346	16.414	16.397	16.430	VV	171221	3165051	18.73%	0.289%
347	16.453	16.430	16.479	VV	288928	6247397	36.97%	0.570%
348	16.485	16.479	16.503	VV	163041	2187905	12.95%	0.200%
349	16.507	16.503	16.512	VV	150602	793537	4.70%	0.072%
350	16.527	16.512	16.534	VV	167020	2100070	12.43%	0.192%
351	16.539	16.534	16.556	VV	165109	2184502	12.93%	0.199%

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352	16.563	16.556	16.595	VV	165218	3625400	21.45%	0.331%
353	16.606	16.595	16.620	VV	160345	2331094	18.33%	0.331%
354	16.622	16.620	16.626	VV	155595	635553	3.33%	0.331%
355	16.652	16.626	16.657	VV	185729	3109081	18.33%	0.331%
356	16.678	16.657	16.708	VV	217475	5734632	33.33%	0.189%
357	16.735	16.708	16.758	VV	220158	5679286	33.33%	0.189%
358	16.764	16.758	16.779	VV	169187	2068509	12.24%	0.189%
359	16.826	16.779	16.846	VV	202744	7728500	45.73%	0.706%
360	16.851	16.846	16.881	VV	191741	3855611	22.81%	0.352%
361	16.884	16.881	16.902	VV	183528	2116224	12.52%	0.193%
362	16.954	16.902	17.007	VV	386691	15702758	92.91%	1.434%
363	17.029	17.007	17.061	VV	262985	6986269	41.34%	0.638%
364	17.088	17.061	17.108	VV	245364	6070080	35.92%	0.554%
365	17.127	17.108	17.140	VV	197418	3635886	21.51%	0.332%
366	17.145	17.140	17.154	VV	192298	1577285	9.33%	0.144%
367	17.174	17.154	17.191	VV	189773	4104851	24.29%	0.375%
368	17.202	17.191	17.222	VV	191460	3533772	20.91%	0.323%
369	17.251	17.222	17.259	VV	222750	4503282	26.65%	0.411%
370	17.279	17.259	17.307	VV	306131	7255504	42.93%	0.662%
371	17.339	17.307	17.370	VV	307527	8650484	51.18%	0.790%
372	17.411	17.370	17.430	VV	363876	9744704	57.66%	0.890%
373	17.440	17.430	17.472	VV	245621	5453179	32.27%	0.498%
374	17.489	17.472	17.505	VV	195455	3754735	22.22%	0.343%
375	17.519	17.505	17.529	VV	194927	2812700	16.64%	0.257%
376	17.532	17.529	17.559	VV	200102	3508677	20.76%	0.320%
377	17.568	17.559	17.582	VV	206537	2755136	16.30%	0.252%
378	17.599	17.582	17.630	VV	205377	5623281	33.27%	0.513%
379	17.651	17.630	17.656	VV	209231	3204694	18.96%	0.293%
380	17.679	17.656	17.694	VV	222900	4746633	28.09%	0.433%
381	17.695	17.694	17.698	VV	205696	502275	2.97%	0.046%
382	17.706	17.698	17.727	VV	222736	3764464	22.27%	0.344%
383	17.749	17.727	17.764	VV	231171	4773582	28.24%	0.436%
384	17.781	17.764	17.794	VV	230079	3997305	23.65%	0.365%
385	17.799	17.794	17.810	VV	222935	2100127	12.43%	0.192%
386	17.867	17.810	17.893	VV	276071	11280504	66.75%	1.030%
387	17.899	17.893	17.908	VV	204090	1746493	10.33%	0.159%
388	17.911	17.908	17.917	VV	200287	1100805	6.51%	0.101%
389	17.925	17.917	17.942	VV	214002	3014140	17.83%	0.275%
390	17.950	17.942	17.955	VV	208013	1671620	9.89%	0.153%
391	17.959	17.955	17.970	VV	208278	1678704	9.93%	0.153%
392	17.994	17.970	17.998	VV	233259	3557470	21.05%	0.325%
393	18.005	17.998	18.035	VV	232847	4672163	27.64%	0.427%
394	18.046	18.035	18.057	VV	197718	2510826	14.86%	0.229%
395	18.080	18.057	18.106	VV	207468	5836994	34.54%	0.533%
396	18.138	18.106	18.145	VV	217782	4630244	27.40%	0.423%
397	18.152	18.145	18.162	VV	212085	2165105	12.81%	0.198%
398	18.178	18.162	18.200	VV	206823	4594696	27.19%	0.420%
399	18.229	18.200	18.235	VV	229509	4393759	26.00%	0.401%
400	18.238	18.235	18.257	VV	233304	2884187	17.07%	0.263%
401	18.309	18.257	18.348	VV	366696	13778026	81.52%	1.258%
402	18.365	18.348	18.370	VV	211418	2617025	15.48%	0.239%
403	18.378	18.370	18.397	VV	219620	3455326	20.44%	0.315%
404	18.399	18.397	18.425	VV	214365	3518222	20.82%	0.321%

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					riteres				
405	18.475	18.425	18.502	VV	319946	11523837	68.19%	1.052%	
406	18.510	18.502	18.541	VV	259452	5504996	32.19%	0.399%	
407	18.564	18.541	18.569	VV	224168	3608890	22.67%	0.350%	
408	18.573	18.569	18.606	VV	225603	4725581	27.37%	0.402%	
409	18.668	18.606	18.697	VV	335661	14433821	85.77%	0.629%	
410	18.733	18.697	18.767	VV	388469	12451642	73.42%	0.738%	
411	18.777	18.767	18.800	VV	228451	4371155	25.86%	0.399%	
412	18.811	18.800	18.814	VV	228484	1884371	11.15%	0.172%	
413	18.848	18.814	18.867	VV	320492	8530129	50.47%	0.779%	
414	18.880	18.867	18.909	VV	264030	6281186	37.17%	0.574%	
415	18.914	18.909	18.950	VV	243624	5527526	32.71%	0.505%	
416	18.955	18.950	18.961	VV	203374	1322930	7.83%	0.121%	
417	18.995	18.961	19.026	VV	345523	10148412	60.05%	0.927%	
418	19.034	19.026	19.039	VV	233498	1789638	10.59%	0.163%	
419	19.045	19.039	19.059	VV	224705	2653325	15.70%	0.242%	
420	19.079	19.059	19.101	VV	263951	5921346	35.04%	0.541%	
421	19.150	19.101	19.189	VV	358238	13735985	81.27%	1.254%	
422	19.207	19.189	19.220	VV	217230	3832128	22.67%	0.350%	
423	19.231	19.220	19.249	VV	220779	3780473	22.37%	0.345%	
424	19.270	19.249	19.301	VV	291652	7882773	46.64%	0.720%	
425	19.320	19.301	19.346	VV	279139	6637796	39.28%	0.606%	
426	19.349	19.346	19.357	VV	223940	1541144	9.12%	0.141%	
427	19.363	19.357	19.381	VV	227623	3080501	18.23%	0.281%	
428	19.399	19.381	19.415	VV	226593	4575556	27.07%	0.418%	
429	19.422	19.415	19.429	VV	236810	1810343	10.71%	0.165%	
430	19.484	19.429	19.501	VV	267764	10518820	62.24%	0.960%	
431	19.524	19.501	19.576	VV	302229	12057079	71.34%	1.101%	
432	19.602	19.576	19.639	VV	271278	9111104	53.91%	0.832%	
433	19.667	19.639	19.674	VV	247733	4973233	29.43%	0.454%	
434	19.680	19.674	19.719	VV	258215	6890541	40.77%	0.629%	
435	19.736	19.719	19.774	VV	280842	8082314	47.82%	0.738%	
436	19.807	19.774	19.841	VV	273450	9700589	57.40%	0.886%	
437	19.862	19.841	19.886	VV	249847	6484691	38.37%	0.592%	
438	19.892	19.886	19.897	VV	224059	1479169	8.75%	0.135%	
439	19.940	19.897	19.962	VV	353280	10676859	63.17%	0.975%	
440	19.987	19.962	19.999	VV	342877	6853806	40.55%	0.626%	
441	20.003	19.999	20.061	VV	328242	9993484	59.13%	0.912%	
442	20.083	20.061	20.096	VV	279541	5634973	33.34%	0.515%	
443	20.103	20.096	20.122	VV	259520	3912580	23.15%	0.357%	
444	20.128	20.122	20.135	VV	240600	1798580	10.64%	0.164%	
445	20.166	20.135	20.201	VV	280274	10146438	60.04%	0.926%	
446	20.233	20.201	20.271	VV	287917	10928198	64.66%	0.998%	
447	20.321	20.271	20.378	VV	313572	16900700	100.00%	1.543%	
448	20.383	20.378	20.408	VV	249925	4286941	25.37%	0.391%	
449	20.416	20.408	20.436	VV	244069	4009705	23.73%	0.366%	
450	20.439	20.436	20.443	VV	237428	1063743	6.29%	0.097%	
451	20.454	20.443	20.462	VV	239704	2731777	16.16%	0.249%	
452	20.474	20.462	20.485	VV	245009	3354290	19.85%	0.306%	
453	20.490	20.485	20.515	VV	255770	4408074	26.08%	0.402%	
454	20.552	20.515	20.570	VV	311314	9129904	54.02%	0.834%	
455	20.592	20.570	20.604	VV	297079	5793027	34.28%	0.529%	
456	20.607	20.604	20.661	VV	285040	9051702	53.56%	0.826%	

Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

rteres								
457	20.690	20.661	20.717	VV	348625	9903202	58.60%	0.904%
458	20.724	20.717	20.744	VV	249775	3788853	22.80%	0.904%
459	20.767	20.744	20.773	VV	254672	4284159	25.80%	0.904%
460	20.777	20.773	20.816	VV	257814	5970493	35.60%	0.904%
461	20.819	20.816	20.824	VV	226159	1154962	6.60%	0.441%
462	20.835	20.824	20.842	VV	230495	2344171	13.60%	0.722%
463	20.863	20.842	20.877	VV	236806	4834314	28.60%	0.441%
464	20.894	20.877	20.937	VV	225751	7903145	46.76%	0.722%
465	20.942	20.937	20.950	VV	231092	1673436	9.90%	0.153%
466	20.962	20.950	20.989	VV	213859	4810488	28.46%	0.439%
467	20.995	20.989	21.002	VV	205836	1501942	8.89%	0.137%
468	21.016	21.002	21.031	VV	204690	3455879	20.45%	0.316%
469	21.036	21.031	21.046	VV	192988	1785743	10.57%	0.163%
470	21.060	21.046	21.078	VV	212733	3855529	22.81%	0.352%
471	21.082	21.078	21.089	VV	209134	1375994	8.14%	0.126%
472	21.093	21.089	21.111	VV	202799	2523549	14.93%	0.230%
473	21.114	21.111	21.127	VV	192660	1816291	10.75%	0.166%
474	21.134	21.127	21.161	VV	195106	3695635	21.87%	0.337%
475	21.196	21.161	21.202	VV	186800	4368225	25.85%	0.399%
476	21.205	21.202	21.246	VV	193450	4735863	28.02%	0.432%
477	21.251	21.246	21.256	VV	182550	1075573	6.36%	0.098%
478	21.262	21.256	21.274	VV	174834	1892764	11.20%	0.173%
479	21.288	21.274	21.304	VV	182809	3124108	18.49%	0.285%
480	21.309	21.304	21.371	VV	170166	6183890	36.59%	0.565%
481	21.381	21.371	21.389	VV	148992	1598983	9.46%	0.146%
482	21.397	21.389	21.416	VV	152387	2259222	13.37%	0.206%
483	21.446	21.416	21.457	VV	148217	3505463	20.74%	0.320%
484	21.461	21.457	21.467	VV	155427	895107	5.30%	0.082%
485	21.495	21.467	21.526	VV	198659	5770751	34.15%	0.527%
486	21.539	21.526	21.554	VV	126189	2036333	12.05%	0.186%
487	21.560	21.554	21.583	VV	121057	1956323	11.58%	0.179%
488	21.600	21.583	21.625	VV	112627	2630877	15.57%	0.240%
489	21.632	21.625	21.641	VV	107019	956193	5.66%	0.087%
490	21.657	21.641	21.662	VV	108954	1353419	8.01%	0.124%
491	21.667	21.662	21.677	VV	105232	876739	5.19%	0.080%
492	21.692	21.677	21.733	VV	101849	3181372	18.82%	0.290%
493	21.746	21.733	21.749	VV	101069	947430	5.61%	0.087%
494	21.753	21.749	21.809	VV	97182	3048656	18.04%	0.278%
Sum of corrected areas:					1095216535			

Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

FG070925.M Sat Jul 19 05:36:07 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	07/11/25
Project:	166 Belmont Ave Belleville	Date Received:	07/11/25
Client Sample ID:	WC-SOIL-20250711MSD	SDG No.:	Q2618
Lab Sample ID:	Q2592-01MSD	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	76.7
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	TPH GC
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG016340.D	1	07/17/25 08:25	07/18/25 14:52	PB168895

