

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “ Results Qualifiers” are used:

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

LAB CHRONICLE

OrderID:	Q2003	OrderDate:	5/9/2025 12:53:14 PM
Client:	Sciacca General Contractors, LLC	Project:	32 Sayer Pl, Hillsdale
Contact:	Rosanne Scirica	Location:	L41,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2003-01	WASTE	SOIL	TPH GC	8015D	05/09/25	05/16/25	05/16/25	05/09/25
Q2003-03	1	Solid	EPH_F2	NJEPH	05/09/25	05/15/25	05/16/25	05/09/25
Q2003-04	2	Solid	EPH_F2	NJEPH	05/09/25	05/15/25	05/16/25	05/09/25
Q2003-05	3	Solid	EPH_F2	NJEPH	05/09/25	05/15/25	05/16/25	05/09/25
Q2003-06	4	Solid	EPH_F2	NJEPH	05/09/25	05/15/25	05/16/25	05/09/25
Q2003-07	5	Solid	EPH_F2	NJEPH	05/09/25	05/15/25	05/16/25	05/09/25



QC SUMMARY

SOIL TPH GC SURROGATE RECOVERY

Lab Name: Chemtech Client: Sciacca General Contractors, LLC
Lab Code: CHEM Case No.: Q2003 SAS No.: Q2003 SDG No.: Q2003

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015850.D	85				0
PIBLK-FF015859.D	92				0
PB168042BL	81				0
PB168042BS	87				0
WASTE	65				0
WASTEMS	61				0
WASTEMSD	58				0

QC LIMITS

TETRACOSANE-d50

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

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

SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Sciacca General Contractors, LLC
Lab Code: CHEM **Cas No:** Q2003 **SAS No :** Q2003 **SDG No:** Q2003
Client SampleID : WASTEMS **Datafile:** FF015857.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
Petroleum Hydrocarbons	13115	15600	27118	88%		68-131

SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Chemtech **Client:** Sciacca General Contractors, LLC
Lab Code: CHEM **Cas No:** Q2003 **SAS No :** Q2003 **SDG No:** Q2003
Client SampleID : WASTEMSD **Datafile:** FF015858.D

COMPOUND	SPIKE ADDED ug/kg	SAMPLE CONCENTRATION ug/kg	MS/MSD CONCENTRATION ug/kg	% REC	Qual	QC LIMITS
Petroleum Hydrocarbons	13124	15600	26693	84%		68-131

MS/MSD % Recovery RPD : 3.8

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

Lab Name: Chemtech **Client:** Sciacca General Contractors, LLC
Lab Code: CHEM **Cas No:** Q2003 **SAS No :** Q2003 **SDG No:** Q2003
Matrix Spike - EPA Sample No : PB168042BS **Datafile:** FF015854.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
Petroleum Hydrocarbons	11326	0	9075	80	68-131

4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB168042BL

Lab Name: CHEMTECH

Contract: SCIA01

Lab Code: CHEM Case No.: Q2003

SAS No.: Q2003 SDG NO.: Q2003

Lab File ID: FF015853.D

Lab Sample ID: PB168042BL

Instrument ID: FF

Date Extracted: 05/16/2025

Matrix: (soil/water) Soil

Date Analyzed: 05/16/25

Level: (low/med) low

Time Analyzed: 12:00

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB168042BS	PB168042BS	FF015854.D	05/16/25
WASTE	Q2003-01	FF015855.D	05/16/25
WASTEMS	Q2003-01MS	FF015857.D	05/16/25
WASTEMSD	Q2003-01MSD	FF015858.D	05/16/25

COMMENTS: _____



SAMPLE DATA

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	05/09/25
Project:	32 Sayer Pl, Hillsdale	Date Received:	05/09/25
Client Sample ID:	WASTE	SDG No.:	Q2003
Lab Sample ID:	Q2003-01	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	86.3
Sample Wt/Vol:	30.07	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	TPH GC
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015855.D	1	05/16/25 08:50	05/16/25 12:58	PB168042

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	15600		444	3280	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	13.0		37 - 130	65%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015855.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:58
Operator : YP\AJ
Sample : Q2003-01
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: May 17 02:43:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.018	1471831	13.043 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

