

Cover Page

Order ID : Q2758

Project ID : 92 Clifford Street, Newark

Client : Sciacca General Contractors, LLC

Lab Sample Number

Q2758-01
Q2758-02

Client Sample Number

WASTE
WASTE

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: 8/8/2025

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 #: Q2758

Completed

For thorough review, the report must have the following:

GENERAL:

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

✓

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

✓

Is the chain of custody signed and complete

✓

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

✓

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

✓

COVER PAGE:

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

✓

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

✓

CHAIN OF CUSTODY:

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

✓

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

✓

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

✓

Were the samples received within hold time

✓

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

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: PRATIK PATEL

Date: 08/08/2025

LAB CHRONICLE

OrderID:	Q2758	OrderDate:	8/1/2025 4:14:00 PM
Client:	Sciacca General Contractors, LLC	Project:	92 Clifford Street, Newark
Contact:	Rosanne Scirica	Location:	D21,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2758-01	WASTE	SOIL			08/01/25			08/01/25
			PCB	8082A		08/05/25	08/05/25	
			TPH GC	8015D		08/06/25	08/06/25	



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.: Q2758

CLIENT ID	S1	S2	S3	S4	TOT
	TETRACOSANE-d50				OUT
PIBLK-FG016352.D	84				0
PIBLK-FG016362.D	94				0
PB169135BL	72				0
PB169135BS	96				0
WASTEMS	61				0
WASTEMSD	51				0
WASTE	0 *				1

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: Alliance

Client: Sciacca General Contractors, LLC

Lab Code: ACE

SDG No: Q2758

Client Sample ID : WASTEMS

Datafile: FG016359.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	13878	35600	89900	391%	*	68-131

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>Q2758</u>
Client Sample ID :	<u>WASTEMSD</u>	Datafile:	<u>FG016360.D</u>

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS(%)
Petroleum Hydrocarbons	13887	35600	78700	310%	*	68-131

MS/MSD % Recovery RPD : 23.1

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

Lab Name: Alliance

Client: Sciacca General Contractors, LLC

Lab Code: ACE

SDG No: Q2758

Client Sample ID : PB169135BS

Datafile: FG016356.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS (%)
Petroleum Hydrocarbons	11330	0	10019	88	68-131

4B
METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PB169135BL

Lab Name: Alliance

Contract: SCIA01

Lab Code: ACE

SDG NO.: Q2758

Lab File ID: FG016355.D

Lab Sample ID: PB169135BL

Instrument ID: FG

Date Extracted: 08/06/2025

Matrix: (soil/water) Soil

Date Analyzed: 08/06/25

Level: (low/med) low

Time Analyzed: 11:37

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

CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB169135BS	PB169135BS	FG016356.D	08/06/25
WASTEMS	Q2757-01MS	FG016359.D	08/06/25
WASTEMSD	Q2757-01MSD	FG016360.D	08/06/25
WASTE	Q2758-01	FG016361.D	08/06/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:	08/01/25	
Project:	92 Clifford Street, Newark		Date Received:	08/01/25	
Client Sample ID:	WASTE		SDG No.:	Q2758	
Lab Sample ID:	Q2758-01		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	92.9	Decanted:
Sample Wt/Vol:	30.07	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
FG016361.D	25	08/06/25 08:20	08/06/25 14:34	PB169135

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	712000		10300	76100	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	0.00	*	37 - 130	0%	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\FG080625\
Data File : FG016361.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 14:34
Operator : YP\AJ
Sample : Q2758-01 25X
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: Aug 07 04:36:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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			
Target Compounds			

(f)=RT Delta > 1/2 Window

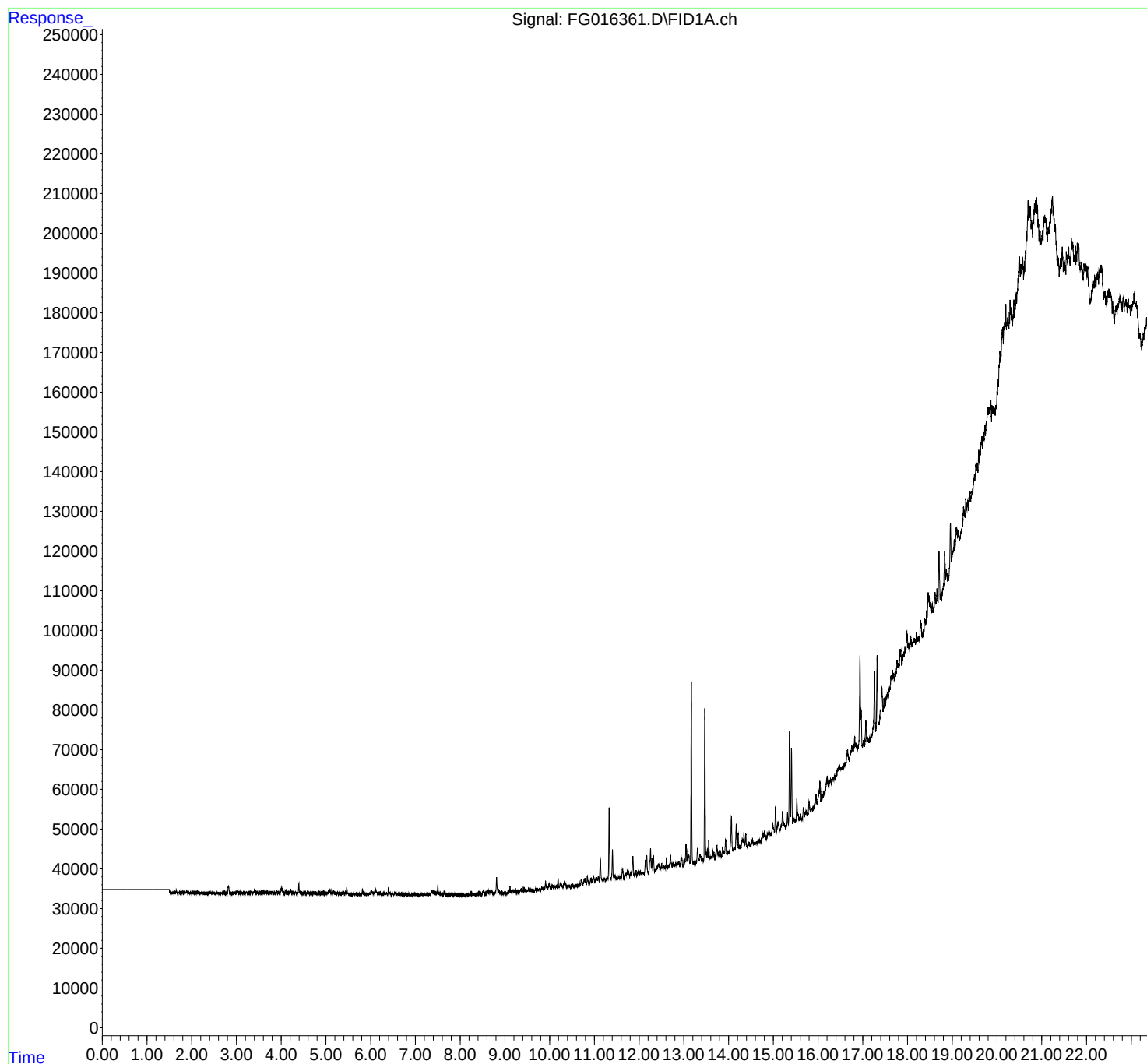
(m)=manual int.

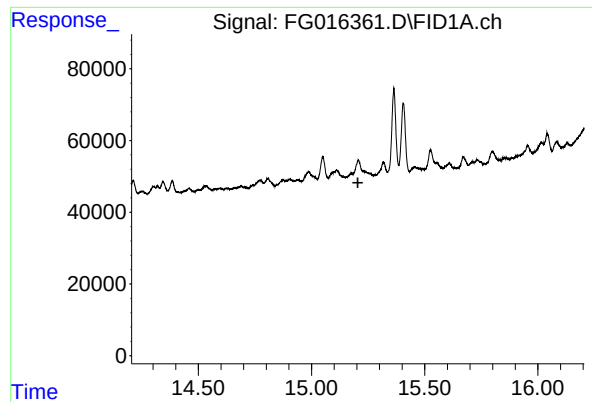
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016361.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 14:34
Operator : YP\AJ
Sample : Q2758-01 25X
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: Aug 07 04:36:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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.: 0.000 min
Exp R.T.: 15.205 min
Response: 0
Conc: N.D.

Instrument :
FID_G
ClientSampleId :
WASTE

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016361.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 14:34
 Sample : Q2758-01 25X
 Misc :
 ALS Vial : 27 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.024	2.006	2.037	BV	28	-69	-0.01%	-0.000%
2	2.051	2.037	2.065	PV	140	1582	0.12%	0.002%
3	2.075	2.065	2.101	VV	305	1840	0.14%	0.002%
4	2.119	2.101	2.174	VV	548	9186	0.70%	0.012%
5	2.178	2.174	2.196	VV	201	1728	0.13%	0.002%
6	2.202	2.196	2.228	VV	189	2124	0.16%	0.003%
7	2.232	2.228	2.237	VV	120	421	0.03%	0.001%
8	2.243	2.237	2.253	VV	129	730	0.06%	0.001%
9	2.258	2.253	2.271	VV	127	944	0.07%	0.001%
10	2.280	2.271	2.308	VV	184	2210	0.17%	0.003%
11	2.319	2.308	2.344	VV	262	3591	0.27%	0.005%
12	2.356	2.344	2.374	VV	191	2012	0.15%	0.003%
13	2.406	2.374	2.427	PV	496	7080	0.54%	0.009%
14	2.431	2.427	2.434	VV	173	740	0.06%	0.001%
15	2.438	2.434	2.445	VV	204	1039	0.08%	0.001%
16	2.450	2.445	2.460	VV	265	1506	0.11%	0.002%
17	2.482	2.460	2.492	VV	301	3920	0.30%	0.005%
18	2.496	2.492	2.520	VV	218	2633	0.20%	0.003%
19	2.537	2.520	2.556	VV	215	3340	0.25%	0.004%
20	2.573	2.556	2.615	VV	311	6821	0.52%	0.009%
21	2.621	2.615	2.641	VV	212	2312	0.18%	0.003%
22	2.649	2.641	2.665	VV	218	2193	0.17%	0.003%
23	2.670	2.665	2.676	VV	216	994	0.08%	0.001%
24	2.702	2.676	2.721	VV	983	12750	0.97%	0.016%
25	2.729	2.721	2.768	VV	417	6225	0.47%	0.008%
26	2.825	2.768	2.873	VV	2004	39260	2.99%	0.050%
27	2.885	2.873	2.906	VV	276	4245	0.32%	0.005%
28	2.911	2.906	2.914	VV	241	1046	0.08%	0.001%
29	2.935	2.914	2.940	VV	461	5072	0.39%	0.006%
30	2.945	2.940	2.995	VV	541	9214	0.70%	0.012%
31	3.035	2.995	3.063	VV	613	14262	1.09%	0.018%
32	3.066	3.063	3.075	VV	284	1582	0.12%	0.002%
33	3.098	3.075	3.118	VV	735	10281	0.78%	0.013%
34	3.136	3.118	3.151	VV	350	5582	0.43%	0.007%
35	3.155	3.151	3.163	VV	364	2187	0.17%	0.003%
36	3.181	3.163	3.197	VV	434	6627	0.51%	0.008%

					rteres			
37	3.223	3.197	3.236	VV	469	7750	0.59%	0.010%
38	3.250	3.236	3.273	VV	377	7304	0.56%	0.009%
39	3.278	3.273	3.285	VV	352	2277	0.17%	0.003%
40	3.288	3.285	3.297	VV	328	2110	0.16%	0.003%
41	3.314	3.297	3.338	VV	450	8588	0.66%	0.011%
42	3.345	3.338	3.353	VV	395	3014	0.23%	0.004%
43	3.357	3.353	3.361	VV	439	1613	0.12%	0.002%
44	3.367	3.361	3.382	VV	425	4922	0.38%	0.006%
45	3.402	3.382	3.441	VV	859	17916	1.37%	0.023%
46	3.445	3.441	3.451	VV	418	2222	0.17%	0.003%
47	3.454	3.451	3.458	VV	466	1571	0.12%	0.002%
48	3.462	3.458	3.492	VV	406	7176	0.55%	0.009%
49	3.526	3.492	3.541	VV	518	11521	0.88%	0.015%
50	3.554	3.541	3.566	VV	477	5908	0.45%	0.007%
51	3.585	3.566	3.594	VV	486	6747	0.51%	0.009%
52	3.617	3.594	3.621	VV	548	7055	0.54%	0.009%
53	3.626	3.621	3.658	VV	550	11061	0.84%	0.014%
54	3.661	3.658	3.672	VV	535	3656	0.28%	0.005%
55	3.683	3.672	3.707	VV	482	8248	0.63%	0.010%
56	3.725	3.707	3.734	VV	466	6935	0.53%	0.009%
57	3.749	3.734	3.783	VV	567	13919	1.06%	0.018%
58	3.795	3.783	3.835	VV	475	12213	0.93%	0.015%
59	3.855	3.835	3.878	VV	565	10633	0.81%	0.013%
60	3.898	3.878	3.928	VV	1065	17536	1.34%	0.022%
61	3.938	3.928	3.950	VV	476	5098	0.39%	0.006%
62	3.954	3.950	3.959	VV	345	1707	0.13%	0.002%
63	3.966	3.959	3.973	VV	354	2844	0.22%	0.004%
64	3.998	3.973	4.011	VV	1606	19666	1.50%	0.025%
65	4.021	4.011	4.045	VV	1456	17772	1.36%	0.023%
66	4.048	4.045	4.082	VV	339	6551	0.50%	0.008%
67	4.098	4.082	4.119	VV	1058	14529	1.11%	0.018%
68	4.128	4.119	4.157	VV	556	9394	0.72%	0.012%
69	4.158	4.157	4.170	VV	425	2734	0.21%	0.003%
70	4.207	4.170	4.234	VV	1363	25907	1.98%	0.033%
71	4.239	4.234	4.270	VV	560	9291	0.71%	0.012%
72	4.275	4.270	4.285	VV	445	3526	0.27%	0.004%
73	4.290	4.285	4.297	VV	429	3069	0.23%	0.004%
74	4.320	4.297	4.358	VV	540	14083	1.07%	0.018%
75	4.394	4.358	4.423	VV	2735	36459	2.78%	0.046%
76	4.439	4.423	4.463	VV	518	9989	0.76%	0.013%
77	4.467	4.463	4.488	VV	427	5198	0.40%	0.007%
78	4.496	4.488	4.511	VV	409	4610	0.35%	0.006%
79	4.515	4.511	4.525	VV	412	2661	0.20%	0.003%
80	4.530	4.525	4.543	VV	368	3575	0.27%	0.005%
81	4.546	4.543	4.556	VV	382	2509	0.19%	0.003%
82	4.560	4.556	4.564	VV	362	1557	0.12%	0.002%
83	4.568	4.564	4.573	VV	402	1936	0.15%	0.002%
84	4.580	4.573	4.595	VV	423	5026	0.38%	0.006%
85	4.612	4.595	4.624	VV	525	7340	0.56%	0.009%
86	4.630	4.624	4.648	VV	411	4424	0.34%	0.006%
87	4.669	4.648	4.692	VV	786	12490	0.95%	0.016%
88	4.713	4.692	4.733	VV	738	10431	0.80%	0.013%
89	4.750	4.733	4.769	VV	411	6558	0.50%	0.008%

					rteres			
90	4.784	4.769	4.803	VV	444	6612	0.50%	0.008%
91	4.807	4.803	4.812	VV	249	1255	0.10%	0.002%
92	4.831	4.812	4.854	VV	1085	15821	1.21%	0.020%
93	4.859	4.854	4.882	VV	413	5775	0.44%	0.007%
94	4.897	4.882	4.910	VV	455	6619	0.50%	0.008%
95	4.913	4.910	4.924	VV	452	3336	0.25%	0.004%
96	4.929	4.924	4.941	VV	434	3324	0.25%	0.004%
97	4.954	4.941	4.971	VV	451	6798	0.52%	0.009%
98	4.976	4.971	4.982	VV	417	2695	0.21%	0.003%
99	4.989	4.982	5.015	VV	477	7458	0.57%	0.009%
100	5.025	5.015	5.039	VV	457	5570	0.42%	0.007%
101	5.062	5.039	5.079	VV	1226	17483	1.33%	0.022%
102	5.092	5.079	5.112	VV	1401	17032	1.30%	0.022%
103	5.135	5.112	5.161	VV	1544	24012	1.83%	0.030%
104	5.177	5.161	5.219	VV	986	16611	1.27%	0.021%
105	5.226	5.219	5.237	VV	273	2358	0.18%	0.003%
106	5.257	5.237	5.284	VV	640	9873	0.75%	0.013%
107	5.299	5.284	5.311	VV	382	4754	0.36%	0.006%
108	5.316	5.311	5.336	VV	359	3947	0.30%	0.005%
109	5.350	5.336	5.367	VV	289	4663	0.36%	0.006%
110	5.382	5.367	5.414	VV	1180	18391	1.40%	0.023%
111	5.437	5.414	5.450	VV	754	10070	0.77%	0.013%
112	5.465	5.450	5.522	VV	1816	26225	2.00%	0.033%
113	5.524	5.522	5.539	VV	158	778	0.06%	0.001%
114	5.552	5.539	5.582	PV	158	2184	0.17%	0.003%
115	5.586	5.582	5.590	VV	122	526	0.04%	0.001%
116	5.598	5.590	5.602	VV	219	869	0.07%	0.001%
117	5.621	5.602	5.650	VV	301	5031	0.38%	0.006%
118	5.671	5.650	5.684	VV	425	5350	0.41%	0.007%
119	5.693	5.684	5.708	VV	318	3128	0.24%	0.004%
120	5.756	5.708	5.774	VV	255	5210	0.40%	0.007%
121	5.778	5.774	5.793	VV	209	1115	0.09%	0.001%
122	5.815	5.793	5.837	VV	1470	16550	1.26%	0.021%
123	5.848	5.837	5.878	VV	889	12394	0.95%	0.016%
124	5.889	5.878	5.901	VV	406	3364	0.26%	0.004%
125	5.909	5.901	5.926	VV	320	4248	0.32%	0.005%
126	5.932	5.926	5.939	VV	366	2297	0.18%	0.003%
127	5.946	5.939	5.955	VV	305	2290	0.17%	0.003%
128	5.958	5.955	5.972	VV	269	2295	0.18%	0.003%
129	5.974	5.972	5.979	VV	284	1075	0.08%	0.001%
130	6.011	5.979	6.032	VV	1360	21810	1.66%	0.028%
131	6.043	6.032	6.062	VV	776	9844	0.75%	0.012%
132	6.080	6.062	6.093	VV	567	9323	0.71%	0.012%
133	6.114	6.093	6.128	VV	1554	20967	1.60%	0.027%
134	6.135	6.128	6.157	VV	822	9554	0.73%	0.012%
135	6.172	6.157	6.193	VV	581	7838	0.60%	0.010%
136	6.210	6.193	6.227	VV	811	8991	0.69%	0.011%
137	6.261	6.227	6.282	VV	527	10397	0.79%	0.013%
138	6.302	6.282	6.325	VV	570	9027	0.69%	0.011%
139	6.354	6.325	6.379	VV	544	10971	0.84%	0.014%
140	6.397	6.379	6.415	VV	1873	19590	1.49%	0.025%
141	6.432	6.415	6.472	VV	645	11899	0.91%	0.015%

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142	6.494	6.472	6.515	VV	469	6244	0.48%	0.008%
143	6.546	6.515	6.572	VV	665	12907	0.98%	0.016%
144	6.584	6.572	6.614	VV	335	5564	0.42%	0.007%
145	6.627	6.614	6.656	VV	568	7881	0.60%	0.010%
146	6.666	6.656	6.675	VV	390	3697	0.28%	0.005%
147	6.687	6.675	6.720	VV	388	6274	0.48%	0.008%
148	6.741	6.720	6.749	VV	227	2515	0.19%	0.003%
149	6.769	6.749	6.816	VV	377	9336	0.71%	0.012%
150	6.820	6.816	6.825	VV	134	520	0.04%	0.001%
151	6.855	6.825	6.865	VV	572	6250	0.48%	0.008%
152	6.869	6.865	6.896	VV	259	2636	0.20%	0.003%
153	6.899	6.896	6.907	VV	114	627	0.05%	0.001%
154	6.937	6.907	6.958	VV	309	5897	0.45%	0.007%
155	6.971	6.958	6.992	VV	467	5730	0.44%	0.007%
156	7.007	6.992	7.040	VV	279	4075	0.31%	0.005%
157	7.060	7.040	7.087	VV	352	4907	0.37%	0.006%
158	7.096	7.087	7.103	VV	94	496	0.04%	0.001%
159	7.113	7.103	7.124	VV	139	819	0.06%	0.001%
160	7.144	7.124	7.165	PV	538	6099	0.47%	0.008%
161	7.182	7.165	7.198	VV	290	3735	0.28%	0.005%
162	7.205	7.198	7.236	VV	244	3812	0.29%	0.005%
163	7.267	7.236	7.295	VV	567	10150	0.77%	0.013%
164	7.305	7.295	7.322	VV	354	3404	0.26%	0.004%
165	7.373	7.322	7.380	VV	917	18658	1.42%	0.024%
166	7.381	7.380	7.397	VV	919	8547	0.65%	0.011%
167	7.403	7.397	7.411	VV	859	6608	0.50%	0.008%
168	7.434	7.411	7.476	VV	1106	28616	2.18%	0.036%
169	7.500	7.476	7.547	VV	2542	40250	3.07%	0.051%
170	7.555	7.547	7.563	VV	460	3765	0.29%	0.005%
171	7.582	7.563	7.597	VV	546	8880	0.68%	0.011%
172	7.600	7.597	7.620	VV	351	3342	0.25%	0.004%
173	7.640	7.620	7.668	VV	1173	14694	1.12%	0.019%
174	7.678	7.668	7.702	VV	307	4328	0.33%	0.005%
175	7.710	7.702	7.714	VV	203	1377	0.11%	0.002%
176	7.720	7.714	7.729	VV	234	1649	0.13%	0.002%
177	7.738	7.729	7.749	VV	240	2196	0.17%	0.003%
178	7.765	7.749	7.769	VV	205	2224	0.17%	0.003%
179	7.775	7.769	7.780	VV	271	1284	0.10%	0.002%
180	7.808	7.780	7.841	VV	534	9703	0.74%	0.012%
181	7.852	7.841	7.866	VV	227	3014	0.23%	0.004%
182	7.884	7.866	7.918	VV	365	7316	0.56%	0.009%
183	7.928	7.918	7.964	VV	210	4170	0.32%	0.005%
184	7.982	7.964	7.995	VV	219	3538	0.27%	0.004%
185	7.997	7.995	8.005	VV	246	1017	0.08%	0.001%
186	8.010	8.005	8.016	VV	137	792	0.06%	0.001%
187	8.042	8.016	8.054	VV	205	3144	0.24%	0.004%
188	8.072	8.054	8.077	PV	136	1120	0.09%	0.001%
189	8.107	8.077	8.134	VV	211	3741	0.29%	0.005%
190	8.147	8.134	8.167	VV	193	2230	0.17%	0.003%
191	8.177	8.167	8.196	VV	163	1851	0.14%	0.002%
192	8.207	8.196	8.219	VV	161	1835	0.14%	0.002%
193	8.244	8.219	8.290	VV	621	12931	0.99%	0.016%
194	8.294	8.290	8.323	VV	206	2281	0.17%	0.003%

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195	8.325	8.323	8.331	VV	85	216	0.02%	0.000%
196	8.345	8.331	8.368	VV	127	1745	0.13%	0.002%
197	8.408	8.368	8.422	VV	423	6408	0.49%	0.008%
198	8.434	8.422	8.464	VV	403	5938	0.45%	0.008%
199	8.468	8.464	8.482	VV	136	840	0.06%	0.001%
200	8.506	8.482	8.513	PV	817	7931	0.60%	0.010%
201	8.517	8.513	8.565	VV	831	10303	0.79%	0.013%
202	8.588	8.565	8.607	VV	506	7493	0.57%	0.010%
203	8.628	8.607	8.642	VV	1023	12096	0.92%	0.015%
204	8.655	8.642	8.669	VV	751	8756	0.67%	0.011%
205	8.691	8.669	8.761	VV	959	28032	2.14%	0.036%
206	8.815	8.761	8.857	VV	4226	68882	5.25%	0.087%
207	8.865	8.857	8.897	VV	822	11804	0.90%	0.015%
208	8.906	8.897	8.914	VV	375	2795	0.21%	0.004%
209	8.923	8.914	8.945	VV	290	3446	0.26%	0.004%
210	8.957	8.945	8.970	VV	209	2259	0.17%	0.003%
211	8.974	8.970	8.979	VV	210	763	0.06%	0.001%
212	8.985	8.979	9.028	VV	134	1745	0.13%	0.002%
213	9.043	9.028	9.054	PV	117	1157	0.09%	0.001%
214	9.115	9.054	9.140	VV	1836	28998	2.21%	0.037%
215	9.165	9.140	9.189	VV	880	15738	1.20%	0.020%
216	9.204	9.189	9.214	VV	480	6262	0.48%	0.008%
217	9.234	9.214	9.267	VV	1092	17310	1.32%	0.022%
218	9.282	9.267	9.307	VV	208	2929	0.22%	0.004%
219	9.358	9.307	9.373	VV	877	15495	1.18%	0.020%
220	9.392	9.373	9.412	VV	1217	14436	1.10%	0.018%
221	9.438	9.412	9.471	VV	701	17490	1.33%	0.022%
222	9.483	9.471	9.499	VV	365	4831	0.37%	0.006%
223	9.505	9.499	9.510	VV	307	1733	0.13%	0.002%
224	9.529	9.510	9.547	VV	1012	13055	1.00%	0.017%
225	9.572	9.547	9.599	VV	719	11864	0.90%	0.015%
226	9.623	9.599	9.652	VV	323	5300	0.40%	0.007%
227	9.687	9.652	9.707	PV	704	10170	0.78%	0.013%
228	9.719	9.707	9.756	VV	707	11464	0.87%	0.015%
229	9.771	9.756	9.800	VV	606	8611	0.66%	0.011%
230	9.826	9.800	9.857	VV	870	15736	1.20%	0.020%
231	9.869	9.857	9.890	VV	727	9996	0.76%	0.013%
232	9.910	9.890	9.929	VV	2284	29422	2.24%	0.037%
233	9.932	9.929	9.952	VV	888	8548	0.65%	0.011%
234	9.989	9.952	10.023	VV	1614	35600	2.72%	0.045%
235	10.028	10.023	10.041	VV	446	4210	0.32%	0.005%
236	10.065	10.041	10.080	VV	1074	17695	1.35%	0.022%
237	10.092	10.080	10.102	VV	890	9738	0.74%	0.012%
238	10.114	10.102	10.139	VV	768	14473	1.10%	0.018%
239	10.157	10.139	10.162	VV	625	8339	0.64%	0.011%
240	10.189	10.162	10.213	VV	2682	39378	3.00%	0.050%
241	10.235	10.213	10.282	VV	1447	35134	2.68%	0.045%
242	10.290	10.282	10.301	VV	649	6319	0.48%	0.008%
243	10.336	10.301	10.354	VV	1724	36818	2.81%	0.047%
244	10.359	10.354	10.385	VV	1014	10885	0.83%	0.014%
245	10.403	10.385	10.414	VV	506	6178	0.47%	0.008%
246	10.419	10.414	10.454	VV	516	9045	0.69%	0.011%