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	450000	E	500	3690	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	14.5		37 - 130	72%	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\FG071825\
 Data File : FG016340.D
 Signal(s) : FID1A.ch
 Acq On : 18 Jul 2025 14:52
 Operator : YP\AJ
 Sample : Q2592-01MSD
 Misc :
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 WC-SOIL-20250711MSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 07/22/2025
 Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
 Quant Time: Jul 21 08:30:04 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...	15.218	1445638	14.458 ug/mlm
Target Compounds			
1) N-OCTANE	2.117	1069182	9.468 ug/ml
2) N-DECANE	4.670	1695057	14.717 ug/ml
3) N-DODECANE	6.854	1902669	16.411 ug/ml
4) N-TETRADECANE	8.696	2113988	17.910 ug/ml
5) N-HEXADECANE	10.317	1994312	17.242 ug/ml
6) N-OCTADECANE	11.773	2122478	18.082 ug/ml
7) N-EICOSANE	13.097	2247651	18.788 ug/mlm
8) N-DOCOSANE	14.309	1993049	17.295 ug/mlm
10) N-TETRACOSANE	15.421	4818697	42.176 ug/ml
11) N-HEXACOSANE	16.455	1904836	17.310 ug/mlm
12) N-OCTACOSANE	17.413	3512634	32.301 ug/ml
13) N-TRIACONTANE	18.311	3039081	28.440 ug/mlm
14) N-DOTRIACONTANE	19.151	2829229	27.979 ug/mlm
15) N-TETRATRIACONTANE	19.943	2719273	29.886 ug/mlm
16) N-HEXATRIACONTANE	20.692	1911926	25.387 ug/mlm
17) N-OCTATRIACONTANE	21.494	1671860	25.688 ug/mlm
18) N-TETRACONTANE	22.527	2220055	38.519 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG071825\
Data File : FG016340.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 14:52
Operator : YP\AJ
Sample : Q2592-01MSD
Misc :
ALS Vial : 28 Sample Multiplier: 1

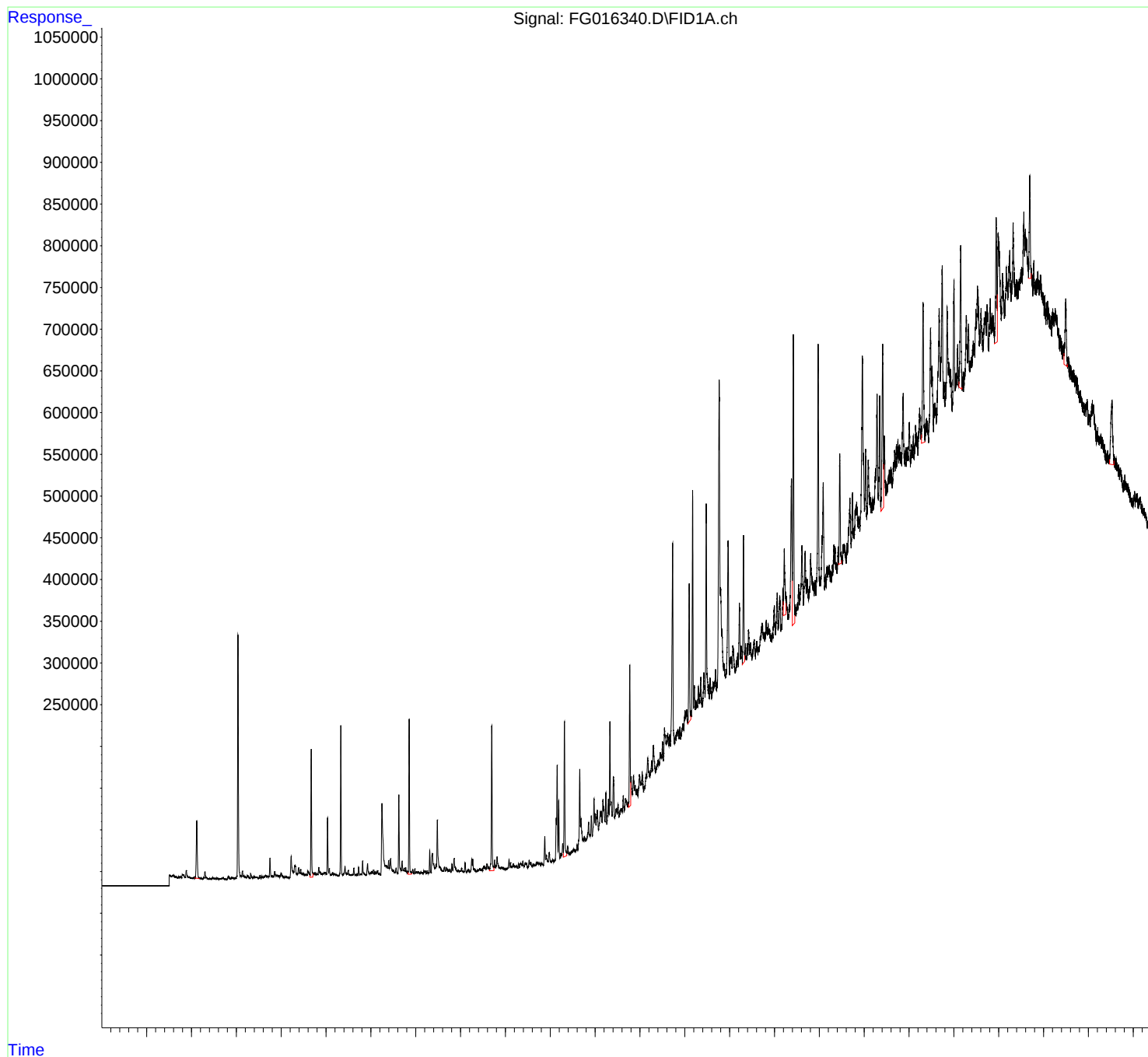
Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

Integration File: autoint1.e
Quant Time: Jul 21 08:30:04 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

Instrument :

FID_G

ClientSampleId :

WC-SOIL-20250711MSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 07/22/2025

Supervised By :mohammad ahmed 07/23/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG07182
Data File : FG016340.D
Signal(s) : FID1A.ch
Acq On : 18 Jul 2025 14:52
Sample : Q2592-01MSD
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	2.045	2.018	2.064	BV	1158	14298	0.09%	0.001%
2	2.074	2.064	2.083	VV	766	8148	0.05%	0.001%
3	2.117	2.083	2.183	VV	69419	1095674	6.70%	0.102%
4	2.191	2.183	2.213	VV	705	10539	0.06%	0.001%
5	2.223	2.213	2.250	VV	705	9653	0.06%	0.001%
6	2.269	2.250	2.285	PV	1852	24653	0.15%	0.002%
7	2.297	2.285	2.380	VV	8824	148691	0.91%	0.014%
8	2.405	2.380	2.433	VV	1146	18092	0.11%	0.002%
9	2.471	2.433	2.503	PV	2017	43371	0.27%	0.004%
10	2.530	2.503	2.550	VV	1230	27614	0.17%	0.003%
11	2.566	2.550	2.581	VV	1410	21587	0.13%	0.002%
12	2.590	2.581	2.610	VV	1179	13943	0.09%	0.001%
13	2.624	2.610	2.639	VV	675	8601	0.05%	0.001%
14	2.663	2.639	2.680	VV	1417	24977	0.15%	0.002%
15	2.701	2.680	2.787	VV	2257	49148	0.30%	0.005%
16	2.819	2.787	2.868	PV	3579	79531	0.49%	0.007%
17	2.891	2.868	2.910	VV	2416	41177	0.25%	0.004%
18	2.926	2.910	2.955	VV	1811	39484	0.24%	0.004%
19	2.971	2.955	2.989	VV	1628	26162	0.16%	0.002%
20	3.036	2.989	3.084	VV	292571	3538737	21.63%	0.329%
21	3.096	3.084	3.113	VV	4373	66837	0.41%	0.006%
22	3.135	3.113	3.180	VV	9553	205083	1.25%	0.019%
23	3.188	3.180	3.208	VV	2974	41487	0.25%	0.004%
24	3.246	3.208	3.307	VV	4034	126410	0.77%	0.012%
25	3.320	3.307	3.365	VV	6173	95966	0.59%	0.009%
26	3.393	3.365	3.415	VV	2561	57729	0.35%	0.005%
27	3.425	3.415	3.444	VV	2239	30754	0.19%	0.003%
28	3.452	3.444	3.463	VV	1534	15697	0.10%	0.001%
29	3.473	3.463	3.492	VV	1284	16303	0.10%	0.002%
30	3.525	3.492	3.547	VV	3999	60001	0.37%	0.006%
31	3.568	3.547	3.588	VV	2320	39131	0.24%	0.004%
32	3.610	3.588	3.615	VV	1587	20397	0.12%	0.002%
33	3.651	3.615	3.674	VV	3936	93313	0.57%	0.009%
34	3.685	3.674	3.710	VV	2675	48345	0.30%	0.004%
35	3.749	3.710	3.782	VV	24210	330599	2.02%	0.031%
36	3.794	3.782	3.815	VV	3044	46203	0.28%	0.004%

37	3.853	3.815	3.886	VV	7957	171622	1.05%	0.016%
38	3.900	3.886	3.935	VV	3385	86946		
39	3.946	3.935	3.965	VV	3108	42715		
40	3.996	3.965	4.063	VV	5813	156216		
41	4.101	4.063	4.131	VV	1621	46886		
42	4.135	4.131	4.176	VV	861	10897		
43	4.222	4.176	4.274	PV	25731	544540	3.33%	0.051%
44	4.302	4.274	4.314	VV	14551	266742	1.63%	0.025%
45	4.318	4.314	4.355	VV	13889	182703	1.12%	0.017%
46	4.386	4.355	4.417	VV	11646	260859	1.59%	0.024%
47	4.433	4.417	4.460	VV	9534	161711	0.99%	0.015%
48	4.471	4.460	4.490	VV	4658	75329	0.46%	0.007%
49	4.502	4.490	4.522	VV	4102	66294	0.41%	0.006%
50	4.541	4.522	4.546	VV	3298	44637	0.27%	0.004%
51	4.552	4.546	4.579	VV	3395	61732	0.38%	0.006%
52	4.590	4.579	4.606	VV	7455	92520	0.57%	0.009%
53	4.611	4.606	4.642	VV	5667	89532	0.55%	0.008%
54	4.670	4.642	4.705	VV	153919	1696107	10.37%	0.158%
55	4.713	4.705	4.728	VV	4778	61843	0.38%	0.006%
56	4.746	4.728	4.774	VV	5199	109837	0.67%	0.010%
57	4.792	4.774	4.815	VV	4002	81137	0.50%	0.008%
58	4.838	4.815	4.858	VV	11693	177693	1.09%	0.017%
59	4.868	4.858	4.893	VV	5747	97961	0.60%	0.009%
60	4.906	4.893	4.918	VV	3670	50775	0.31%	0.005%
61	4.928	4.918	4.940	VV	3744	46339	0.28%	0.004%
62	4.959	4.940	4.970	VV	5103	79539	0.49%	0.007%
63	4.983	4.970	5.003	VV	5140	88885	0.54%	0.008%
64	5.034	5.003	5.059	VV	70526	778559	4.76%	0.072%
65	5.073	5.059	5.110	VV	9705	149046	0.91%	0.014%
66	5.143	5.110	5.164	VV	4466	97151	0.59%	0.009%
67	5.188	5.164	5.210	VV	3104	69224	0.42%	0.006%
68	5.221	5.210	5.274	VV	1943	50888	0.31%	0.005%
69	5.330	5.274	5.371	VV	180844	1788404	10.93%	0.166%
70	5.387	5.371	5.393	VV	2957	28942	0.18%	0.003%
71	5.423	5.393	5.458	VV	11775	214407	1.31%	0.020%
72	5.465	5.458	5.473	VV	2648	22911	0.14%	0.002%
73	5.494	5.473	5.517	VV	6760	104416	0.64%	0.010%
74	5.526	5.517	5.546	VV	1581	21554	0.13%	0.002%
75	5.562	5.546	5.575	VV	1205	17574	0.11%	0.002%
76	5.592	5.575	5.602	VV	1985	22806	0.14%	0.002%
77	5.619	5.602	5.649	VV	9213	115080	0.70%	0.011%
78	5.661	5.649	5.679	VV	1752	22495	0.14%	0.002%
79	5.694	5.679	5.710	VV	2377	26392	0.16%	0.002%
80	5.727	5.710	5.751	VV	10443	109068	0.67%	0.010%
81	5.766	5.751	5.769	VV	1592	15804	0.10%	0.001%
82	5.779	5.769	5.793	VV	1801	22291	0.14%	0.002%
83	5.816	5.793	5.881	VV	17760	243759	1.49%	0.023%
84	5.926	5.881	5.960	VV	14346	238541	1.46%	0.022%
85	5.969	5.960	5.981	VV	2287	27188	0.17%	0.003%
86	6.015	5.981	6.035	VV	4472	101058	0.62%	0.009%
87	6.050	6.035	6.070	VV	6304	78934	0.48%	0.007%
88	6.086	6.070	6.105	VV	4031	55695	0.34%	0.005%
89	6.129	6.105	6.135	VV	3544	49023	0.30%	0.005%