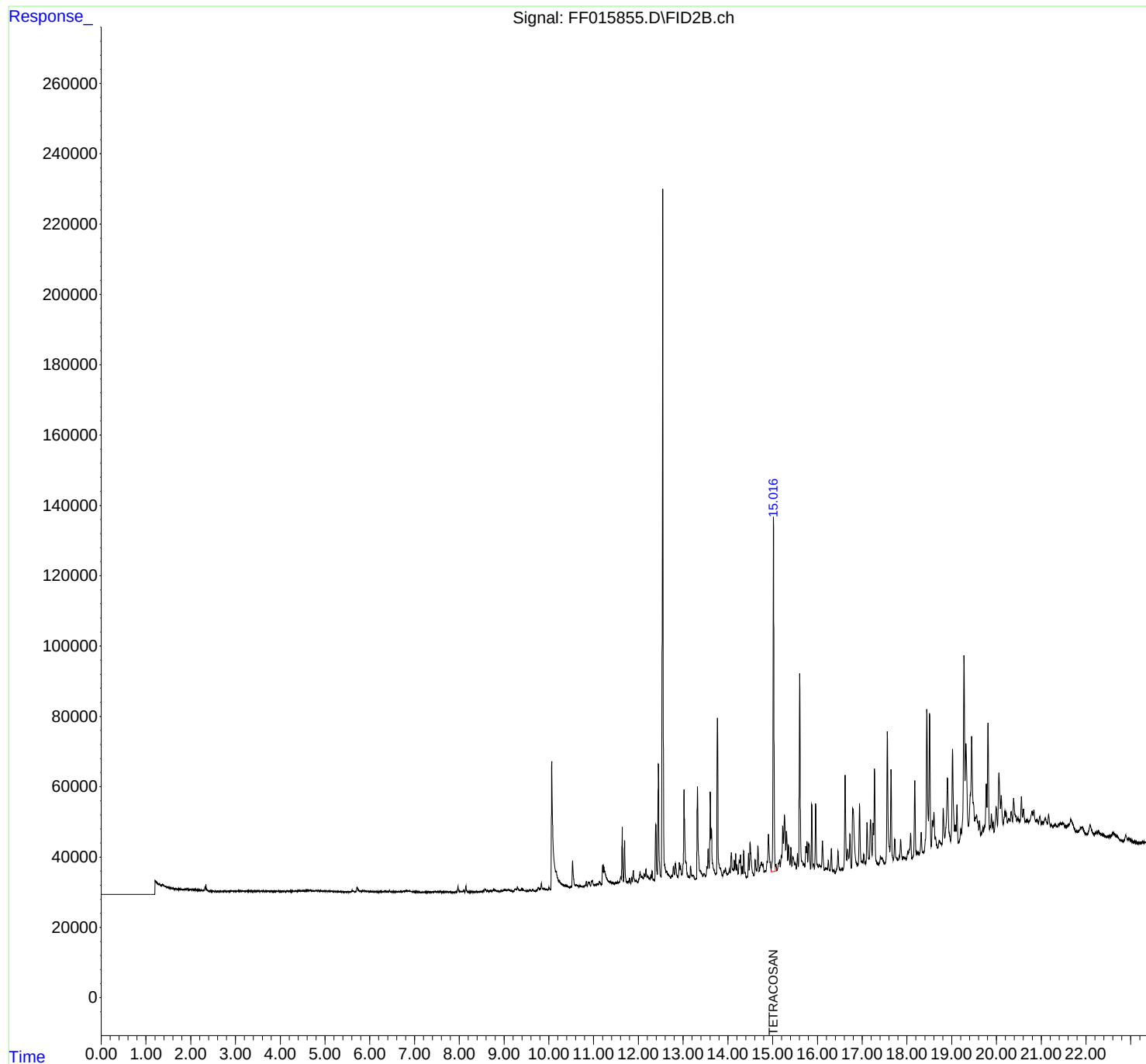
(m)=manual int.

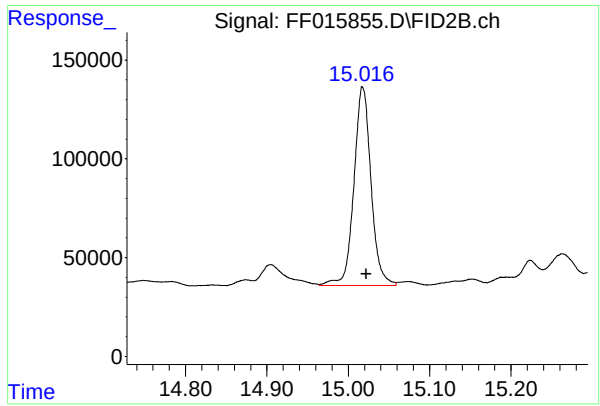
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015855.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:58
Operator : YP\AJ
Sample : Q2003-01
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
WASTE

Integration File: autoint1.e
Quant Time: May 17 02:43:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.018 min
Delta R.T.: -0.005 min
Response: 1471831
Conc: 13.04 ug/ml