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247	10.458	10.454	10.474	VV	265	1656	0.13%	0.002%
248	10.499	10.474	10.533	PV	949	17737	1.35%	0.023%
249	10.538	10.533	10.558	VV	287	2924	0.22%	0.004%
250	10.564	10.558	10.578	VV	139	1062	0.08%	0.001%
251	10.594	10.578	10.618	VV	415	5343	0.41%	0.007%
252	10.635	10.618	10.642	VV	419	3527	0.27%	0.004%
253	10.663	10.642	10.681	VV	969	12953	0.99%	0.016%
254	10.709	10.681	10.734	VV	1728	25286	1.93%	0.032%
255	10.772	10.734	10.786	VV	1728	30491	2.33%	0.039%
256	10.800	10.786	10.826	VV	1813	25996	1.98%	0.033%
257	10.844	10.826	10.881	VV	2223	33357	2.54%	0.042%
258	10.920	10.881	10.957	VV	1529	36430	2.78%	0.046%
259	10.979	10.957	11.006	VV	2014	37998	2.90%	0.048%
260	11.023	11.006	11.035	VV	850	11818	0.90%	0.015%
261	11.059	11.035	11.074	VV	1362	23603	1.80%	0.030%
262	11.092	11.074	11.108	VV	1749	21975	1.68%	0.028%
263	11.133	11.108	11.184	VV	5765	102057	7.78%	0.130%
264	11.198	11.184	11.210	VV	794	9988	0.76%	0.013%
265	11.227	11.210	11.246	VV	1023	13909	1.06%	0.018%
266	11.254	11.246	11.260	VV	579	3873	0.30%	0.005%
267	11.290	11.260	11.302	VV	911	17851	1.36%	0.023%
268	11.330	11.302	11.372	VV	18450	217396	16.58%	0.276%
269	11.405	11.372	11.426	VV	7737	97229	7.42%	0.123%
270	11.432	11.426	11.444	VV	1012	9283	0.71%	0.012%
271	11.459	11.444	11.480	VV	1237	17454	1.33%	0.022%
272	11.501	11.480	11.527	VV	588	10635	0.81%	0.013%
273	11.544	11.527	11.563	VV	628	7730	0.59%	0.010%
274	11.579	11.563	11.596	VV	616	8481	0.65%	0.011%
275	11.625	11.596	11.661	VV	2339	43254	3.30%	0.055%
276	11.696	11.661	11.712	VV	1159	22656	1.73%	0.029%
277	11.735	11.712	11.752	VV	1546	27061	2.06%	0.034%
278	11.766	11.752	11.788	VV	1306	20775	1.58%	0.026%
279	11.805	11.788	11.813	VV	965	9452	0.72%	0.012%
280	11.825	11.813	11.834	VV	1089	12498	0.95%	0.016%
281	11.861	11.834	11.906	VV	5168	81154	6.19%	0.103%
282	11.932	11.906	11.952	VV	1337	18417	1.40%	0.023%
283	11.986	11.952	12.002	PV	1054	20155	1.54%	0.026%
284	12.020	12.002	12.052	VV	1028	21477	1.64%	0.027%
285	12.068	12.052	12.080	VV	693	8705	0.66%	0.011%
286	12.087	12.080	12.109	VV	716	7594	0.58%	0.010%
287	12.141	12.109	12.155	VV	3585	44995	3.43%	0.057%
288	12.172	12.155	12.209	VV	4535	61115	4.66%	0.078%
289	12.257	12.209	12.274	VV	6301	104646	7.98%	0.133%
290	12.289	12.274	12.303	VV	3576	41164	3.14%	0.052%
291	12.322	12.303	12.347	VV	4273	57968	4.42%	0.074%
292	12.354	12.347	12.363	VV	463	3158	0.24%	0.004%
293	12.400	12.363	12.406	VV	1267	19782	1.51%	0.025%
294	12.430	12.406	12.461	VV	2006	47230	3.60%	0.060%
295	12.465	12.461	12.475	VV	989	7395	0.56%	0.009%
296	12.479	12.475	12.486	VV	881	4868	0.37%	0.006%
297	12.503	12.486	12.522	VV	2015	26793	2.04%	0.034%
298	12.548	12.522	12.572	VV	1130	27152	2.07%	0.034%
299	12.579	12.572	12.591	VV	845	7246	0.55%	0.009%

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300	12.614	12.591	12.634	VV	3218	40664	3.10%	0.052%
301	12.647	12.634	12.662	VV	1036	13007	0.99%	0.017%
302	12.700	12.662	12.742	VV	3614	78844	6.01%	0.100%
303	12.760	12.742	12.782	VV	1339	21455	1.64%	0.027%
304	12.795	12.782	12.800	VV	761	7137	0.54%	0.009%
305	12.820	12.800	12.843	VV	1371	23821	1.82%	0.030%
306	12.865	12.843	12.872	VV	1096	15916	1.21%	0.020%
307	12.888	12.872	12.909	VV	1563	21678	1.65%	0.028%
308	12.913	12.909	12.919	VV	516	2384	0.18%	0.003%
309	12.940	12.919	12.950	VV	2550	30549	2.33%	0.039%
310	12.955	12.950	12.978	VV	2182	20115	1.53%	0.026%
311	13.010	12.978	13.027	VV	1872	32965	2.51%	0.042%
312	13.049	13.027	13.067	VV	5285	74039	5.65%	0.094%
313	13.087	13.067	13.105	VV	3633	59092	4.51%	0.075%
314	13.113	13.105	13.141	VV	2599	32105	2.45%	0.041%
315	13.168	13.141	13.207	VV	46105	524186	39.98%	0.665%
316	13.212	13.207	13.219	VV	568	3554	0.27%	0.005%
317	13.231	13.219	13.249	VV	835	8468	0.65%	0.011%
318	13.269	13.249	13.279	PV	434	5441	0.41%	0.007%
319	13.305	13.279	13.337	VV	3842	60434	4.61%	0.077%
320	13.358	13.337	13.397	VV	2041	47222	3.60%	0.060%
321	13.411	13.397	13.444	VV	957	17039	1.30%	0.022%
322	13.469	13.444	13.510	VV	38631	456787	34.84%	0.580%
323	13.526	13.510	13.539	VV	2991	34693	2.65%	0.044%
324	13.556	13.539	13.580	VV	5213	62887	4.80%	0.080%
325	13.597	13.580	13.624	VV	922	18210	1.39%	0.023%
326	13.644	13.624	13.662	VV	2152	30310	2.31%	0.038%
327	13.672	13.662	13.692	VV	1779	17885	1.36%	0.023%
328	13.712	13.692	13.717	PV	827	6768	0.52%	0.009%
329	13.738	13.717	13.779	VV	3259	58276	4.44%	0.074%
330	13.807	13.779	13.841	VV	1879	36291	2.77%	0.046%
331	13.867	13.841	13.883	PV	2292	27911	2.13%	0.035%
332	13.895	13.883	13.911	VV	1341	15706	1.20%	0.020%
333	13.934	13.911	13.958	VV	4041	57343	4.37%	0.073%
334	13.978	13.958	13.996	VV	743	9920	0.76%	0.013%
335	14.001	13.996	14.009	VV	460	2868	0.22%	0.004%
336	14.062	14.009	14.112	VV	9173	164904	12.58%	0.209%
337	14.129	14.112	14.148	VV	1225	19820	1.51%	0.025%
338	14.171	14.148	14.194	VV	6941	96938	7.39%	0.123%
339	14.212	14.194	14.234	VV	4294	56166	4.28%	0.071%
340	14.257	14.234	14.272	VV	1210	20203	1.54%	0.026%
341	14.303	14.272	14.311	VV	2320	33541	2.56%	0.043%
342	14.319	14.311	14.330	VV	2338	23613	1.80%	0.030%
343	14.344	14.330	14.365	VV	3434	48115	3.67%	0.061%
344	14.384	14.365	14.425	VV	3595	48401	3.69%	0.061%
345	14.459	14.425	14.480	PV	1224	20138	1.54%	0.026%
346	14.497	14.480	14.506	VV	682	6609	0.50%	0.008%
347	14.529	14.506	14.559	VV	1661	29554	2.25%	0.038%
348	14.594	14.559	14.614	VV	595	13111	1.00%	0.017%
349	14.625	14.614	14.642	VV	585	5938	0.45%	0.008%
350	14.663	14.642	14.668	VV	453	4743	0.36%	0.006%
351	14.689	14.668	14.720	VV	934	13698	1.04%	0.017%

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352	14.740	14.720	14.748	PV	813	8259	0.63%	0.010%
353	14.772	14.748	14.787	VV	2113	35357	2.70%	0.045%
354	14.809	14.787	14.840	VV	2301	39155	2.99%	0.050%
355	14.875	14.840	14.883	PV	1476	21416	1.63%	0.027%
356	14.902	14.883	14.926	VV	1436	29777	2.27%	0.038%
357	14.938	14.926	14.959	VV	1083	17445	1.33%	0.022%
358	14.987	14.959	15.026	VV	3040	73500	5.61%	0.093%
359	15.051	15.026	15.076	VV	6970	97564	7.44%	0.124%
360	15.111	15.076	15.151	VV	2701	73624	5.62%	0.093%
361	15.207	15.151	15.277	VV	4885	131316	10.02%	0.167%
362	15.318	15.277	15.337	VV	3853	57769	4.41%	0.073%
363	15.364	15.337	15.385	VV	24100	298256	22.75%	0.378%
364	15.405	15.385	15.434	VV	19609	253914	19.37%	0.322%
365	15.452	15.434	15.484	VV	1584	32482	2.48%	0.041%
366	15.491	15.484	15.498	VV	889	6319	0.48%	0.008%
367	15.526	15.498	15.580	VV	5914	115003	8.77%	0.146%
368	15.609	15.580	15.637	VV	1784	27656	2.11%	0.035%
369	15.671	15.637	15.693	PV	2898	40436	3.08%	0.051%
370	15.712	15.693	15.718	VV	1476	14142	1.08%	0.018%
371	15.732	15.718	15.757	VV	1575	25451	1.94%	0.032%
372	15.763	15.757	15.771	PV	442	1896	0.14%	0.002%
373	15.798	15.771	15.832	PV	3255	57606	4.39%	0.073%
374	15.853	15.832	15.875	VV	912	15190	1.16%	0.019%
375	15.885	15.875	15.892	VV	554	2954	0.23%	0.004%
376	15.956	15.892	15.978	VV	2711	59445	4.53%	0.075%
377	16.015	15.978	16.025	VV	3071	50978	3.89%	0.065%
378	16.041	16.025	16.064	VV	5115	66766	5.09%	0.085%
379	16.083	16.064	16.103	PV	2298	32867	2.51%	0.042%
380	16.129	16.103	16.150	VV	1588	21647	1.65%	0.027%
381	16.203	16.150	16.230	VV	4315	118557	9.04%	0.150%
382	16.278	16.230	16.306	VV	2793	85479	6.52%	0.108%
383	16.338	16.306	16.350	VV	2300	46766	3.57%	0.059%
384	16.369	16.350	16.381	VV	2257	35021	2.67%	0.044%
385	16.403	16.381	16.420	VV	3110	52784	4.03%	0.067%
386	16.444	16.420	16.458	VV	3139	58546	4.47%	0.074%
387	16.476	16.458	16.490	VV	3657	56965	4.34%	0.072%
388	16.494	16.490	16.512	VV	2546	28632	2.18%	0.036%
389	16.517	16.512	16.526	VV	2159	16390	1.25%	0.021%
390	16.545	16.526	16.559	VV	2311	38426	2.93%	0.049%
391	16.572	16.559	16.582	VV	2144	24872	1.90%	0.032%
392	16.603	16.582	16.615	VV	2387	43363	3.31%	0.055%
393	16.662	16.615	16.697	VV	4802	150984	11.52%	0.192%
394	16.752	16.697	16.782	VV	4748	164538	12.55%	0.209%
395	16.785	16.782	16.789	VV	3037	13464	1.03%	0.017%
396	16.819	16.789	16.839	VV	5895	125942	9.61%	0.160%
397	16.847	16.839	16.857	VV	3829	37931	2.89%	0.048%
398	16.873	16.857	16.886	VV	3361	49768	3.80%	0.063%
399	16.938	16.886	16.956	VV	24891	409321	31.22%	0.519%
400	16.964	16.956	16.994	VV	10673	129694	9.89%	0.165%
401	17.013	16.994	17.035	VV	2342	37523	2.86%	0.048%
402	17.068	17.035	17.091	VV	6464	106043	8.09%	0.135%
403	17.100	17.091	17.129	VV	2214	31119	2.37%	0.039%
404	17.133	17.129	17.145	VV	1110	7119	0.54%	0.009%

					rteres			
405	17.155	17.145	17.164	PV	1251	10210	0.78%	0.013%
406	17.198	17.164	17.203	VV	968	10864	0.83%	0.014%
407	17.263	17.203	17.288	VV	15088	245411	18.72%	0.311%
408	17.320	17.288	17.352	VV	18385	227038	17.32%	0.288%
409	17.360	17.352	17.367	VV	832	4968	0.38%	0.006%
410	17.425	17.367	17.458	PV	8361	207591	15.83%	0.263%
411	17.476	17.458	17.496	VV	4564	71852	5.48%	0.091%
412	17.500	17.496	17.507	VV	2856	15367	1.17%	0.020%
413	17.525	17.507	17.531	VV	4086	44010	3.36%	0.056%
414	17.553	17.531	17.571	VV	4222	88625	6.76%	0.112%
415	17.597	17.571	17.602	VV	4579	71762	5.47%	0.091%
416	17.636	17.602	17.648	VV	6909	157829	12.04%	0.200%
417	17.661	17.648	17.681	VV	7784	124570	9.50%	0.158%
418	17.687	17.681	17.703	VV	6419	75864	5.79%	0.096%
419	17.726	17.703	17.739	VV	6347	112281	8.56%	0.142%
420	17.768	17.739	17.786	VV	7869	183409	13.99%	0.233%
421	17.798	17.786	17.804	VV	6525	68594	5.23%	0.087%
422	17.838	17.804	17.842	VV	9026	161350	12.31%	0.205%
423	17.849	17.842	17.870	VV	9002	119601	9.12%	0.152%
424	17.918	17.870	17.924	VV	7036	195847	14.94%	0.249%
425	17.942	17.924	17.958	VV	7947	139294	10.62%	0.177%
426	17.985	17.958	18.011	VV	10713	264692	20.19%	0.336%
427	18.021	18.011	18.026	VV	7052	62209	4.74%	0.079%
428	18.031	18.026	18.048	VV	6705	78668	6.00%	0.100%
429	18.072	18.048	18.111	VV	7396	220789	16.84%	0.280%
430	18.129	18.111	18.147	VV	5862	115504	8.81%	0.147%
431	18.152	18.147	18.186	VV	5469	107168	8.17%	0.136%
432	18.199	18.186	18.228	VV	5785	118439	9.03%	0.150%
433	18.237	18.228	18.243	VV	3730	32682	2.49%	0.041%
434	18.252	18.243	18.259	VV	3955	33346	2.54%	0.042%
435	18.292	18.259	18.322	VV	7268	179167	13.67%	0.227%
436	18.326	18.322	18.337	VV	3060	23567	1.80%	0.030%
437	18.360	18.337	18.371	VV	3574	58328	4.45%	0.074%
438	18.381	18.371	18.406	VV	5485	99740	7.61%	0.127%
439	18.428	18.406	18.441	VV	6508	111565	8.51%	0.142%
440	18.461	18.441	18.479	VV	10723	193094	14.73%	0.245%
441	18.484	18.479	18.498	VV	9450	92347	7.04%	0.117%
442	18.505	18.498	18.521	VV	6835	80941	6.17%	0.103%
443	18.527	18.521	18.535	VV	5035	40649	3.10%	0.052%
444	18.553	18.535	18.570	VV	6096	108517	8.28%	0.138%
445	18.612	18.570	18.630	VV	7643	182424	13.91%	0.231%
446	18.634	18.630	18.642	VV	5035	33435	2.55%	0.042%
447	18.657	18.642	18.682	VV	7614	134224	10.24%	0.170%
448	18.703	18.682	18.735	VV	15828	284974	21.74%	0.362%
449	18.744	18.735	18.761	VV	4082	55470	4.23%	0.070%
450	18.782	18.761	18.785	VV	4693	57476	4.38%	0.073%
451	18.829	18.785	18.853	VV	13413	314803	24.01%	0.399%
452	18.866	18.853	18.877	VV	8042	102360	7.81%	0.130%
453	18.881	18.877	18.893	VV	6604	58982	4.50%	0.075%
454	18.902	18.893	18.911	VV	5564	52157	3.98%	0.066%
455	18.959	18.911	18.979	VV	17654	399538	30.47%	0.507%
456	19.002	18.979	19.010	VV	9756	159948	12.20%	0.203%

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457	19.043	19.010	19.055	VV	11967	274540	20.94%	0.348%
458	19.095	19.055	19.117	VV	13962	436613	33.30%	0.554%
459	19.130	19.117	19.154	VV	12355	251446	19.18%	0.319%
460	19.177	19.154	19.183	VV	10174	169635	12.94%	0.215%
461	19.190	19.183	19.194	VV	10893	68059	5.19%	0.086%
462	19.203	19.194	19.213	VV	11206	119981	9.15%	0.152%
463	19.228	19.213	19.235	VV	13324	161135	12.29%	0.204%
464	19.254	19.235	19.273	VV	16006	328492	25.06%	0.417%
465	19.279	19.273	19.287	VV	13546	109314	8.34%	0.139%
466	19.303	19.287	19.326	VV	17048	349289	26.64%	0.443%
467	19.346	19.326	19.361	VV	15413	300056	22.89%	0.381%
468	19.374	19.361	19.383	VV	15778	200169	15.27%	0.254%
469	19.397	19.383	19.413	VV	16784	276533	21.09%	0.351%
470	19.441	19.413	19.449	VV	15942	326475	24.90%	0.414%
471	19.456	19.449	19.462	VV	15981	117169	8.94%	0.149%
472	19.496	19.462	19.504	VV	18879	443081	33.80%	0.562%
473	19.534	19.504	19.544	VV	21267	467200	35.63%	0.593%
474	19.562	19.544	19.573	VV	20337	334853	25.54%	0.425%
475	19.590	19.573	19.604	VV	23111	384666	29.34%	0.488%
476	19.617	19.604	19.630	VV	22968	337397	25.73%	0.428%
477	19.663	19.630	19.677	VV	24868	657139	50.12%	0.834%
478	19.692	19.677	19.712	VV	25156	504305	38.47%	0.640%
479	19.732	19.712	19.743	VV	26545	475011	36.23%	0.603%
480	19.786	19.743	19.803	VV	29922	960824	73.29%	1.219%
481	19.818	19.803	19.822	VV	29298	336696	25.68%	0.427%
482	19.831	19.822	19.838	VV	28732	266519	20.33%	0.338%
483	19.844	19.838	19.851	VV	28542	210059	16.02%	0.267%
484	19.864	19.851	19.878	VV	29822	452775	34.53%	0.575%
485	19.888	19.878	19.899	VV	28034	337730	25.76%	0.429%
486	19.906	19.899	19.915	VV	27571	253077	19.30%	0.321%
487	19.921	19.915	19.927	VV	26839	195706	14.93%	0.248%
488	19.932	19.927	19.937	VV	26147	148307	11.31%	0.188%
489	19.947	19.937	19.960	VV	26089	346374	26.42%	0.440%
490	19.973	19.960	19.981	VV	26417	323527	24.68%	0.411%
491	20.007	19.981	20.012	VV	29157	504714	38.50%	0.640%
492	20.030	20.012	20.035	VV	31722	432150	32.96%	0.548%
493	20.065	20.035	20.082	VV	37902	994233	75.83%	1.262%
494	20.118	20.082	20.126	VV	42194	1022173	77.96%	1.297%
495	20.131	20.126	20.140	VV	42684	356578	27.20%	0.452%
496	20.153	20.140	20.157	VV	42650	429919	32.79%	0.546%
497	20.181	20.157	20.191	VV	43481	848488	64.72%	1.077%
498	20.198	20.191	20.210	VV	47176	508826	38.81%	0.646%
499	20.220	20.210	20.225	VV	42026	369434	28.18%	0.469%
500	20.238	20.225	20.245	VV	43037	506666	38.65%	0.643%
501	20.250	20.245	20.267	VV	42230	553320	42.20%	0.702%
502	20.276	20.267	20.283	VV	43574	389500	29.71%	0.494%
503	20.292	20.283	20.304	VV	46352	553906	42.25%	0.703%
504	20.309	20.304	20.324	VV	44096	498931	38.06%	0.633%
505	20.329	20.324	20.345	VV	42574	536165	40.90%	0.680%
506	20.378	20.345	20.392	VV	44687	1165176	88.87%	1.479%
507	20.405	20.392	20.409	VV	42657	424344	32.37%	0.538%
508	20.432	20.409	20.441	VV	45184	832871	63.53%	1.057%
509	20.468	20.441	20.472	VV	48143	865055	65.98%	1.098%

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510	20.490	20.472	20.500	VV	52110	834017	63.61%	1.058%
511	20.507	20.500	20.520	VV	52445	588050	44.85%	0.746%
512	20.527	20.520	20.545	VV	50450	738931	56.36%	0.938%
513	20.550	20.545	20.556	VV	48513	321050	24.49%	0.407%
514	20.571	20.556	20.593	VV	51149	1093935	83.44%	1.388%
515	20.613	20.593	20.619	VV	49278	723872	55.21%	0.919%
516	20.639	20.619	20.643	VV	51570	714346	54.49%	0.906%
517	20.660	20.643	20.668	VV	55967	826348	63.03%	1.049%
518	20.695	20.668	20.705	VV	63106	1276699	97.38%	1.620%
519	20.715	20.705	20.727	VV	62273	792877	60.48%	1.006%
520	20.742	20.727	20.762	VV	60466	1263223	96.35%	1.603%
521	20.773	20.762	20.797	VV	56471	1146238	87.43%	1.455%
522	20.810	20.797	20.816	VV	56085	599355	45.71%	0.761%
523	20.838	20.816	20.846	VV	59126	1027530	78.37%	1.304%
524	20.858	20.846	20.866	VV	59202	689594	52.60%	0.875%
525	20.872	20.866	20.879	VV	59274	481424	36.72%	0.611%
526	20.887	20.879	20.896	VV	59794	575374	43.89%	0.730%
527	20.901	20.896	20.917	VV	57554	716324	54.64%	0.909%
528	20.922	20.917	20.938	VV	53626	651450	49.69%	0.827%
529	20.946	20.938	20.957	VV	50061	552752	42.16%	0.701%
530	20.966	20.957	20.976	VV	49615	536230	40.90%	0.680%
531	20.981	20.976	20.993	VV	47462	492800	37.59%	0.625%
532	21.015	20.993	21.027	VV	48613	947325	72.26%	1.202%
533	21.041	21.027	21.046	VV	50790	574572	43.82%	0.729%
534	21.059	21.046	21.063	VV	51494	507788	38.73%	0.644%
535	21.067	21.063	21.077	VV	51279	436813	33.32%	0.554%
536	21.080	21.077	21.090	VV	50578	374791	28.59%	0.476%
537	21.093	21.090	21.124	VV	50238	968786	73.89%	1.229%
538	21.146	21.124	21.162	VV	47040	1027319	78.36%	1.304%
539	21.189	21.162	21.197	VV	49761	986857	75.27%	1.252%
540	21.213	21.197	21.217	VV	50263	618223	47.15%	0.785%
541	21.241	21.217	21.258	VV	52933	1238887	94.49%	1.572%
542	21.265	21.258	21.288	VV	49687	845976	64.53%	1.074%
543	21.293	21.288	21.342	VV	44488	1311074	100.00%	1.664%
544	21.352	21.342	21.371	VV	35260	584216	44.56%	0.741%
545	21.376	21.371	21.390	VV	34167	369761	28.20%	0.469%
546	21.418	21.390	21.423	VV	33458	634216	48.37%	0.805%
547	21.429	21.423	21.440	VV	33416	324973	24.79%	0.412%
548	21.458	21.440	21.480	VV	35352	797511	60.83%	1.012%
549	21.486	21.480	21.499	VV	30606	324933	24.78%	0.412%
550	21.508	21.499	21.522	VV	30607	417501	31.84%	0.530%
551	21.529	21.522	21.538	VV	29401	273339	20.85%	0.347%
552	21.548	21.538	21.557	VV	32490	343674	26.21%	0.436%
553	21.562	21.557	21.577	VV	31185	353615	26.97%	0.449%
554	21.603	21.577	21.632	VV	32478	996824	76.03%	1.265%
555	21.662	21.632	21.681	VV	33252	885370	67.53%	1.124%
556	21.693	21.681	21.713	VV	31780	587524	44.81%	0.746%
557	21.722	21.713	21.730	VV	28070	264171	20.15%	0.335%
558	21.739	21.730	21.744	VV	27355	232781	17.75%	0.295%
559	21.752	21.744	21.762	VV	29576	289469	22.08%	0.367%
560	21.775	21.762	21.783	VV	27837	341516	26.05%	0.433%
561	21.793	21.783	21.802	VV	29470	305878	23.33%	0.388%

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562	21.809	21.802	21.813	VV	28444	195370	14.90%	0.248%
563	21.820	21.813	21.842	VV	28591	470342	35.87%	0.597%
564	21.847	21.842	21.869	VV	23404	355364	27.10%	0.451%
565	21.879	21.869	21.907	VV	22747	476031	36.31%	0.604%
566	21.914	21.907	21.925	VV	20080	211344	16.12%	0.268%
567	21.945	21.925	21.966	VV	21252	476832	36.37%	0.605%
568	21.976	21.966	21.982	VV	20468	191876	14.63%	0.243%
569	21.987	21.982	22.012	VV	20179	336163	25.64%	0.427%
570	22.028	22.012	22.045	VV	18359	322326	24.58%	0.409%
571	22.051	22.045	22.075	VV	15064	207470	15.82%	0.263%
572	22.085	22.075	22.094	VV	9131	103318	7.88%	0.131%
573	22.109	22.094	22.115	VV	11010	122586	9.35%	0.156%
574	22.124	22.115	22.130	VV	10850	89849	6.85%	0.114%
575	22.156	22.130	22.160	VV	12211	200306	15.28%	0.254%
576	22.164	22.160	22.169	VV	11556	58022	4.43%	0.074%
577	22.181	22.169	22.213	VV	13229	300190	22.90%	0.381%
578	22.227	22.213	22.232	VV	11858	130645	9.96%	0.166%
579	22.250	22.232	22.256	VV	12748	171999	13.12%	0.218%
580	22.263	22.256	22.271	VV	11468	94870	7.24%	0.120%
581	22.278	22.271	22.288	VV	12747	120606	9.20%	0.153%
582	22.301	22.288	22.316	VV	12978	195700	14.93%	0.248%
583	22.325	22.316	22.332	VV	12997	119686	9.13%	0.152%
584	22.338	22.332	22.383	VV	12478	244755	18.67%	0.311%
585	22.401	22.383	22.409	VV	4761	63060	4.81%	0.080%
586	22.415	22.409	22.426	VV	4336	30791	2.35%	0.039%
587	22.440	22.426	22.447	VV	2776	21071	1.61%	0.027%
588	22.452	22.447	22.457	VV	1052	3885	0.30%	0.005%
589	22.475	22.457	22.489	PV	2240	22199	1.69%	0.028%
Sum of corrected areas:					78802676			

FG080525.M Thu Aug 07 05:39:36 2025



CALIBRATION SUMMARY

TPH GC INITIAL CALIBRATION SUMMARY

Lab Name: Alliance

Contract: SCIA01

ProjectID: 92 Clifford Street, Newark

Lab Code: ACE

SDG No.: Q2758

Calibration Sequence : FG080525		Test : TPH GC	
Concentration (PPM)	Area Count	Reference Factor	File ID
1700	159549953	93853	FG016345.D
850	82027875	96503	FG016346.D
340	33685502	99075	FG016347.D
170	17686270	104037	FG016348.D
85	8678686	102102	FG016349.D
AVG RF : 99114		% RSD : 4.15	AVG RT : 15.2092

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: SCIA01
ProjectID: 92 Clifford Street, Newark
Lab Code: ACE SDG No.: Q2758
DataFile: FG016353.D Analyst Name: YP\AJ Analyst Date: 08-06-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	87012770	102368	99114	3.283

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016353.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 10:05
 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: Aug 07 04:34:01 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Quant Title :
 QLast Update : Tue Aug 05 12:47:26 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...	15.206	4784787	50.221 ug/ml
Target Compounds			
1) N-OCTANE	2.118	5007849	47.191 ug/ml
2) N-DECANE	4.669	5325144	49.277 ug/ml
3) N-DODECANE	6.854	5388387	49.581 ug/ml
4) N-TETRADECANE	8.695	5409897	49.478 ug/ml
5) N-HEXADECANE	10.315	5457794	50.211 ug/ml
6) N-OCTADECANE	11.770	5584676	50.487 ug/ml
7) N-EICOSANE	13.092	5635577	49.861 ug/ml
8) N-DOCOSANE	14.300	5516905	50.218 ug/ml
10) N-TETRACOSANE	15.411	5539409	50.555 ug/ml
11) N-HEXACOSANE	16.441	5570773	52.089 ug/ml
12) N-OCTACOSANE	17.398	5582496	51.818 ug/ml
13) N-TRIACONTANE	18.293	5808806	53.312 ug/ml
14) N-DOTRIACONTANE	19.131	5762369	54.707 ug/ml
15) N-TETRATRIACONTANE	19.920	5093946	53.459 ug/ml
16) N-HEXATRIACONTANE	20.663	4170203	55.811 ug/ml
17) N-OCTATRIACONTANE	21.456	3370911	56.221 ug/ml
18) N-TETRACONTANE	22.466	2787628	66.322 ug/ml