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90	6.148	6.135	6.165	VV	5255	62863	0.38%	0.006%
91	6.181	6.165	6.215	VV	2071	34288		
92	6.247	6.215	6.315	VV	85975	1987894		
93	6.323	6.315	6.341	VV	11443	170928		
94	6.352	6.341	6.378	VV	11047	215355		
95	6.396	6.378	6.418	VV	17333	268103		
96	6.439	6.418	6.483	VV	19546	405554	2.48%	0.038%
97	6.496	6.483	6.531	VV	5654	111655	0.68%	0.010%
98	6.562	6.531	6.599	VV	7929	158274	0.97%	0.015%
99	6.624	6.599	6.671	VV	95757	1099654	6.72%	0.102%
100	6.696	6.671	6.728	VV	15993	282819	1.73%	0.026%
101	6.742	6.728	6.758	VV	7625	103827	0.63%	0.010%
102	6.771	6.758	6.808	VV	4609	107194	0.66%	0.010%
103	6.819	6.808	6.829	VV	3705	40668	0.25%	0.004%
104	6.854	6.829	6.906	VV	185914	1903182	11.63%	0.177%
105	6.931	6.906	6.958	VV	4962	82248	0.50%	0.008%
106	6.979	6.958	6.997	VV	6278	68808	0.42%	0.006%
107	7.012	6.997	7.034	VV	2819	44291	0.27%	0.004%
108	7.050	7.034	7.069	VV	2763	39283	0.24%	0.004%
109	7.081	7.069	7.099	VV	1326	14758	0.09%	0.001%
110	7.115	7.099	7.134	VV	1986	28545	0.17%	0.003%
111	7.143	7.134	7.163	VV	1781	17727	0.11%	0.002%
112	7.182	7.163	7.200	PV	3747	51981	0.32%	0.005%
113	7.214	7.200	7.234	VV	3113	40965	0.25%	0.004%
114	7.252	7.234	7.267	VV	3579	35197	0.22%	0.003%
115	7.277	7.267	7.289	VV	1133	11449	0.07%	0.001%
116	7.313	7.289	7.339	VV	27693	281971	1.72%	0.026%
117	7.373	7.339	7.429	VV	23598	659131	4.03%	0.061%
118	7.431	7.429	7.437	VV	6750	30591	0.19%	0.003%
119	7.452	7.437	7.462	VV	11414	140072	0.86%	0.013%
120	7.482	7.462	7.525	VV	63923	952215	5.82%	0.089%
121	7.530	7.525	7.591	VV	7856	209137	1.28%	0.019%
122	7.604	7.591	7.613	VV	2766	34746	0.21%	0.003%
123	7.637	7.613	7.656	VV	7231	119002	0.73%	0.011%
124	7.675	7.656	7.691	VV	6933	98788	0.60%	0.009%
125	7.704	7.691	7.729	VV	4420	76517	0.47%	0.007%
126	7.758	7.729	7.780	VV	4627	84172	0.51%	0.008%
127	7.807	7.780	7.825	VV	10464	135023	0.83%	0.013%
128	7.855	7.825	7.925	VV	17089	412246	2.52%	0.038%
129	7.946	7.925	7.971	VV	3369	60465	0.37%	0.006%
130	7.982	7.971	7.999	VV	2142	27049	0.17%	0.003%
131	8.020	7.999	8.066	VV	4993	84415	0.52%	0.008%
132	8.070	8.066	8.076	VV	827	4447	0.03%	0.000%
133	8.101	8.076	8.132	VV	11765	140195	0.86%	0.013%
134	8.175	8.132	8.210	PV	3221	69688	0.43%	0.006%
135	8.248	8.210	8.260	PV	15568	200475	1.23%	0.019%
136	8.273	8.260	8.292	VV	15484	172919	1.06%	0.016%
137	8.307	8.292	8.337	VV	3536	63999	0.39%	0.006%
138	8.349	8.337	8.367	VV	1305	17168	0.10%	0.002%
139	8.384	8.367	8.396	VV	1838	24298	0.15%	0.002%
140	8.426	8.396	8.447	VV	3615	70990	0.43%	0.007%
141	8.471	8.447	8.489	VV	2938	45766	0.28%	0.004%

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142	8.516	8.489	8.534	VV	5973	107495	0.66%	0.010%
143	8.540	8.534	8.566	VV	4248	69416	0.00%	0.000%
144	8.589	8.566	8.612	VV	8041	144755	0.00%	0.000%
145	8.625	8.612	8.643	VV	4670	63443	0.00%	0.000%
146	8.696	8.643	8.744	VV	173423	2114446	12.57%	0.039%
147	8.758	8.744	8.774	VV	12530	136991	0.00%	0.000%
148	8.814	8.774	8.893	VV	16363	420317	2.57%	0.039%
149	8.906	8.893	8.934	VV	3632	63829	0.39%	0.006%
150	8.948	8.934	8.968	VV	2590	37986	0.23%	0.004%
151	8.981	8.968	8.995	VV	1282	12846	0.08%	0.001%
152	9.011	8.995	9.026	PV	1606	14687	0.09%	0.001%
153	9.081	9.026	9.100	VV	11894	184461	1.13%	0.017%
154	9.112	9.100	9.129	VV	7839	91483	0.56%	0.009%
155	9.141	9.129	9.152	VV	3568	40801	0.25%	0.004%
156	9.171	9.152	9.205	VV	6252	131279	0.80%	0.012%
157	9.218	9.205	9.223	VV	3166	30917	0.19%	0.003%
158	9.241	9.223	9.274	VV	3674	77338	0.47%	0.007%
159	9.291	9.274	9.309	VV	5700	65636	0.40%	0.006%
160	9.332	9.309	9.343	VV	5969	84810	0.52%	0.008%
161	9.347	9.343	9.368	VV	5646	67387	0.41%	0.006%
162	9.388	9.368	9.417	VV	8912	139281	0.85%	0.013%
163	9.440	9.417	9.455	VV	5811	94693	0.58%	0.009%
164	9.467	9.455	9.495	VV	5898	76019	0.46%	0.007%
165	9.529	9.495	9.547	PV	9068	128771	0.79%	0.012%
166	9.562	9.547	9.591	VV	5713	94497	0.58%	0.009%
167	9.624	9.591	9.644	VV	3190	63756	0.39%	0.006%
168	9.655	9.644	9.670	VV	2190	25884	0.16%	0.002%
169	9.688	9.670	9.699	VV	4249	50833	0.31%	0.005%
170	9.715	9.699	9.739	VV	4488	85749	0.52%	0.008%
171	9.745	9.739	9.759	VV	2984	31261	0.19%	0.003%
172	9.769	9.759	9.786	VV	2767	31748	0.19%	0.003%
173	9.802	9.786	9.822	VV	3030	37899	0.23%	0.004%
174	9.827	9.822	9.845	VV	1506	11263	0.07%	0.001%
175	9.878	9.845	9.896	PV	34279	426582	2.61%	0.040%
176	9.910	9.896	9.947	VV	10692	196363	1.20%	0.018%
177	9.976	9.947	10.019	VV	12838	233170	1.43%	0.022%
178	10.034	10.019	10.042	VV	1561	14930	0.09%	0.001%
179	10.056	10.042	10.081	VV	2632	34081	0.21%	0.003%
180	10.132	10.081	10.140	PV	51035	507212	3.10%	0.047%
181	10.154	10.140	10.172	VV	113841	1287701	7.87%	0.120%
182	10.189	10.172	10.213	VV	70446	719689	4.40%	0.067%
183	10.236	10.213	10.257	VV	5869	98103	0.60%	0.009%
184	10.276	10.257	10.294	VV	16774	220754	1.35%	0.021%
185	10.317	10.294	10.353	VV	161818	1961007	11.98%	0.182%
186	10.357	10.353	10.368	VV	4930	34506	0.21%	0.003%
187	10.387	10.368	10.417	VV	10158	148930	0.91%	0.014%
188	10.428	10.417	10.440	VV	1258	10067	0.06%	0.001%
189	10.448	10.440	10.458	PV	1246	7036	0.04%	0.001%
190	10.472	10.458	10.488	VV	2822	27445	0.17%	0.003%
191	10.503	10.488	10.507	VV	2506	20176	0.12%	0.002%
192	10.521	10.507	10.540	VV	3767	52176	0.32%	0.005%
193	10.557	10.540	10.570	VV	1199	16625	0.10%	0.002%
194	10.596	10.570	10.612	PV	6244	69768	0.43%	0.006%

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195	10.658	10.612	10.674	PV	94981	1198280	7.32%	0.111%
196	10.686	10.674	10.730	VV	34245	672443		
197	10.739	10.730	10.753	VV	8459	97533		
198	10.768	10.753	10.785	VV	8484	130323		
199	10.801	10.785	10.807	VV	5873	64710		
200	10.811	10.807	10.817	VV	5345	30315		
201	10.855	10.817	10.877	VV	22721	455704	2.79%	0.042%
202	10.882	10.877	10.892	VV	8028	63843	0.39%	0.006%
203	10.916	10.892	10.938	VV	28723	383174	2.34%	0.036%
204	10.976	10.938	10.992	VV	46968	756499	4.62%	0.070%
205	11.004	10.992	11.020	VV	27969	365628	2.23%	0.034%
206	11.050	11.020	11.077	VV	30518	663554	4.06%	0.062%
207	11.116	11.077	11.127	VV	25546	489664	2.99%	0.046%
208	11.138	11.127	11.154	VV	25365	336852	2.06%	0.031%
209	11.175	11.154	11.189	VV	38528	542517	3.32%	0.050%
210	11.194	11.189	11.217	VV	28630	348462	2.13%	0.032%
211	11.239	11.217	11.261	VV	43863	592461	3.62%	0.055%
212	11.296	11.261	11.311	VV	34121	599590	3.66%	0.056%
213	11.330	11.311	11.349	VV	125507	1431311	8.75%	0.133%
214	11.356	11.349	11.380	VV	28961	398735	2.44%	0.037%
215	11.408	11.380	11.439	VV	55910	1009167	6.17%	0.094%
216	11.465	11.439	11.471	VV	14705	219917	1.34%	0.020%
217	11.477	11.471	11.492	VV	15813	154385	0.94%	0.014%
218	11.510	11.492	11.531	VV	18335	274497	1.68%	0.026%
219	11.590	11.531	11.606	VV	11669	372550	2.28%	0.035%
220	11.627	11.606	11.648	VV	25084	357330	2.18%	0.033%
221	11.678	11.648	11.696	VV	19975	391954	2.40%	0.036%
222	11.698	11.696	11.723	VV	16556	191958	1.17%	0.018%
223	11.736	11.723	11.747	VV	13138	163375	1.00%	0.015%
224	11.773	11.747	11.795	VV	175735	2325549	14.21%	0.216%
225	11.804	11.795	11.824	VV	40884	566572	3.46%	0.053%
226	11.830	11.824	11.836	VV	20545	149276	0.91%	0.014%
227	11.857	11.836	11.877	VV	40025	740623	4.53%	0.069%
228	11.889	11.877	11.919	VV	27519	562292	3.44%	0.052%
229	11.935	11.919	11.953	VV	20976	358030	2.19%	0.033%
230	11.990	11.953	12.015	VV	34558	927034	5.67%	0.086%
231	12.020	12.015	12.032	VV	25886	245414	1.50%	0.023%
232	12.049	12.032	12.079	VV	37261	744398	4.55%	0.069%
233	12.097	12.079	12.109	VV	18905	289084	1.77%	0.027%
234	12.142	12.109	12.151	VV	30193	626126	3.83%	0.058%
235	12.173	12.151	12.210	VV	48773	1274216	7.79%	0.119%
236	12.217	12.210	12.223	VV	26971	198920	1.22%	0.019%
237	12.261	12.223	12.272	VV	42549	967275	5.91%	0.090%
238	12.298	12.272	12.347	VV	58881	1835254	11.22%	0.171%
239	12.403	12.347	12.421	VV	35725	1405370	8.59%	0.131%
240	12.426	12.421	12.434	VV	33244	250184	1.53%	0.023%
241	12.453	12.434	12.472	VV	44310	896817	5.48%	0.083%
242	12.476	12.472	12.484	VV	40720	278067	1.70%	0.026%
243	12.503	12.484	12.523	VV	55708	1026272	6.27%	0.095%
244	12.547	12.523	12.562	VV	69862	1273658	7.78%	0.118%
245	12.564	12.562	12.569	VV	60880	239546	1.46%	0.022%
246	12.572	12.569	12.583	VV	61007	475470	2.91%	0.044%

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247	12.585	12.583	12.590	VV	53021	227533	1.39%	0.021%
248	12.620	12.590	12.643	VV	59829	1686718	10.00%	0.030%
249	12.657	12.643	12.678	VV	58183	1070805	6.98%	0.106%
250	12.729	12.678	12.775	VV	285259	6361245	38.00%	0.110%
251	12.796	12.775	12.805	VV	51201	847116	5.40%	0.021%
252	12.821	12.805	12.827	VV	54664	677032	4.20%	0.021%
253	12.829	12.827	12.834	VV	55470	229081	1.40%	0.021%
254	12.849	12.834	12.870	VV	56933	1142320	6.98%	0.106%
255	12.890	12.870	12.910	VV	58195	1178127	7.20%	0.110%
256	12.957	12.910	12.972	VV	58626	1963133	12.00%	0.183%
257	12.978	12.972	12.982	VV	54649	327835	2.00%	0.030%
258	13.006	12.982	13.023	VV	73469	1597905	9.77%	0.149%
259	13.042	13.023	13.071	VV	70580	1918230	11.72%	0.178%
260	13.098	13.071	13.136	VV	221607	4438603	27.13%	0.413%
261	13.141	13.136	13.150	VV	66393	555607	3.40%	0.052%
262	13.175	13.150	13.196	VV	328188	4622226	28.25%	0.430%
263	13.213	13.196	13.234	VV	95756	1818470	11.11%	0.169%
264	13.241	13.234	13.248	VV	73827	592645	3.62%	0.055%
265	13.252	13.248	13.258	VV	73220	419982	2.57%	0.039%
266	13.272	13.258	13.287	VV	75398	1227175	7.50%	0.114%
267	13.303	13.287	13.320	VV	89779	1601091	9.79%	0.149%
268	13.324	13.320	13.330	VV	73191	435311	2.66%	0.040%
269	13.357	13.330	13.386	VV	100109	2650819	16.20%	0.247%
270	13.424	13.386	13.436	VV	100407	2394350	14.63%	0.223%
271	13.443	13.436	13.451	VV	84678	731114	4.47%	0.068%
272	13.478	13.451	13.520	VV	301553	5852159	35.77%	0.544%
273	13.531	13.520	13.544	VV	83429	1125812	6.88%	0.105%
274	13.562	13.544	13.594	VV	90193	2343177	14.32%	0.218%
275	13.629	13.594	13.643	VV	82031	2149686	13.14%	0.200%
276	13.653	13.643	13.659	VV	81900	736233	4.50%	0.068%
277	13.686	13.659	13.713	VV	95914	2649269	16.19%	0.246%
278	13.719	13.713	13.726	VV	78255	604334	3.69%	0.056%
279	13.768	13.726	13.792	VV	438568	9810315	59.96%	0.913%
280	13.802	13.792	13.824	VV	186926	3119035	19.06%	0.290%
281	13.832	13.824	13.866	VV	138840	2843131	17.38%	0.264%
282	13.882	13.866	13.912	VV	94885	2391284	14.61%	0.222%
283	13.967	13.912	13.999	VV	239593	6843276	41.82%	0.637%
284	14.017	13.999	14.024	VV	97210	1318105	8.06%	0.123%
285	14.030	14.024	14.055	VV	97562	1712514	10.47%	0.159%
286	14.072	14.055	14.133	VV	107491	4236334	25.89%	0.394%
287	14.151	14.133	14.158	VV	87082	1240082	7.58%	0.115%
288	14.179	14.158	14.194	VV	95381	1895663	11.59%	0.176%
289	14.218	14.194	14.241	VV	154974	3312366	20.24%	0.308%
290	14.259	14.241	14.284	VV	101616	2369082	14.48%	0.220%
291	14.309	14.284	14.338	VV	232221	4587207	28.03%	0.427%
292	14.353	14.338	14.377	VV	100847	2082580	12.73%	0.194%
293	14.390	14.377	14.399	VV	98190	1170925	7.16%	0.109%
294	14.421	14.399	14.446	VV	114784	2795803	17.09%	0.260%
295	14.466	14.446	14.487	VV	96601	2229957	13.63%	0.207%
296	14.492	14.487	14.497	VV	83025	486161	2.97%	0.045%
297	14.548	14.497	14.577	VV	97526	4132416	25.26%	0.384%
298	14.601	14.577	14.608	VV	94206	1565422	9.57%	0.146%
299	14.612	14.608	14.630	VV	93041	1150239	7.03%	0.107%