Instrument :
FID_F
ClientSampleId :
WASTE

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015855.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:58
Sample : Q2003-01
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.923	1.900	1.954	BV	196	2692	0.10%	0.006%
2	1.961	1.954	1.974	PV	120	917	0.03%	0.002%
3	1.978	1.974	1.990	VV	76	700	0.03%	0.002%
4	1.995	1.990	2.006	VV	164	850	0.03%	0.002%
5	2.012	2.006	2.023	VV	129	628	0.02%	0.001%
6	2.046	2.023	2.070	PV	225	3141	0.11%	0.007%
7	2.073	2.070	2.083	VV	109	791	0.03%	0.002%
8	2.092	2.083	2.096	VV	190	1148	0.04%	0.003%
9	2.110	2.096	2.118	VV	280	2309	0.08%	0.005%
10	2.120	2.118	2.129	VV	235	1188	0.04%	0.003%
11	2.133	2.129	2.139	VV	195	794	0.03%	0.002%
12	2.147	2.139	2.158	VV	168	1683	0.06%	0.004%
13	2.163	2.158	2.182	VV	156	2090	0.08%	0.005%
14	2.187	2.182	2.191	VV	194	819	0.03%	0.002%
15	2.196	2.191	2.219	VV	248	2685	0.10%	0.006%
16	2.224	2.219	2.238	VV	209	1451	0.05%	0.003%
17	2.241	2.238	2.258	VV	220	1536	0.06%	0.003%
18	2.268	2.258	2.282	VV	188	2224	0.08%	0.005%
19	2.288	2.282	2.295	VV	240	1461	0.05%	0.003%
20	2.318	2.295	2.346	VV	1172	20460	0.74%	0.046%
21	2.354	2.346	2.417	VV	606	10817	0.39%	0.024%
22	2.442	2.417	2.462	PV	189	2517	0.09%	0.006%
23	2.470	2.462	2.492	PV	133	1187	0.04%	0.003%
24	2.496	2.492	2.502	VV	123	409	0.01%	0.001%
25	2.514	2.502	2.539	VV	116	1616	0.06%	0.004%
26	2.542	2.539	2.548	VV	113	337	0.01%	0.001%
27	2.553	2.548	2.566	VV	80	579	0.02%	0.001%
28	2.569	2.566	2.587	PV	116	774	0.03%	0.002%
29	2.595	2.587	2.613	VV	162	1593	0.06%	0.004%
30	2.616	2.613	2.631	VV	139	692	0.03%	0.002%
31	2.636	2.631	2.663	VV	168	1439	0.05%	0.003%
32	2.673	2.663	2.692	VV	112	867	0.03%	0.002%
33	2.702	2.692	2.718	VV	101	656	0.02%	0.001%
34	2.735	2.718	2.744	VV	124	1141	0.04%	0.003%
35	2.752	2.744	2.756	VV	108	414	0.02%	0.001%
36	2.764	2.756	2.768	PV	143	596	0.02%	0.001%

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37	2.773	2.768	2.795	VV	148	1293	0.05%	0.003%
38	2.820	2.795	2.825	VV	142	1468	0.05%	0.003%
39	2.842	2.825	2.847	VV	226	1898	0.07%	0.004%
40	2.850	2.847	2.855	VV	219	806	0.03%	0.002%
41	2.861	2.855	2.870	VV	179	1310	0.05%	0.003%
42	2.876	2.870	2.902	VV	212	2544	0.09%	0.006%
43	2.916	2.902	2.924	VV	181	1738	0.06%	0.004%
44	2.934	2.924	2.947	VV	192	1814	0.07%	0.004%
45	2.956	2.947	2.975	VV	161	1850	0.07%	0.004%
46	2.988	2.975	2.996	VV	168	1395	0.05%	0.003%
47	3.003	2.996	3.029	VV	186	2369	0.09%	0.005%
48	3.035	3.029	3.039	VV	114	514	0.02%	0.001%
49	3.055	3.039	3.060	VV	202	1842	0.07%	0.004%
50	3.065	3.060	3.083	VV	253	2694	0.10%	0.006%
51	3.100	3.083	3.112	VV	290	3959	0.14%	0.009%
52	3.116	3.112	3.145	VV	326	3936	0.14%	0.009%
53	3.148	3.145	3.152	VV	175	635	0.02%	0.001%
54	3.167	3.152	3.200	VV	186	3981	0.14%	0.009%
55	3.205	3.200	3.218	VV	162	1344	0.05%	0.003%
56	3.228	3.218	3.236	VV	174	1420	0.05%	0.003%
57	3.242	3.236	3.252	VV	200	1422	0.05%	0.003%
58	3.257	3.252	3.262	VV	166	806	0.03%	0.002%
59	3.272	3.262	3.289	VV	192	1996	0.07%	0.004%
60	3.294	3.289	3.304	VV	209	1406	0.05%	0.003%
61	3.308	3.304	3.314	VV	191	1032	0.04%	0.002%
62	3.319	3.314	3.337	VV	219	2488	0.09%	0.006%
63	3.352	3.337	3.378	VV	214	3549	0.13%	0.008%
64	3.388	3.378	3.408	VV	172	2027	0.07%	0.005%
65	3.412	3.408	3.429	VV	196	1488	0.05%	0.003%
66	3.433	3.429	3.438	VV	216	746	0.03%	0.002%
67	3.476	3.438	3.487	VV	301	5665	0.21%	0.013%
68	3.498	3.487	3.507	VV	251	2209	0.08%	0.005%
69	3.517	3.507	3.524	VV	166	1642	0.06%	0.004%
70	3.546	3.524	3.553	VV	214	2883	0.10%	0.006%
71	3.557	3.553	3.575	VV	178	2134	0.08%	0.005%
72	3.589	3.575	3.607	VV	211	3001	0.11%	0.007%
73	3.619	3.607	3.642	VV	244	4355	0.16%	0.010%
74	3.648	3.642	3.675	VV	173	2942	0.11%	0.007%
75	3.701	3.675	3.709	VV	167	2761	0.10%	0.006%
76	3.722	3.709	3.737	VV	157	2358	0.09%	0.005%
77	3.750	3.737	3.781	VV	213	3994	0.15%	0.009%
78	3.787	3.781	3.798	VV	166	1451	0.05%	0.003%
79	3.803	3.798	3.807	VV	206	827	0.03%	0.002%
80	3.809	3.807	3.836	VV	206	2674	0.10%	0.006%
81	3.841	3.836	3.887	VV	206	4736	0.17%	0.011%
82	3.890	3.887	3.909	VV	169	1823	0.07%	0.004%
83	3.914	3.909	3.925	VV	193	1442	0.05%	0.003%
84	3.942	3.925	3.949	VV	206	2215	0.08%	0.005%
85	3.954	3.949	3.967	VV	200	1512	0.05%	0.003%
86	3.974	3.967	3.978	VV	139	763	0.03%	0.002%
87	3.986	3.978	3.991	VV	169	988	0.04%	0.002%
88	3.994	3.991	3.997	VV	117	481	0.02%	0.001%
89	4.001	3.997	4.006	VV	209	733	0.03%	0.002%