(f)=RT Delta > 1/2 Window

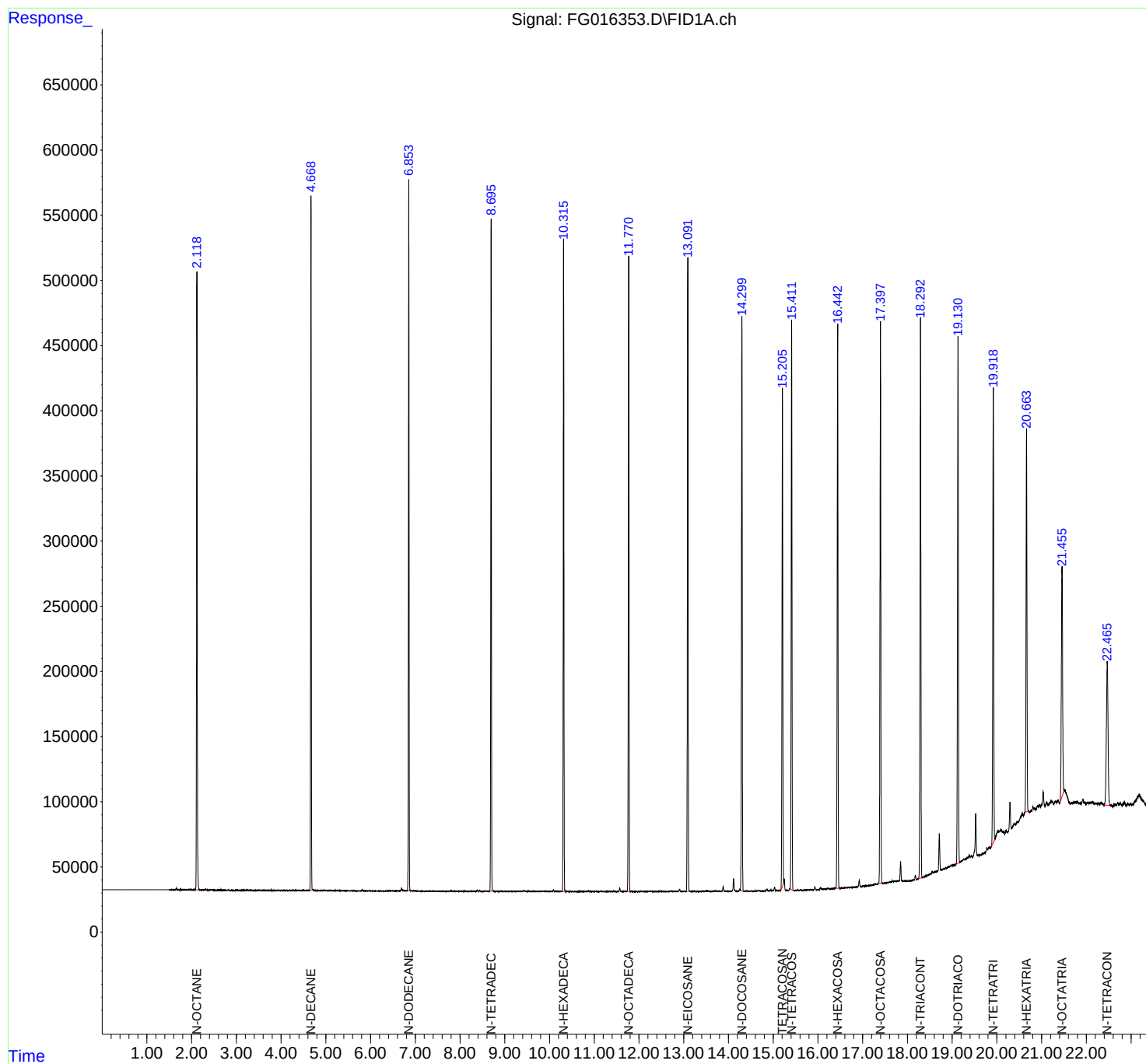
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016353.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 10:05
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: Aug 07 04:34:01 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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\FG080625\
Data File : FG016353.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 10:05
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.118	2.081	2.171	BB	474745	5007849	86.21%	5.455%
2	4.669	4.635	4.706	BB	532556	5325144	91.67%	5.801%
3	6.854	6.819	6.892	BB	544369	5388387	92.76%	5.870%
4	8.695	8.659	8.735	BB	515978	5409897	93.13%	5.893%
5	10.315	10.277	10.356	BB	500164	5457794	93.96%	5.945%
6	11.770	11.732	11.811	BB	487529	5584676	96.14%	6.084%
7	13.092	13.050	13.135	BB	486647	5635577	97.02%	6.139%
8	14.300	14.264	14.340	BB	440515	5516905	94.97%	6.010%
9	15.206	15.161	15.235	BV	380809	4784787	82.37%	5.212%
10	15.411	15.375	15.457	BB	436937	5539409	95.36%	6.034%
11	16.441	16.392	16.486	BB	429445	5570773	95.90%	6.069%
12	17.398	17.350	17.440	BB	430713	5582496	96.10%	6.081%
13	18.293	18.245	18.330	BB	429650	5808806	100.00%	6.328%
14	19.131	19.078	19.173	BB	403567	5762369	99.20%	6.277%
15	19.920	19.867	19.953	BB	347485	5093946	87.69%	5.549%
16	20.663	20.625	20.713	BB	294285	4170203	71.79%	4.543%
17	21.456	21.410	21.499	BB	175449	3370911	58.03%	3.672%
18	22.466	22.396	22.537	BB	109657	2787628	47.99%	3.037%
Sum of corrected areas:							91797556	

FG080525.M Thu Aug 07 05:06:37 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: SCIA01
ProjectID: 92 Clifford Street, Newark
Lab Code: ACE SDG No.: Q2758
DataFile: FG016363.D Analyst Name: YP\AJ Analyst Date: 08-06-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	87118415	102492	99114	3.408

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016363.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 15:33
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :

Integration File: autoint1.e
 Quant Time: Aug 07 04:37:28 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Quant Title :
 QLast Update : Tue Aug 05 12:47:26 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	4777924	50.149 ug/ml
Target Compounds			
1) N-OCTANE	2.120	4915244	46.318 ug/ml
2) N-DECANE	4.672	5305457	49.095 ug/ml
3) N-DODECANE	6.855	5419922	49.871 ug/ml
4) N-TETRADECANE	8.697	5480648	50.125 ug/ml
5) N-HEXADECANE	10.317	5554247	51.098 ug/ml
6) N-OCTADECANE	11.773	5683349	51.379 ug/ml
7) N-EICOSANE	13.094	5716791	50.580 ug/ml
8) N-DOCOSANE	14.301	5559145	50.602 ug/ml
10) N-TETRACOSANE	15.415	5532980	50.496 ug/ml
11) N-HEXACOSANE	16.443	5496032	51.390 ug/ml
12) N-OCTACOSANE	17.400	5444224	50.535 ug/ml
13) N-TRIACONTANE	18.294	5607721	51.466 ug/ml
14) N-DOTRIACONTANE	19.134	5540171	52.598 ug/ml
15) N-TETRATRIACONTANE	19.921	4923662	51.672 ug/ml
16) N-HEXATRIACONTANE	20.667	4165616	55.750 ug/ml
17) N-OCTATRIACONTANE	21.459	3626054	60.476 ug/ml
18) N-TETRACONTANE	22.473	3147152	74.875 ug/ml

(f)=RT Delta > 1/2 Window

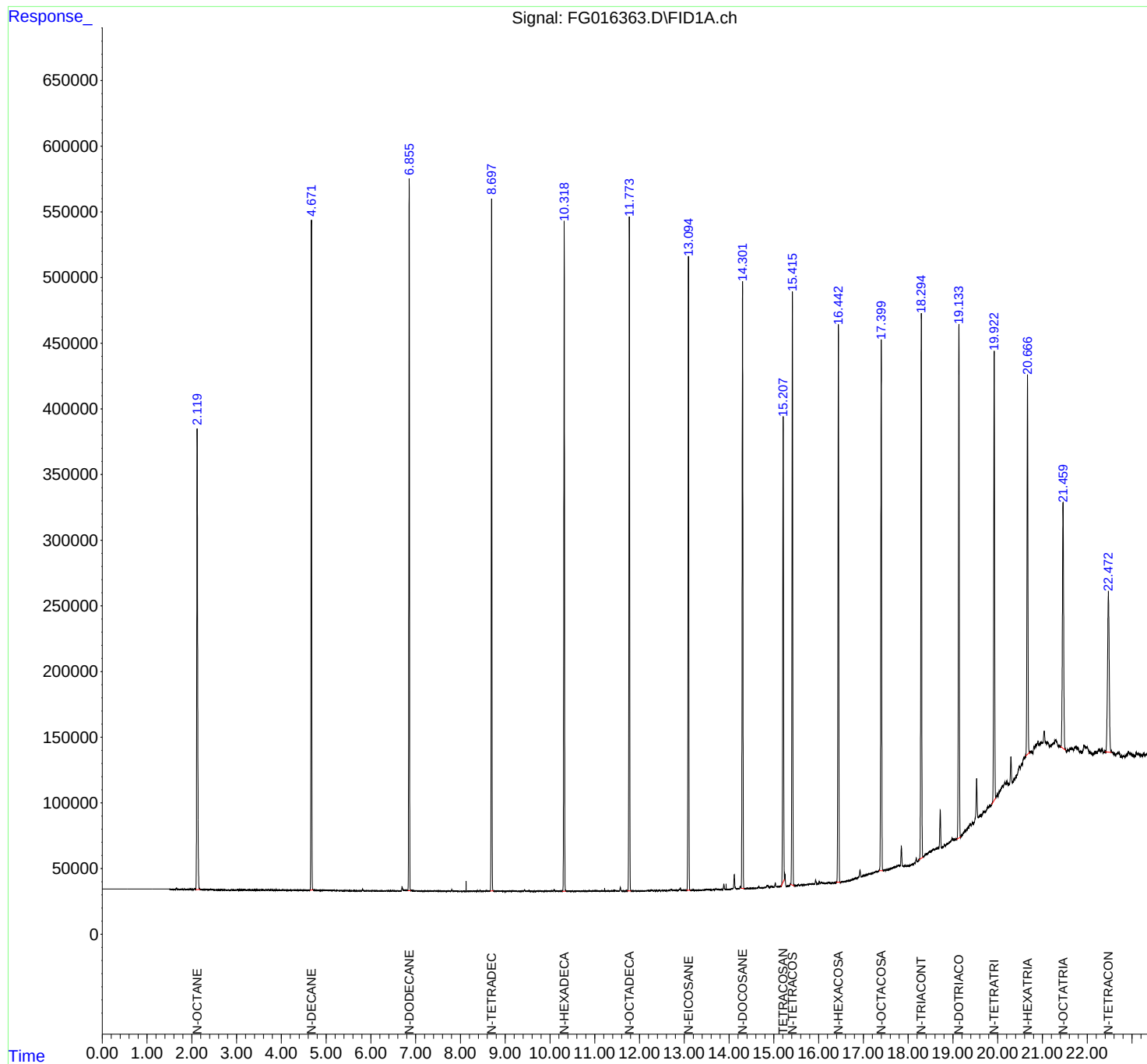
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016363.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 15:33
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :

Integration File: autoint1.e
Quant Time: Aug 07 04:37:28 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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\FG080625\
Data File : FG016363.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 15:33
Sample : 50 PPM TRPH STD :
Misc
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.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	2.084	2.181	BB	350994	4915244	85.98%	5.349%
2	4.672	4.640	4.711	BB	510287	5305457	92.80%	5.773%
3	6.855	6.823	6.892	BB	542311	5419922	94.81%	5.898%
4	8.697	8.662	8.736	BB	524323	5480648	95.87%	5.964%
5	10.317	10.275	10.356	BB	506722	5554247	97.16%	6.044%
6	11.773	11.733	11.811	BB	511353	5683349	99.42%	6.185%
7	13.094	13.052	13.137	BB	479075	5716791	100.00%	6.221%
8	14.301	14.266	14.344	BB	462544	5559145	97.24%	6.049%
9	15.208	15.160	15.237	BV	352397	4777924	83.58%	5.199%
10	15.415	15.371	15.449	BB	450760	5532980	96.78%	6.021%
11	16.443	16.398	16.488	BB	423917	5496032	96.14%	5.981%
12	17.400	17.351	17.438	BB	404099	5444224	95.23%	5.924%
13	18.294	18.239	18.333	BB	414024	5607721	98.09%	6.102%
14	19.134	19.081	19.172	BB	390744	5540171	96.91%	6.029%
15	19.921	19.867	19.956	BB	339857	4923662	86.13%	5.358%
16	20.667	20.625	20.712	BB	288452	4165616	72.87%	4.533%
17	21.459	21.410	21.521	BB	187155	3626054	63.43%	3.946%
18	22.473	22.403	22.545	BB	122601	3147152	55.05%	3.425%
Sum of corrected areas:							91896340	

FG080525.M Thu Aug 07 05:11:43 2025

Analytical Sequence

Client: Sciacca General Contractors, LLC

SDG No.: Q2758

Project: 92 Clifford Street, Newark

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 15.2092					
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	06 Aug 2025 09:35	FG016352.D	15.204	
50 PPM TRPH STD	50 PPM TRPH STD	06 Aug 2025 10:05	FG016353.D	15.206	
PB169135BL	PB169135BL	06 Aug 2025 11:37	FG016355.D	15.203	
PB169135BS	PB169135BS	06 Aug 2025 12:06	FG016356.D	15.201	
WASTEMS	Q2757-01MS	06 Aug 2025 13:35	FG016359.D	15.208	
WASTEMSD	Q2757-01MSD	06 Aug 2025 14:05	FG016360.D	15.208	
WASTE	Q2758-01	06 Aug 2025 14:34	FG016361.D	00.000	
PIBLK02	LBLK02	06 Aug 2025 15:04	FG016362.D	15.206	
50 TRPH STD	50 TRPH STD	06 Aug 2025 15:33	FG016363.D	15.208	



QC SAMPLE DATA

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:		
Project:	92 Clifford Street, Newark		Date Received:		
Client Sample ID:	PB169135BL		SDG No.:	Q2758	
Lab Sample ID:	PB169135BL		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	100	Decanted:
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
FG016355.D	1	08/06/25 08:20	08/06/25 11:37	PB169135

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	14.4		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\FG080625\
Data File : FG016355.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 11:37
Operator : YP\AJ
Sample : PB169135BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB169135BL

Integration File: autoint1.e
Quant Time: Aug 07 04:34:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.203	1371727	14.398 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

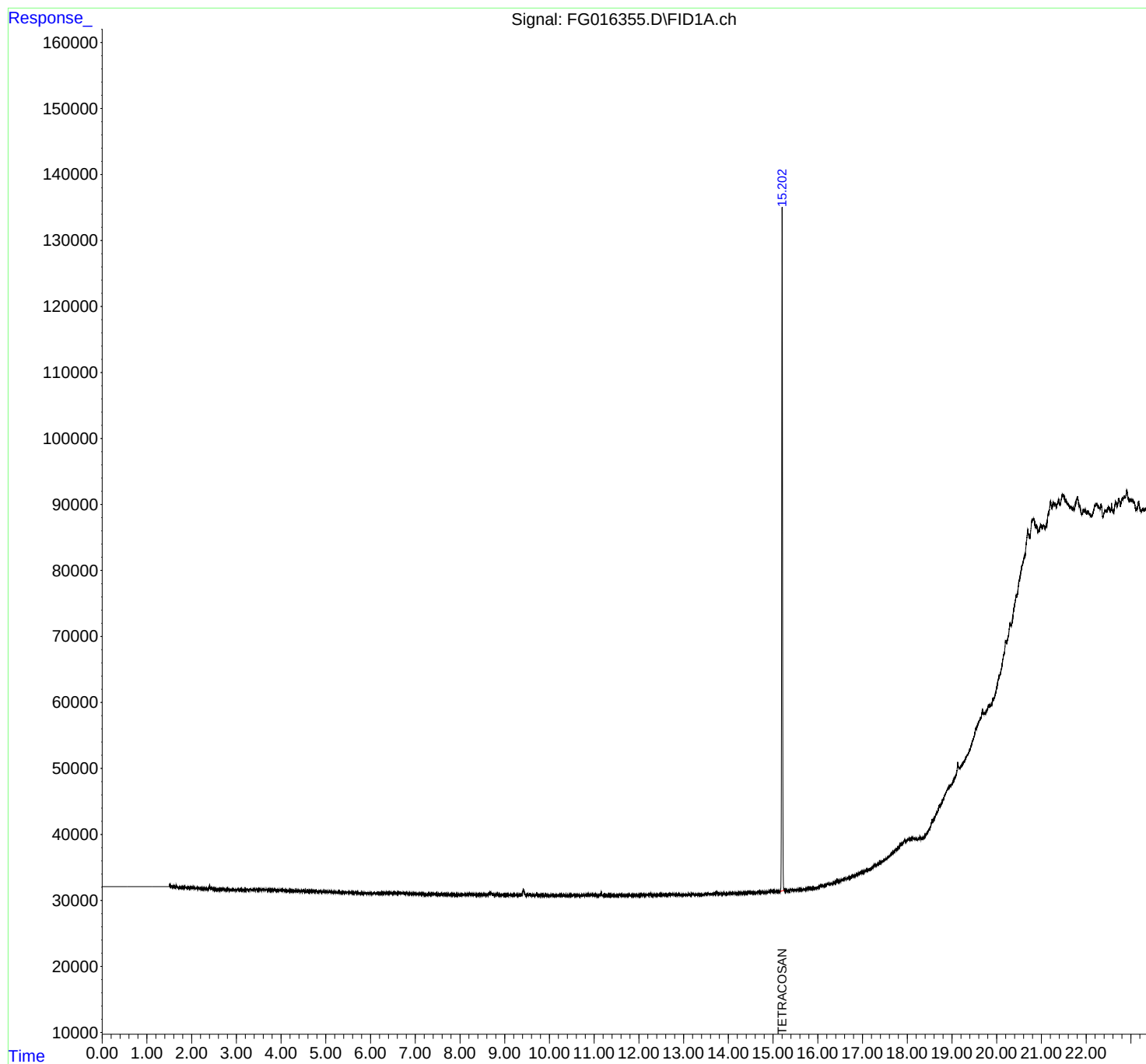
(m)=manual int.

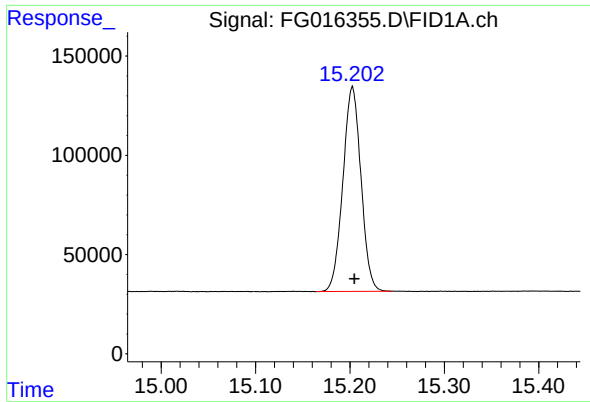
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016355.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 11:37
Operator : YP\AJ
Sample : PB169135BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB169135BL

Integration File: autoint1.e
Quant Time: Aug 07 04:34:43 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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.: 15.203 min
Delta R.T.: -0.002 min
Response: 1371727
Conc: 14.40 ug/ml

Instrument :
FID_G
ClientSampleId :
PB169135BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016355.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 11:37
Sample : PB169135BL
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.203	15.164	15.244	BB	103266	1371727	100.00%	100.000%
Sum of corrected areas:						1371727		

FG080525.M Thu Aug 07 05:09:05 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	08/06/25
Project:	92 Clifford Street, Newark	Date Received:	08/06/25
Client Sample ID:	PIBLK-FG016352.D	SDG No.:	Q2758
Lab Sample ID:	I.BLK-FG016352.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
FG016352.D	1		08/06/25	FG080625

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	16.8		29 - 130	84%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016352.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 09:35
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: Aug 07 04:33:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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	1598237	16.775 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

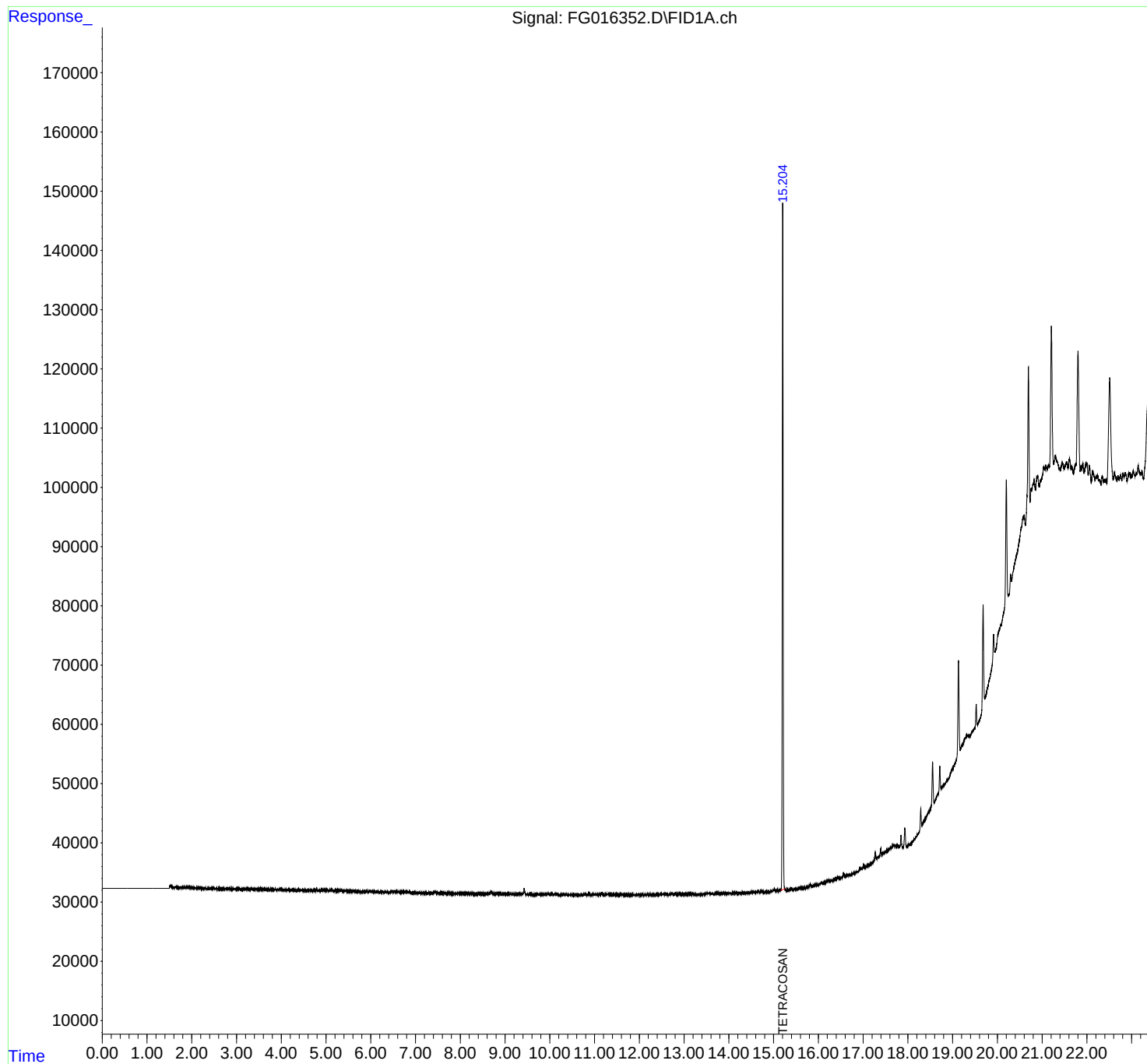
(m)=manual int.

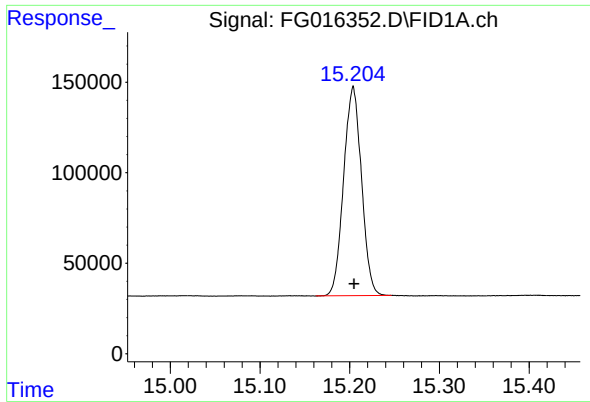
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016352.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 09:35
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Aug 07 04:33:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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.: 0.000 min
Response: 1598237
Conc: 16.78 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016352.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 09:35
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.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	15.163	15.247	BB	115833	1598237	100.00%	100.000%
Sum of corrected areas:						1598237		

FG080525.M Thu Aug 07 05:02:12 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	08/06/25
Project:	92 Clifford Street, Newark	Date Received:	08/06/25
Client Sample ID:	PIBLK-FG016362.D	SDG No.:	Q2758
Lab Sample ID:	I.BLK-FG016362.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
FG016362.D	1		08/06/25	FG080625

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	18.9		29 - 130	94%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016362.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 15:04
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: Aug 07 04:37:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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...	15.206	1797357	18.865 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

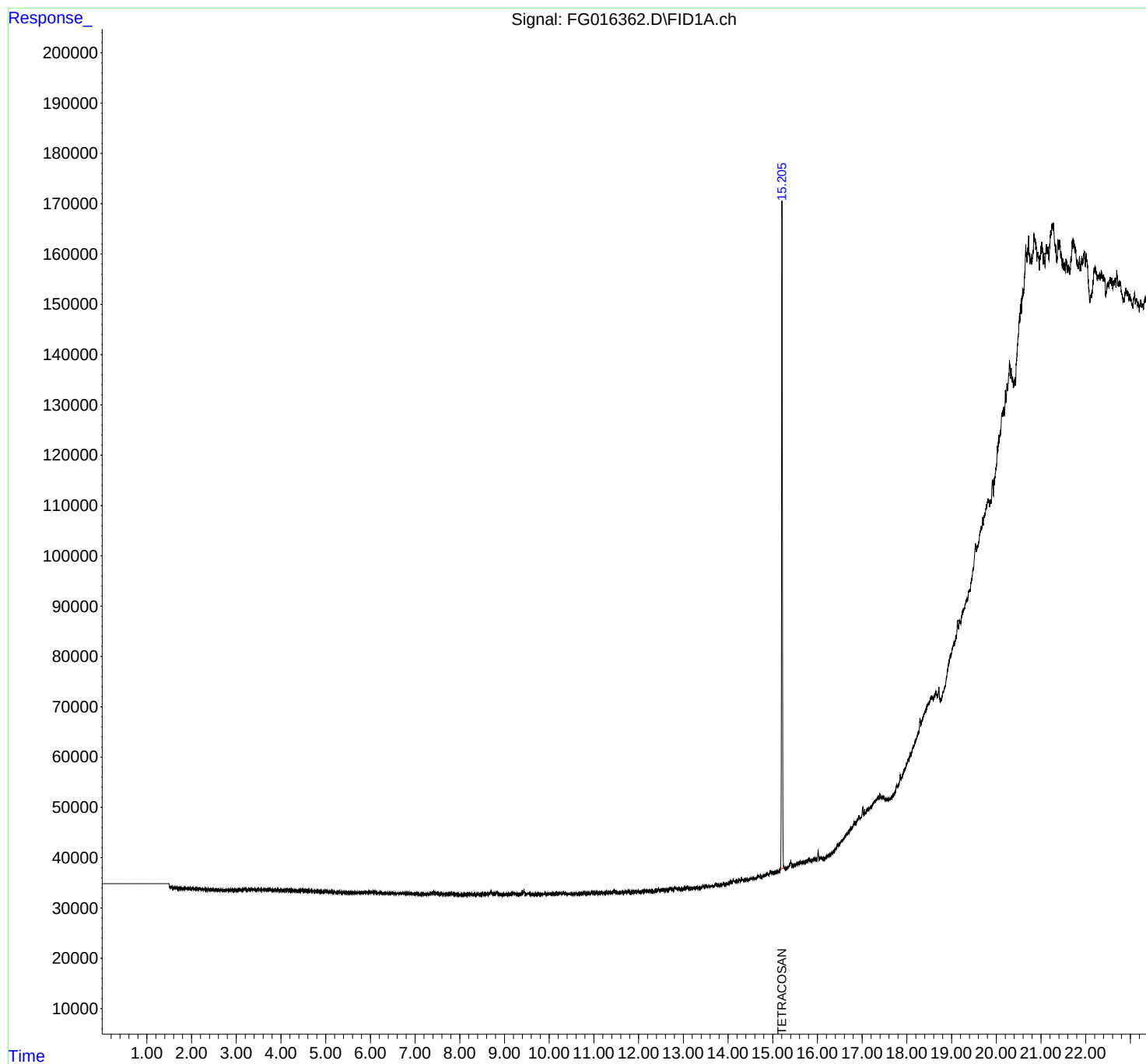
(m)=manual int.