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300	14.647	14.630	14.663	VV	85091	1645907	10.06%	0.153%
301	14.686	14.663	14.693	VV	95973	1601330		
302	14.711	14.693	14.715	VV	107617	1356080		
303	14.725	14.715	14.756	VV	110683	2485589	15.82%	0.171%
304	14.761	14.756	14.784	VV	95225	1532079	9.02%	0.137%
305	14.818	14.784	14.828	VV	110977	2627607	16.38%	0.059%
306	14.834	14.828	14.843	VV	99305	871441	5.33%	0.081%
307	14.846	14.843	14.850	VV	100493	440558	2.69%	0.041%
308	14.857	14.850	14.882	VV	104146	1836461	11.22%	0.171%
309	14.887	14.882	14.909	VV	97641	1475329	9.02%	0.137%
310	14.913	14.909	14.921	VV	89376	635567	3.88%	0.059%
311	14.926	14.921	14.939	VV	85845	888235	5.43%	0.083%
312	14.943	14.939	14.949	VV	87328	520193	3.18%	0.048%
313	14.998	14.949	15.019	VV	117809	4163760	25.45%	0.387%
314	15.023	15.019	15.029	VV	91547	538636	3.29%	0.050%
315	15.060	15.029	15.085	VV	133871	3615152	22.09%	0.336%
316	15.119	15.085	15.140	VV	127602	3578642	21.87%	0.333%
317	15.149	15.140	15.153	VV	91138	678700	4.15%	0.063%
318	15.184	15.153	15.196	VV	134121	2773468	16.95%	0.258%
319	15.219	15.196	15.259	VV	178768	5252733	32.10%	0.489%
320	15.266	15.259	15.308	VV	119732	3143706	19.21%	0.292%
321	15.327	15.308	15.335	VV	106848	1653292	10.10%	0.154%
322	15.378	15.335	15.399	VV	258262	6465412	39.51%	0.601%
323	15.421	15.399	15.453	VV	427641	7488913	45.77%	0.697%
324	15.458	15.453	15.472	VV	103113	1157366	7.07%	0.108%
325	15.476	15.472	15.483	VV	94691	598038	3.65%	0.056%
326	15.493	15.483	15.498	VV	98526	869449	5.31%	0.081%
327	15.518	15.498	15.526	VV	104592	1696298	10.37%	0.158%
328	15.537	15.526	15.557	VV	123723	2118057	12.94%	0.197%
329	15.564	15.557	15.573	VV	111662	1007156	6.16%	0.094%
330	15.612	15.573	15.644	VV	167648	5579100	34.10%	0.519%
331	15.680	15.644	15.710	VV	157443	5017390	30.66%	0.467%
332	15.733	15.710	15.759	VV	124005	3303805	20.19%	0.307%
333	15.807	15.759	15.844	VV	151309	6120679	37.41%	0.569%
334	15.848	15.844	15.860	VV	118272	1133250	6.93%	0.105%
335	15.865	15.860	15.872	VV	114419	777063	4.75%	0.072%
336	15.876	15.872	15.886	VV	111563	904357	5.53%	0.084%
337	15.907	15.886	15.923	VV	114638	2330191	14.24%	0.217%
338	15.975	15.923	16.011	VV	395842	9622499	58.81%	0.895%
339	16.020	16.011	16.028	VV	114635	1138043	6.96%	0.106%
340	16.062	16.028	16.068	VV	159396	3122058	19.08%	0.290%
341	16.085	16.068	16.119	VV	223281	4995696	30.53%	0.465%
342	16.138	16.119	16.154	VV	112896	2208414	13.50%	0.205%
343	16.173	16.154	16.185	VV	122120	2078448	12.70%	0.193%
344	16.189	16.185	16.198	VV	117508	918227	5.61%	0.085%
345	16.203	16.198	16.217	VV	121134	1335942	8.16%	0.124%
346	16.220	16.217	16.246	VV	120438	1949075	11.91%	0.181%
347	16.255	16.246	16.272	VV	112428	1641776	10.03%	0.153%
348	16.294	16.272	16.301	VV	118330	1947998	11.91%	0.181%
349	16.323	16.301	16.340	VV	142046	2964204	18.12%	0.276%
350	16.345	16.340	16.366	VV	138043	1986467	12.14%	0.185%
351	16.372	16.366	16.376	VV	117519	684876	4.19%	0.064%

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352	16.384	16.376	16.396	VV	113934	1351405	8.26% 0.126%
353	16.419	16.396	16.434	VV	136475	2735513	16.09% 0.214%
354	16.456	16.434	16.499	VV	246332	6343403	38.06% 0.639%
355	16.506	16.499	16.520	VV	121515	1456479	8.26% 0.126%
356	16.531	16.520	16.540	VV	131881	1572202	9.01% 0.137%
357	16.549	16.540	16.554	VV	130737	1032701	6.09% 0.093%
358	16.556	16.554	16.600	VV	130611	3429443	20.96% 0.319%
359	16.610	16.600	16.632	VV	127594	2305754	14.09% 0.214%
360	16.682	16.632	16.708	VV	184703	6869649	41.98% 0.639%
361	16.740	16.708	16.765	VV	185706	5221518	31.91% 0.486%
362	16.770	16.765	16.775	VV	141337	835674	5.11% 0.078%
363	16.832	16.775	16.871	VV	171209	8998206	54.99% 0.837%
364	16.881	16.871	16.903	VV	152429	2784415	17.02% 0.259%
365	16.959	16.903	17.009	VV	342919	13837341	84.57% 1.287%
366	17.032	17.009	17.063	VV	228431	5900603	36.06% 0.549%
367	17.090	17.063	17.115	VV	213870	5731367	35.03% 0.533%
368	17.126	17.115	17.165	VV	171369	4732126	28.92% 0.440%
369	17.179	17.165	17.190	VV	163747	2334857	14.27% 0.217%
370	17.201	17.190	17.206	VV	159356	1567168	9.58% 0.146%
371	17.211	17.206	17.215	VV	161432	869980	5.32% 0.081%
372	17.225	17.215	17.230	VV	161268	1427978	8.73% 0.133%
373	17.258	17.230	17.262	VV	195459	3474084	21.23% 0.323%
374	17.288	17.262	17.321	VV	285110	7436510	45.45% 0.692%
375	17.346	17.321	17.373	VV	280303	6487115	39.65% 0.603%
376	17.413	17.373	17.434	VV	339914	8659283	52.92% 0.806%
377	17.448	17.434	17.482	VV	227909	5557463	33.96% 0.517%
378	17.489	17.482	17.504	VV	172705	2167804	13.25% 0.202%
379	17.508	17.504	17.519	VV	162678	1471713	8.99% 0.137%
380	17.540	17.519	17.552	VV	175812	3404240	20.81% 0.317%
381	17.558	17.552	17.564	VV	183143	1225139	7.49% 0.114%
382	17.576	17.564	17.588	VV	178565	2532861	15.48% 0.236%
383	17.594	17.588	17.625	VV	184046	3935684	24.05% 0.366%
384	17.631	17.625	17.636	VV	171914	1151265	7.04% 0.107%
385	17.648	17.636	17.656	VV	189677	2128916	13.01% 0.198%
386	17.679	17.656	17.703	VV	202072	5224074	31.93% 0.486%
387	17.720	17.703	17.732	VV	207584	3392229	20.73% 0.316%
388	17.753	17.732	17.770	VV	213502	4541811	27.76% 0.422%
389	17.783	17.770	17.804	VV	204808	3920194	23.96% 0.365%
390	17.809	17.804	17.814	VV	192093	1127091	6.89% 0.105%
391	17.819	17.814	17.837	VV	187359	2567569	15.69% 0.239%
392	17.870	17.837	17.899	VV	264053	8010800	48.96% 0.745%
393	17.901	17.899	17.905	VV	184236	635170	3.88% 0.059%
394	17.920	17.905	17.938	VV	193357	3731668	22.81% 0.347%
395	17.946	17.938	17.950	VV	190513	1295298	7.92% 0.120%
396	17.955	17.950	17.972	VV	193982	2513516	15.36% 0.234%
397	17.977	17.972	17.981	VV	183565	995907	6.09% 0.093%
398	18.010	17.981	18.034	VV	221309	6226798	38.06% 0.579%
399	18.050	18.034	18.055	VV	187179	2245245	13.72% 0.209%
400	18.061	18.055	18.070	VV	191872	1691296	10.34% 0.157%
401	18.076	18.070	18.083	VV	189212	1475004	9.01% 0.137%
402	18.094	18.083	18.117	VV	204104	3840495	23.47% 0.357%
403	18.151	18.117	18.163	VV	212690	5354763	32.73% 0.498%
404	18.168	18.163	18.182	VV	202744	2231002	13.63% 0.208%

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					rters				
405	18.185	18.182	18.203	VV	195266	2316967	14.16%	0.216%	
406	18.237	18.203	18.272	VV	231739	8589570	52.16%	0.216%	
407	18.313	18.272	18.355	VV	353129	12440868	76.16%	0.216%	
408	18.374	18.355	18.381	VV	202763	3072757	18.16%	0.216%	
409	18.390	18.381	18.400	VV	208420	2341025	14.16%	0.216%	
410	18.409	18.400	18.436	VV	208822	4238004	25.16%	0.216%	
411	18.479	18.436	18.498	VV	317740	9218918	56.34%	0.858%	
412	18.513	18.498	18.545	VV	269487	6811280	41.63%	0.634%	
413	18.559	18.545	18.570	VV	223370	3210384	19.62%	0.299%	
414	18.577	18.570	18.587	VV	223669	2092503	12.79%	0.195%	
415	18.596	18.587	18.607	VV	217754	2591377	15.84%	0.241%	
416	18.612	18.607	18.617	VV	214900	1246167	7.62%	0.116%	
417	18.672	18.617	18.703	VV	332262	13743209	83.99%	1.278%	
418	18.741	18.703	18.770	VV	378451	11867996	72.53%	1.104%	
419	18.783	18.770	18.801	VV	240246	4123080	25.20%	0.384%	
420	18.819	18.801	18.828	VV	235062	3634113	22.21%	0.338%	
421	18.849	18.828	18.880	VV	327344	8706866	53.21%	0.810%	
422	18.894	18.880	18.918	VV	259312	5621027	34.35%	0.523%	
423	18.925	18.918	18.955	VV	250832	5148765	31.47%	0.479%	
424	18.958	18.955	18.964	VV	212553	1033338	6.32%	0.096%	
425	19.002	18.964	19.027	VV	350774	10144081	62.00%	0.944%	
426	19.031	19.027	19.035	VV	229729	1046019	6.39%	0.097%	
427	19.044	19.035	19.051	VV	240691	2303814	14.08%	0.214%	
428	19.056	19.051	19.063	VV	235185	1609974	9.84%	0.150%	
429	19.084	19.063	19.101	VV	270611	5740477	35.08%	0.534%	
430	19.108	19.101	19.112	VV	233211	1495114	9.14%	0.139%	
431	19.153	19.112	19.183	VV	384689	12190585	74.50%	1.134%	
432	19.206	19.183	19.216	VV	236409	4358057	26.63%	0.405%	
433	19.223	19.216	19.231	VV	224193	2073922	12.67%	0.193%	
434	19.238	19.231	19.245	VV	235562	1957152	11.96%	0.182%	
435	19.276	19.245	19.306	VV	301108	9650577	58.98%	0.898%	
436	19.326	19.306	19.344	VV	288701	6066970	37.08%	0.564%	
437	19.349	19.344	19.356	VV	243345	1596876	9.76%	0.149%	
438	19.361	19.356	19.367	VV	240251	1610882	9.84%	0.150%	
439	19.378	19.367	19.384	VV	243482	2525127	15.43%	0.235%	
440	19.390	19.384	19.400	VV	246965	2166421	13.24%	0.202%	
441	19.432	19.400	19.440	VV	264780	6106538	37.32%	0.568%	
442	19.447	19.440	19.469	VV	260370	4360916	26.65%	0.406%	
443	19.491	19.469	19.505	VV	299784	5968080	36.47%	0.555%	
444	19.527	19.505	19.570	VV	324884	11629070	71.07%	1.082%	
445	19.584	19.570	19.591	VV	271219	3239067	19.80%	0.301%	
446	19.607	19.591	19.626	VV	295651	5778816	35.32%	0.538%	
447	19.631	19.626	19.650	VV	263175	3618230	22.11%	0.337%	
448	19.676	19.650	19.680	VV	282910	4716710	28.83%	0.439%	
449	19.690	19.680	19.695	VV	281729	2542308	15.54%	0.236%	
450	19.702	19.695	19.718	VV	287599	3850937	23.54%	0.358%	
451	19.739	19.718	19.768	VV	295856	8259552	50.48%	0.768%	
452	19.773	19.768	19.781	VV	252743	1964344	12.01%	0.183%	
453	19.811	19.781	19.830	VV	300842	7978808	48.76%	0.742%	
454	19.839	19.830	19.844	VV	275198	2216835	13.55%	0.206%	
455	19.848	19.844	19.855	VV	278906	1765550	10.79%	0.164%	
456	19.858	19.855	19.863	VV	276574	1343332	8.21%	0.125%	