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90	4.010	4.006	4.015	VV	188	874	0.03%	0.002%
91	4.040	4.015	4.063	VV	251	5269	0.19%	0.012%
92	4.068	4.063	4.071	VV	175	715	0.03%	0.002%
93	4.079	4.071	4.089	VV	212	1855	0.07%	0.004%
94	4.092	4.089	4.109	VV	214	1982	0.07%	0.004%
95	4.115	4.109	4.135	VV	220	2584	0.09%	0.006%
96	4.155	4.135	4.177	VV	240	4609	0.17%	0.010%
97	4.181	4.177	4.207	VV	206	2983	0.11%	0.007%
98	4.209	4.207	4.269	VV	188	5535	0.20%	0.012%
99	4.275	4.269	4.286	VV	209	1739	0.06%	0.004%
100	4.291	4.286	4.319	VV	226	3790	0.14%	0.008%
101	4.327	4.319	4.340	VV	244	2506	0.09%	0.006%
102	4.369	4.340	4.376	VV	282	4712	0.17%	0.011%
103	4.410	4.376	4.432	VV	348	8990	0.33%	0.020%
104	4.448	4.432	4.480	VV	345	7892	0.29%	0.018%
105	4.486	4.480	4.490	VV	311	1795	0.07%	0.004%
106	4.494	4.490	4.507	VV	328	3033	0.11%	0.007%
107	4.511	4.507	4.527	VV	327	3580	0.13%	0.008%
108	4.536	4.527	4.545	VV	335	3455	0.13%	0.008%
109	4.587	4.545	4.659	VV	474	27852	1.01%	0.062%
110	4.684	4.659	4.706	VV	517	11898	0.43%	0.027%
111	4.712	4.706	4.718	VV	330	2271	0.08%	0.005%
112	4.770	4.718	4.776	VV	389	11256	0.41%	0.025%
113	4.818	4.793	4.836	VV	457	9452	0.34%	0.021%
114	4.852	4.836	4.914	VV	397	15536	0.57%	0.035%
115	4.920	4.914	4.949	VV	367	5984	0.22%	0.013%
116	4.956	4.949	4.994	VV	350	7570	0.28%	0.017%
117	5.003	4.994	5.043	VV	347	8186	0.30%	0.018%
118	5.074	5.043	5.188	VV	317	18847	0.69%	0.042%
119	5.195	5.188	5.315	VV	234	10331	0.38%	0.023%
120	5.336	5.315	5.397	VV	144	5185	0.19%	0.012%
121	5.418	5.397	5.438	PV	107	1765	0.06%	0.004%
122	5.452	5.438	5.472	VV	144	1750	0.06%	0.004%
123	5.484	5.472	5.505	VV	129	1367	0.05%	0.003%
124	5.514	5.505	5.537	VV	108	1620	0.06%	0.004%
125	5.561	5.537	5.585	VV	150	2769	0.10%	0.006%
126	5.608	5.585	5.681	VV	406	13086	0.48%	0.029%
127	5.716	5.681	5.772	VV	1469	35238	1.28%	0.079%
128	5.778	5.772	5.828	VV	407	11209	0.41%	0.025%
129	5.840	5.828	5.857	VV	419	5662	0.21%	0.013%
130	5.874	5.857	5.947	VV	428	16188	0.59%	0.036%
131	5.962	5.947	6.026	VV	234	9433	0.34%	0.021%
132	6.040	6.026	6.054	VV	214	2608	0.09%	0.006%
133	6.062	6.054	6.102	VV	127	3341	0.12%	0.007%
134	6.113	6.102	6.154	VV	187	3933	0.14%	0.009%
135	6.170	6.154	6.274	VV	208	11174	0.41%	0.025%
136	6.296	6.274	6.330	VV	217	6035	0.22%	0.013%
137	6.362	6.330	6.407	VV	312	9942	0.36%	0.022%
138	6.442	6.407	6.500	VV	462	10910	0.40%	0.024%
139	6.517	6.500	6.567	VV	261	4718	0.17%	0.011%
140	6.588	6.567	6.629	VV	160	4479	0.16%	0.010%
141	6.646	6.629	6.667	VV	198	3641	0.13%	0.008%