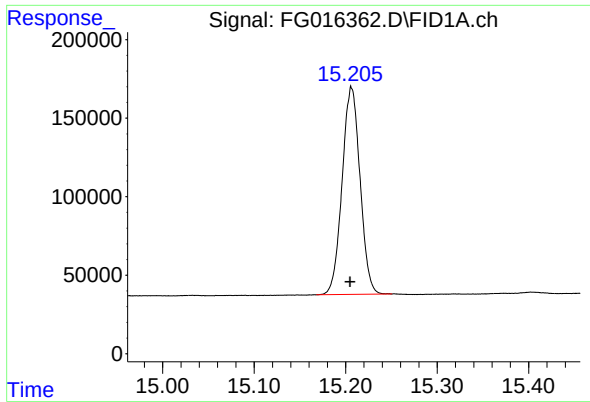
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016362.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 15:04
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Aug 07 04:37:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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.: 15.206 min
Delta R.T.: 0.002 min
Response: 1797357
Conc: 18.87 ug/ml

Instrument :
FID_G
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016362.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 15:04
Sample : I.BLK
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.206	15.168	15.250	BB	131844	1797357	100.00%	100.000%
Sum of corrected areas:						1797357		

FG080525.M Thu Aug 07 05:11:15 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:		
Project:	92 Clifford Street, Newark		Date Received:		
Client Sample ID:	PB169135BS		SDG No.:	Q2758	
Lab Sample ID:	PB169135BS		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
FG016356.D	1	08/06/25 08:20	08/06/25 12:06	PB169135

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	10000		384	2830	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	19.2		37 - 130	96%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016356.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 12:06
 Operator : YP\AJ
 Sample : PB169135BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 PB169135BS

Integration File: autoint1.e
 Quant Time: Aug 07 04:34:58 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Quant Title :
 QLast Update : Tue Aug 05 12:47:26 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.201	1833387	19.243 ug/ml
Target Compounds			
1) N-OCTANE	2.118	1511015	14.239 ug/ml
2) N-DECANE	4.667	1797085	16.630 ug/ml
3) N-DODECANE	6.850	1860172	17.116 ug/ml
4) N-TETRADECANE	8.692	1930357	17.655 ug/ml
5) N-HEXADECANE	10.312	1966285	18.089 ug/ml
6) N-OCTADECANE	11.766	2024519	18.302 ug/ml
7) N-EICOSANE	13.086	2080839	18.410 ug/ml
8) N-DOCOSANE	14.295	2024644	18.429 ug/ml
10) N-TETRACOSANE	15.406	2031138	18.537 ug/ml
11) N-HEXACOSANE	16.435	1985812	18.568 ug/ml
12) N-OCTACOSANE	17.392	1987000	18.444 ug/ml
13) N-TRIACONTANE	18.286	1972300	18.101 ug/ml
14) N-DOTRIACONTANE	19.125	1847584	17.541 ug/ml
15) N-TETRATRIACONTANE	19.913	1591090	16.698 ug/ml
16) N-HEXATRIACONTANE	20.657	1293253	17.308 ug/ml
17) N-OCTATRIACONTANE	21.449	1057278	17.634 ug/ml
18) N-TETRACONTANE	22.456	839347	19.969 ug/ml

(f)=RT Delta > 1/2 Window

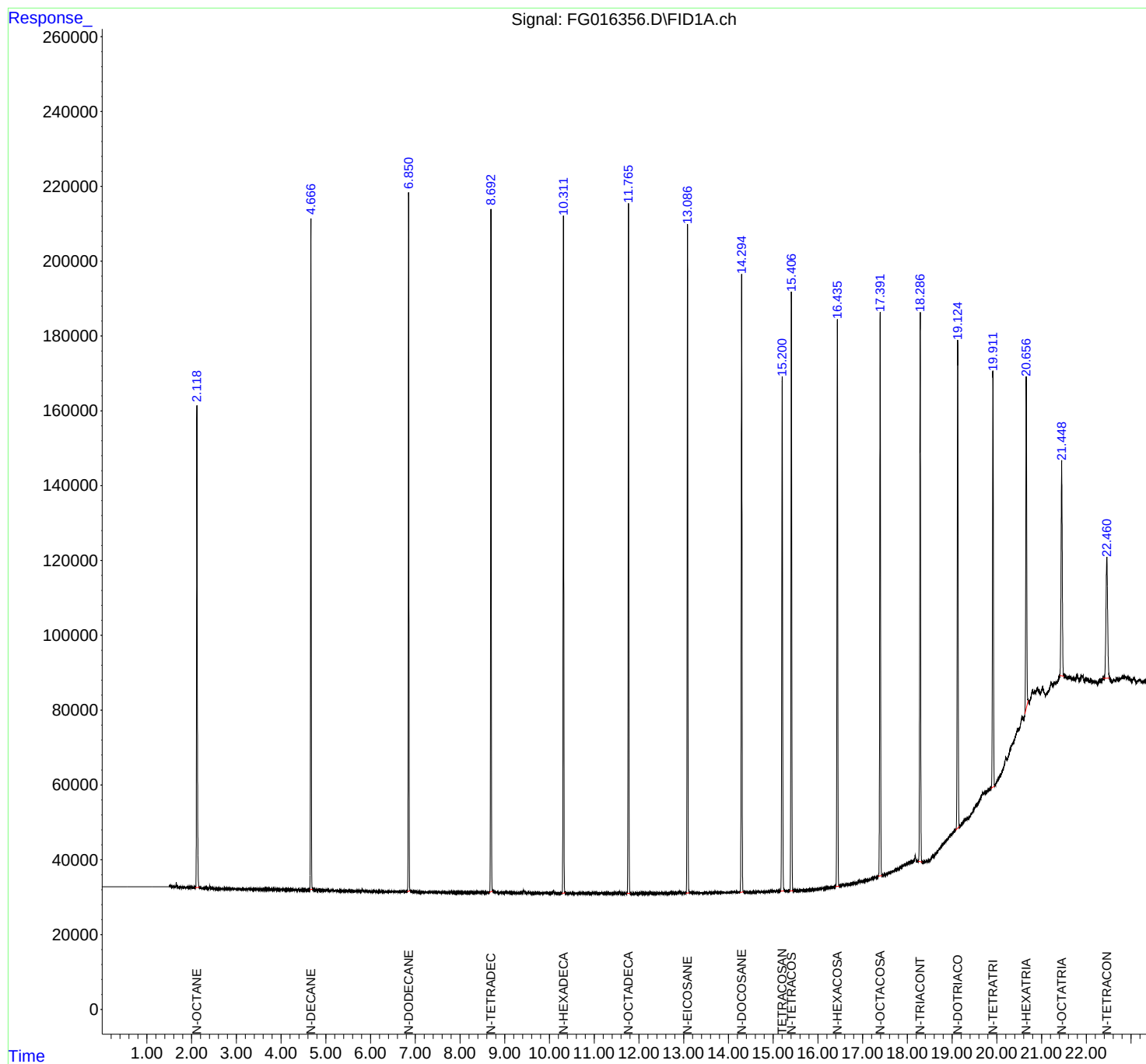
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016356.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 12:06
Operator : YP\AJ
Sample : PB169135BS
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_G
ClientSampleId :
PB169135BS

Integration File: autoint1.e
Quant Time: Aug 07 04:34:58 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 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\FG080625\
 Data File : FG016356.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 12:06
 Sample : PB169135BS
 Misc :
 ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.118	2.087	2.167	BB	128810	1511015	72.62%	4.777%
2	4.667	4.638	4.703	BB	179202	1797085	86.36%	5.681%
3	6.850	6.820	6.886	BB	186728	1860172	89.40%	5.880%
4	8.692	8.655	8.729	BB	182414	1930357	92.77%	6.102%
5	10.312	10.278	10.350	BB	180996	1966285	94.49%	6.216%
6	11.766	11.731	11.803	BB	184116	2024519	97.29%	6.400%
7	13.086	13.050	13.125	BB	178741	2080839	100.00%	6.578%
8	14.295	14.255	14.330	BB	163779	2024644	97.30%	6.400%
9	15.201	15.163	15.245	BB	136883	1833387	88.11%	5.796%
10	15.406	15.367	15.449	BB	159768	2031138	97.61%	6.421%
11	16.435	16.398	16.474	BB	150921	1985812	95.43%	6.278%
12	17.392	17.353	17.430	BB	150517	1987000	95.49%	6.281%
13	18.286	18.240	18.329	BB	146599	1972300	94.78%	6.235%
14	19.125	19.083	19.160	BB	130253	1847584	88.79%	5.841%
15	19.913	19.867	19.952	BB	109820	1591090	76.46%	5.030%
16	20.657	20.625	20.701	BB	88707	1293253	62.15%	4.088%
17	21.449	21.410	21.500	BB	57586	1057278	50.81%	3.342%
18	22.457	22.382	22.522	BB	32267	839347	40.34%	2.653%
Sum of corrected areas:							31633106	

FG080525.M Thu Aug 07 05:10:49 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:	08/01/25	
Project:	92 Clifford Street, Newark		Date Received:	08/01/25	
Client Sample ID:	WASTEMS		SDG No.:	Q2758	
Lab Sample ID:	Q2757-01MS		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	81.5	Decanted:
Sample Wt/Vol:	30.06	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
FG016359.D	1	08/06/25 08:00	08/06/25 13:35	PB169135

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	89900	E	470	3470	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	12.2		37 - 130	61%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016359.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 13:35
 Operator : YP\AJ
 Sample : Q2757-01MS
 Misc :
 ALS Vial : 25 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 WASTEMS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 08/07/2025
 Supervised By :mohammad ahmed 08/08/2025

Integration File: Sample.e
 Quant Time: Aug 07 04:36:07 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Quant Title :
 QLast Update : Tue Aug 05 12:47:26 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	1159198	12.167 ug/ml
Target Compounds			
1) N-OCTANE	2.121	1364056	12.854 ug/ml
2) N-DECANE	4.671	1796874	16.628 ug/ml
3) N-DODECANE	6.855	2164252	19.914 ug/ml
4) N-TETRADECANE	8.698	2626659	24.023 ug/ml
5) N-HEXADECANE	10.317	2627611	24.174 ug/mlm
6) N-OCTADECANE	11.773	2308510	20.870 ug/ml
7) N-EICOSANE	13.094	2278300	20.157 ug/ml
8) N-DOCOSANE	14.302	1964023	17.878 ug/ml
10) N-TETRACOSANE	15.414	2143059	19.559 ug/ml
11) N-HEXACOSANE	16.444	1848887	17.288 ug/ml
12) N-OCTACOSANE	17.402	1932284	17.936 ug/mlm
13) N-TRIACONTANE	18.296	1867728	17.142 ug/mlm
14) N-DOTRIACONTANE	19.137	1957848	18.588 ug/mlm
15) N-TETRATRIACONTANE	19.926	1750280	18.369 ug/ml
16) N-HEXATRIACONTANE	20.669	1318549	17.647 ug/ml
17) N-OCTATRIACONTANE	21.466	1100735	18.358 ug/mlm
18) N-TETRACONTANE	22.476	1108676	26.377 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016359.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 13:35
Operator : YP\AJ
Sample : Q2757-01MS
Misc :
ALS Vial : 25 Sample Multiplier: 1

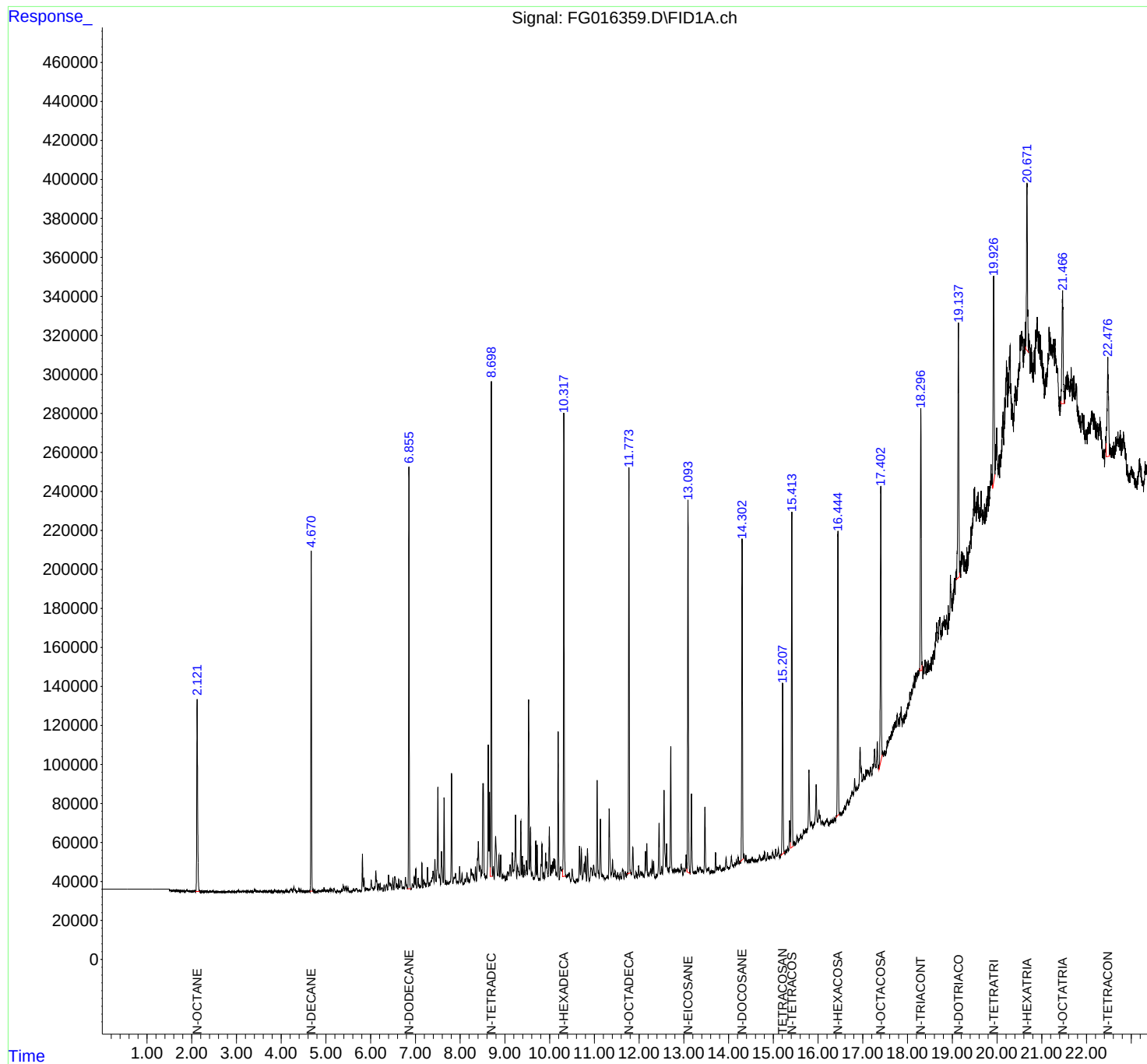
Instrument :
FID_G
ClientSampleId :
WASTEMS

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 08/07/2025
Supervised By :mohammad ahmed 08/08/2025

Integration File: Sample.e
Quant Time: Aug 07 04:36:07 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 2025
Response via : Initial Calibration
Integrator: ChemStation

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



Instrument :

FID_G

ClientSampleId :

WASTEMS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

rteres

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG08062
Data File : FG016359.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 13:35
Sample : Q2757-01MS
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.020	2.006	2.042	BV	115	532	0.01%	0.000%
2	2.063	2.042	2.085	PV	422	6286	0.12%	0.004%
3	2.121	2.085	2.203	VV	98667	1378297	25.71%	0.899%
4	2.222	2.203	2.229	VV	232	2365	0.04%	0.002%
5	2.233	2.229	2.241	VV	153	848	0.02%	0.001%
6	2.251	2.241	2.258	VV	177	1149	0.02%	0.001%
7	2.286	2.258	2.300	VV	235	3193	0.06%	0.002%
8	2.315	2.300	2.359	VV	490	8623	0.16%	0.006%
9	2.360	2.359	2.381	VV	145	661	0.01%	0.000%
10	2.407	2.381	2.444	PV	798	10430	0.19%	0.007%
11	2.464	2.444	2.515	VV	509	9713	0.18%	0.006%
12	2.535	2.515	2.582	PV	235	5017	0.09%	0.003%
13	2.586	2.582	2.608	VV	193	2006	0.04%	0.001%
14	2.611	2.608	2.615	VV	173	484	0.01%	0.000%
15	2.631	2.615	2.651	VV	167	2248	0.04%	0.001%
16	2.657	2.651	2.662	VV	196	1003	0.02%	0.001%
17	2.667	2.662	2.683	VV	198	1553	0.03%	0.001%
18	2.688	2.683	2.694	VV	163	842	0.02%	0.001%
19	2.700	2.694	2.704	VV	255	883	0.02%	0.001%
20	2.726	2.704	2.747	VV	230	3790	0.07%	0.002%
21	2.751	2.747	2.764	VV	169	1013	0.02%	0.001%
22	2.767	2.764	2.782	PV	124	726	0.01%	0.000%
23	2.790	2.782	2.799	VV	98	693	0.01%	0.000%
24	2.825	2.799	2.857	VV	513	10807	0.20%	0.007%
25	2.862	2.857	2.875	VV	151	1114	0.02%	0.001%
26	2.904	2.875	2.919	VV	381	6129	0.11%	0.004%
27	2.948	2.919	2.990	VV	369	8742	0.16%	0.006%
28	3.040	2.990	3.067	VV	840	18324	0.34%	0.012%
29	3.071	3.067	3.076	VV	372	1683	0.03%	0.001%
30	3.080	3.076	3.085	VV	313	1618	0.03%	0.001%
31	3.101	3.085	3.119	VV	433	5865	0.11%	0.004%
32	3.140	3.119	3.166	VV	672	11176	0.21%	0.007%
33	3.183	3.166	3.202	VV	407	6990	0.13%	0.005%
34	3.206	3.202	3.211	VV	283	1455	0.03%	0.001%
35	3.215	3.211	3.219	VV	307	1284	0.02%	0.001%
36	3.223	3.219	3.238	VV	267	2673	0.05%	0.002%

					retention				
37	3.249	3.238	3.299	VV	482	12217	0.23%	0.008%	
38	3.328	3.299	3.379	VV	489	16439	0.06%	0.002%	
39	3.406	3.379	3.442	VV	1315	26637	0.17%	0.006%	
40	3.447	3.442	3.465	VV	557	5851	0.13%	0.005%	
41	3.468	3.465	3.473	VV	323	1466	0.08%	0.003%	
42	3.478	3.473	3.492	VV	311	3137	0.17%	0.006%	
43	3.497	3.492	3.515	VV	305	4078	0.08%	0.003%	
44	3.522	3.515	3.563	VV	385	9162	0.17%	0.006%	
45	3.584	3.563	3.603	VV	407	7222	0.13%	0.005%	
46	3.637	3.603	3.688	VV	556	16794	0.31%	0.011%	
47	3.702	3.688	3.710	VV	325	3336	0.06%	0.002%	
48	3.728	3.710	3.735	VV	586	6541	0.12%	0.004%	
49	3.746	3.735	3.769	VV	596	9720	0.18%	0.006%	
50	3.783	3.769	3.788	VV	433	3905	0.07%	0.003%	
51	3.797	3.788	3.834	VV	474	7951	0.15%	0.005%	
52	3.857	3.834	3.886	VV	1107	18686	0.35%	0.012%	
53	3.899	3.886	3.907	VV	362	3770	0.07%	0.002%	
54	3.911	3.907	3.917	VV	313	1645	0.03%	0.001%	
55	3.939	3.917	3.984	VV	483	12199	0.23%	0.008%	
56	3.998	3.984	4.017	VV	670	8329	0.16%	0.005%	
57	4.021	4.017	4.042	VV	446	4680	0.09%	0.003%	
58	4.053	4.042	4.076	VV	430	4646	0.09%	0.003%	
59	4.103	4.076	4.118	PV	805	11306	0.21%	0.007%	
60	4.132	4.118	4.165	VV	736	12157	0.23%	0.008%	
61	4.217	4.165	4.233	VV	1555	32735	0.61%	0.021%	
62	4.240	4.233	4.260	VV	1212	13229	0.25%	0.009%	
63	4.284	4.260	4.304	VV	2809	39157	0.73%	0.026%	
64	4.318	4.304	4.351	VV	1256	18042	0.34%	0.012%	
65	4.356	4.351	4.359	VV	231	866	0.02%	0.001%	
66	4.396	4.359	4.425	VV	1568	30076	0.56%	0.020%	
67	4.437	4.425	4.460	VV	1118	16587	0.31%	0.011%	
68	4.466	4.460	4.479	VV	463	4815	0.09%	0.003%	
69	4.484	4.479	4.528	VV	544	8978	0.17%	0.006%	
70	4.567	4.528	4.584	VV	594	11007	0.21%	0.007%	
71	4.614	4.584	4.624	VV	569	9020	0.17%	0.006%	
72	4.632	4.624	4.643	VV	492	4960	0.09%	0.003%	
73	4.671	4.643	4.701	VV	174767	1814116	33.84%	1.183%	
74	4.714	4.701	4.735	VV	1172	15206	0.28%	0.010%	
75	4.750	4.735	4.771	VV	687	8896	0.17%	0.006%	
76	4.788	4.771	4.811	VV	309	4305	0.08%	0.003%	
77	4.838	4.811	4.876	VV	975	18423	0.34%	0.012%	
78	4.911	4.876	4.940	VV	886	22425	0.42%	0.015%	
79	4.958	4.940	4.974	VV	2351	25344	0.47%	0.017%	
80	4.984	4.974	4.999	VV	1044	11014	0.21%	0.007%	
81	5.018	4.999	5.029	VV	738	10052	0.19%	0.007%	
82	5.040	5.029	5.052	VV	794	8362	0.16%	0.005%	
83	5.066	5.052	5.073	VV	660	7312	0.14%	0.005%	
84	5.093	5.073	5.109	VV	1643	22746	0.42%	0.015%	
85	5.137	5.109	5.161	VV	1452	24678	0.46%	0.016%	
86	5.179	5.161	5.227	VV	1941	31691	0.59%	0.021%	
87	5.259	5.227	5.277	VV	806	10130	0.19%	0.007%	
88	5.294	5.277	5.323	VV	447	6880	0.13%	0.004%	
89	5.354	5.323	5.368	VV	1417	16126	0.30%	0.011%	

Instrument :

FID_G

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

					rters			
90	5.386	5.368	5.415	VV	3108	53050	0.99%	0.035%
91	5.431	5.415	5.451	VV	2598	36575		
92	5.467	5.451	5.482	VV	3043	32678		
93	5.495	5.482	5.516	VV	2138	25605		
94	5.524	5.516	5.540	VV	490	4174		
95	5.564	5.540	5.578	PV	295	4204		
96	5.600	5.578	5.607	VV	850	8724	0.16%	0.006%
97	5.619	5.607	5.646	VV	1639	22618	0.42%	0.015%
98	5.675	5.646	5.688	VV	1763	29817	0.56%	0.019%
99	5.693	5.688	5.714	VV	1506	14888	0.28%	0.010%
100	5.737	5.714	5.750	VV	675	11918	0.22%	0.008%
101	5.761	5.750	5.776	VV	676	7702	0.14%	0.005%
102	5.816	5.776	5.834	VV	19332	202705	3.78%	0.132%
103	5.850	5.834	5.880	VV	6972	90583	1.69%	0.059%
104	5.898	5.880	5.940	VV	1767	43322	0.81%	0.028%
105	5.948	5.940	5.958	VV	1044	10519	0.20%	0.007%
106	5.972	5.958	5.985	VV	1015	14530	0.27%	0.009%
107	6.046	6.037	6.063	VV	1840	21013	0.39%	0.014%
108	6.085	6.063	6.096	VV	2494	33784	0.63%	0.022%
109	6.115	6.096	6.129	VV	10457	122174	2.28%	0.080%
110	6.174	6.157	6.197	VV	3837	52724	0.98%	0.034%
111	6.252	6.228	6.280	VV	1802	35989	0.67%	0.023%
112	6.301	6.280	6.322	PV	3202	38577	0.72%	0.025%
113	6.432	6.422	6.443	VV	4109	43592	0.81%	0.028%
114	6.496	6.474	6.520	VV	6359	75047	1.40%	0.049%
115	6.585	6.573	6.610	VV	3515	50155	0.94%	0.033%
116	6.671	6.644	6.678	VV	4806	62673	1.17%	0.041%
117	6.684	6.678	6.706	VV	4895	51826	0.97%	0.034%
118	6.730	6.706	6.754	VV	1708	34406	0.64%	0.022%
119	6.776	6.754	6.797	VV	6728	89975	1.68%	0.059%
120	6.801	6.797	6.821	VV	2565	24719	0.46%	0.016%
121	6.855	6.821	6.904	VV	216874	2193968	40.92%	1.431%
122	6.931	6.904	6.958	VV	3027	57362	1.07%	0.037%
123	6.973	6.958	6.993	VV	6739	93555	1.75%	0.061%
124	7.009	6.993	7.030	VV	10891	121162	2.26%	0.079%
125	7.059	7.030	7.075	VV	5992	87626	1.63%	0.057%
126	7.083	7.075	7.098	VV	2115	21244	0.40%	0.014%
127	7.186	7.165	7.200	VV	4430	65444	1.22%	0.043%
128	7.206	7.200	7.235	VV	3188	51456	0.96%	0.034%
129	7.308	7.294	7.323	VV	3376	43497	0.81%	0.028%
130	7.345	7.323	7.359	VV	4091	71974	1.34%	0.047%
131	7.373	7.359	7.377	VV	5839	56025	1.05%	0.037%
132	7.393	7.377	7.416	VV	9130	163753	3.05%	0.107%
133	7.436	7.416	7.464	VV	15269	225964	4.21%	0.147%
134	7.502	7.464	7.529	VV	52298	695693	12.98%	0.454%
135	7.539	7.529	7.562	VV	6898	104557	1.95%	0.068%
136	7.582	7.562	7.621	VV	19132	339179	6.33%	0.221%
137	7.641	7.621	7.668	VV	46679	507555	9.47%	0.331%
138	7.684	7.668	7.699	VV	4146	58135	1.08%	0.038%
139	7.714	7.699	7.728	VV	2977	44152	0.82%	0.029%
140	7.744	7.728	7.753	VV	2899	37934	0.71%	0.025%
141	7.770	7.753	7.779	VV	3570	49584	0.92%	0.032%

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142	7.808	7.779	7.840	VV	59016	687896	12.83%	0.449%
143	7.864	7.840	7.874	VV	5264	91331		
144	7.933	7.921	7.958	VV	3269	64543		
145	7.988	7.958	8.014	VV	11050	184966		
146	8.072	8.062	8.081	VV	2226	22903		
147	8.106	8.092	8.113	M	2146	16362		
148	8.152	8.121	8.171	VV	7543	149647	2.79%	0.098%
149	8.210	8.199	8.215	VV	3562	31843	0.59%	0.021%
150	8.273	8.263	8.286	VV	7444	91937	1.71%	0.060%
151	8.343	8.315	8.364	VV	10421	178893	3.34%	0.117%
152	8.388	8.364	8.393	VV	14520	154605	2.88%	0.101%
153	8.445	8.429	8.468	VV	10655	212562	3.96%	0.139%
154	8.480	8.468	8.488	VV	8458	86712	1.62%	0.057%
155	8.511	8.488	8.542	VV	52915	1006572	18.78%	0.657%
156	8.548	8.542	8.562	VV	6588	65814	1.23%	0.043%
157	8.582	8.562	8.593	VV	5541	93965	1.75%	0.061%
158	8.629	8.593	8.644	VV	72877	878458	16.39%	0.573%
159	8.656	8.644	8.673	VV	48430	528932	9.87%	0.345%
160	8.698	8.673	8.725	VV	257791	2786545	51.98%	1.818%
161	8.742	8.725	8.761	VV	10078	156297	2.92%	0.102%
162	8.793	8.761	8.848	VV	25621	662227	12.35%	0.432%
163	8.867	8.848	8.889	VV	15931	230477	4.30%	0.150%
164	8.954	8.939	8.967	VV	5940	80335	1.50%	0.052%
165	9.030	9.011	9.044	VV	5123	75262	1.40%	0.049%
166	9.165	9.139	9.185	VV	16808	301401	5.62%	0.197%
167	9.194	9.185	9.200	VV	7968	69335	1.29%	0.045%
168	9.239	9.200	9.265	VV	36167	630310	11.76%	0.411%
169	9.392	9.377	9.414	VV	14931	199116	3.71%	0.130%
170	9.431	9.414	9.449	VV	10400	150272	2.80%	0.098%
171	9.483	9.449	9.500	VV	12589	242579	4.52%	0.158%
172	9.530	9.500	9.553	VV	95087	1112945	20.76%	0.726%
173	9.573	9.553	9.593	VV	29243	365151	6.81%	0.238%
174	9.648	9.639	9.656	VV	3409	32438	0.61%	0.021%
175	9.690	9.656	9.707	VV	22543	299422	5.59%	0.195%
176	9.768	9.755	9.784	VV	3231	47811	0.89%	0.031%
177	9.829	9.812	9.851	VV	20775	281011	5.24%	0.183%
178	9.911	9.889	9.925	VV	15925	211954	3.95%	0.138%
179	10.038	10.022	10.051	VV	9669	124706	2.33%	0.081%
180	10.067	10.051	10.080	VV	11185	145476	2.71%	0.095%
181	10.093	10.080	10.105	VV	12945	153251	2.86%	0.100%
182	10.118	10.105	10.144	VV	12312	198212	3.70%	0.129%
183	10.154	10.144	10.167	VV	5371	65444	1.22%	0.043%
184	10.191	10.167	10.214	VV	77879	823594	15.36%	0.537%
185	10.240	10.214	10.263	VV	8477	182196	3.40%	0.119%
186	10.270	10.263	10.279	VV	6825	63944	1.19%	0.042%
187	10.318	10.279	10.377	VV	240872	2861842	53.38%	1.867%
188	10.402	10.377	10.413	VV	4212	77962	1.45%	0.051%
189	10.437	10.413	10.471	VV	5085	115979	2.16%	0.076%
190	10.599	10.558	10.606	M	638	3799	0.07%	0.002%
191	10.627	10.616	10.640	VV	1547	17649	0.33%	0.012%
192	10.709	10.689	10.735	VV	17095	244188	4.55%	0.159%
193	10.934	10.889	10.959	VV	7044	191772	3.58%	0.125%
194	10.983	10.959	11.012	VV	8402	179350	3.35%	0.117%