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457	19.870	19.863	19.876	VV	275906	2154591	13.17%	0.200%
458	19.880	19.876	19.905	VV	273274	4587119	28.17%	0.200%
459	19.944	19.905	19.969	VV	392803	11898848	72.26%	0.200%
460	19.989	19.969	20.003	VV	370312	7114386	43.17%	0.200%
461	20.009	20.003	20.057	VV	361601	10088243	61.17%	0.178%
462	20.084	20.057	20.113	VV	319601	9892381	60.17%	0.178%
463	20.118	20.113	20.124	VV	287890	1914315	11.70%	0.178%
464	20.129	20.124	20.135	VV	280849	1714380	10.48%	0.159%
465	20.169	20.135	20.201	VV	324617	11888671	72.66%	1.106%
466	20.205	20.201	20.211	VV	300633	1655271	10.12%	0.154%
467	20.246	20.211	20.276	VV	339249	12175019	74.41%	1.133%
468	20.321	20.276	20.363	VV	370609	16362451	100.00%	1.522%
469	20.367	20.363	20.380	VV	292659	2881653	17.61%	0.268%
470	20.386	20.380	20.390	VV	296629	1859300	11.36%	0.173%
471	20.395	20.390	20.410	VV	300824	3516915	21.49%	0.327%
472	20.420	20.410	20.430	VV	295796	3431983	20.97%	0.319%
473	20.454	20.430	20.475	VV	299148	7668794	46.87%	0.713%
474	20.494	20.475	20.500	VV	309247	4465142	27.29%	0.415%
475	20.504	20.500	20.529	VV	306186	5241134	32.03%	0.488%
476	20.560	20.529	20.576	VV	372843	9602690	58.69%	0.893%
477	20.595	20.576	20.607	VV	352477	6233857	38.10%	0.580%
478	20.616	20.607	20.644	VV	339331	7309560	44.67%	0.680%
479	20.648	20.644	20.664	VV	315907	3626113	22.16%	0.337%
480	20.692	20.664	20.724	VV	413764	12464470	76.18%	1.159%
481	20.732	20.724	20.742	VV	301160	3126574	19.11%	0.291%
482	20.746	20.742	20.760	VV	290113	2965062	18.12%	0.276%
483	20.784	20.760	20.804	VV	308071	7661585	46.82%	0.713%
484	20.814	20.804	20.825	VV	279377	3449839	21.08%	0.321%
485	20.832	20.825	20.837	VV	281291	2025005	12.38%	0.188%
486	20.846	20.837	20.860	VV	284091	3736349	22.83%	0.348%
487	20.869	20.860	20.875	VV	291480	2451825	14.98%	0.228%
488	20.876	20.875	20.893	VV	289148	3034254	18.54%	0.282%
489	20.902	20.893	20.915	VV	274512	3507194	21.43%	0.326%
490	20.927	20.915	20.963	VV	285015	7878524	48.15%	0.733%
491	20.968	20.963	20.985	VV	262988	3348799	20.47%	0.312%
492	20.988	20.985	21.001	VV	253583	2530447	15.46%	0.235%
493	21.005	21.001	21.011	VV	256377	1419965	8.68%	0.132%
494	21.027	21.011	21.035	VV	254533	3612391	22.08%	0.336%
495	21.039	21.035	21.053	VV	236512	2459180	15.03%	0.229%
496	21.061	21.053	21.073	VV	247196	2925430	17.88%	0.272%
497	21.079	21.073	21.084	VV	245508	1512033	9.24%	0.141%
498	21.090	21.084	21.094	VV	246265	1335626	8.16%	0.124%
499	21.099	21.094	21.125	VV	243452	4397824	26.88%	0.409%
500	21.133	21.125	21.137	VV	231141	1616018	9.88%	0.150%
501	21.141	21.137	21.150	VV	228425	1646889	10.07%	0.153%
502	21.161	21.150	21.164	VV	220149	1911170	11.68%	0.178%
503	21.168	21.164	21.185	VV	225917	2680608	16.38%	0.249%
504	21.196	21.185	21.202	VV	227322	2153932	13.16%	0.200%
505	21.206	21.202	21.222	VV	231810	2733161	16.70%	0.254%
506	21.227	21.222	21.238	VV	226090	2078356	12.70%	0.193%
507	21.258	21.238	21.290	VV	229875	6837774	41.79%	0.636%
508	21.294	21.290	21.315	VV	220054	3248144	19.85%	0.302%
509	21.319	21.315	21.334	VV	205821	2270596	13.88%	0.211%

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510	21.337	21.334	21.347	VV	202965	1539423	9.41%	0.143%
511	21.354	21.347	21.365	VV	194877	2085379	12.08%	0.136%
512	21.374	21.365	21.383	VV	195608	1965790	12.08%	0.136%
513	21.390	21.383	21.405	VV	192154	2350653	14.09%	0.184%
514	21.408	21.405	21.419	VV	187550	1589347	9.41%	0.143%
515	21.441	21.419	21.457	VV	179311	3942152	24.09%	0.208%
516	21.494	21.457	21.534	VV	235213	8806940	53.82%	0.819%
517	21.545	21.534	21.551	VV	161063	1570530	9.60%	0.146%
518	21.555	21.551	21.584	VV	162854	2969677	18.15%	0.276%
519	21.588	21.584	21.594	VV	148486	849592	5.19%	0.079%
520	21.597	21.594	21.623	VV	151667	2530318	15.46%	0.235%
521	21.627	21.623	21.631	VV	143263	668474	4.09%	0.062%
522	21.636	21.631	21.649	VV	140030	1459462	8.92%	0.136%
523	21.652	21.649	21.673	VV	141185	1976942	12.08%	0.184%
524	21.677	21.673	21.700	VV	142254	2139357	13.07%	0.199%
525	21.716	21.700	21.730	VV	133521	2238138	13.68%	0.208%
526	21.745	21.730	21.769	VV	130931	2836514	17.34%	0.264%
527	21.774	21.769	21.788	VV	119496	1290134	7.88%	0.120%
528	21.794	21.788	21.810	VV	111876	1419302	8.67%	0.132%
529	21.813	21.810	21.835	VV	109771	1604508	9.81%	0.149%
530	21.839	21.835	21.874	VV	104069	2195979	13.42%	0.204%
531	21.875	21.874	21.885	VV	95071	628842	3.84%	0.058%
532	21.898	21.885	21.917	VV	94675	1676934	10.25%	0.156%
533	21.922	21.917	21.930	VV	89203	636543	3.89%	0.059%
534	21.932	21.930	21.938	VV	91354	436204	2.67%	0.041%
535	21.941	21.938	21.946	VV	85929	413798	2.53%	0.038%
536	21.957	21.946	21.962	VV	91722	837450	5.12%	0.078%
537	21.964	21.962	21.969	VV	92083	353659	2.16%	0.033%
538	21.972	21.969	22.005	VV	95003	1712013	10.46%	0.159%
539	22.009	22.005	22.033	VV	76421	1181084	7.22%	0.110%
540	22.038	22.033	22.043	VV	70356	412616	2.52%	0.038%
541	22.070	22.043	22.100	VV	82932	2607603	15.94%	0.243%
542	22.105	22.100	22.141	VV	83139	1781096	10.89%	0.166%
543	22.148	22.141	22.179	VV	59043	1108441	6.77%	0.103%
544	22.185	22.179	22.203	VV	48733	611873	3.74%	0.057%
545	22.209	22.203	22.230	VV	53251	657695	4.02%	0.061%
546	22.235	22.230	22.243	VV	37053	265203	1.62%	0.025%
547	22.252	22.243	22.270	VV	38737	561215	3.43%	0.052%
548	22.280	22.270	22.298	VV	41292	591001	3.61%	0.055%
549	22.304	22.298	22.325	VV	36577	495461	3.03%	0.046%
550	22.329	22.325	22.355	VV	33189	420286	2.57%	0.039%
551	22.358	22.355	22.370	VV	26438	146844	0.90%	0.014%
552	22.384	22.370	22.388	VV	18761	140159	0.86%	0.013%
553	22.391	22.388	22.396	VV	12966	42264	0.26%	0.004%
554	22.419	22.396	22.425	VV	13000	147186	0.90%	0.014%
555	22.429	22.425	22.450	VV	16211	118414	0.72%	0.011%
556	22.468	22.450	22.472	PV	6288	42751	0.26%	0.004%
Sum of corrected areas:							1075006980	

Instrument :
FID_G
ClientSampleId :
WC-SOIL-20250711MSD

Manual IntegrationsAPPROVED
Reviewed By :Yogesh Patel 07/22/2025
Supervised By :mohammad ahmed 07/23/2025

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
50 PPM TRPH STD		FG016329.D	FG071825	N-OCTATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
50 PPM TRPH STD		FG016329.D	FG071825	N-TETRACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01		FG016331.D	FG071825	TETRACOSANE-d50 (SURROGA	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
.BLK		FG016335.D	FG071825	TETRACOSANE-d50 (SURROGA	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
PB168895BS		FG016338.D	FG071825	N-DOTRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
PB168895BS		FG016338.D	FG071825	N-TETRATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-DOCOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-EICOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-HEXACOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-HEXATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-OCTACOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-OCTATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-TETRACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-TETRACOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	N-TRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MS		FG016339.D	FG071825	TETRACOSANE-d50 (SURROGA	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-DOCOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-DOTRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-EICOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-HEXACOSANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-HEXATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-OCTATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Q2592-01MSD		FG016340.D	FG071825	N-TETRATRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	N-TRIACONTANE	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly
Q2592-01MSD		FG016340.D	FG071825	TETRACOSANE-d50 (SURROGA	mohammad	7/23/2025 1:32:45 AM	Peak Integrated by Software incorrectly

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 # FG071825

Review By	yogesh	Review On	7/18/2025 10:25:55 AM
Supervise By	mohammad	Supervise On	7/23/2025 1:32:45 AM
SubDirectory	FG071825	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	PP24469 PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FG016327.D	18 Jul 2025 08:09	YP\AJ	Ok
2	I.BLK	FG016328.D	18 Jul 2025 08:55	YP\AJ	Ok
3	50 PPM TRPH STD	FG016329.D	18 Jul 2025 09:24	YP\AJ	Ok,M
4	RT MARKER	FG016330.D	18 Jul 2025 09:56	YP\AJ	Ok
5	Q2592-01	FG016331.D	18 Jul 2025 10:26	YP\AJ	Dilution
6	Q2592-01	FG016332.D	18 Jul 2025 10:55	YP\AJ	Ok
7	Q2618-01	FG016333.D	18 Jul 2025 11:24	YP\AJ	Dilution
8	Q2618-01	FG016334.D	18 Jul 2025 11:54	YP\AJ	Ok
9	I.BLK	FG016335.D	18 Jul 2025 12:24	YP\AJ	Ok,M
10	50 PPM TRPH STD	FG016336.D	18 Jul 2025 12:53	YP\AJ	Ok
11	PB168895BL	FG016337.D	18 Jul 2025 13:23	YP\AJ	Ok
12	PB168895BS	FG016338.D	18 Jul 2025 13:52	YP\AJ	Ok,M
13	Q2592-01MS	FG016339.D	18 Jul 2025 14:22	YP\AJ	Ok,M
14	Q2592-01MSD	FG016340.D	18 Jul 2025 14:52	YP\AJ	Ok,M
15	I.BLK	FG016341.D	18 Jul 2025 15:21	YP\AJ	Ok
16	50 PPM TRPH STD	FG016342.D	18 Jul 2025 15:51	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	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 # FG071825

Review By	yogesh	Review On	7/18/2025 10:25:55 AM
Supervise By	mohammad	Supervise On	7/23/2025 1:32:45 AM
SubDirectory	FG071825	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	PP24468,PP24473		
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG016327.D	18 Jul 2025 08:09		YP\AJ	Ok
2	I.BLK		FG016328.D	18 Jul 2025 08:55		YP\AJ	Ok
3	50 PPM TRPH STD		FG016329.D	18 Jul 2025 09:24		YP\AJ	Ok,M
4	RT MARKER		FG016330.D	18 Jul 2025 09:56		YP\AJ	Ok
5	Q2592-01		FG016331.D	18 Jul 2025 10:26	Need 25X	YP\AJ	Dilution
6	Q2592-01		FG016332.D	18 Jul 2025 10:55		YP\AJ	Ok
7	Q2618-01		FG016333.D	18 Jul 2025 11:24	Need 5X	YP\AJ	Dilution
8	Q2618-01		FG016334.D	18 Jul 2025 11:54		YP\AJ	Ok
9	I.BLK		FG016335.D	18 Jul 2025 12:24		YP\AJ	Ok,M
10	50 PPM TRPH STD		FG016336.D	18 Jul 2025 12:53		YP\AJ	Ok
11	PB168895BL		FG016337.D	18 Jul 2025 13:23		YP\AJ	Ok
12	PB168895BS		FG016338.D	18 Jul 2025 13:52		YP\AJ	Ok,M
13	Q2592-01MS		FG016339.D	18 Jul 2025 14:22		YP\AJ	Ok,M
14	Q2592-01MSD		FG016340.D	18 Jul 2025 14:52		YP\AJ	Ok,M
15	I.BLK		FG016341.D	18 Jul 2025 15:21		YP\AJ	Ok
16	50 PPM TRPH STD		FG016342.D	18 Jul 2025 15:51		YP\AJ	Ok