					rteres			
142	6.696	6.667	6.730	VV	276	8706	0.32%	0.019%
143	6.760	6.730	6.778	VV	400	8882	0.32%	0.020%
144	6.817	6.778	6.875	VV	505	23299	0.85%	0.052%
145	6.880	6.875	6.958	VV	385	13624	0.50%	0.030%
146	6.970	6.958	6.999	VV	252	3351	0.12%	0.007%
147	7.011	6.999	7.029	VV	140	2038	0.07%	0.005%
148	7.067	7.029	7.157	VV	177	6619	0.24%	0.015%
149	7.198	7.157	7.220	VV	109	1802	0.07%	0.004%
150	7.232	7.220	7.250	PV	98	1202	0.04%	0.003%
151	7.278	7.250	7.330	VV	141	4831	0.18%	0.011%
152	7.341	7.330	7.357	VV	130	1523	0.06%	0.003%
153	7.364	7.357	7.385	VV	120	1578	0.06%	0.004%
154	7.423	7.385	7.435	VV	139	3458	0.13%	0.008%
155	7.452	7.435	7.497	VV	302	6506	0.24%	0.015%
156	7.519	7.497	7.567	VV	158	6165	0.22%	0.014%
157	7.577	7.567	7.619	VV	157	3296	0.12%	0.007%
158	7.629	7.619	7.657	VV	181	2757	0.10%	0.006%
159	7.664	7.657	7.672	VV	156	1169	0.04%	0.003%
160	7.707	7.672	7.794	VV	286	10207	0.37%	0.023%
161	7.803	7.794	7.837	VV	62	1609	0.06%	0.004%
162	7.845	7.837	7.890	VV	147	1140	0.04%	0.003%
163	7.972	7.890	8.010	PV	1744	29327	1.07%	0.065%
164	8.016	8.010	8.071	VV	244	8481	0.31%	0.019%
165	8.096	8.071	8.122	VV	476	9417	0.34%	0.021%
166	8.148	8.122	8.200	VV	1709	26529	0.96%	0.059%
167	8.212	8.200	8.227	VV	91	1302	0.05%	0.003%
168	8.259	8.227	8.308	VV	124	3310	0.12%	0.007%
169	8.319	8.308	8.353	VV	91	968	0.04%	0.002%
170	8.378	8.353	8.413	PV	149	2414	0.09%	0.005%
171	8.423	8.413	8.454	VV	132	1176	0.04%	0.003%
172	8.483	8.454	8.506	PV	123	2219	0.08%	0.005%
173	8.573	8.506	8.638	VV	830	28191	1.03%	0.063%
174	8.708	8.638	8.733	VV	375	13473	0.49%	0.030%
175	8.761	8.733	8.874	VV	612	32909	1.20%	0.073%
176	8.882	8.874	8.915	VV	202	3268	0.12%	0.007%
177	8.934	8.915	8.950	VV	394	5184	0.19%	0.012%
178	9.020	8.950	9.056	VV	494	22849	0.83%	0.051%
179	9.101	9.056	9.198	VV	654	25454	0.93%	0.057%
180	9.245	9.198	9.283	VV	661	20095	0.73%	0.045%
181	9.300	9.283	9.334	VV	1292	23613	0.86%	0.053%
182	9.350	9.334	9.370	VV	430	7661	0.28%	0.017%
183	9.394	9.370	9.423	VV	728	15371	0.56%	0.034%
184	9.429	9.423	9.459	VV	413	6940	0.25%	0.015%
185	9.469	9.459	9.538	VV	215	6170	0.22%	0.014%
186	9.571	9.538	9.611	PV	429	7675	0.28%	0.017%
187	9.636	9.611	9.670	PV	496	7398	0.27%	0.017%
188	9.678	9.670	9.703	VV	57	658	0.02%	0.001%
189	9.761	9.703	9.798	PV	882	24447	0.89%	0.055%
190	9.835	9.798	9.880	VV	2006	42948	1.56%	0.096%
191	9.894	9.880	9.937	VV	581	13377	0.49%	0.030%
192	9.947	9.937	9.974	VV	289	4410	0.16%	0.010%
193	10.005	9.974	10.046	VV	783	13846	0.50%	0.031%
194	10.066	10.046	10.154	VV	36056	882482	32.10%	1.969%