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195	11.020	11.012	11.034	VV	3737	46343	0.86%	0.030%
196	11.062	11.034	11.084	VV	51608	614869	1.11%	0.042%
197	11.091	11.084	11.107	VV	4650	49695	0.09%	0.012%
198	11.135	11.107	11.164	VV	31823	453926	0.88%	0.033%
199	11.176	11.164	11.190	VV	3025	41446	0.07%	0.012%
200	11.201	11.190	11.219	VV	2816	38502	0.07%	0.012%
201	11.229	11.219	11.242	VV	1537	18493	0.34%	0.012%
202	11.294	11.242	11.306	VV	2305	65122	1.21%	0.042%
203	11.407	11.371	11.428	VV	10518	177298	3.31%	0.116%
204	11.437	11.428	11.442	VV	2516	20522	0.38%	0.013%
205	11.460	11.442	11.497	VV	5007	93997	1.75%	0.061%
206	11.520	11.497	11.536	VV	3785	53860	1.00%	0.035%
207	11.543	11.536	11.559	VV	1834	18416	0.34%	0.012%
208	11.629	11.597	11.662	VV	5354	115993	2.16%	0.076%
209	11.682	11.662	11.712	VV	3706	76143	1.42%	0.050%
210	11.730	11.712	11.739	VV	2978	40608	0.76%	0.026%
211	11.773	11.739	11.832	VV	210614	2483759	46.33%	1.620%
212	11.861	11.832	11.901	VV	16253	267451	4.99%	0.174%
213	11.933	11.901	11.956	VV	3200	55596	1.04%	0.036%
214	12.037	12.010	12.052	VV	3393	62320	1.16%	0.041%
215	12.142	12.111	12.157	VV	13800	172655	3.22%	0.113%
216	12.173	12.157	12.199	VV	17735	216510	4.04%	0.141%
217	12.208	12.199	12.226	VV	2041	27030	0.50%	0.018%
218	12.259	12.226	12.276	VV	4913	89826	1.68%	0.059%
219	12.292	12.276	12.307	VV	8678	95982	1.79%	0.063%
220	12.324	12.307	12.357	VV	8541	105143	1.96%	0.069%
221	12.391	12.357	12.403	PV	1080	16464	0.31%	0.011%
222	12.447	12.403	12.474	VV	27573	372403	6.95%	0.243%
223	12.504	12.474	12.523	VV	5558	90393	1.69%	0.059%
224	12.558	12.523	12.598	VV	44393	779062	14.53%	0.508%
225	12.615	12.598	12.638	VV	17021	225999	4.22%	0.147%
226	12.648	12.638	12.663	VV	4476	54022	1.01%	0.035%
227	12.708	12.663	12.748	VV	66288	872531	16.28%	0.569%
228	12.760	12.748	12.775	VV	2954	42786	0.80%	0.028%
229	12.792	12.775	12.807	VV	3857	58894	1.10%	0.038%
230	12.864	12.847	12.880	VV	3810	57767	1.08%	0.038%
231	12.893	12.880	12.906	VV	2986	38870	0.73%	0.025%
232	12.916	12.906	12.923	VV	2499	23411	0.44%	0.015%
233	12.940	12.923	12.980	VV	5927	110666	2.06%	0.072%
234	13.004	12.980	13.027	VV	3656	64135	1.20%	0.042%
235	13.051	13.027	13.066	VV	10441	140416	2.62%	0.092%
236	13.094	13.066	13.139	VV	192665	2333317	43.52%	1.522%
237	13.170	13.139	13.219	VV	41456	535696	9.99%	0.349%
238	13.242	13.219	13.251	VV	1263	17980	0.34%	0.012%
239	13.265	13.251	13.282	VV	1347	18484	0.34%	0.012%
240	13.306	13.282	13.329	VV	3471	59453	1.11%	0.039%
241	13.355	13.329	13.367	VV	3591	62460	1.17%	0.041%
242	13.375	13.367	13.395	VV	3049	37077	0.69%	0.024%
243	13.416	13.395	13.440	VV	2240	37032	0.69%	0.024%
244	13.471	13.440	13.514	VV	34312	427732	7.98%	0.279%
245	13.528	13.514	13.543	VV	2453	32951	0.61%	0.021%
246	13.557	13.543	13.581	VV	3061	40432	0.75%	0.026%

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247	13.645	13.628	13.661	VV	1349	16413	0.31%	0.011%
248	13.677	13.661	13.688	VV	933	9159		
249	13.709	13.688	13.729	PV	10386	116380		
250	13.744	13.729	13.776	VV	2728	54738		
251	13.807	13.776	13.854	VV	3285	71263		
252	13.869	13.854	13.882	VV	1359	14295		
253	13.944	13.915	14.007	VV	6416	122113	2.28%	0.080%
254	14.063	14.007	14.116	VV	6452	149488	2.79%	0.098%
255	14.142	14.116	14.154	VV	2134	38508	0.72%	0.025%
256	14.173	14.154	14.191	VV	3421	53851	1.00%	0.035%
257	14.214	14.191	14.236	VV	5271	88758	1.66%	0.058%
258	14.255	14.236	14.269	VV	2825	46983	0.88%	0.031%
259	14.302	14.269	14.331	VV	167472	2086876	38.93%	1.361%
260	14.346	14.331	14.367	VV	5850	92070	1.72%	0.060%
261	14.386	14.367	14.427	VV	5196	106779	1.99%	0.070%
262	14.437	14.427	14.442	VV	1936	16364	0.31%	0.011%
263	14.446	14.442	14.450	VV	1858	8059	0.15%	0.005%
264	14.459	14.450	14.473	VV	1975	24243	0.45%	0.016%
265	14.494	14.473	14.501	VV	1962	28215	0.53%	0.018%
266	14.524	14.501	14.579	VV	2874	91987	1.72%	0.060%
267	14.597	14.579	14.612	VV	1366	22176	0.41%	0.014%
268	14.629	14.612	14.647	VV	1176	19872	0.37%	0.013%
269	14.694	14.647	14.728	VV	3612	85210	1.59%	0.056%
270	14.740	14.728	14.755	VV	1238	16877	0.31%	0.011%
271	14.778	14.755	14.789	VV	2291	33780	0.63%	0.022%
272	14.806	14.789	14.846	VV	4279	64411	1.20%	0.042%
273	14.869	14.846	14.893	VV	3868	53261	0.99%	0.035%
274	14.909	14.893	14.919	VV	1218	15204	0.28%	0.010%
275	14.942	14.919	14.956	VV	1472	22144	0.41%	0.014%
276	14.987	14.956	15.009	VV	3559	64825	1.21%	0.042%
277	15.012	15.009	15.030	VV	1031	9393	0.18%	0.006%
278	15.052	15.030	15.074	VV	4659	61735	1.15%	0.040%
279	15.113	15.074	15.144	VV	4620	76836	1.43%	0.050%
280	15.208	15.144	15.248	PV	88421	1198412	22.35%	0.782%
281	15.253	15.248	15.265	VV	1213	8778	0.16%	0.006%
282	15.284	15.265	15.302	VV	1535	17571	0.33%	0.011%
283	15.321	15.302	15.337	VV	2128	25545	0.48%	0.017%
284	15.365	15.337	15.384	VV	15201	201882	3.77%	0.132%
285	15.414	15.384	15.444	VV	172660	2183237	40.72%	1.424%
286	15.460	15.444	15.487	VV	3157	56161	1.05%	0.037%
287	15.529	15.487	15.564	VV	5253	133053	2.48%	0.087%
288	15.609	15.564	15.643	VV	4424	144266	2.69%	0.094%
289	15.677	15.643	15.699	VV	5767	144071	2.69%	0.094%
290	15.729	15.699	15.742	VV	4973	122391	2.28%	0.080%
291	15.796	15.742	15.829	VV	34647	672892	12.55%	0.439%
292	15.856	15.829	15.881	VV	7272	189708	3.54%	0.124%
293	15.958	15.881	15.982	VV	25052	595507	11.11%	0.388%
294	16.018	15.982	16.037	VV	10998	256964	4.79%	0.168%
295	16.044	16.037	16.067	VV	7942	103722	1.93%	0.068%
296	16.087	16.067	16.136	VV	4139	132172	2.47%	0.086%
297	16.200	16.136	16.242	VV	3519	146046	2.72%	0.095%
298	16.285	16.242	16.300	VV	1689	33090	0.62%	0.022%
299	16.319	16.300	16.346	VV	1527	20368	0.38%	0.013%

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300	16.363	16.346	16.389	PV	1331	19560	0.36%	0.013%
301	16.408	16.389	16.412	PV	2105	17382		
302	16.444	16.412	16.474	VV	145891	1906228	35.00%	0.003%
303	16.480	16.474	16.495	VV	1629	18363	0.01%	0.003%
304	16.505	16.495	16.526	VV	1285	14504	0.01%	0.003%
305	16.547	16.526	16.553	PV	1056	10629	0.01%	0.003%
306	16.595	16.553	16.611	VV	2184	41898	0.78%	0.027%
307	16.616	16.611	16.619	VV	1170	5106	0.10%	0.003%
308	16.664	16.619	16.680	VV	3696	89744	1.67%	0.059%
309	16.766	16.680	16.784	VV	4982	195597	3.65%	0.128%
310	16.818	16.784	16.838	VV	10357	185236	3.46%	0.121%
311	16.846	16.838	16.851	VV	4385	32184	0.60%	0.021%
312	16.865	16.851	16.883	VV	4409	69732	1.30%	0.045%
313	16.939	16.883	16.958	VV	22804	440299	8.21%	0.287%
314	16.966	16.958	16.986	VV	11499	147987	2.76%	0.097%
315	17.016	16.986	17.033	VV	6570	148172	2.76%	0.097%
316	17.046	17.033	17.055	VV	5011	58102	1.08%	0.038%
317	17.069	17.055	17.084	VV	7537	101475	1.89%	0.066%
318	17.103	17.084	17.116	VV	6595	109858	2.05%	0.072%
319	17.122	17.116	17.151	VV	5765	91461	1.71%	0.060%
320	17.173	17.151	17.199	VV	5842	109217	2.04%	0.071%
321	17.228	17.199	17.238	VV	6108	92110	1.72%	0.060%
322	17.261	17.238	17.294	VV	12890	244759	4.57%	0.160%
323	17.324	17.294	17.348	VV	14625	216855	4.05%	0.141%
324	17.355	17.348	17.364	VV	1832	9950	0.19%	0.006%
325	17.402	17.364	17.437	PV	143494	2032351	37.91%	1.326%
326	17.446	17.437	17.461	VV	6231	71645	1.34%	0.047%
327	17.468	17.461	17.473	VV	5000	32654	0.61%	0.021%
328	17.482	17.473	17.498	VV	5185	62952	1.17%	0.041%
329	17.544	17.498	17.555	VV	8541	165053	3.08%	0.108%
330	17.564	17.555	17.569	VV	7962	61866	1.15%	0.040%
331	17.620	17.599	17.627	VV	9262	143133	2.67%	0.093%
332	17.668	17.657	17.677	VV	11884	118046	2.20%	0.077%
333	17.688	17.677	17.700	VV	12519	158410	2.95%	0.103%
334	17.714	17.700	17.724	VV	12522	162963	3.04%	0.106%
335	17.734	17.724	17.745	VV	13014	140909	2.63%	0.092%
336	17.816	17.808	17.825	VV	12313	104503	1.95%	0.068%
337	17.841	17.825	17.847	VV	13669	159657	2.98%	0.104%
338	17.893	17.879	17.904	VV	9259	122300	2.28%	0.080%
339	17.953	17.947	17.958	VV	8966	51359	0.96%	0.034%
340	17.975	17.971	17.982	VV	9764	59353	1.11%	0.039%
341	18.029	18.018	18.038	VV	13532	151756	2.83%	0.099%
342	18.093	18.086	18.107	VV	17990	211017	3.94%	0.138%
343	18.126	18.107	18.137	VV	19806	327350	6.11%	0.214%
344	18.151	18.137	18.162	VV	23119	306936	5.73%	0.200%
345	18.185	18.162	18.194	VV	23834	399739	7.46%	0.261%
346	18.204	18.194	18.226	VV	22570	410964	7.67%	0.268%
347	18.235	18.226	18.241	VV	23447	206512	3.85%	0.135%
348	18.297	18.241	18.342	VV	155481	3177772	59.28%	2.073%
349	18.351	18.342	18.356	VV	22016	166364	3.10%	0.109%
350	18.361	18.356	18.370	VV	20941	156599	2.92%	0.102%
351	18.381	18.370	18.396	VV	24260	346549	6.46%	0.226%

Instrument :

FID_G

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

rteres									
352	18.400	18.396	18.418	VV	23322	251010	4.68%	0.164%	
353	18.430	18.418	18.438	VV	21992	217933			
354	18.490	18.477	18.495	VV	17995	183810			
355	18.576	18.567	18.581	VV	22855	162432			
356	18.586	18.581	18.591	VV	22166	122837			
357	18.599	18.591	18.607	VV	22566	202349			
358	18.630	18.607	18.636	VV	30700	440455	8.22%	0.287%	
359	18.722	18.711	18.735	VV	35878	459491	8.57%	0.300%	
360	18.817	18.810	18.826	VV	33550	290584	5.42%	0.190%	
361	18.833	18.826	18.840	VV	30627	236866	4.42%	0.155%	
362	18.860	18.854	18.865	VV	30243	182921	3.41%	0.119%	
363	18.909	18.891	18.916	VV	35578	415639	7.75%	0.271%	
364	18.931	18.916	18.936	VV	31323	349667	6.52%	0.228%	
365	18.994	18.986	19.001	VV	37108	311550	5.81%	0.203%	
366	19.010	19.001	19.017	VV	39284	344056	6.42%	0.224%	
367	19.024	19.017	19.030	VV	40106	305317	5.70%	0.199%	
368	19.042	19.030	19.047	VV	44819	406806	7.59%	0.265%	
369	19.053	19.047	19.065	VV	45504	446211	8.32%	0.291%	
370	19.093	19.065	19.098	VV	48856	901909	16.82%	0.588%	
371	19.137	19.098	19.170	VV	173620	3830450	71.45%	2.499%	
372	19.176	19.170	19.189	VV	50529	510112	9.52%	0.333%	
373	19.199	19.189	19.204	VV	53126	432937	8.08%	0.282%	
374	19.212	19.204	19.221	VV	54405	524423	9.78%	0.342%	
375	19.262	19.252	19.276	VV	50823	664589	12.40%	0.434%	
376	19.290	19.276	19.295	VV	45865	518447	9.67%	0.338%	
377	19.326	19.316	19.333	VV	52705	453644	8.46%	0.296%	
378	19.390	19.377	19.395	VV	53386	529495	9.88%	0.345%	
379	19.433	19.425	19.440	VV	60046	530267	9.89%	0.346%	
380	19.501	19.492	19.510	VV	78488	776176	14.48%	0.506%	
381	19.617	19.610	19.624	VV	64122	501486	9.35%	0.327%	
382	19.696	19.690	19.702	VV	59813	418886	7.81%	0.273%	
383	19.707	19.702	19.712	VV	57457	336337	6.27%	0.219%	
384	19.720	19.712	19.729	VV	62879	571347	10.66%	0.373%	
385	19.769	19.753	19.774	VV	64477	770378	14.37%	0.503%	
386	19.814	19.806	19.818	VV	68042	482181	8.99%	0.315%	
387	19.823	19.818	19.834	VV	68731	585570	10.92%	0.382%	
388	19.868	19.834	19.877	VV	79021	1842654	34.37%	1.202%	
389	19.882	19.877	19.887	VV	72960	417955	7.80%	0.273%	
390	19.893	19.887	19.899	VV	72542	514948	9.61%	0.336%	
391	19.926	19.899	19.954	VV	173520	3989631	74.42%	2.603%	
392	19.960	19.954	19.964	VV	77936	417265	7.78%	0.272%	
393	19.971	19.964	19.976	VV	85754	592564	11.05%	0.387%	
394	19.993	19.976	20.026	VV	93542	2375043	44.30%	1.549%	
395	20.052	20.026	20.059	VV	77965	1432721	26.73%	0.935%	
396	20.071	20.067	20.077	VV	77139	454835	8.48%	0.297%	
397	20.083	20.077	20.087	VV	77302	446495	8.33%	0.291%	
398	20.105	20.087	20.111	VV	83931	1101307	20.54%	0.718%	
399	20.135	20.111	20.150	VV	96825	2059793	38.42%	1.344%	
400	20.172	20.150	20.177	VV	102936	1488953	27.77%	0.971%	
401	20.275	20.240	20.280	VV	121153	2602054	48.54%	1.697%	
402	20.355	20.351	20.368	VV	87972	845040	15.76%	0.551%	
403	20.375	20.368	20.379	VV	89563	575079	10.73%	0.375%	
404	20.442	20.437	20.448	VV	98658	608639	11.35%	0.397%	

Instrument :

FID_G

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

							Instrument : FID_G	
							ClientSampleId : WASTEMS	
rteres								
405	20.516	20.506	20.522	VV	124606	1130100	21.08%	0.737%
406	20.529	20.522	20.537	VV	123892	1091292	20.98%	0.737%
407	20.542	20.537	20.548	VV	123428	767326	14.04%	0.737%
408	20.555	20.548	20.563	VV	126062	1138081	21.08%	0.737%
409	20.568	20.563	20.598	VV	122052	2395590	44.04%	0.737%
410	20.604	20.598	20.609	VV	119802	754045	14.04%	0.737%
Manual IntegrationsAPPROVED								
411	20.617	20.609	20.623	VV	118394	964655	17.99%	0.629%
412	20.634	20.623	20.641	VV	127738	1293784	24.13%	0.844%
413	20.669	20.641	20.701	VV	196654	5360966	100.00%	3.497%
414	20.705	20.701	20.741	VV	119338	2721520	50.77%	1.775%
415	20.751	20.741	20.764	VV	111103	1465216	27.33%	0.956%
416	20.797	20.790	20.811	VV	101666	1233552	23.01%	0.805%
417	20.816	20.811	20.819	VV	99454	481409	8.98%	0.314%
418	20.847	20.842	20.852	VV	108360	608174	11.34%	0.397%
419	20.942	20.933	20.964	VV	113536	1995804	37.23%	1.302%
420	20.968	20.964	20.974	VV	110832	654555	12.21%	0.427%
421	21.011	21.006	21.017	VV	100393	627201	11.70%	0.409%
422	21.086	21.080	21.089	VV	87336	445302	8.31%	0.290%
423	21.185	21.181	21.198	VV	105932	1007064	18.79%	0.657%
424	21.228	21.223	21.243	VV	98309	1144773	21.35%	0.747%
425	21.297	21.285	21.317	VV	98914	1782764	33.25%	1.163%
426	21.325	21.317	21.330	VV	86709	632123	11.79%	0.412%
427	21.332	21.330	21.345	VV	83988	758645	14.15%	0.495%
428	21.350	21.345	21.391	VV	82175	1974721	36.84%	1.288%
429	21.400	21.391	21.405	VV	65644	535675	9.99%	0.349%
430	21.411	21.405	21.422	VV	65541	636678	11.88%	0.415%
431	21.466	21.422	21.509	VV	118438	4264514	79.55%	2.782%
432	21.516	21.509	21.521	VV	66327	446003	8.32%	0.291%
433	21.525	21.521	21.531	VV	68133	408991	7.63%	0.267%
434	21.539	21.531	21.547	VV	72048	629266	11.74%	0.410%
435	21.559	21.547	21.566	VV	72361	799468	14.91%	0.522%
436	21.571	21.566	21.576	VV	73325	400144	7.46%	0.261%
437	21.588	21.576	21.598	VV	71315	915714	17.08%	0.597%
438	21.646	21.641	21.652	VV	65810	419938	7.83%	0.274%
439	21.658	21.652	21.684	VV	72915	1238087	23.09%	0.808%
440	21.807	21.802	21.821	VV	48322	514466	9.60%	0.336%
441	21.856	21.846	21.874	VV	41959	651337	12.15%	0.425%
442	22.006	22.001	22.015	VV	30416	234566	4.38%	0.153%
443	22.029	22.015	22.041	VV	30952	448716	8.37%	0.293%
444	22.046	22.041	22.058	VV	33073	308477	5.75%	0.201%
445	22.136	22.131	22.141	VV	35003	200262	3.74%	0.131%
446	22.145	22.141	22.154	VV	32960	229164	4.27%	0.149%
447	22.215	22.200	22.222	VV	28110	310318	5.79%	0.202%
448	22.237	22.222	22.242	VV	25656	292110	5.45%	0.191%
449	22.291	22.284	22.295	VV	23593	152315	2.84%	0.099%
450	22.323	22.317	22.337	VV	21429	216461	4.04%	0.141%
451	22.374	22.366	22.380	VV	8402	57045	1.06%	0.037%
452	22.385	22.380	22.404	VV	8558	88137	1.64%	0.057%
453	22.431	22.404	22.439	VV	13187	164165	3.06%	0.107%
454	22.476	22.439	22.514	VV	53249	1214469	22.65%	0.792%
455	22.518	22.514	22.540	VV	7512	71485	1.33%	0.047%
456	22.546	22.540	22.551	VBA	3998	131188	2.45%	0.086%

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025
Supervised By :mohammad ahmed 08/08/2025

rters
Sum of corrected areas:

153298067

FG080525.M Thu Aug 07 06:44:39 2025

Instrument :

FID_G

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	08/01/25
Project:	92 Clifford Street, Newark	Date Received:	08/01/25
Client Sample ID:	WASTEMSD	SDG No.:	Q2758
Lab Sample ID:	Q2757-01MSD	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	81.5
Sample Wt/Vol:	30.04	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
FG016360.D	1	08/06/25 08:00	08/06/25 14:05	PB169135

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	78700	E	471	3470	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	10.3		37 - 130	51%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
 Data File : FG016360.D
 Signal(s) : FID1A.ch
 Acq On : 06 Aug 2025 14:05
 Operator : YP\AJ
 Sample : Q2757-01MSD
 Misc :
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 FID_G
 ClientSampleId :
 WASTEMSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 08/07/2025
 Supervised By :mohammad ahmed 08/08/2025

Integration File: Sample.e
 Quant Time: Aug 07 04:36:32 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
 Quant Title :
 QLast Update : Tue Aug 05 12:47:26 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	979149	10.277 ug/ml
Target Compounds			
1) N-OCTANE	2.120	1162549	10.955 ug/ml
2) N-DECANE	4.671	1529060	14.149 ug/ml
3) N-DODECANE	6.854	1830064	16.839 ug/ml
4) N-TETRADECANE	8.696	2223493	20.336 ug/ml
5) N-HEXADECANE	10.317	2154124	19.818 ug/ml
6) N-OCTADECANE	11.772	1943271	17.568 ug/ml
7) N-EICOSANE	13.093	1913807	16.933 ug/ml
8) N-DOCOSANE	14.301	1672344	15.223 ug/mlm
10) N-TETRACOSANE	15.412	1813978	16.555 ug/ml
11) N-HEXACOSANE	16.442	1576917	14.745 ug/ml
12) N-OCTACOSANE	17.400	1646076	15.279 ug/ml
13) N-TRIACONTANE	18.295	1628250	14.944 ug/ml
14) N-DOTRIACONTANE	19.135	1633032	15.504 ug/mlm
15) N-TETRATRIACONTANE	19.923	1314760	13.798 ug/mlm
16) N-HEXATRIACONTANE	20.669	998081	13.358 ug/ml
17) N-OCTATRIACONTANE	21.465	990954	16.527 ug/mlm
18) N-TETRACONTANE	22.478	970832	23.097 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG080625\
Data File : FG016360.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 14:05
Operator : YP\AJ
Sample : Q2757-01MSD
Misc :
ALS Vial : 26 Sample Multiplier: 1

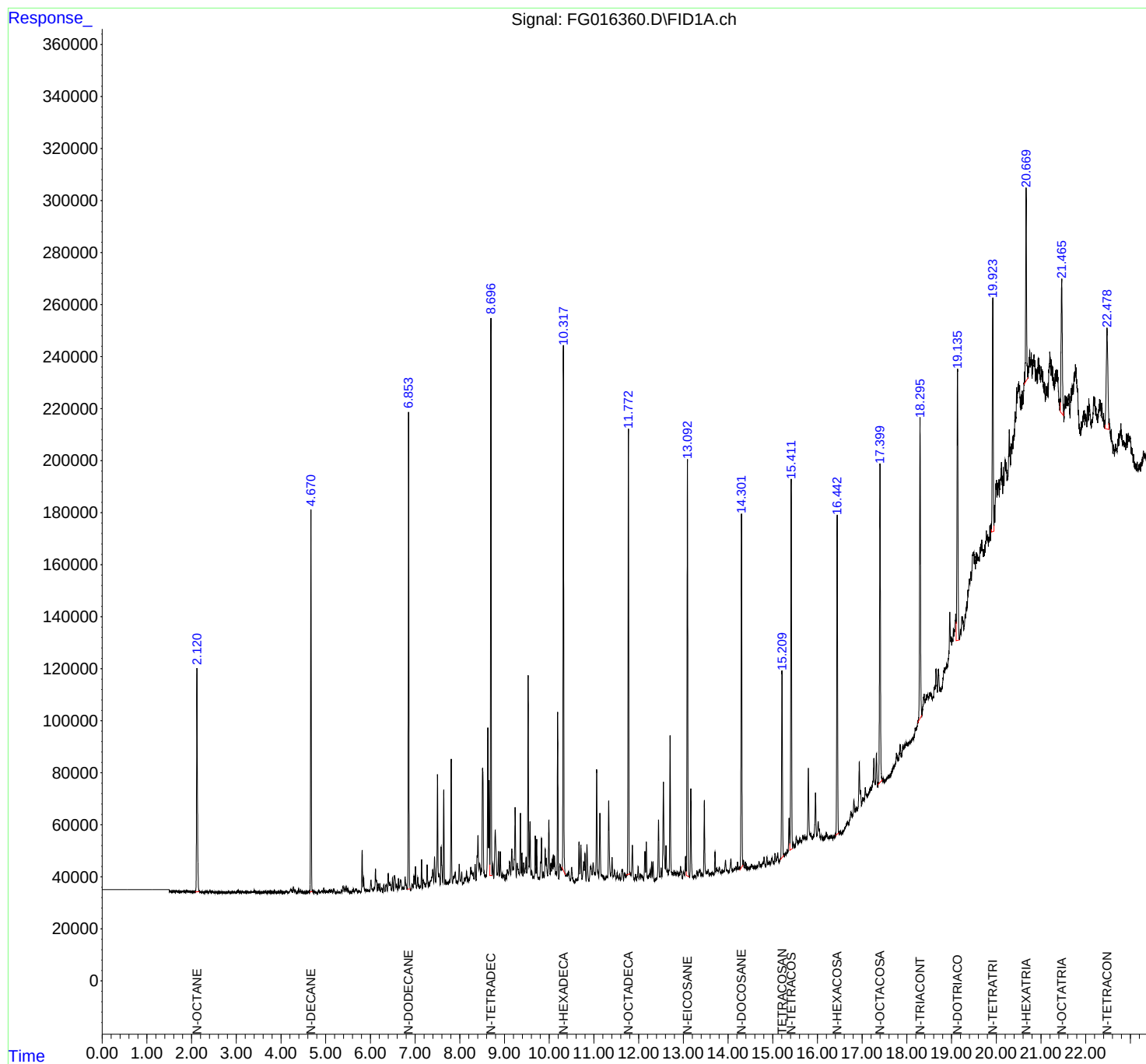
Instrument :
FID_G
ClientSampleId :
WASTEMSD

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 08/07/2025
Supervised By :mohammad ahmed 08/08/2025

Integration File: Sample.e
Quant Time: Aug 07 04:36:32 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Quant Title :
QLast Update : Tue Aug 05 12:47:26 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Instrument :

FID_G

ClientSampleId :

WASTEMSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025

Supervised By :mohammad ahmed 08/08/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_G\Data\FG08062
Data File : FG016360.D
Signal(s) : FID1A.ch
Acq On : 06 Aug 2025 14:05
Sample : Q2757-01MSD
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_G\Method\FG080525.M
Title :