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: rubina
Date: 7/17/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:15
In Date: 07/16/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN #1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:40
Out Date: 07/17/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB136505

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
Q2618-01	WASTE	1	1.14	10.42	11.56	10.99	94.5	
Q2618-02	VOC	2	1.16	10.32	11.48	10.75	92.9	
Q2618-03	1	3	1.16	10.28	11.44	10.52	91.1	
Q2618-04	2	4	1.19	10.41	11.6	10.93	93.6	
Q2618-05	3	5	1.14	10.31	11.45	10.85	94.2	
Q2618-06	4	6	1.17	10.46	11.63	10.94	93.4	
Q2618-07	5	7	1.17	10.59	11.76	11.1	93.8	
Q2618-08	6	8	1.13	10.65	11.78	11.08	93.4	
Q2619-01	GAS-BUR-1337	11	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2619-02	GAS-BUR-1336	12	1.00	1.00	2.00	2.00	100.0	WIPE SAMPLE
Q2620-01	GAS-BUR-0010	13	1.00	1.00	2.00	2.00	100.0	oily-debris
Q2621-01	TR-05-07162025	14	1.14	10.19	11.33	10.73	94.1	
Q2621-02	TR-05-07162025-E2	15	1.19	10.44	11.63	10.87	92.7	
Q2622-01	2819	9	1.18	10.42	11.6	8.79	73.0	
Q2622-02	2819-E2	10	1.12	10.34	11.46	8.92	75.4	

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

WORKLIST(Hardcopy Internal Chain)

✓ 126505

WorkList Name : %1-071625

WorkList ID : 190750

Department : Wet-Chemistry

Date : 07-16-2025 08:09:34

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2618-01	WASTE	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-02	VOC	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-03	1	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-04	2	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-05	3	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-06	4	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-07	5	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2618-08	6	Solid	Percent Solids	Cool 4 deg C	SCIA01	O11	07/16/2025	Chemtech -SO
Q2619-01	GAS-BUR-1337	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/16/2025	Chemtech -SO
Q2619-02	GAS-BUR-1336	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/16/2025	Chemtech -SO
Q2620-01	GAS-BUR-0010	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	07/16/2025	Chemtech -SO
Q2621-01	TR-05-07162025	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	07/16/2025	Chemtech -SO
Q2621-02	TR-05-07162025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D41	07/16/2025	Chemtech -SO
Q2622-01	2819	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/16/2025	Chemtech -SO
Q2622-02	2819-E2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D41	07/16/2025	Chemtech -SO

Date/Time 07-16-25 15:25
 Raw Sample Received by: SO WOL
 Raw Sample Relinquished by: RJ (EXT-106)

Date/Time 07-16-25 17:130
 Raw Sample Received by: RJ (EXT-106)
 Raw Sample Relinquished by: SO WOL

SOP ID: M3541-ASE Extraction-15

Clean Up SOP #: N/A

Matrix: Solid

Weigh By: EH

Balance check: RJ

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date: 07/17/2025

Extraction Start Time: 08:25

Extraction End Date: 07/17/2025

Extraction End Time: 11:25

Concentration By: EH

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

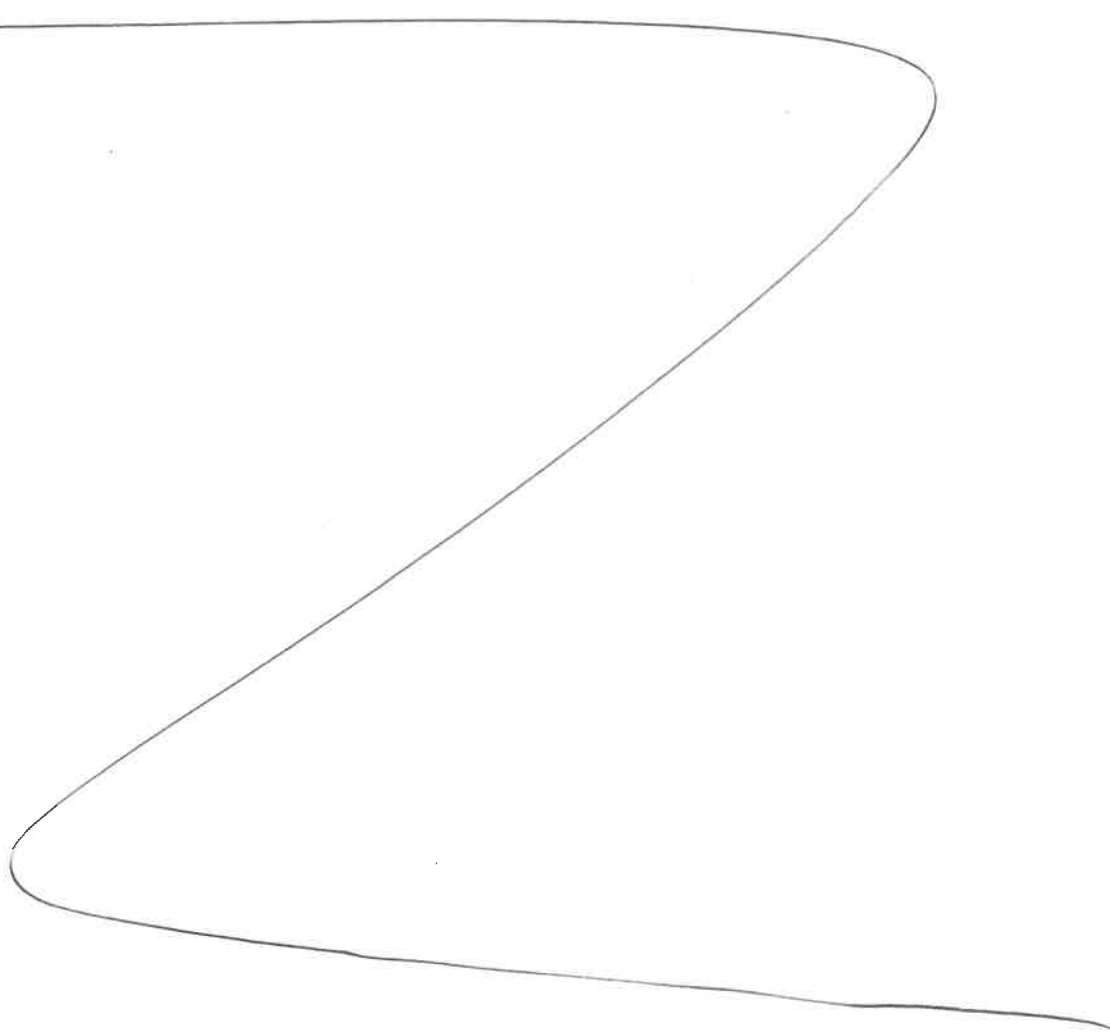
Envap Temperature: 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
7/17/25	RS (Bath)	X.P. Pestil
11:30	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-15

Concentration Date: 07/17/2025

Sample ID	Client Sample ID	Test	g/ mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB168895BL	PB168895BL	TPH GC	30.01	N/A	ritesh	Evelyn	1			U2-1
PB168895BS	PB168895BS	TPH GC	30.03	N/A	ritesh	Evelyn	1			2
Q2592-01	WC-SOIL-20250711	TPH GC	30.05	N/A	ritesh	Evelyn	1	E		3
Q2592-01MS	WC-SOIL-20250711MS	TPH GC	30.06	N/A	ritesh	Evelyn	1	E		4
Q2592-01MS D	WC-SOIL-20250711MSD	TPH GC	30.02	N/A	ritesh	Evelyn	1	E		5
Q2618-01	WASTE	TPH GC	30.10	N/A	ritesh	Evelyn	1			6



RS
7/17

16-58474
08-20-25

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2618 WorkList ID : 190782 Department : Extraction Date : 07-17-2025 08:20:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2592-01	WC-SOIL-20250711	Solid	TPH GC	Cool 4 deg C	PARS02	D51	07/11/2025	8015D
Q2618-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	O11	07/16/2025	8015D

Date/Time 07/17/25 8:20
Raw Sample Received by: RJ C (EAT-Velby)
Raw Sample Relinquished by: CP

Date/Time 07/17/25 8:30
Raw Sample Received by: CP
Raw Sample Relinquished by: RJ C (EAT-Velby)

Prep Standard - Chemical Standard Summary

Order ID : Q2618

Test : TPH GC

Prepbatch ID : PB168895,

Sequence ID/Qc Batch ID: FG071825,

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,



<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_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 07/15/2025
<u>FROM</u> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2626	07/15/2025	01/15/2026	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 07/15/2025
<u>FROM</u> 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_2Cl_2) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8\%$	99.9%
Color (APHA)	≤ 10	10
Residue after Evaporation	≤ 1.0 ppm	0.8 ppm
Titration Acid ($\mu\text{eq/g}$)	≤ 0.3	< 0.1
Chloride (Cl)	≤ 10 ppm	< 5 ppm
Water (by KF, coulometric)	$\leq 0.02\%$	$< 0.01\%$

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

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

E 3926

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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 Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	2
Assay (CH ₂ Cl ₂) (by GC, exclusive of preservative, corrected for water)	$\geq 99.8 \%$	99.9 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μ eq/g)	≤ 0.3	<0.1
Chloride (Cl)	≤ 10 ppm	<5 ppm
Water (by KF, coulometric)	$\leq 0.02 \%$	<0.01 %

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

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

RS
7/14/25

E3954

Jamie Croak
Director Quality Operations, Bioscience Production



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

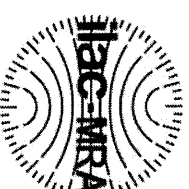
Bellefonte, PA 16823-8812

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:

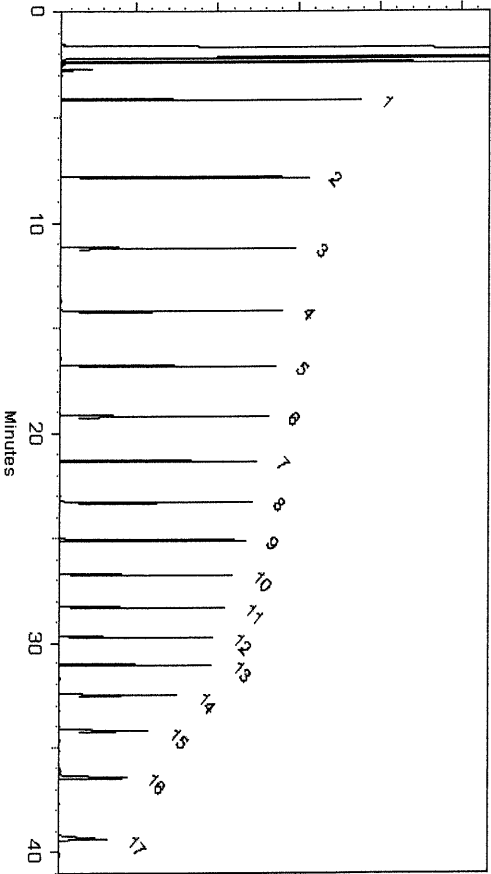
250°C

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

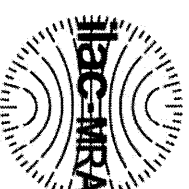
Belleville, PA 16823-8812

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:

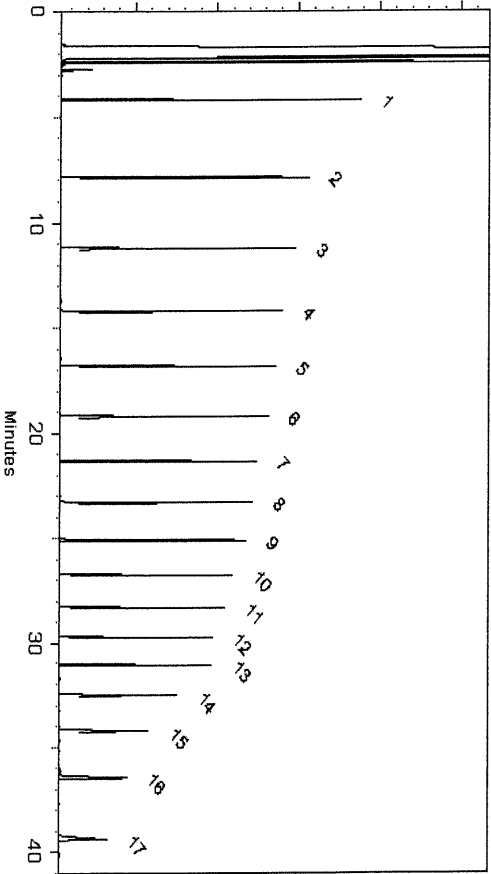
250°C

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Florida TRPH Standard

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

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

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

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

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

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

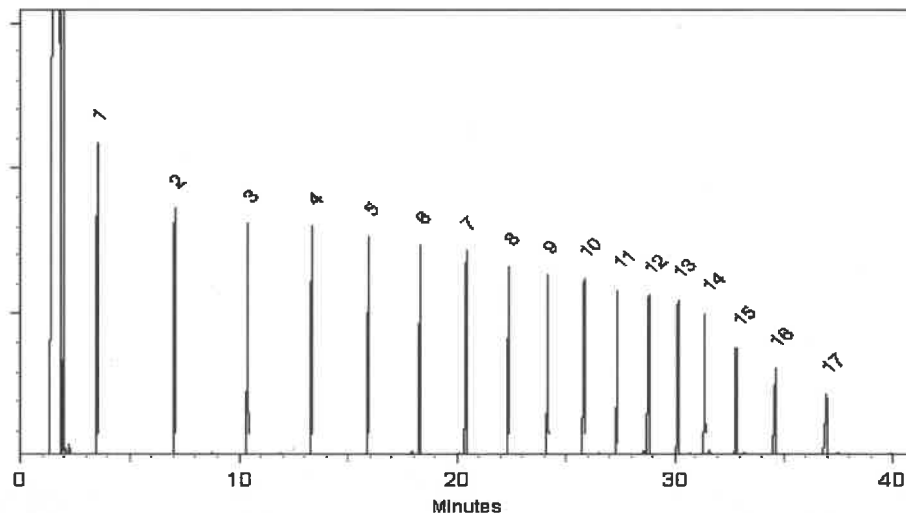
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