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195	10.163	10.154	10.290	VV	5256	234539	8.53%	0.523%
196	10.296	10.290	10.360	VV	1431	50578	1.84%	0.113%
197	10.368	10.360	10.436	VV	1060	40178	1.46%	0.090%
198	10.441	10.436	10.490	VV	657	17043	0.62%	0.038%
199	10.533	10.490	10.593	VV	7898	160007	5.82%	0.357%
200	10.613	10.593	10.669	VV	1039	39481	1.44%	0.088%
201	10.694	10.669	10.753	VV	805	29989	1.09%	0.067%
202	10.777	10.753	10.792	VV	484	10333	0.38%	0.023%
203	10.838	10.792	10.861	VV	1889	38318	1.39%	0.085%
204	10.884	10.861	10.895	VV	1645	23791	0.87%	0.053%
205	10.905	10.895	10.933	VV	1568	24618	0.90%	0.055%
206	10.973	10.933	11.013	VV	2029	60801	2.21%	0.136%
207	11.036	11.013	11.046	VV	837	14736	0.54%	0.033%
208	11.080	11.046	11.106	VV	931	28593	1.04%	0.064%
209	11.130	11.106	11.175	VV	1646	45584	1.66%	0.102%
210	11.204	11.175	11.217	VV	6198	88636	3.22%	0.198%
211	11.230	11.217	11.346	VV	5751	238661	8.68%	0.533%
212	11.359	11.346	11.404	VV	1435	42864	1.56%	0.096%
213	11.417	11.404	11.462	VV	1124	32503	1.18%	0.073%
214	11.486	11.462	11.508	VV	1112	25328	0.92%	0.057%
215	11.536	11.508	11.554	VV	1173	27039	0.98%	0.060%
216	11.607	11.554	11.618	VV	2671	62080	2.26%	0.139%
217	11.639	11.618	11.670	VV	16604	221661	8.06%	0.495%
218	11.693	11.670	11.760	VV	12696	207273	7.54%	0.462%
219	11.780	11.760	11.788	VV	1080	17294	0.63%	0.039%
220	11.808	11.788	11.830	VV	2007	33122	1.20%	0.074%
221	11.853	11.830	11.868	VV	2120	30299	1.10%	0.068%
222	11.888	11.868	11.930	VV	4165	81967	2.98%	0.183%
223	11.952	11.930	11.990	VV	1284	36550	1.33%	0.082%
224	12.038	11.990	12.062	VV	3712	95467	3.47%	0.213%
225	12.074	12.062	12.113	VV	2376	63671	2.32%	0.142%
226	12.131	12.113	12.153	VV	3101	59923	2.18%	0.134%
227	12.170	12.153	12.196	VV	4383	80183	2.92%	0.179%
228	12.210	12.196	12.243	VV	2382	56639	2.06%	0.126%
229	12.279	12.243	12.291	VV	2622	54782	1.99%	0.122%
230	12.307	12.291	12.336	VV	3729	60588	2.20%	0.135%
231	12.342	12.336	12.359	VV	1287	14497	0.53%	0.032%
232	12.390	12.359	12.422	VV	16922	279524	10.17%	0.624%
233	12.447	12.422	12.506	VV	34022	529219	19.25%	1.181%
234	12.545	12.506	12.626	VV	197794	2749309	100.00%	6.134%
235	12.638	12.626	12.725	VV	3258	136449	4.96%	0.304%
236	12.744	12.725	12.762	VV	2175	41452	1.51%	0.092%
237	12.785	12.762	12.806	VV	4703	83191	3.03%	0.186%
238	12.829	12.806	12.882	VV	5535	144903	5.27%	0.323%
239	12.916	12.882	12.933	VV	5567	112963	4.11%	0.252%
240	12.945	12.933	12.970	VV	4596	75955	2.76%	0.169%
241	13.020	12.970	13.115	VV	26345	633253	23.03%	1.413%
242	13.127	13.115	13.145	VV	1569	25622	0.93%	0.057%
243	13.168	13.145	13.193	VV	4457	74862	2.72%	0.167%
244	13.206	13.193	13.217	VV	1741	24676	0.90%	0.055%
245	13.227	13.217	13.272	VV	1790	39743	1.45%	0.089%
246	13.318	13.272	13.376	VV	26176	501457	18.24%	1.119%