Signal : FID1A.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.019	2.000	2.025	BV	93	424	0.01%	0.000%
2	2.033	2.025	2.039	VV	113	485	0.01%	0.000%
3	2.056	2.039	2.085	PV	375	6030	0.15%	0.004%
4	2.120	2.085	2.184	VV	86084	1175348	28.55%	0.784%
5	2.188	2.184	2.196	VV	180	803	0.02%	0.001%
6	2.204	2.196	2.214	VV	143	1278	0.03%	0.001%
7	2.219	2.214	2.247	VV	215	2106	0.05%	0.001%
8	2.293	2.247	2.299	VV	179	3587	0.09%	0.002%
9	2.316	2.299	2.329	VV	436	4859	0.12%	0.003%
10	2.333	2.329	2.363	VV	274	3521	0.09%	0.002%
11	2.367	2.363	2.378	VV	129	521	0.01%	0.000%
12	2.381	2.378	2.388	VV	114	323	0.01%	0.000%
13	2.406	2.388	2.443	PV	751	9471	0.23%	0.006%
14	2.464	2.443	2.518	VV	527	10205	0.25%	0.007%
15	2.536	2.518	2.563	VV	250	3123	0.08%	0.002%
16	2.566	2.563	2.577	VV	163	1098	0.03%	0.001%
17	2.582	2.577	2.589	VV	186	725	0.02%	0.000%
18	2.601	2.589	2.615	VV	133	950	0.02%	0.001%
19	2.634	2.615	2.646	PV	134	1228	0.03%	0.001%
20	2.670	2.646	2.677	VV	125	1335	0.03%	0.001%
21	2.681	2.677	2.693	VV	177	1016	0.02%	0.001%
22	2.699	2.693	2.720	VV	206	2173	0.05%	0.001%
23	2.731	2.720	2.757	VV	329	2629	0.06%	0.002%
24	2.759	2.757	2.786	VV	58	490	0.01%	0.000%
25	2.827	2.786	2.867	PV	448	8503	0.21%	0.006%
26	2.870	2.867	2.877	VV	53	482	0.01%	0.000%
27	2.902	2.877	2.927	VV	315	4974	0.12%	0.003%
28	2.950	2.927	2.986	VV	337	6592	0.16%	0.004%
29	3.041	2.986	3.081	VV	665	18097	0.44%	0.012%
30	3.095	3.081	3.122	VV	372	5630	0.14%	0.004%
31	3.137	3.122	3.167	VV	501	8445	0.21%	0.006%
32	3.180	3.167	3.205	VV	388	5739	0.14%	0.004%
33	3.210	3.205	3.230	VV	281	3321	0.08%	0.002%
34	3.254	3.230	3.294	VV	431	10523	0.26%	0.007%
35	3.299	3.294	3.303	VV	279	1335	0.03%	0.001%
36	3.309	3.303	3.312	VV	310	1349	0.03%	0.001%

					rteres				
37	3.327	3.312	3.365	VV	438	9944	0.24%	0.007%	
38	3.373	3.365	3.385	VV	312	2854			
39	3.405	3.385	3.431	VV	1118	16206			
40	3.436	3.431	3.453	VV	369	3911			
41	3.456	3.453	3.466	VV	350	1742			
42	3.468	3.466	3.477	VV	314	1320			
43	3.491	3.477	3.511	VV	279	4074	0.10%	0.003%	
44	3.524	3.511	3.530	VV	247	2450	0.06%	0.002%	
45	3.537	3.530	3.541	VV	261	1548	0.04%	0.001%	
46	3.548	3.541	3.568	VV	289	3820	0.09%	0.003%	
47	3.585	3.568	3.607	VV	305	5459	0.13%	0.004%	
48	3.619	3.607	3.629	VV	330	3403	0.08%	0.002%	
49	3.650	3.629	3.653	VV	416	4774	0.12%	0.003%	
50	3.657	3.653	3.697	VV	403	5980	0.15%	0.004%	
51	3.729	3.697	3.765	VV	521	14266	0.35%	0.010%	
52	3.769	3.765	3.774	VV	305	1373	0.03%	0.001%	
53	3.784	3.774	3.793	VV	377	3563	0.09%	0.002%	
54	3.805	3.793	3.820	VV	467	5042	0.12%	0.003%	
55	3.827	3.820	3.837	VV	271	2356	0.06%	0.002%	
56	3.856	3.837	3.887	VV	933	15927	0.39%	0.011%	
57	3.892	3.887	3.915	VV	320	4514	0.11%	0.003%	
58	3.941	3.915	3.979	VV	440	11199	0.27%	0.007%	
59	3.998	3.979	4.014	VV	575	7752	0.19%	0.005%	
60	4.028	4.014	4.036	VV	407	3783	0.09%	0.003%	
61	4.056	4.036	4.072	VV	351	5056	0.12%	0.003%	
62	4.101	4.072	4.117	PV	747	10568	0.26%	0.007%	
63	4.131	4.117	4.162	VV	584	9686	0.24%	0.006%	
64	4.219	4.162	4.232	VV	1343	28784	0.70%	0.019%	
65	4.237	4.232	4.259	VV	1139	11753	0.29%	0.008%	
66	4.280	4.259	4.304	VV	2218	33414	0.81%	0.022%	
67	4.317	4.304	4.354	VV	1172	16848	0.41%	0.011%	
68	4.395	4.354	4.423	VV	1372	26512	0.64%	0.018%	
69	4.440	4.423	4.474	VV	985	17212	0.42%	0.011%	
70	4.482	4.474	4.498	VV	398	4973	0.12%	0.003%	
71	4.506	4.498	4.526	VV	238	3117	0.08%	0.002%	
72	4.535	4.526	4.545	VV	198	1602	0.04%	0.001%	
73	4.566	4.545	4.595	VV	414	8253	0.20%	0.006%	
74	4.610	4.595	4.629	VV	458	7204	0.17%	0.005%	
75	4.632	4.629	4.640	VV	389	2495	0.06%	0.002%	
76	4.671	4.640	4.702	VV	147292	1547029	37.58%	1.032%	
77	4.714	4.702	4.730	VV	1082	12416	0.30%	0.008%	
78	4.747	4.730	4.772	VV	582	9169	0.22%	0.006%	
79	4.784	4.772	4.805	VV	246	2897	0.07%	0.002%	
80	4.809	4.805	4.813	VV	77	224	0.01%	0.000%	
81	4.840	4.813	4.855	PV	779	11198	0.27%	0.007%	
82	4.858	4.855	4.872	VV	478	3501	0.09%	0.002%	
83	4.893	4.872	4.899	VV	522	6345	0.15%	0.004%	
84	4.908	4.899	4.939	VV	717	12599	0.31%	0.008%	
85	4.957	4.939	4.973	VV	1994	20846	0.51%	0.014%	
86	4.985	4.973	5.000	VV	867	9384	0.23%	0.006%	
87	5.017	5.000	5.027	VV	658	7588	0.18%	0.005%	
88	5.040	5.027	5.053	VV	745	8726	0.21%	0.006%	
89	5.065	5.053	5.077	VV	614	7499	0.18%	0.005%	

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90	5.092	5.077	5.109	VV	1382	16123	0.39%	0.011%
91	5.135	5.109	5.159	VV	1313	21052		
92	5.179	5.159	5.226	VV	1637	27199		
93	5.258	5.226	5.277	VV	697	8481		
94	5.295	5.277	5.325	VV	414	6830		
95	5.351	5.325	5.367	VV	1032	13711		
96	5.386	5.367	5.413	VV	2606	44342	1.08%	0.030%
97	5.431	5.413	5.451	VV	2214	32062	0.78%	0.021%
98	5.466	5.451	5.481	VV	2588	27934	0.68%	0.019%
99	5.494	5.481	5.517	VV	1819	22450	0.55%	0.015%
100	5.521	5.517	5.539	VV	408	3534	0.09%	0.002%
101	5.559	5.539	5.577	PV	322	4622	0.11%	0.003%
102	5.599	5.577	5.606	VV	700	7301	0.18%	0.005%
103	5.620	5.606	5.647	VV	1319	19064	0.46%	0.013%
104	5.674	5.647	5.685	VV	1499	23160	0.56%	0.015%
105	5.693	5.685	5.712	VV	1288	13306	0.32%	0.009%
106	5.737	5.712	5.749	VV	596	9961	0.24%	0.007%
107	5.758	5.749	5.782	VV	558	6973	0.17%	0.005%
108	5.816	5.782	5.834	VV	16126	170120	4.13%	0.114%
109	5.850	5.834	5.878	VV	5804	74163	1.80%	0.049%
110	5.895	5.878	5.933	VV	1330	29153	0.71%	0.019%
111	5.934	5.933	5.939	VV	670	2538	0.06%	0.002%
112	5.944	5.939	5.958	VV	719	7247	0.18%	0.005%
113	5.968	5.958	5.985	VV	753	10031	0.24%	0.007%
114	6.013	5.985	6.036	VV	4626	74130	1.80%	0.049%
115	6.044	6.036	6.063	VV	1448	16510	0.40%	0.011%
116	6.083	6.063	6.096	VV	1952	25656	0.62%	0.017%
117	6.115	6.096	6.130	VV	8768	104648	2.54%	0.070%
118	6.135	6.130	6.157	VV	4660	42629	1.04%	0.028%
119	6.173	6.157	6.197	VV	3224	42478	1.03%	0.028%
120	6.211	6.197	6.227	VV	3259	32604	0.79%	0.022%
121	6.251	6.227	6.280	VV	1530	28806	0.70%	0.019%
122	6.301	6.280	6.324	PV	2634	32344	0.79%	0.022%
123	6.356	6.324	6.378	PV	2916	52933	1.29%	0.035%
124	6.398	6.378	6.421	VV	7051	94630	2.30%	0.063%
125	6.431	6.421	6.442	VV	3450	37143	0.90%	0.025%
126	6.450	6.442	6.474	VV	2862	34004	0.83%	0.023%
127	6.495	6.474	6.518	VV	5336	63106	1.53%	0.042%
128	6.537	6.518	6.572	VV	6022	125890	3.06%	0.084%
129	6.583	6.572	6.610	VV	2875	42413	1.03%	0.028%
130	6.627	6.610	6.643	VV	4839	52383	1.27%	0.035%
131	6.670	6.643	6.676	VV	4141	50247	1.22%	0.034%
132	6.684	6.676	6.704	VV	4117	47743	1.16%	0.032%
133	6.729	6.704	6.750	VV	1446	29124	0.71%	0.019%
134	6.776	6.750	6.797	VV	5498	78325	1.90%	0.052%
135	6.800	6.797	6.823	VV	2241	22385	0.54%	0.015%
136	6.854	6.823	6.904	VV	183263	1862540	45.24%	1.243%
137	6.931	6.904	6.956	VV	2764	51079	1.24%	0.034%
138	6.973	6.956	6.993	VV	5774	81745	1.99%	0.055%
139	7.008	6.993	7.030	VV	9342	104240	2.53%	0.070%
140	7.059	7.030	7.076	VV	5067	77657	1.89%	0.052%
141	7.083	7.076	7.097	VV	1886	18586	0.45%	0.012%

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				rters				
142	7.113	7.097	7.123	VV	1803	21415	0.52%	0.014%
143	7.145	7.123	7.164	VV	11938	129112		
144	7.185	7.164	7.198	VV	3996	54783		
145	7.203	7.198	7.235	VV	2852	50288		
146	7.269	7.235	7.295	VV	9765	149058		
147	7.307	7.295	7.322	VV	2985	35326		
148	7.352	7.322	7.358	VV	3548	62830	1.53%	0.042%
149	7.372	7.358	7.377	VV	5029	49205	1.20%	0.033%
150	7.393	7.377	7.415	VV	7818	137039	3.33%	0.091%
151	7.435	7.415	7.464	VV	12708	193881	4.71%	0.129%
152	7.501	7.464	7.526	VV	44285	584814	14.20%	0.390%
153	7.538	7.526	7.562	VV	6017	97428	2.37%	0.065%
154	7.581	7.562	7.620	VV	16475	293410	7.13%	0.196%
155	7.640	7.620	7.668	VV	38197	435540	10.58%	0.291%
156	7.683	7.668	7.701	VV	3641	54821	1.33%	0.037%
157	7.712	7.701	7.728	VV	2815	39474	0.96%	0.026%
158	7.742	7.728	7.754	VV	2705	37822	0.92%	0.025%
159	7.771	7.754	7.779	VV	3232	43001	1.04%	0.029%
160	7.808	7.779	7.839	VV	49999	588780	14.30%	0.393%
161	7.872	7.839	7.878	VV	4728	92521	2.25%	0.062%
162	7.897	7.878	7.921	VV	6526	123799	3.01%	0.083%
163	7.935	7.921	7.957	VV	2950	58178	1.41%	0.039%
164	7.987	7.957	8.018	VV	9551	174729	4.24%	0.117%
165	8.043	8.018	8.061	VV	6476	106950	2.60%	0.071%
166	8.072	8.061	8.084	VV	2190	27148	0.66%	0.018%
167	8.107	8.084	8.120	VV	4140	65578	1.59%	0.044%
168	8.151	8.120	8.171	VV	6695	136437	3.31%	0.091%
169	8.183	8.171	8.196	VV	4214	52651	1.28%	0.035%
170	8.209	8.196	8.215	VV	3330	35552	0.86%	0.024%
171	8.246	8.215	8.261	VV	8137	156025	3.79%	0.104%
172	8.272	8.261	8.286	VV	6500	88801	2.16%	0.059%
173	8.297	8.286	8.320	VV	5671	94362	2.29%	0.063%
174	8.343	8.320	8.363	VV	9235	146122	3.55%	0.098%
175	8.387	8.363	8.392	VV	12546	135941	3.30%	0.091%
176	8.406	8.392	8.428	VV	20322	294873	7.16%	0.197%
177	8.442	8.428	8.467	VV	9513	187274	4.55%	0.125%
178	8.480	8.467	8.487	VV	7335	75086	1.82%	0.050%
179	8.510	8.487	8.540	VV	45818	854891	20.76%	0.570%
180	8.547	8.540	8.564	VV	5951	72238	1.75%	0.048%
181	8.582	8.564	8.592	VV	4965	78520	1.91%	0.052%
182	8.628	8.592	8.643	VV	61698	750758	18.24%	0.501%
183	8.656	8.643	8.673	VV	41147	454549	11.04%	0.303%
184	8.696	8.673	8.725	VV	218071	2367476	57.50%	1.580%
185	8.742	8.725	8.760	VV	9061	137313	3.34%	0.092%
186	8.793	8.760	8.846	VV	21883	576051	13.99%	0.384%
187	8.866	8.846	8.887	VV	13745	200958	4.88%	0.134%
188	8.906	8.887	8.938	VV	13729	226656	5.51%	0.151%
189	8.953	8.938	8.966	VV	5333	74264	1.80%	0.050%
190	8.976	8.966	8.980	VV	4407	36321	0.88%	0.024%
191	8.991	8.980	9.012	VV	4620	72194	1.75%	0.048%
192	9.030	9.012	9.045	VV	4754	72792	1.77%	0.049%
193	9.062	9.045	9.087	VV	6539	133290	3.24%	0.089%
194	9.116	9.087	9.138	VV	9481	215859	5.24%	0.144%

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195	9.164	9.138	9.186	VV	14532	269949	6.56%	0.180%	
196	9.193	9.186	9.200	VV	7067	59682			
197	9.239	9.200	9.264	VV	30411	543901	13.21%	0.638%	
198	9.282	9.264	9.334	VV	8763	263215	6.56%	0.180%	
199	9.357	9.334	9.377	VV	28129	374733	9.45%	0.260%	
200	9.391	9.377	9.413	VV	12785	176481	2.76%	0.076%	
201	9.430	9.413	9.450	VV	9042	143201	3.48%	0.096%	
202	9.483	9.450	9.499	VV	10970	214870	5.22%	0.143%	
203	9.529	9.499	9.552	VV	80786	955524	23.21%	0.638%	
204	9.572	9.552	9.592	VV	24785	319746	7.77%	0.213%	
205	9.610	9.592	9.638	VV	5361	121369	2.95%	0.081%	
206	9.646	9.638	9.652	VV	3227	26423	0.64%	0.018%	
207	9.689	9.652	9.706	VV	19209	273305	6.64%	0.182%	
208	9.721	9.706	9.753	VV	17903	228277	5.54%	0.152%	
209	9.768	9.753	9.784	VV	3129	53607	1.30%	0.036%	
210	9.808	9.784	9.812	VV	8960	93884	2.28%	0.063%	
211	9.828	9.812	9.850	VV	18152	245749	5.97%	0.164%	
212	9.867	9.850	9.885	VV	5266	83801	2.04%	0.056%	
213	9.911	9.885	9.924	VV	13918	194790	4.73%	0.130%	
214	9.935	9.924	9.963	VV	10360	163667	3.98%	0.109%	
215	9.993	9.963	10.021	VV	24880	389028	9.45%	0.260%	
216	10.038	10.021	10.050	VV	8443	113801	2.76%	0.076%	
217	10.067	10.050	10.079	VV	9899	131757	3.20%	0.088%	
218	10.092	10.079	10.105	VV	11532	139493	3.39%	0.093%	
219	10.117	10.105	10.142	VV	11168	175689	4.27%	0.117%	
220	10.154	10.142	10.166	VV	5093	63968	1.55%	0.043%	
221	10.189	10.166	10.214	VV	66279	710199	17.25%	0.474%	
222	10.241	10.214	10.264	VV	7579	175590	4.26%	0.117%	
223	10.270	10.264	10.278	VV	6069	52515	1.28%	0.035%	
224	10.317	10.278	10.385	VV	206120	2463531	59.84%	1.644%	
225	10.402	10.385	10.412	VV	4025	59556	1.45%	0.040%	
226	10.431	10.412	10.474	VV	4811	118445	2.88%	0.079%	
227	10.502	10.474	10.555	VV	6593	143781	3.49%	0.096%	
228	10.559	10.555	10.577	VV	941	10435	0.25%	0.007%	
229	10.599	10.577	10.616	VV	1930	33356	0.81%	0.022%	
230	10.628	10.616	10.639	VV	1761	21162	0.51%	0.014%	
231	10.667	10.639	10.687	VV	16201	219694	5.34%	0.147%	
232	10.708	10.687	10.734	VV	14995	224860	5.46%	0.150%	
233	10.770	10.734	10.784	VV	8375	156688	3.81%	0.105%	
234	10.800	10.784	10.824	VV	11619	158748	3.86%	0.106%	
235	10.844	10.824	10.889	VV	14972	228408	5.55%	0.152%	
236	10.924	10.889	10.959	VV	6529	186364	4.53%	0.124%	
237	10.982	10.959	11.010	VV	7860	165864	4.03%	0.111%	
238	11.020	11.010	11.034	VV	3838	50904	1.24%	0.034%	
239	11.062	11.034	11.084	VV	43558	540778	13.13%	0.361%	
240	11.091	11.084	11.107	VV	4676	49689	1.21%	0.033%	
241	11.134	11.107	11.164	VV	26857	405513	9.85%	0.271%	
242	11.171	11.164	11.189	VV	3137	43550	1.06%	0.029%	
243	11.202	11.189	11.219	VV	2979	45676	1.11%	0.030%	
244	11.227	11.219	11.242	VV	1916	23482	0.57%	0.016%	
245	11.286	11.242	11.305	VV	2630	76854	1.87%	0.051%	
246	11.330	11.305	11.372	VV	31452	475696	11.55%	0.317%	

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					rters			
247	11.406	11.372	11.429	VV	9620	169238	4.11%	0.113%
248	11.460	11.429	11.496	VV	4825	115610		
249	11.520	11.496	11.537	VV	3683	60124		
250	11.542	11.537	11.557	VV	1974	19523		
251	11.575	11.557	11.600	VV	3139	46941		
252	11.627	11.600	11.662	VV	4823	109656		
253	11.682	11.662	11.713	VV	3550	76010	1.85%	0.051%
254	11.729	11.713	11.738	VV	2889	37986	0.92%	0.025%
255	11.772	11.738	11.833	VV	174405	2108003	51.20%	1.407%
256	11.860	11.833	11.899	VV	14011	230219	5.59%	0.154%
257	11.933	11.899	11.954	VV	2889	50843	1.23%	0.034%
258	11.990	11.954	12.008	VV	5805	90018	2.19%	0.060%
259	12.035	12.008	12.052	VV	2829	52376	1.27%	0.035%
260	12.067	12.052	12.112	VV	2453	58426	1.42%	0.039%
261	12.141	12.112	12.156	VV	11557	147789	3.59%	0.099%
262	12.172	12.156	12.196	VV	15116	179320	4.36%	0.120%
263	12.207	12.196	12.222	VV	1709	23173	0.56%	0.015%
264	12.258	12.222	12.274	VV	4295	79877	1.94%	0.053%
265	12.291	12.274	12.307	VV	7243	81637	1.98%	0.054%
266	12.323	12.307	12.362	VV	7337	89967	2.19%	0.060%
267	12.388	12.362	12.403	PV	886	13966	0.34%	0.009%
268	12.446	12.403	12.486	VV	23364	323783	7.86%	0.216%
269	12.503	12.486	12.524	VV	4794	64362	1.56%	0.043%
270	12.555	12.524	12.597	VV	37650	643643	15.63%	0.430%
271	12.613	12.597	12.637	VV	13235	183788	4.46%	0.123%
272	12.647	12.637	12.664	VV	3718	45959	1.12%	0.031%
273	12.705	12.664	12.749	VV	55019	705277	17.13%	0.471%
274	12.760	12.749	12.775	VV	2668	34516	0.84%	0.023%
275	12.793	12.775	12.808	VV	3198	49553	1.20%	0.033%
276	12.823	12.808	12.839	VV	2590	39428	0.96%	0.026%
277	12.863	12.839	12.879	VV	2917	53436	1.30%	0.036%
278	12.891	12.879	12.904	VV	2198	27724	0.67%	0.018%
279	12.915	12.904	12.923	VV	1895	19353	0.47%	0.013%
280	12.939	12.923	12.978	VV	4672	82365	2.00%	0.055%
281	13.004	12.978	13.026	VV	2735	43945	1.07%	0.029%
282	13.050	13.026	13.065	VV	8431	110987	2.70%	0.074%
283	13.093	13.065	13.140	VV	161338	1949520	47.35%	1.301%
284	13.169	13.140	13.222	VV	34326	425241	10.33%	0.284%
285	13.242	13.222	13.253	PV	455	5135	0.12%	0.003%
286	13.267	13.253	13.280	VV	725	6073	0.15%	0.004%
287	13.305	13.280	13.329	VV	2527	37261	0.91%	0.025%
288	13.356	13.329	13.366	VV	2457	38550	0.94%	0.026%
289	13.374	13.366	13.396	VV	2396	27065	0.66%	0.018%
290	13.417	13.396	13.440	VV	1360	20233	0.49%	0.014%
291	13.471	13.440	13.512	VV	29043	348352	8.46%	0.232%
292	13.527	13.512	13.540	VV	1856	23232	0.56%	0.016%
293	13.557	13.540	13.580	VV	2403	32421	0.79%	0.022%
294	13.606	13.580	13.627	VV	759	15113	0.37%	0.010%
295	13.644	13.627	13.662	VV	1282	15332	0.37%	0.010%
296	13.674	13.662	13.687	VV	821	7292	0.18%	0.005%
297	13.709	13.687	13.729	PV	8795	101759	2.47%	0.068%
298	13.743	13.729	13.785	VV	2497	56997	1.38%	0.038%
299	13.804	13.785	13.850	VV	2705	51530	1.25%	0.034%

Instrument :

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Manual IntegrationsAPPROVED

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300	13.866	13.850	13.885	VV	1342	16161	0.39%	0.011%
301	13.901	13.885	13.915	VV	1181	14862		
302	13.944	13.915	14.010	VV	5030	96246		
303	14.063	14.010	14.109	VV	4982	96332		
304	14.138	14.109	14.153	VV	1116	19109		
305	14.173	14.153	14.193	VV	1885	28236		
306	14.213	14.193	14.235	VV	3591	47024	1.14%	0.031%
307	14.253	14.235	14.267	VV	1274	18220	0.44%	0.012%
308	14.301	14.267	14.332	VV	137011	1717387	41.71%	1.146%
309	14.344	14.332	14.366	VV	3810	48958	1.19%	0.033%
310	14.385	14.366	14.422	VV	2965	45211	1.10%	0.030%
311	14.439	14.422	14.445	VV	462	5215	0.13%	0.003%
312	14.452	14.445	14.471	VV	546	6296	0.15%	0.004%
313	14.494	14.471	14.500	VV	632	7765	0.19%	0.005%
314	14.531	14.500	14.562	VV	1430	35611	0.86%	0.024%
315	14.568	14.562	14.573	VV	465	2593	0.06%	0.002%
316	14.584	14.573	14.588	VV	392	3444	0.08%	0.002%
317	14.602	14.588	14.614	VV	487	5549	0.13%	0.004%
318	14.632	14.614	14.643	VV	517	5433	0.13%	0.004%
319	14.692	14.643	14.727	VV	2290	50005	1.21%	0.033%
320	14.742	14.727	14.750	VV	583	7323	0.18%	0.005%
321	14.778	14.750	14.788	VV	1765	25984	0.63%	0.017%
322	14.805	14.788	14.841	VV	3813	52808	1.28%	0.035%
323	14.868	14.841	14.892	PV	3350	45744	1.11%	0.031%
324	14.911	14.892	14.925	VV	1090	16500	0.40%	0.011%
325	14.934	14.925	14.955	VV	1213	15419	0.37%	0.010%
326	14.987	14.955	15.005	VV	2644	48149	1.17%	0.032%
327	15.014	15.005	15.030	VV	732	7368	0.18%	0.005%
328	15.053	15.030	15.072	PV	3673	50266	1.22%	0.034%
329	15.111	15.072	15.144	VV	3713	66429	1.61%	0.044%
330	15.208	15.144	15.266	PV	72675	1057348	25.68%	0.706%
331	15.283	15.266	15.299	VV	2367	36845	0.89%	0.025%
332	15.321	15.299	15.336	VV	2975	52455	1.27%	0.035%
333	15.365	15.336	15.383	VV	15222	223034	5.42%	0.149%
334	15.412	15.383	15.442	VV	144676	1910610	46.41%	1.275%
335	15.461	15.442	15.485	VV	4785	101551	2.47%	0.068%
336	15.527	15.485	15.566	VV	6901	226650	5.51%	0.151%
337	15.583	15.566	15.588	VV	4171	54686	1.33%	0.036%
338	15.608	15.588	15.640	VV	5540	142012	3.45%	0.095%
339	15.673	15.640	15.699	VV	6170	177628	4.31%	0.119%
340	15.717	15.699	15.724	VV	5259	74808	1.82%	0.050%
341	15.726	15.724	15.750	VV	5123	74210	1.80%	0.050%
342	15.797	15.750	15.837	VV	31035	595660	14.47%	0.397%
343	15.854	15.837	15.882	VV	5688	128350	3.12%	0.086%
344	15.885	15.882	15.894	VV	3725	25277	0.61%	0.017%
345	15.957	15.894	15.982	VV	20450	436921	10.61%	0.292%
346	16.018	15.982	16.035	VV	9024	187365	4.55%	0.125%
347	16.043	16.035	16.065	VV	5948	78366	1.90%	0.052%
348	16.081	16.065	16.106	VV	3299	59104	1.44%	0.039%
349	16.125	16.106	16.142	VV	2019	37257	0.90%	0.025%
350	16.206	16.142	16.235	VV	2933	110756	2.69%	0.074%
351	16.253	16.235	16.267	VV	1189	18373	0.45%	0.012%

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					nteres			
352	16.285	16.267	16.297	VV	1285	18753	0.46%	0.013%
353	16.316	16.297	16.345	VV	1339	23669		
354	16.363	16.345	16.385	VV	948	10953		
355	16.406	16.385	16.412	PV	1138	10524		
356	16.442	16.412	16.474	VV	123369	1608783	39	
357	16.478	16.474	16.495	VV	1446	13329		
358	16.503	16.495	16.525	VV	1305	16516	0.40%	0.011%
359	16.531	16.525	16.542	VV	510	3876	0.09%	0.003%
360	16.554	16.542	16.564	PV	514	2924	0.07%	0.002%
361	16.665	16.564	16.680	PV	1821	60449	1.47%	0.040%
362	16.684	16.680	16.700	VV	1331	11538	0.28%	0.008%
363	16.750	16.700	16.771	VV	4069	103302	2.51%	0.069%
364	16.775	16.771	16.785	VV	2624	18779	0.46%	0.013%
365	16.816	16.785	16.840	VV	7486	143376	3.48%	0.096%
366	16.867	16.840	16.894	VV	3481	90549	2.20%	0.060%
367	16.937	16.894	16.955	VV	19261	325916	7.92%	0.217%
368	16.965	16.955	16.987	VV	8238	106727	2.59%	0.071%
369	17.014	16.987	17.037	VV	4419	97987	2.38%	0.065%
370	17.041	17.037	17.048	VV	3062	19267	0.47%	0.013%
371	17.073	17.048	17.095	VV	6787	133868	3.25%	0.089%
372	17.098	17.095	17.118	VV	3889	43660	1.06%	0.029%
373	17.135	17.118	17.143	VV	3152	42873	1.04%	0.029%
374	17.191	17.143	17.213	VV	4799	160819	3.91%	0.107%
375	17.262	17.213	17.291	VV	14469	334908	8.13%	0.223%
376	17.321	17.291	17.350	VV	14796	254505	6.18%	0.170%
377	17.400	17.350	17.457	VV	123151	1796041	43.62%	1.198%
378	17.474	17.457	17.496	VV	2435	37429	0.91%	0.025%
379	17.537	17.496	17.549	VV	923	19959	0.48%	0.013%
380	17.561	17.549	17.567	VV	810	8071	0.20%	0.005%
381	17.597	17.567	17.611	VV	1078	22588	0.55%	0.015%
382	17.622	17.611	17.637	VV	687	7278	0.18%	0.005%
383	17.658	17.637	17.665	PV	1137	10421	0.25%	0.007%
384	17.701	17.665	17.706	VV	2070	34100	0.83%	0.023%
385	17.714	17.706	17.719	VV	1677	12912	0.31%	0.009%
386	17.769	17.719	17.815	VV	5279	153220	3.72%	0.102%
387	17.850	17.815	17.877	VV	6423	133290	3.24%	0.089%
388	17.909	17.877	17.927	VV	4113	84326	2.05%	0.056%
389	17.941	17.927	17.958	VV	3855	57226	1.39%	0.038%
390	17.985	17.958	17.999	VV	3710	73229	1.78%	0.049%
391	18.012	17.999	18.022	VV	2187	26962	0.65%	0.018%
392	18.037	18.022	18.043	VV	2212	23381	0.57%	0.016%
393	18.051	18.043	18.064	VV	2057	21167	0.51%	0.014%
394	18.073	18.064	18.090	VV	1706	21720	0.53%	0.014%
395	18.105	18.090	18.111	VV	1565	12151	0.30%	0.008%
396	18.117	18.111	18.121	VV	1131	6694	0.16%	0.004%
397	18.135	18.121	18.150	VV	1661	19982	0.49%	0.013%
398	18.186	18.150	18.203	VV	3529	62998	1.53%	0.042%
399	18.241	18.203	18.250	VV	4988	95266	2.31%	0.064%
400	18.295	18.250	18.333	VV	120283	1853664	45.02%	1.237%
401	18.376	18.333	18.381	VV	10502	215615	5.24%	0.144%
402	18.387	18.381	18.409	VV	11427	153320	3.72%	0.102%
403	18.434	18.409	18.449	VV	9909	206367	5.01%	0.138%
404	18.463	18.449	18.489	VV	9191	198262	4.82%	0.132%