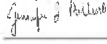


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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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	MKQC3882	99%	503.6 µg/mL	+/- 13.0098
9	n-Tetracosane (C24)	646-31-1	MKQC8345	99%	504.0 µg/mL	+/- 13.0201
10	n-Hexacosane (C26)	630-01-3	MKQC4814	99%	504.0 µg/mL	+/- 13.0201
11	n-Octacosane (C28)	630-02-4	BCCG0084	99%	504.0 µg/mL	+/- 13.0201
12	n-Triacontane (C30)	638-68-6	MKQC9436	97%	504.0 µg/mL	+/- 13.0204
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	504.0 µg/mL	+/- 13.0201
14	n-Tetratriacontane (C34)	14167-59-0	OML4N	99%	504.4 µg/mL	+/- 13.0305
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	504.0 µg/mL	+/- 13.0201
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	503.8 µg/mL	+/- 13.0152
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.6 µg/mL	+/- 13.0098

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

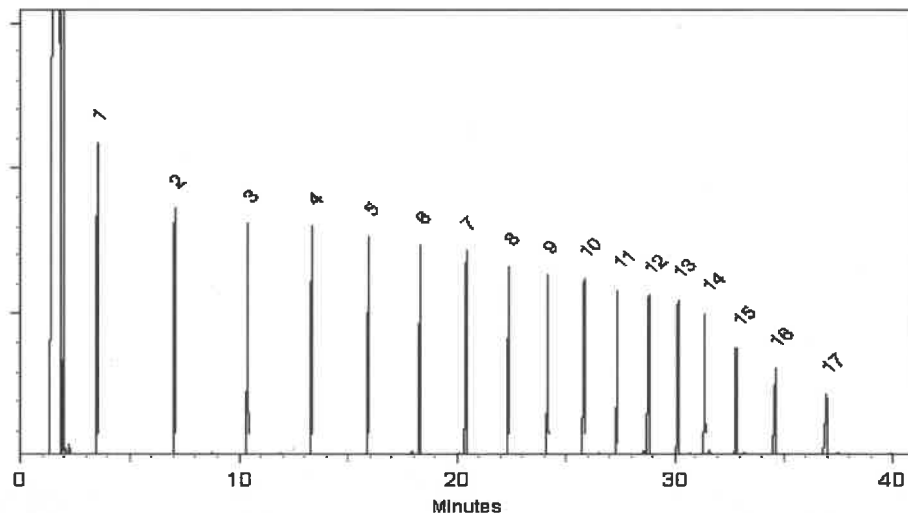
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

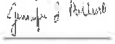


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 070716

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

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

Peak No. Name FID RT (min)

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

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

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

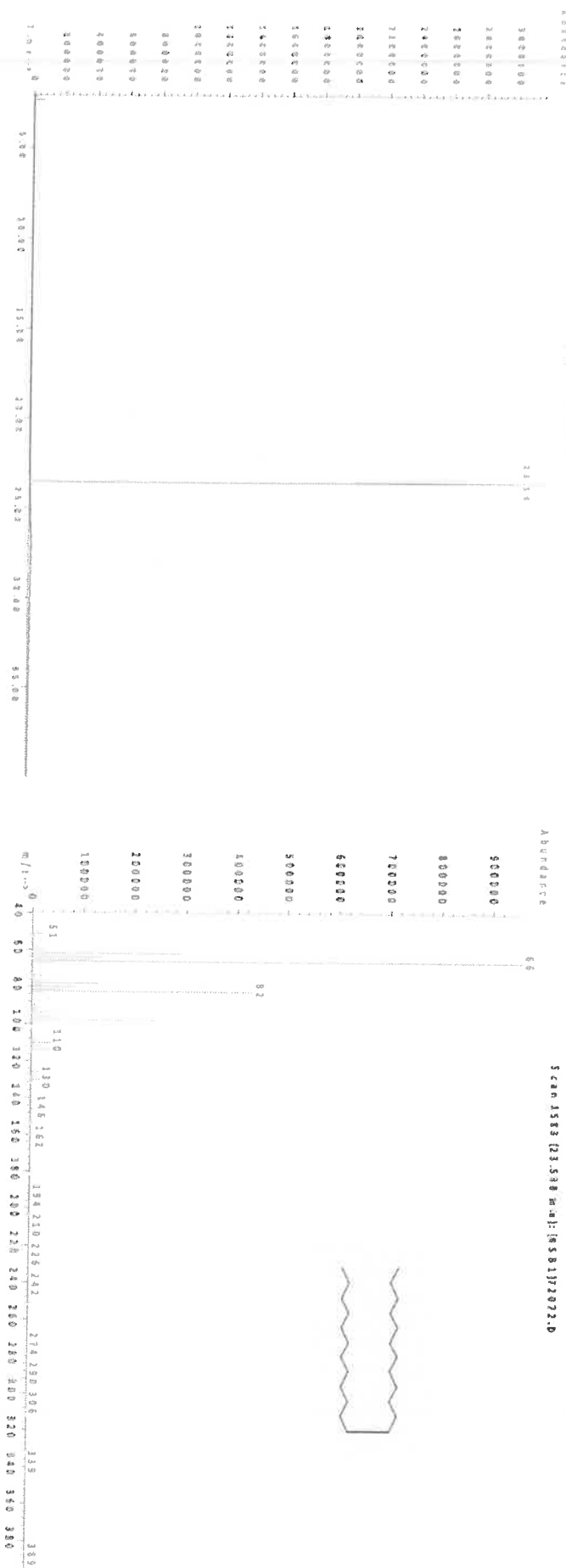
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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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

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Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

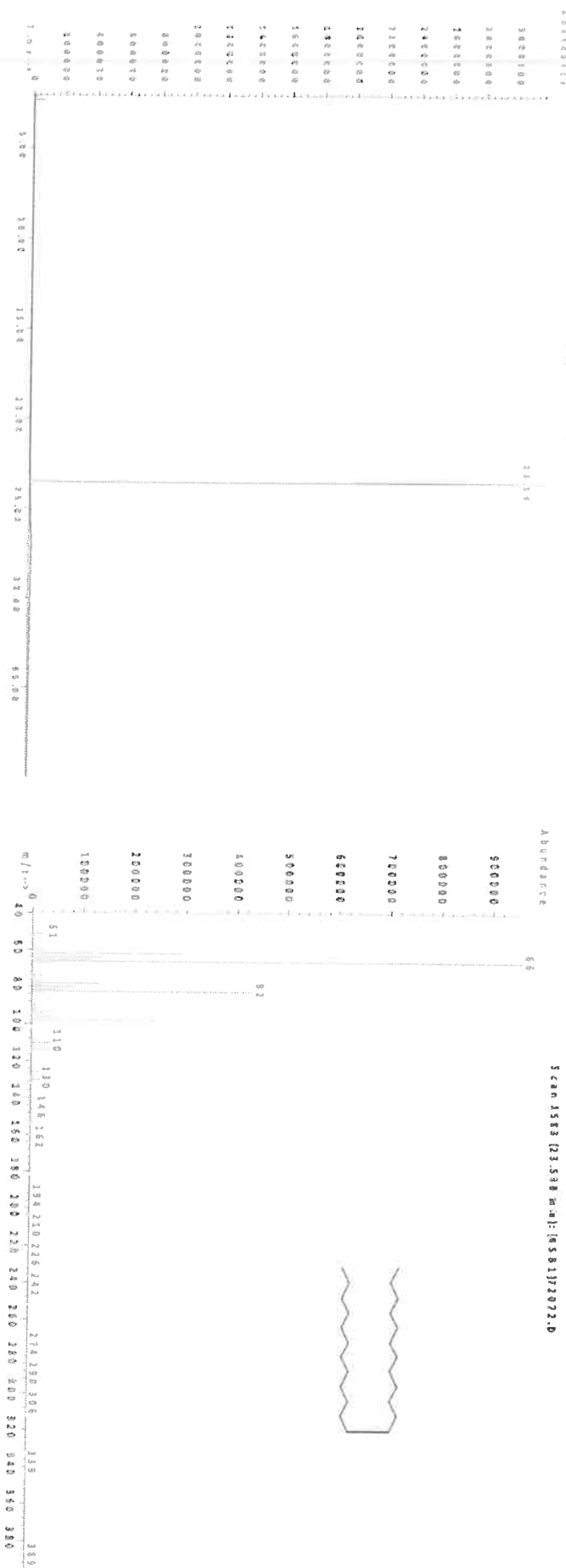
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	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.
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ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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



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ISO - 17034

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Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

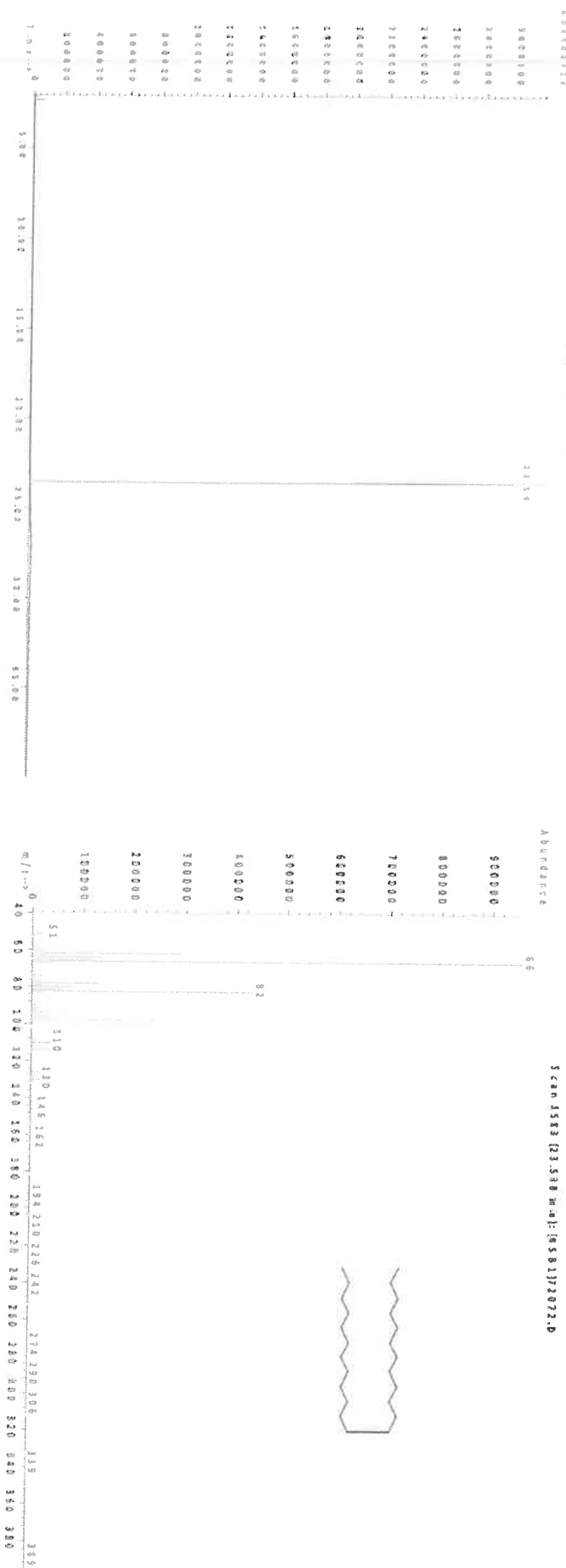
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
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.