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247	13.390	13.376	13.442	VV	3008	89271	3.25%	0.199%
248	13.464	13.442	13.501	VV	2052	61566	2.24%	0.137%
249	13.557	13.501	13.580	VV	9026	203633	7.41%	0.454%
250	13.606	13.580	13.623	VV	24930	356513	12.97%	0.795%
251	13.632	13.623	13.726	VV	14699	330068	12.01%	0.736%
252	13.767	13.726	13.883	VV	45715	775570	28.21%	1.731%
253	13.913	13.883	13.926	VV	2537	51865	1.89%	0.116%
254	13.944	13.926	13.989	VV	3253	81912	2.98%	0.183%
255	14.033	13.989	14.050	VV	3019	76004	2.76%	0.170%
256	14.077	14.050	14.124	VV	7543	175427	6.38%	0.391%
257	14.142	14.124	14.156	VV	5322	74053	2.69%	0.165%
258	14.172	14.156	14.191	VV	7235	101389	3.69%	0.226%
259	14.203	14.191	14.228	VV	3982	62131	2.26%	0.139%
260	14.252	14.228	14.265	VV	5258	85251	3.10%	0.190%
261	14.281	14.265	14.302	VV	6714	102294	3.72%	0.228%
262	14.317	14.302	14.333	VV	3652	46294	1.68%	0.103%
263	14.353	14.333	14.431	VV	7802	133091	4.84%	0.297%
264	14.460	14.431	14.476	VV	7179	90412	3.29%	0.202%
265	14.496	14.476	14.581	VV	10048	257283	9.36%	0.574%
266	14.608	14.581	14.646	VV	5087	106184	3.86%	0.237%
267	14.670	14.646	14.702	VV	8984	162772	5.92%	0.363%
268	14.749	14.702	14.771	VV	4275	139869	5.09%	0.312%
269	14.782	14.771	14.810	VV	3695	65904	2.40%	0.147%
270	14.834	14.810	14.847	VV	1929	38839	1.41%	0.087%
271	14.874	14.847	14.882	VV	4489	67211	2.44%	0.150%
272	14.905	14.882	14.964	VV	12165	306204	11.14%	0.683%
273	15.018	14.964	15.061	VV	102431	1560881	56.77%	3.483%
274	15.073	15.061	15.098	VV	3464	62493	2.27%	0.139%
275	15.152	15.098	15.169	VV	4686	140765	5.12%	0.314%
276	15.224	15.169	15.239	VV	14103	318110	11.57%	0.710%
277	15.263	15.239	15.290	VV	17372	394201	14.34%	0.880%
278	15.309	15.290	15.336	VV	12612	250152	9.10%	0.558%
279	15.353	15.336	15.385	VV	8641	178277	6.48%	0.398%
280	15.407	15.385	15.427	VV	7965	130231	4.74%	0.291%
281	15.450	15.427	15.487	VV	5317	152809	5.56%	0.341%
282	15.501	15.487	15.528	VV	3625	73903	2.69%	0.165%
283	15.554	15.528	15.573	VV	6142	104860	3.81%	0.234%
284	15.603	15.573	15.684	VV	57201	969394	35.26%	2.163%
285	15.699	15.684	15.717	VV	3287	58109	2.11%	0.130%
286	15.741	15.717	15.752	VV	7938	116325	4.23%	0.260%
287	15.766	15.752	15.784	VV	9492	132324	4.81%	0.295%
288	15.805	15.784	15.846	VV	8740	222061	8.08%	0.495%
289	15.872	15.846	15.898	VV	20001	275842	10.03%	0.615%
290	15.912	15.898	15.932	VV	2950	50542	1.84%	0.113%
291	15.959	15.932	16.021	VV	19917	352216	12.81%	0.786%
292	16.040	16.021	16.086	VV	2812	89351	3.25%	0.199%
293	16.111	16.086	16.156	VV	9459	183777	6.68%	0.410%
294	16.182	16.156	16.195	VV	1636	31710	1.15%	0.071%
295	16.207	16.195	16.223	VV	1504	24160	0.88%	0.054%
296	16.243	16.223	16.280	VV	3715	66323	2.41%	0.148%
297	16.310	16.280	16.343	VV	7040	108444	3.94%	0.242%
298	16.361	16.343	16.399	VV	836	19248	0.70%	0.043%
299	16.459	16.399	16.523	PV	6187	134232	4.88%	0.300%