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405	18.504	18.489	18.523	VV	8525	156308	3.80%	0.104%
406	18.535	18.523	18.546	VV	7866	101967		
407	18.551	18.546	18.570	VV	6930	82716		
408	18.580	18.570	18.584	VV	5129	41644		
409	18.589	18.584	18.596	VV	5122	34419		
410	18.609	18.596	18.622	VV	8092	106065		
411	18.626	18.622	18.633	VV	7713	48243	1.17%	0.032%
412	18.653	18.633	18.683	VV	13493	275712	6.70%	0.184%
413	18.707	18.683	18.736	VV	12484	257904	6.26%	0.172%
414	18.746	18.736	18.768	VV	4366	63142	1.53%	0.042%
415	18.781	18.768	18.788	VV	3061	34322	0.83%	0.023%
416	18.835	18.788	18.848	VV	9474	238414	5.79%	0.159%
417	18.861	18.848	18.867	VV	8887	94911	2.31%	0.063%
418	18.870	18.867	18.878	VV	8475	56077	1.36%	0.037%
419	18.890	18.878	18.900	VV	9611	114000	2.77%	0.076%
420	18.960	18.900	18.985	VV	27558	754350	18.32%	0.503%
421	18.994	18.985	19.003	VV	17276	172513	4.19%	0.115%
422	19.016	19.003	19.021	VV	15802	163491	3.97%	0.109%
423	19.025	19.021	19.032	VV	15482	102126	2.48%	0.068%
424	19.041	19.032	19.053	VV	19424	219784	5.34%	0.147%
425	19.070	19.053	19.073	VV	18021	206529	5.02%	0.138%
426	19.092	19.073	19.104	VV	23306	381979	9.28%	0.255%
427	19.133	19.104	19.180	VV	115434	2167211	52.64%	1.446%
428	19.198	19.180	19.209	VV	14541	222793	5.41%	0.149%
429	19.230	19.209	19.237	VV	18648	264124	6.42%	0.176%
430	19.242	19.237	19.250	VV	18272	137403	3.34%	0.092%
431	19.255	19.250	19.274	VV	16360	203716	4.95%	0.136%
432	19.302	19.274	19.310	VV	17691	326752	7.94%	0.218%
433	19.340	19.310	19.351	VV	21217	461006	11.20%	0.308%
434	19.365	19.351	19.372	VV	25205	274565	6.67%	0.183%
435	19.399	19.372	19.410	VV	28578	610679	14.83%	0.408%
436	19.432	19.410	19.445	VV	30475	582672	14.15%	0.389%
437	19.476	19.445	19.482	VV	36455	723801	17.58%	0.483%
438	19.487	19.482	19.492	VV	36113	210507	5.11%	0.140%
439	19.498	19.492	19.506	VV	36199	303226	7.37%	0.202%
440	19.513	19.506	19.521	VV	35075	293880	7.14%	0.196%
441	19.525	19.521	19.534	VV	32077	242163	5.88%	0.162%
442	19.545	19.534	19.549	VV	33364	288588	7.01%	0.193%
443	19.555	19.549	19.562	VV	34584	261720	6.36%	0.175%
444	19.569	19.562	19.575	VV	32153	243833	5.92%	0.163%
445	19.581	19.575	19.590	VV	32920	290961	7.07%	0.194%
446	19.604	19.590	19.623	VV	31098	604349	14.68%	0.403%
447	19.637	19.623	19.647	VV	34390	470025	11.42%	0.314%
448	19.654	19.647	19.661	VV	35259	272366	6.62%	0.182%
449	19.677	19.661	19.712	VV	36217	1006526	24.45%	0.672%
450	19.727	19.712	19.732	VV	31102	361133	8.77%	0.241%
451	19.742	19.732	19.752	VV	32526	358588	8.71%	0.239%
452	19.760	19.752	19.768	VV	32972	319264	7.75%	0.213%
453	19.778	19.768	19.791	VV	36730	468528	11.38%	0.313%
454	19.796	19.791	19.800	VV	34110	187103	4.54%	0.125%
455	19.809	19.800	19.824	VV	34453	477665	11.60%	0.319%
456	19.832	19.824	19.845	VV	33054	399986	9.72%	0.267%

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Manual IntegrationsAPPROVED

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Instrument : FID_G ClientSampleId : WASTEMSD									
rteres									
457	19.857	19.845	19.872	VV	36745	526821	12.80%	0.352%	
458	19.887	19.872	19.892	VV	36633	412332	10.80%	0.352%	
459	19.924	19.892	19.949	VV	122257	2422647	58.40%	0.352%	
460	19.963	19.949	19.970	VV	41990	494791	12.80%	0.352%	
461	19.989	19.970	19.998	VV	49400	745600	18.40%	0.352%	
462	20.005	19.998	20.015	VV	50384	485953	11.20%	0.352%	
463	20.026	20.015	20.038	VV	48453	629850	15.30%	0.420%	
464	20.060	20.038	20.069	VV	48802	881901	21.42%	0.588%	
465	20.116	20.069	20.145	VV	54036	2161185	52.49%	1.442%	
466	20.157	20.145	20.174	VV	51088	793194	19.27%	0.529%	
467	20.191	20.174	20.195	VV	51961	612095	14.87%	0.408%	
468	20.201	20.195	20.214	VV	52829	562124	13.65%	0.375%	
469	20.222	20.214	20.239	VV	50760	739751	17.97%	0.494%	
470	20.244	20.239	20.249	VV	45273	257619	6.26%	0.172%	
471	20.259	20.249	20.263	VV	46264	392047	9.52%	0.262%	
472	20.292	20.263	20.305	VV	62008	1365239	33.16%	0.911%	
473	20.310	20.305	20.320	VV	54864	463822	11.27%	0.310%	
474	20.334	20.320	20.352	VV	55527	1005958	24.43%	0.671%	
475	20.367	20.352	20.375	VV	57175	769468	18.69%	0.513%	
476	20.383	20.375	20.389	VV	57418	478258	11.62%	0.319%	
477	20.394	20.389	20.397	VV	56341	248929	6.05%	0.166%	
478	20.421	20.397	20.437	VV	65357	1481607	35.99%	0.989%	
479	20.456	20.437	20.462	VV	73922	1019056	24.75%	0.680%	
480	20.487	20.462	20.496	VV	73991	1433489	34.82%	0.957%	
481	20.505	20.496	20.519	VV	74686	1017041	24.70%	0.679%	
482	20.524	20.519	20.537	VV	72627	756946	18.39%	0.505%	
483	20.541	20.537	20.550	VV	66690	481470	11.69%	0.321%	
484	20.556	20.550	20.576	VV	68230	1032739	25.08%	0.689%	
485	20.583	20.576	20.588	VV	69186	452489	10.99%	0.302%	
486	20.594	20.588	20.601	VV	66120	502558	12.21%	0.335%	
487	20.621	20.601	20.627	VV	70714	1062222	25.80%	0.709%	
488	20.634	20.627	20.640	VV	74630	550565	13.37%	0.367%	
489	20.669	20.640	20.713	VV	144570	4117108	100.00%	2.747%	
490	20.749	20.713	20.757	VV	80103	2001017	48.60%	1.335%	
491	20.762	20.757	20.772	VV	75956	643163	15.62%	0.429%	
492	20.784	20.772	20.802	VV	78369	1331334	32.34%	0.888%	
493	20.808	20.802	20.818	VV	74991	722347	17.55%	0.482%	
494	20.845	20.818	20.857	VV	76218	1721501	41.81%	1.149%	
495	20.862	20.857	20.878	VV	73473	877159	21.31%	0.585%	
496	20.884	20.878	20.895	VV	69520	665335	16.16%	0.444%	
497	20.900	20.895	20.916	VV	68446	831796	20.20%	0.555%	
498	20.921	20.916	20.926	VV	68812	398512	9.68%	0.266%	
499	20.937	20.926	20.944	VV	71953	751500	18.25%	0.501%	
500	20.950	20.944	20.964	VV	71801	820797	19.94%	0.548%	
501	20.971	20.964	20.982	VV	68599	712065	17.30%	0.475%	
502	20.987	20.982	20.992	VV	64327	394937	9.59%	0.264%	
503	21.003	20.992	21.015	VV	67110	900003	21.86%	0.601%	
504	21.021	21.015	21.025	VV	65322	364442	8.85%	0.243%	
505	21.029	21.025	21.040	VV	65241	583377	14.17%	0.389%	
506	21.045	21.040	21.064	VV	64010	852717	20.71%	0.569%	
507	21.075	21.064	21.080	VV	59308	556301	13.51%	0.371%	
508	21.085	21.080	21.097	VV	58465	555983	13.50%	0.371%	
509	21.122	21.097	21.136	VV	56511	1247486	30.30%	0.832%	

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025
Supervised By :mohammad ahmed 08/08/2025

							Instrument : FID_G			
							ClientSampleId : WASTEMSD			
rteres										
510	21.147	21.136	21.152	VV	54585	526823	12.80%	0.352%		
511	21.159	21.152	21.164	VV	56582	393160	Manual IntegrationsAPPROVED Reviewed By :Yogesh Patel 08/07/2025 Supervised By :mohammad ahmed 08/08/2025			
512	21.184	21.164	21.189	VV	63268	871262			21.80%	0.352%
513	21.198	21.189	21.226	VV	67650	1415830			34.40%	0.352%
514	21.234	21.226	21.254	VV	63570	1000608			24.40%	0.352%
515	21.263	21.254	21.276	VV	59811	746267			18.80%	0.352%
516	21.287	21.276	21.294	VV	55322	565582	13.74%	0.377%		
517	21.299	21.294	21.304	VV	53288	331281	8.05%	0.221%		
518	21.315	21.304	21.321	VV	55677	540968	13.14%	0.361%		
519	21.327	21.321	21.337	VV	56483	532739	12.94%	0.355%		
520	21.344	21.337	21.352	VV	56767	483420	11.74%	0.323%		
521	21.365	21.352	21.371	VV	56109	617170	14.99%	0.412%		
522	21.374	21.371	21.378	VV	53189	211142	5.13%	0.141%		
523	21.381	21.378	21.411	VV	52614	925084	22.47%	0.617%		
524	21.416	21.411	21.421	VV	42700	239893	5.83%	0.160%		
525	21.428	21.421	21.433	VV	42898	320314	7.78%	0.214%		
526	21.465	21.433	21.512	VV	88352	2710423	65.83%	1.809%		
527	21.539	21.512	21.544	VV	41393	726214	17.64%	0.485%		
528	21.548	21.544	21.556	VV	38489	254817	6.19%	0.170%		
529	21.564	21.556	21.576	VV	40227	464304	11.28%	0.310%		
530	21.583	21.576	21.602	VV	39739	602740	14.64%	0.402%		
531	21.631	21.602	21.641	VV	39799	895845	21.76%	0.598%		
532	21.645	21.641	21.651	VV	33464	204292	4.96%	0.136%		
533	21.663	21.651	21.669	VV	38083	366268	8.90%	0.244%		
534	21.677	21.669	21.684	VV	40836	340068	8.26%	0.227%		
535	21.699	21.684	21.709	VV	41257	577642	14.03%	0.385%		
536	21.722	21.709	21.728	VV	40983	458260	11.13%	0.306%		
537	21.744	21.728	21.750	VV	44984	573181	13.92%	0.382%		
538	21.758	21.750	21.763	VV	45095	332124	8.07%	0.222%		
539	21.771	21.763	21.777	VV	47183	380113	9.23%	0.254%		
540	21.784	21.777	21.794	VV	45890	430532	10.46%	0.287%		
541	21.798	21.794	21.882	VV	41114	1502887	36.50%	1.003%		
542	21.905	21.882	21.914	VV	21801	362100	8.80%	0.242%		
543	21.937	21.914	21.947	VV	23108	414934	10.08%	0.277%		
544	21.953	21.947	21.961	VV	24606	189887	4.61%	0.127%		
545	21.971	21.961	21.979	VV	24472	241752	5.87%	0.161%		
546	21.987	21.979	21.994	VV	22141	188249	4.57%	0.126%		
547	22.005	21.994	22.011	VV	22018	209564	5.09%	0.140%		
548	22.016	22.011	22.026	VV	20577	165819	4.03%	0.111%		
549	22.036	22.026	22.040	VV	24133	189971	4.61%	0.127%		
550	22.044	22.040	22.060	VV	23992	261598	6.35%	0.175%		
551	22.070	22.060	22.082	VV	26079	297003	7.21%	0.198%		
552	22.088	22.082	22.124	VV	23156	461332	11.21%	0.308%		
553	22.136	22.124	22.148	VV	16327	217025	5.27%	0.145%		
554	22.153	22.148	22.155	VV	16111	66944	1.63%	0.045%		
555	22.183	22.155	22.190	VV	24100	430666	10.46%	0.287%		
556	22.201	22.190	22.222	VV	23088	376764	9.15%	0.251%		
557	22.228	22.222	22.244	VV	18894	220210	5.35%	0.147%		
558	22.258	22.244	22.267	VV	15250	199538	4.85%	0.133%		
559	22.274	22.267	22.279	VV	14836	93666	2.28%	0.063%		
560	22.290	22.279	22.293	VV	16228	127963	3.11%	0.085%		
561	22.311	22.293	22.318	VV	19447	248926	6.05%	0.166%		

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 08/07/2025
Supervised By :mohammad ahmed 08/08/2025

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
100 TRPH STD		FG016345.D	FG080525	N-TETRACONTANE	mohammad	8/7/2025 1:28:09 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
Q2758-01		FG016358.D	FG080625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-DOTRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-HEXADECANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-OCTACOSANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-OCTATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-TETRACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MS		FG016359.D	FG080625	N-TRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MSD		FG016360.D	FG080625	N-DOCOSANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MSD		FG016360.D	FG080625	N-DOTRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MSD		FG016360.D	FG080625	N-OCTATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MSD		FG016360.D	FG080625	N-TETRACONTANE	 	 	Peak Integrated by Software incorrectly
Q2757-01MSD		FG016360.D	FG080625	N-TETRATRIACONTANE	 	 	Peak Integrated by Software incorrectly

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG080525

Review By	yogesh	Review On	8/5/2025 1:54:47 PM
Supervise By	mohammad	Supervise On	8/7/2025 1:28:09 AM
SubDirectory	FG080525	HP Acquire Method	HP Processing Method FG080525
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	FG016343.D	05 Aug 2025 09:42	YP\AJ	Ok
2	I.BLK	FG016344.D	05 Aug 2025 10:12	YP\AJ	Ok
3	100 TRPH STD	FG016345.D	05 Aug 2025 10:41	YP\AJ	Ok,M
4	50 TRPH STD	FG016346.D	05 Aug 2025 11:11	YP\AJ	Ok
5	20 TRPH STD	FG016347.D	05 Aug 2025 11:40	YP\AJ	Ok
6	10 TRPH STD	FG016348.D	05 Aug 2025 12:10	YP\AJ	Ok
7	5 TRPH STD	FG016349.D	05 Aug 2025 12:39	YP\AJ	Ok
8	FG080525ICV	FG016350.D	05 Aug 2025 13:24	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG080625

Review By	yogesh	Review On	8/6/2025 11:56:13 AM
Supervise By		Supervise On	
SubDirectory	FG080625	HP Acquire Method	HP Processing Method FG080525
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	FG016351.D	06 Aug 2025 09:06	YP\AJ	Ok
2	I.BLK	FG016352.D	06 Aug 2025 09:35	YP\AJ	Ok
3	50 PPM TRPH STD	FG016353.D	06 Aug 2025 10:05	YP\AJ	Ok
4	RT MARKER	FG016354.D	06 Aug 2025 10:34	YP\AJ	Ok
5	PB169135BL	FG016355.D	06 Aug 2025 11:37	YP\AJ	Ok
6	PB169135BS	FG016356.D	06 Aug 2025 12:06	YP\AJ	Ok
7	Q2757-01	FG016357.D	06 Aug 2025 12:36	YP\AJ	Ok
8	Q2758-01	FG016358.D	06 Aug 2025 13:05	YP\AJ	Dilution
9	Q2757-01MS	FG016359.D	06 Aug 2025 13:35	YP\AJ	Ok,NS
10	Q2757-01MSD	FG016360.D	06 Aug 2025 14:05	YP\AJ	Ok,NS
11	Q2758-01	FG016361.D	06 Aug 2025 14:34	YP\AJ	Ok
12	I.BLK	FG016362.D	06 Aug 2025 15:04	YP\AJ	Ok
13	50 TRPH STD	FG016363.D	06 Aug 2025 15:33	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG080525

Review By	yogesh	Review On	8/5/2025 1:54:47 PM
Supervise By	mohammad	Supervise On	8/7/2025 1:28:09 AM
SubDirectory	FG080525	HP Acquire Method	HP Processing Method FG080525

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		FG016343.D	05 Aug 2025 09:42		YP\AJ	Ok
2	I.BLK		FG016344.D	05 Aug 2025 10:12		YP\AJ	Ok
3	100 TRPH STD		FG016345.D	05 Aug 2025 10:41		YP\AJ	Ok,M
4	50 TRPH STD		FG016346.D	05 Aug 2025 11:11		YP\AJ	Ok
5	20 TRPH STD		FG016347.D	05 Aug 2025 11:40		YP\AJ	Ok
6	10 TRPH STD		FG016348.D	05 Aug 2025 12:10		YP\AJ	Ok
7	5 TRPH STD		FG016349.D	05 Aug 2025 12:39		YP\AJ	Ok
8	FG080525ICV		FG016350.D	05 Aug 2025 13:24		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_G

Daily Analysis Runlog For Sequence/QC Batch ID # FG080625

Review By	yogesh	Review On	8/6/2025 11:56:13 AM
Supervise By		Supervise On	
SubDirectory	FG080625	HP Acquire Method	HP Processing Method FG080525
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC	PP24469		
Internal Standard/PEM			
ICV/I.BLK	PP24468,PP24473		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FG016351.D	06 Aug 2025 09:06		YP\AJ	Ok
2	I.BLK		FG016352.D	06 Aug 2025 09:35		YP\AJ	Ok
3	50 PPM TRPH STD		FG016353.D	06 Aug 2025 10:05		YP\AJ	Ok
4	RT MARKER		FG016354.D	06 Aug 2025 10:34		YP\AJ	Ok
5	PB169135BL		FG016355.D	06 Aug 2025 11:37		YP\AJ	Ok
6	PB169135BS		FG016356.D	06 Aug 2025 12:06		YP\AJ	Ok
7	Q2757-01		FG016357.D	06 Aug 2025 12:36		YP\AJ	Ok
8	Q2758-01		FG016358.D	06 Aug 2025 13:05	Need 25X	YP\AJ	Dilution
9	Q2757-01MS		FG016359.D	06 Aug 2025 13:35		YP\AJ	Ok,NS
10	Q2757-01MSD		FG016360.D	06 Aug 2025 14:05		YP\AJ	Ok,NS
11	Q2758-01		FG016361.D	06 Aug 2025 14:34		YP\AJ	Ok
12	I.BLK		FG016362.D	06 Aug 2025 15:04		YP\AJ	Ok
13	50 TRPH STD		FG016363.D	06 Aug 2025 15:33		YP\AJ	Ok

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 8/5/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:10
In Date: 08/04/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104
Time OUT: 08:14
Out Date: 08/05/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID-OVEN

QC:LB136687

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
Q2752-03	PIPE-LINE-LIQUIDS	1	1.00	1.00	2.00	2.00	100.0	oil sample
Q2757-01	WASTE	2	1.14	9.99	11.13	9.28	81.5	
Q2757-02	VOC	3	1.13	10.85	11.98	9.96	81.4	
Q2757-03	1	4	1.19	10.50	11.69	9.83	82.3	
Q2757-04	2	5	1.18	10.81	11.99	10.1	82.5	
Q2757-05	3	6	1.18	10.81	11.99	9.98	81.4	
Q2757-06	4	7	1.13	10.59	11.72	9.66	80.5	
Q2757-07	5	8	1.13	10.86	11.99	9.95	81.2	
Q2758-01	WASTE	9	1.12	10.57	11.69	10.94	92.9	
Q2759-01	SOLID-DRUMS	10	1.15	10.84	11.99	5.75	42.4	
Q2760-01	NB-07-08042025	11	1.13	10.76	11.89	11.36	95.1	
Q2760-02	NB-07-08042025-E2	12	1.13	10.37	11.5	10.44	89.8	
Q2763-01	TP-2	13	1.16	10.02	11.18	9.36	81.8	
Q2763-02	TP-2 EPH	14	1.18	10.12	11.3	9.75	84.7	
Q2763-03	TP-2 VOC	15	1.18	10.48	11.66	9.45	78.9	

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

WORKLIST(Hardcopy Internal Chain)

136687

WorkList Name : %1-080425

WorkList ID : 191066

Department : Wet-Chemistry

Date : 08-04-2025 07:38:11

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2752-03	PIPE-LINE-LIQUIDS	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/01/2025	Chemtech -SO
Q2757-01	WASTE	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-02	VOC	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-03	1	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-04	2	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-05	3	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-06	4	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2757-07	5	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2758-01	WASTE	Solid	Percent Solids	Cool 4 deg C	SCIA01	D31	08/01/2025	Chemtech -SO
Q2759-01	SOLID-DRUMS	Solid	Percent Solids	Cool 4 deg C	SCIA01	D21	08/01/2025	Chemtech -SO
Q2760-01	NB-07-08042025	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/04/2025	Chemtech -SO
Q2760-02	NB-07-08042025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/04/2025	Chemtech -SO
Q2763-01	TP-2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/04/2025	Chemtech -SO
Q2763-02	TP-2 EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	O23	08/04/2025	Chemtech -SO
Q2763-03	TP-2 VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	O23	08/04/2025	Chemtech -SO

Date/Time 08/04/25 15:10

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: R3 C 174-1046

Date/Time 08/04/25 17:20

Raw Sample Received by: R3 C 174-1046

Raw Sample Relinquished by: [Signature]

SOP ID: M3541-ASE Extraction-15

Clean Up SOP #: N/A

Extraction Start Date : 08/06/2025

Matrix : Solid

Extraction Start Time : 08:20

Weigh By: RJ

Extraction By: RJ

Extraction End Date : 08/06/2025

Balance check: RJ

Filter By: RJ

Extraction End Time : 11:20

Balance ID: EX-SC-2

pH Meter ID: N/A

Concentration By: RS

pH Strip Lot#: N/A

Hood ID: 3,7

Supervisor By : RUPESH

Extraction Method: ☐ Seperatory Funnel

☐ Continious Liquid/Liquid

☐ Sonication

☐ Waste Dilution

☒ Soxhlet

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	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	EP2629
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
8/6/25	RS (Ext Lab)	Y-P Pest IP43
11:25	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-15

Concentration Date: 08/06/2025

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB169135BL	PB169135BL	TPH GC	30.02	N/A	ritesh	RUPESH	1			U1-1
PB169135BS	PB169135BS	TPH GC	30.01	N/A	ritesh	RUPESH	1			2
Q2757-01	WASTE	TPH GC	30.09	N/A	ritesh	RUPESH	1			3
Q2757-01MS	WASTEMS	TPH GC	30.06	N/A	ritesh	RUPESH	1			4
Q2757-01MS D	WASTEMSD	TPH GC	30.04	N/A	ritesh	RUPESH	1			5
Q2758-01	WASTE	TPH GC	30.07	N/A	ritesh	RUPESH	1			6

Rs
816

8:22
16135

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2758T WorkList ID : 191130 Department : Extraction Date : 08-06-2025 08:15:11

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2757-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	D31	08/01/2025	8015D
Q2758-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	D21	08/01/2025	8015D

Date/Time 08/06/25 8:15
Raw Sample Received by: RSF ELA-Web
Raw Sample Relinquished by: Chen

Date/Time 08/06/25 8:25
Raw Sample Received by: Chen
Raw Sample Relinquished by: RSF ELA-Web

Prep Standard - Chemical Standard Summary

Order ID : Q2758

Test : TPH GC

Prepbatch ID : PB169135,

Sequence ID/Qc Batch ID: FG080625,

Standard ID :

EP2626,EP2629,PP24467,PP24468,PP24469,PP24470,PP24471,PP24472,PP24473,PP24583,PP24596,

Chemical ID :

E3875,E3926,E3930,E3931,E3949,E3951,E3954,P11951,P11952,P13106,P13108,P13477,P13479,P13483,P13484,P13485,P13486,P13938,P13945,

Extractions STANDARD PREPARATION LOG

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

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

<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	EP2629	07/28/2025	01/28/2026	RUPESHKUMAR SHAH	Extraction_SC ALE_2	None	Riteshkumar Patel
(EX-SC-2)								

FROM 4000.00000gram of E3875 = Final Quantity: 4000.000 gram



Pest/Pcb STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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	417203	01/28/2026	07/28/2025 / RUPESH	01/29/2025 / Rajesh	E3875

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. MÉXICO
CP 64070
TEL +52 81 13 52 67 67
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:	MAY/23/2024
LOT NUMBER :	417203		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO ₄)	Min. 99.0%	99.8 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.2
Insoluble matter	Max. 0.01%	0.001 %
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%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.001 %
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%	0.2 %
Retained on US Standard No. 60 sieve	Min. 94%	96.2 %
Through US Standard No. 60 sieve	Max. 5%	3.5 %
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.

RE-02-01, Ed. 3

E 3875

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

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Avantor Performance Materials, LLC

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

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



Material No.: 9254-03

Batch No.: 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

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



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

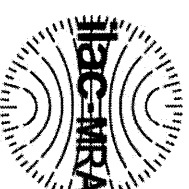
Bellevonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

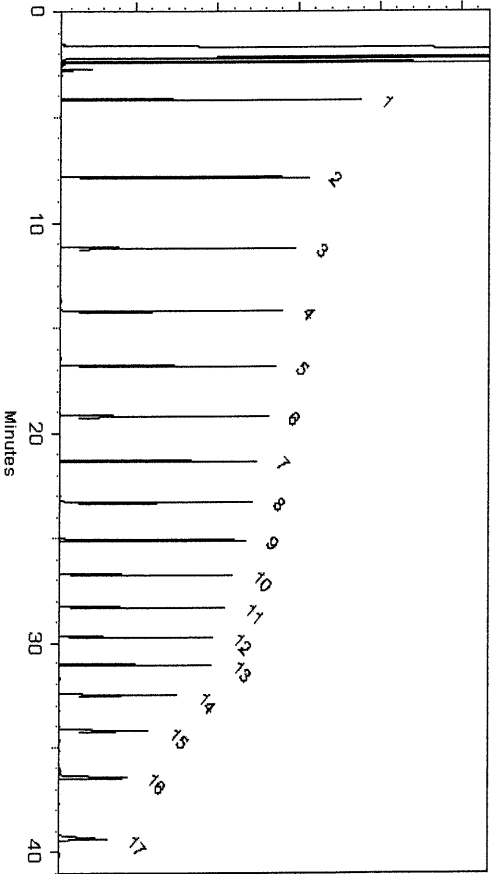
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

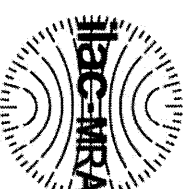
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

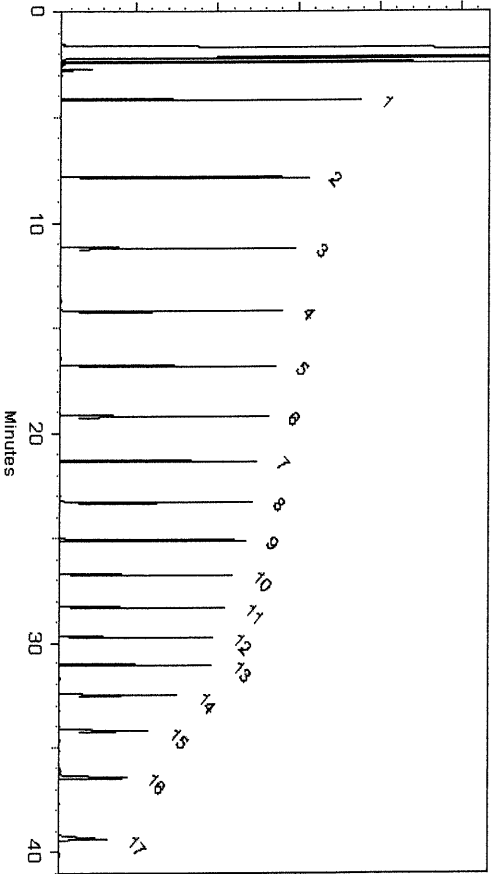
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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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.)