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 070716

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

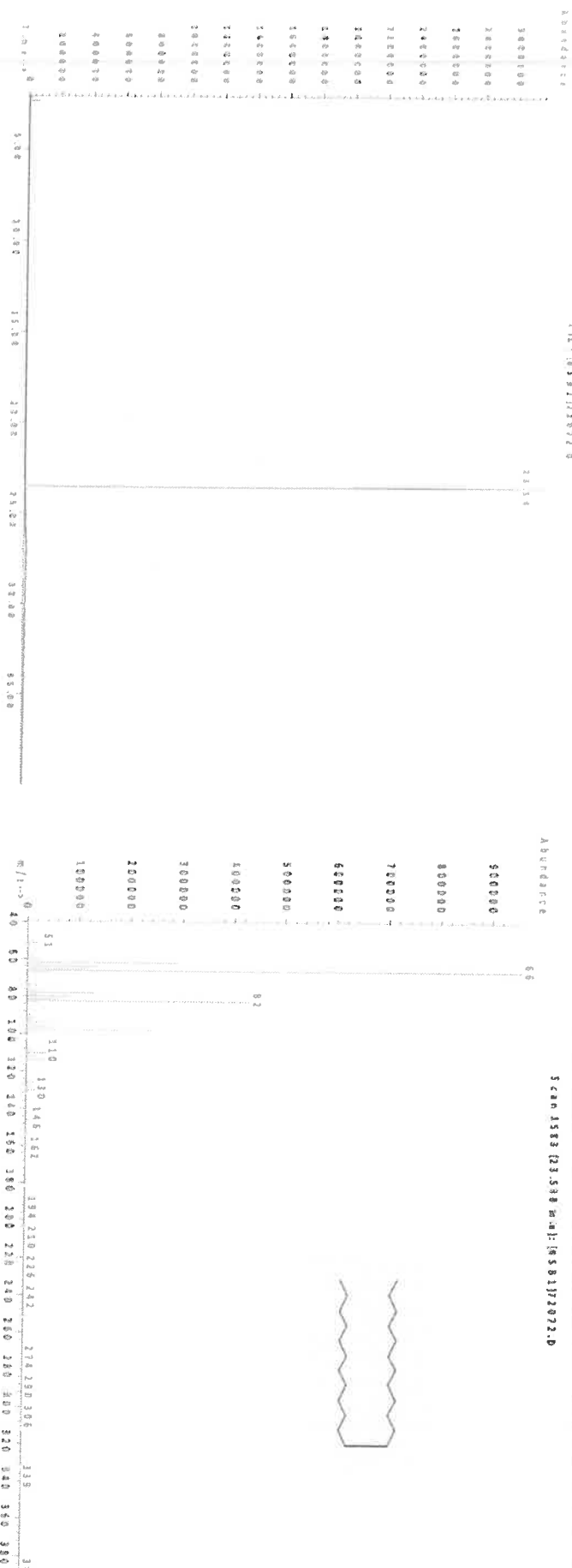
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

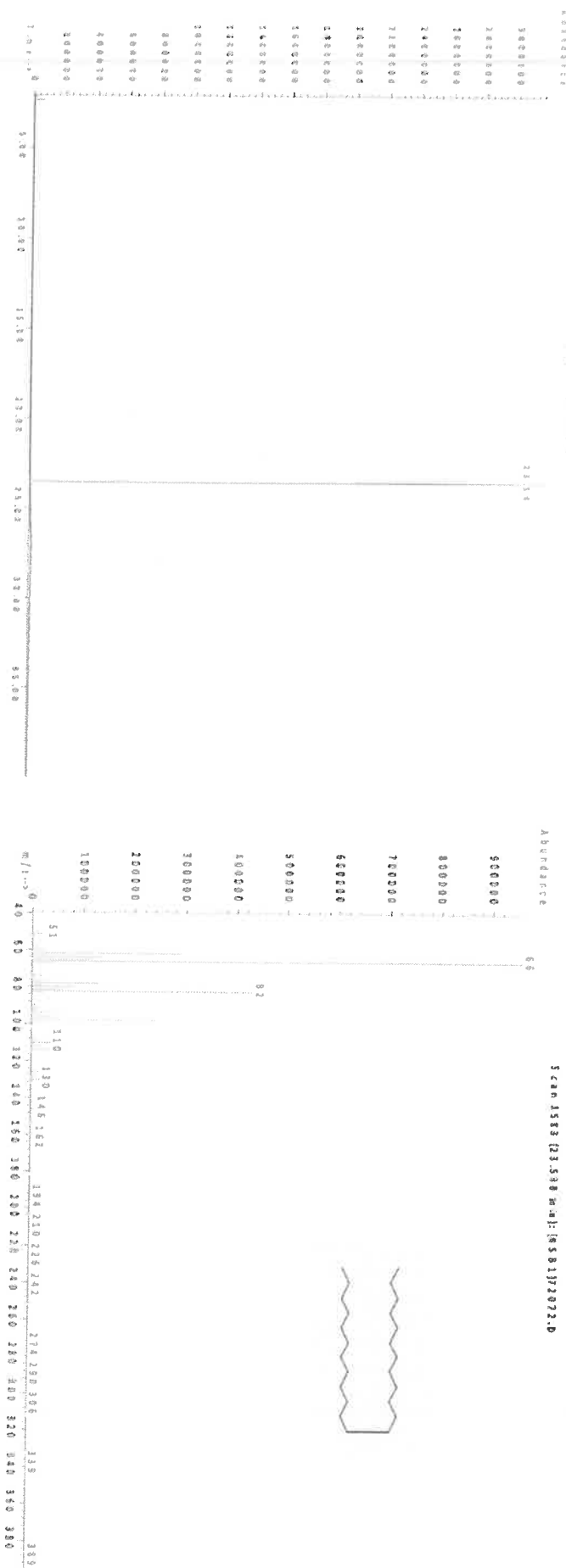
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

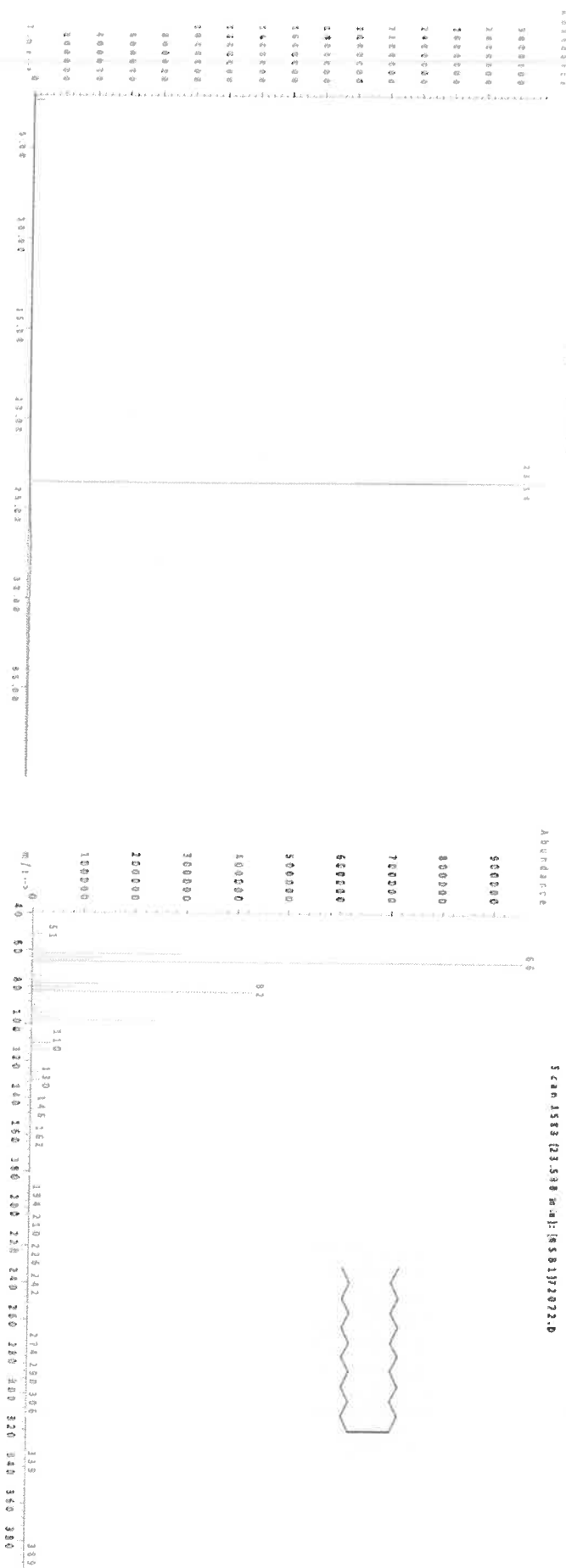
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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



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.)

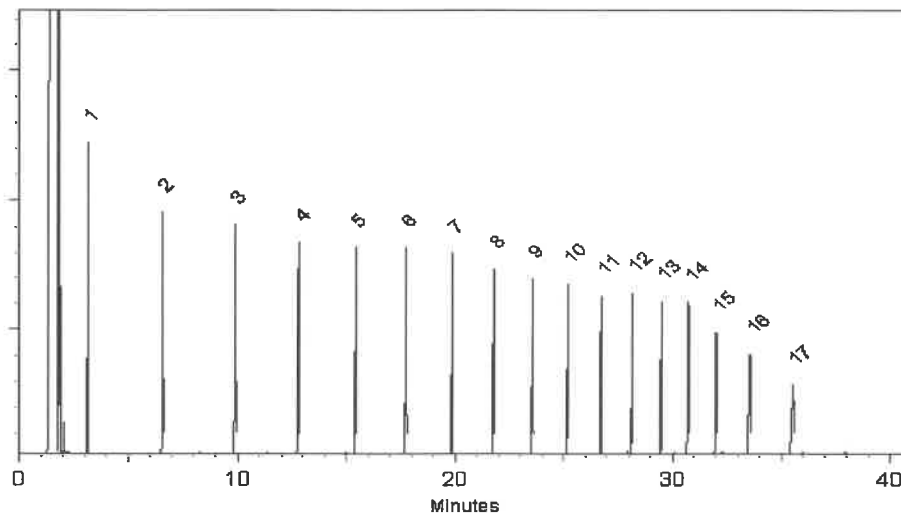
Inj. Temp:
250°C

Det. Temp:
330°C

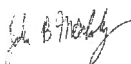
Det. Type:
FID

Split Vent:
2 ml/min.

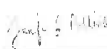
Inj. Vol
1µl



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.



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chromatographic plus



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P031937
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CAS # 110-54-3
Purity 99%

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Rtx-5 (cat.#10223)

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hydrogen-constant pressure 10 psi.

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@ 10°C/min. (hold 10 min.)

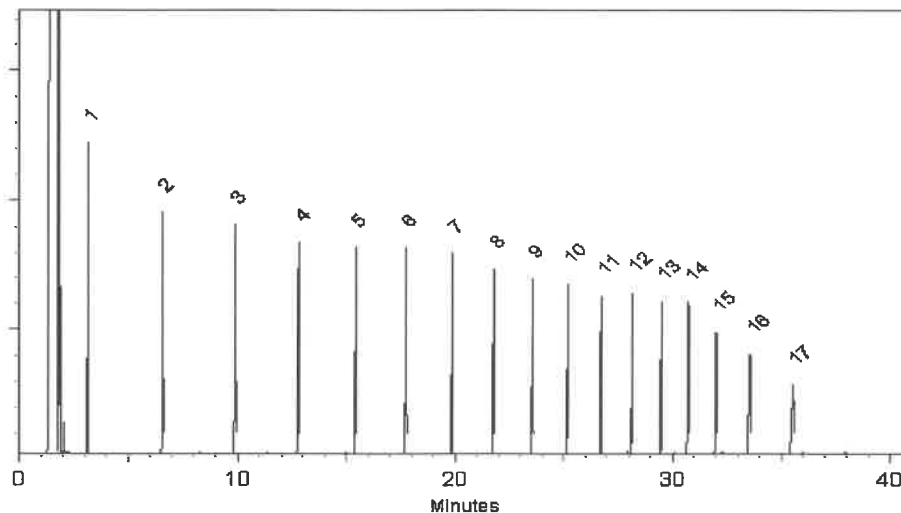
Inj. Temp:
250°C

Det. Temp:
330°C

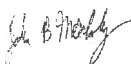
Det. Type:
FID

Split Vent:
2 ml/min.

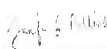
Inj. Vol
1µl



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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

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

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.



SHIPPING DOCUMENTS

166 Belmont Ave
 Belleville.
 166 Belmont Ave Q2618

CHEMTECH
 CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
 (908) 789-8900 Fax (908) 789-8922
 www.chemtech.net

Chemtech Project Number Belleville
 COC Number

CLIENT INFORMATION		PROJECT INFORMATION		BILLING INFORMATION	
Report to be sent to:		PROJECT NAME:		BILL TO:	
COMPANY:		PROJECT #:		PO#	
ADDRESS:		LOCATION:		ADDRESS:	
CITY:		PROJECT MANAGER:		CITY:	
STATE:		E-MAIL:		STATE:	
ATTENTION:		PHONE:		ATTENTION:	
PHONE:		FAX:		PHONE:	
FAX:				ZIP:	

DATA TURNAROUND INFORMATION		DATA DELIVERABLE INFORMATION		ANALYSIS	
FAX (RUSH) _____ DAYS*		☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data) ☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP ☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B ☐ EDD FORMAT _____ ☐ Other _____			
HARDCOPY (DATA PACKAGE): _____ DAYS*					
EDD: _____ DAYS*					
TO BE APPROVED BY CHEMTECH					
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS					

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles										COMMENTS	
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	A-HCl B-HNO3 C-H2SO4	D-NaOH E-ICE F-OTHER
1.	WASTE				7/16/25	8:30	1	X										
2.	VOC				7/16/25	8:30	1		X									
3.	1				7/16/25	8:45	1			X								
4.	2				7/16/25	9:15	1			X								
5.	3				7/16/25	9:45	1			X								
6.	4				7/16/25	10:00	1			X								
7.	5				7/16/25	10:15	1			X								
8.	6				7/16/25	9:30	1											
9.																		
10.																		

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

RELINQUISHED BY SAMPLER	DATE/TIME <u>7-16-25</u>	RECEIVED BY <u>[Signature]</u>	1145	Conditions of bottles or collars at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>5.15</u>
1.			7-16-25	Comments:
RELINQUISHED BY	DATE/TIME	RECEIVED BY		
2.				
RELINQUISHED BY	DATE/TIME <u>7-16-25</u>	RECEIVED FOR LAB BY		CLIENT: ☐ Hand Delivered ☐ Other: _____
3.				CHEMTECH: ☐ Picked Up
			Page _____ of _____	Shipment Complete ☐ YES ☐ NO

10/2018 WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2618	SCIA01	Order Date : 7/16/2025 12:13:00 PM	Project Mgr : Deepak
Client Name : Sciacca General Contractor		Project Name : 98 Morse Ave Nutley 166 Belmont Ave NJ	Report Type : Results Only
Client Contact : Rosanne Scirica		Receive DateTime : 7/16/2025 2:00:00 PM	EDD Type : EXCEL NJCLEANUP
Invoice Name : Sciacca General Contractor		Purchase Order : 13-151M	Hard Copy Date :
Invoice Contact : Rosanne Scirica			Date Signoff : 7/16/2025 1:55:47 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2618-02	VOC	Solid	07/16/2025	08:30	VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By :

Date / Time :


7-16-25 1420

Received By :

Date / Time :


07/16/25 14:20

Storage Area : VOA Refridgerator Room

Ref # 6
E 22