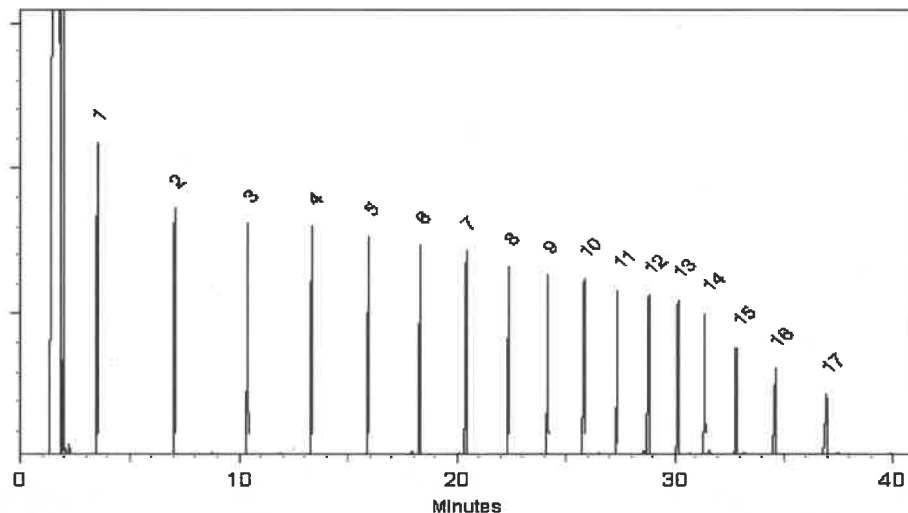
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

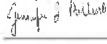


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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

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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.)

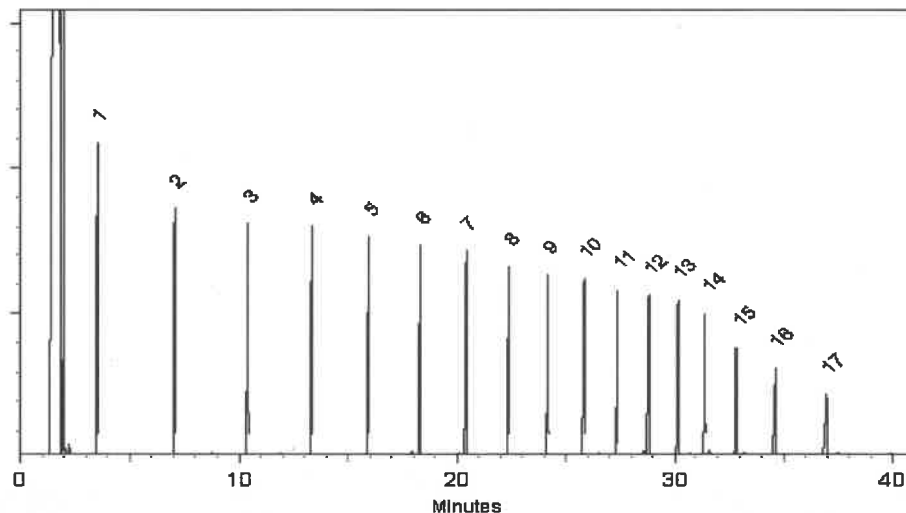
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

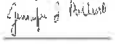


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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.

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

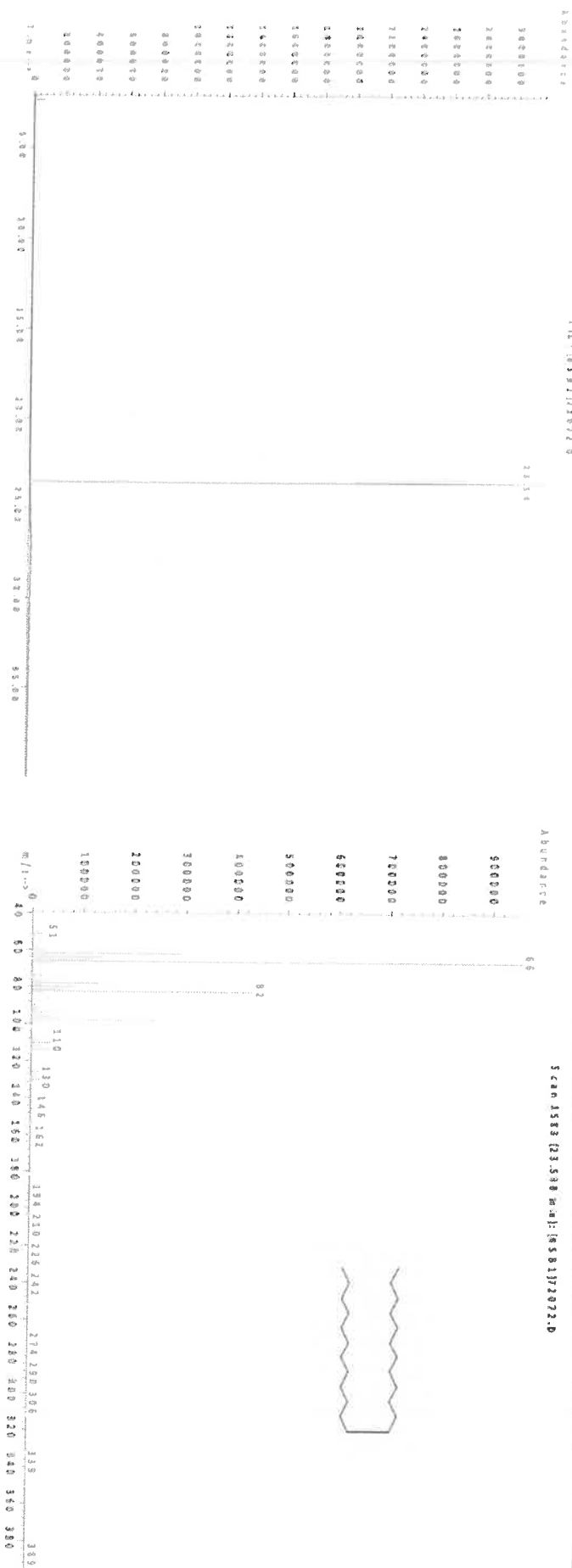
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

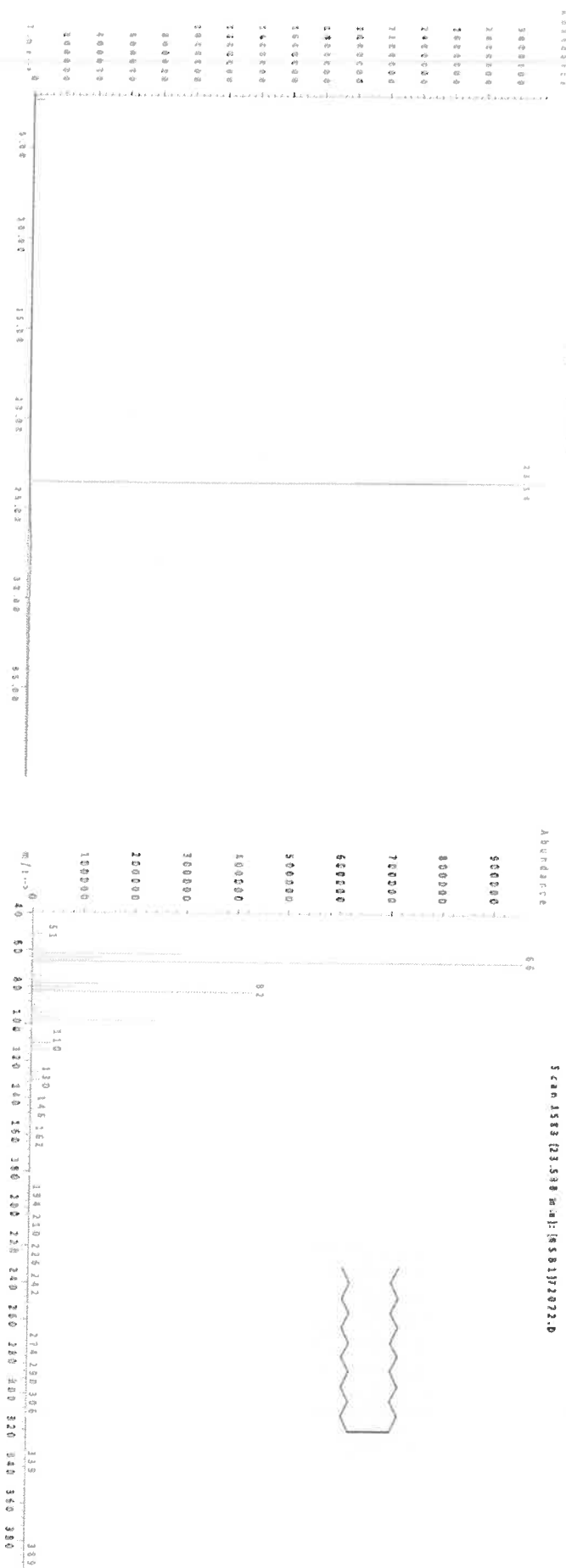
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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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.

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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.

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

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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

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www.absolutestandards.com

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part # 10009R
Lot # 070716
Shelf Life 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	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3/8h)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

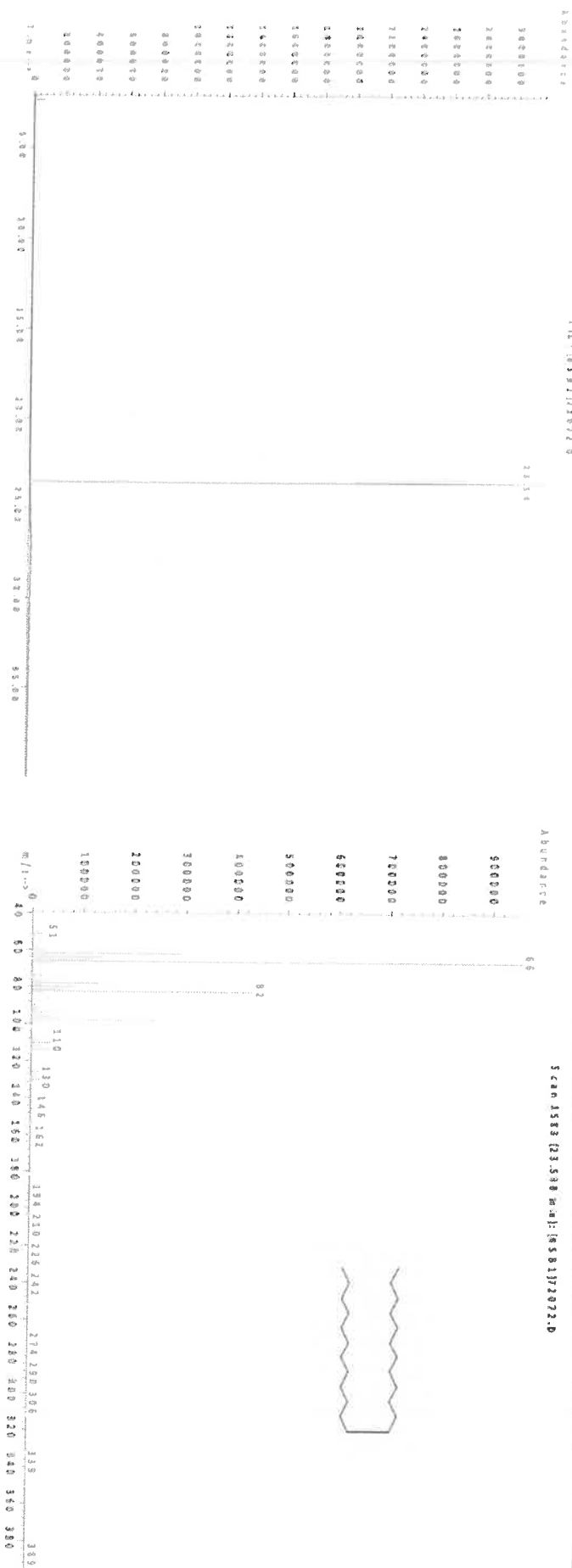
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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

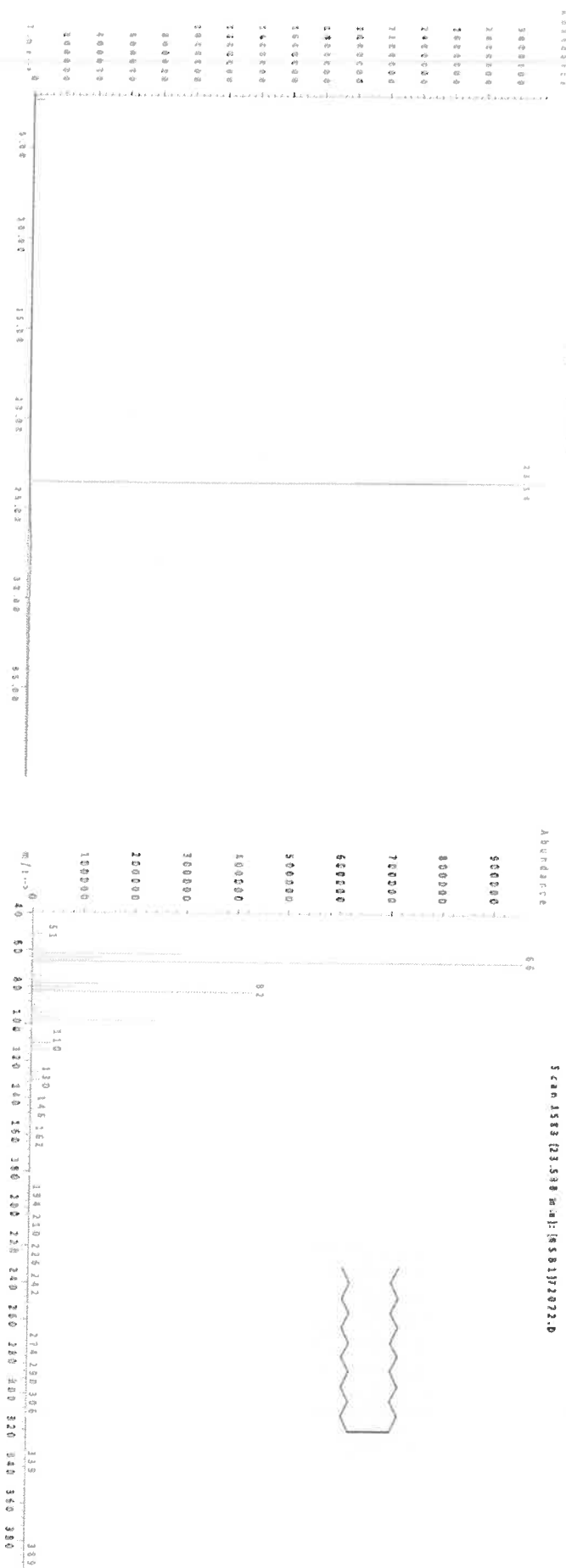
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

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

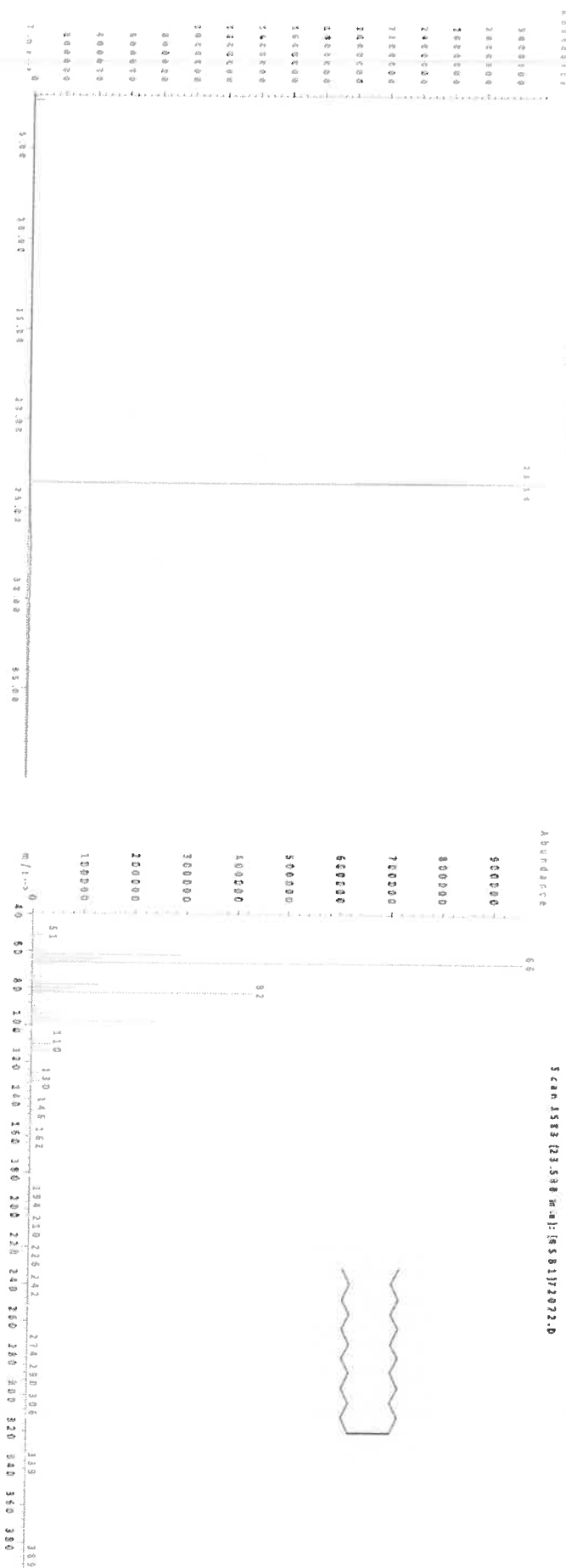
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

Formulated By:	<i>Prashant Chauhan</i>	101122
Reviewed By:	<i>Pedro L. Rentas</i>	101122
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, (1996).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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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	2.04159	4001.3	15.4	1719-03-5	N/A	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04158	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

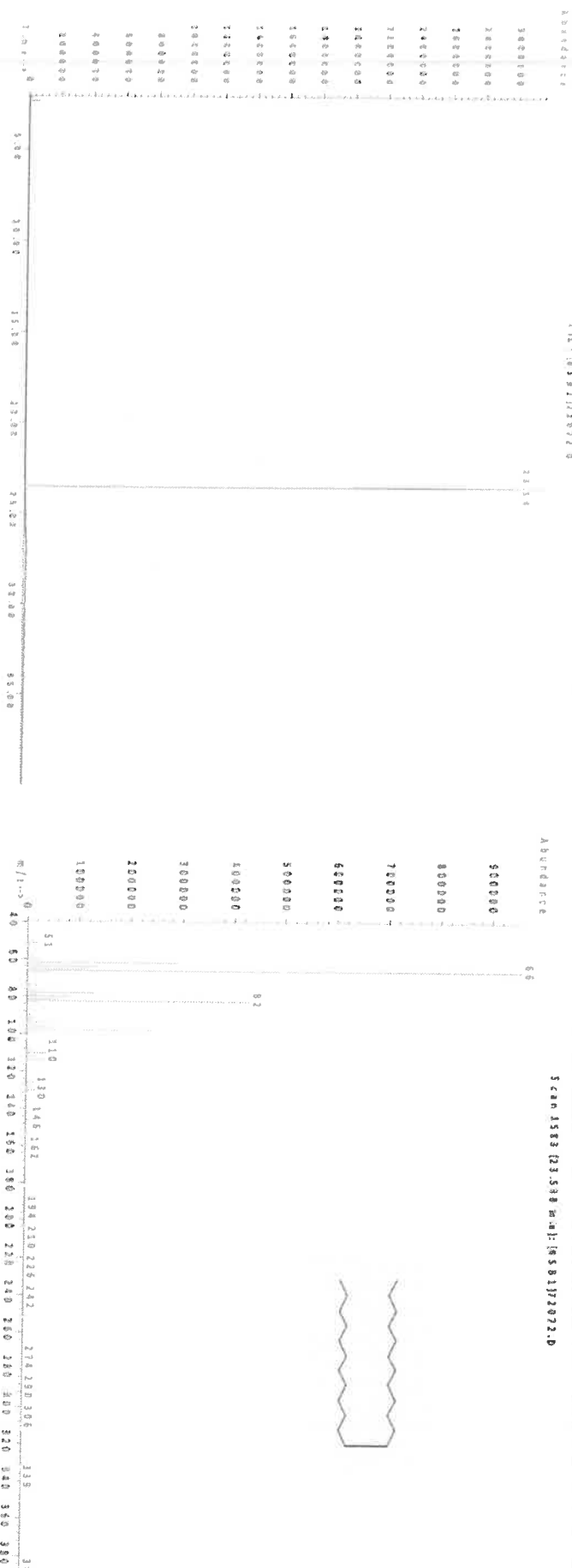
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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, (1996).



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0217113

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : October 31, 2031

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

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

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Octane (C8)	111-65-9	SHBR0789	99%	502.0 µg/mL	+/- 12.9685
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	501.5 µg/mL	+/- 12.9555
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	502.5 µg/mL	+/- 12.9814
4	n-Tetradecane (C14)	629-59-4	STBL0465	99%	500.5 µg/mL	+/- 12.9297
5	n-Hexadecane (C16)	544-76-3	SHBR0669	99%	500.0 µg/mL	+/- 12.9168
6	n-Octadecane (C18)	593-45-3	UB5NG	99%	500.5 µg/mL	+/- 12.9297
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	500.0 µg/mL	+/- 12.9177
8	n-Docosane (C22)	629-97-0	MKCQ3882	99%	500.5 µg/mL	+/- 12.9297
9	n-Tetracosane (C24)	646-31-1	MKCS9978	99%	500.5 µg/mL	+/- 12.9297
10	n-Hexacosane (C26)	630-01-3	MKCQ4814	99%	502.0 µg/mL	+/- 12.9685
11	n-Octacosane (C28)	630-02-4	BCCJ4566	99%	501.0 µg/mL	+/- 12.9426
12	n-Triacontane (C30)	638-68-6	MKCV7007	98%	499.8 µg/mL	+/- 12.9116
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	500.0 µg/mL	+/- 12.9168
14	n-Tetratriacontane (C34)	14167-59-0	D3MZN	99%	501.5 µg/mL	+/- 12.9555
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	500.5 µg/mL	+/- 12.9297
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	500.2 µg/mL	+/- 12.9209
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.5 µg/mL	+/- 13.0072

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

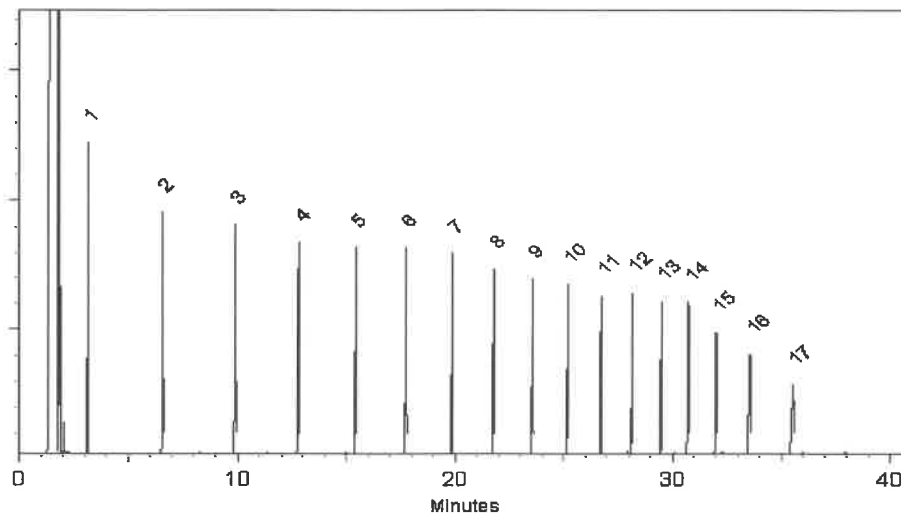
Inj. Temp:
250°C

Det. Temp:
330°C

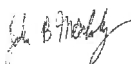
Det. Type:
FID

Split Vent:
2 ml/min.

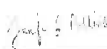
Inj. Vol
1µl



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


Josh McCloskey - Operations Technician I

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


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 10-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



110 Benner Circle
Bellefonte, PA 16823-8812
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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
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16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	500.2 µg/mL	+/- 12.9209
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.5 µg/mL	+/- 13.0072

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

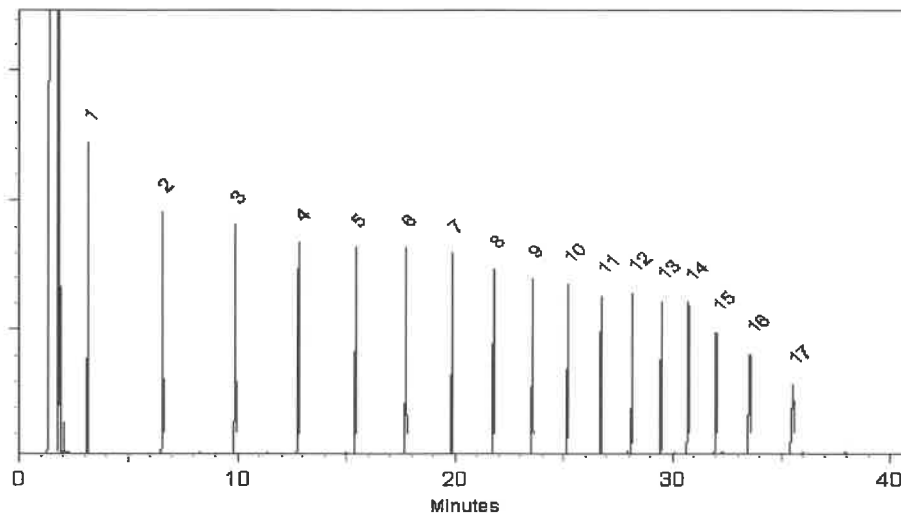
Inj. Temp:
250°C

Det. Temp:
330°C

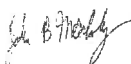
Det. Type:
FID

Split Vent:
2 ml/min.

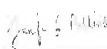
Inj. Vol
1µl



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


Josh McCloskey - Operations Technician I

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


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 10-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



SHIPPING DOCUMENTS

CHAIN OF CUSTODY RECORD

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

Chemtech Project Number
COC Number

2000

Q2758
92 Clifton Street

PROJECT INFORMATION

BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

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

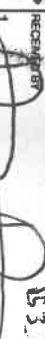
ANALYSIS

1 TPH-GC
2 VOC
3 EPH-F2
4
5
6
7
8
9

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE	SAMPLE COLLECTION		# of Bottles	<- Specify Preservatives									
			COMP	GRAB	DATE		TIME	A-HCl	D-NH ₄	B-NH ₃	E-CE	C-H ₂ SO ₄	F-OTHER			
							1	2	3	4	5	6	7	8	9	

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

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	CONDITIONS OF BOTTLES OR COILERS AT RECEIPT	☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP
1.	8-1-25	1.  8-1-25	Comments: _____ _____ _____	3.02
RELINQUISHED BY	DATE/TIME	2. _____		
2.		RECEIVED BY		
RELINQUISHED BY	DATE/TIME	3. _____	CLIENT: ☐ Hand Delivered ☐ Other: _____ CHEMTECH: ☐ Picked Up	Shipment Complete ☐ YES ☐ NO
3.	8-1-25	RECEIVED FOR LAB BY	Page _____ of _____	

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT

YELLOW - CHEMTech COPY

PINK - SAMPLER COPY

Shipment Complete
☐ YES ☐ NO

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2758	SCIA01	Order Date : 8/1/2025 4:14:00 PM	Project Mgr :
Client Name : Sciacca General Contractor		92 Clifford Street, Newark	Report Type : Results Only
Client Contact : Rosanne Scirica		Project Name : 89 E. Centre St, Nutley	EDD Type : EXCEL NJCLEANUP
Invoice Name : Sciacca General Contractor		Receive DateTime : 8/1/2025 12:00:00 AM	Hard Copy Date :
Invoice Contact : Rosanne Scirica		Purchase Order : 04:40:00 PM	Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2758-01	WASTE	Solid	08/01/2025	00:00	VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By :

Date / Time :


8/4/25 1040

Received By :

Date / Time :



08/04/25 10:40

Storage Area : VOA Refridgerator Room

Yg #6
Pg 2