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300	16.549	16.523	16.570	VV	1027	20115	0.73%	0.045%
301	16.617	16.570	16.654	VV	27317	452097	16.44%	1.009%
302	16.675	16.654	16.698	VV	6247	126403	4.60%	0.282%
303	16.726	16.698	16.758	VV	10484	183315	6.67%	0.409%
304	16.788	16.758	16.903	VV	17485	608412	22.13%	1.358%
305	16.940	16.903	16.986	VV	18798	350177	12.74%	0.781%
306	16.998	16.986	17.015	VV	2225	35953	1.31%	0.080%
307	17.035	17.015	17.059	VV	4143	71036	2.58%	0.159%
308	17.069	17.059	17.080	VV	1803	20374	0.74%	0.045%
309	17.107	17.080	17.155	VV	13050	263249	9.58%	0.587%
310	17.185	17.155	17.221	VV	13589	318723	11.59%	0.711%
311	17.243	17.221	17.254	VV	12680	177818	6.47%	0.397%
312	17.274	17.254	17.364	VV	28094	479416	17.44%	1.070%
313	17.409	17.364	17.430	VV	2894	65824	2.39%	0.147%
314	17.445	17.430	17.505	VV	2441	69059	2.51%	0.154%
315	17.561	17.505	17.617	VV	37889	720025	26.19%	1.607%
316	17.644	17.617	17.695	VV	27033	434155	15.79%	0.969%
317	17.727	17.695	17.803	VV	7144	178768	6.50%	0.399%
318	17.859	17.803	17.902	VV	6668	171313	6.23%	0.382%
319	17.922	17.902	17.950	VV	1767	41552	1.51%	0.093%
320	17.963	17.950	17.982	VV	1411	24116	0.88%	0.054%
321	18.018	17.982	18.030	VV	2887	59063	2.15%	0.132%
322	18.082	18.030	18.113	VV	8191	198512	7.22%	0.443%
323	18.174	18.113	18.220	VV	22961	408595	14.86%	0.912%
324	18.231	18.220	18.247	VV	2501	37157	1.35%	0.083%
325	18.261	18.247	18.278	VV	2260	38937	1.42%	0.087%
326	18.318	18.278	18.373	VV	7995	207984	7.56%	0.464%
327	18.443	18.373	18.479	VV	42755	925886	33.68%	2.066%
328	18.506	18.479	18.542	VV	41454	754074	27.43%	1.683%
329	18.570	18.542	18.585	VV	10885	208580	7.59%	0.465%
330	18.602	18.585	18.636	VV	13246	285498	10.38%	0.637%
331	18.639	18.636	18.684	VV	5984	118898	4.32%	0.265%
332	18.720	18.684	18.783	VV	4945	235566	8.57%	0.526%
333	18.810	18.783	18.845	VV	13851	304529	11.08%	0.679%
334	18.904	18.845	18.972	VV	22315	805229	29.29%	1.797%
335	19.018	18.972	19.062	VV	30251	746002	27.13%	1.665%
336	19.080	19.062	19.096	VV	8670	156426	5.69%	0.349%
337	19.116	19.096	19.147	VV	14344	266166	9.68%	0.594%
338	19.202	19.147	19.217	VV	7292	211729	7.70%	0.472%
339	19.274	19.217	19.298	VV	56407	1197749	43.57%	2.673%
340	19.317	19.298	19.374	VV	31217	888157	32.30%	1.982%
341	19.445	19.374	19.513	VV	32970	1363848	49.61%	3.043%
342	19.554	19.513	19.604	VV	10731	497537	18.10%	1.110%
343	19.621	19.604	19.646	VV	8901	174304	6.34%	0.389%
344	19.697	19.646	19.712	VV	6865	225546	8.20%	0.503%
345	19.771	19.712	19.787	VV	18874	477874	17.38%	1.066%
346	19.810	19.787	19.844	VV	36220	687454	25.00%	1.534%
347	19.858	19.844	19.867	VV	7033	89839	3.27%	0.200%
348	19.887	19.867	19.908	VV	10264	201123	7.32%	0.449%
349	19.926	19.908	19.947	VV	7890	155520	5.66%	0.347%
350	19.993	19.947	20.022	VV	11979	388943	14.15%	0.868%
351	20.054	20.022	20.088	VV	21546	595524	21.66%	1.329%

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352	20.107	20.088	20.147	VV	14986	384986	14.00%	0.859%
353	20.187	20.147	20.201	VV	10570	283738	10.32%	0.633%
354	20.218	20.201	20.248	VV	10001	243466	8.86%	0.543%
355	20.271	20.248	20.303	VV	8238	258517	9.40%	0.577%
356	20.327	20.303	20.357	VV	10046	281837	10.25%	0.629%
357	20.382	20.357	20.455	VV	13692	567488	20.64%	1.266%
358	20.478	20.455	20.503	VV	7901	216503	7.87%	0.483%
359	20.513	20.503	20.530	VV	7327	115423	4.20%	0.258%
360	20.557	20.530	20.582	VV	13880	320956	11.67%	0.716%
361	20.604	20.582	20.660	VV	10274	377754	13.74%	0.843%
362	20.671	20.660	20.686	VV	7081	108967	3.96%	0.243%
363	20.694	20.686	20.726	VV	6859	157918	5.74%	0.352%
364	20.794	20.726	20.814	VV	9313	415410	15.11%	0.927%
365	20.836	20.814	20.879	VV	9627	306483	11.15%	0.684%
366	20.898	20.879	20.937	VV	6666	222538	8.09%	0.497%
367	20.966	20.937	21.001	VV	7485	247311	9.00%	0.552%
368	21.019	21.001	21.039	VV	5739	128291	4.67%	0.286%
369	21.092	21.039	21.136	VV	6933	348480	12.68%	0.778%
370	21.164	21.136	21.266	VV	7690	406882	14.80%	0.908%
371	21.320	21.266	21.356	VV	4524	230380	8.38%	0.514%
372	21.393	21.356	21.403	VV	4543	118864	4.32%	0.265%
373	21.433	21.403	21.452	VV	4683	132673	4.83%	0.296%
374	21.482	21.452	21.533	VV	4796	211747	7.70%	0.472%
375	21.545	21.533	21.570	VV	3680	77215	2.81%	0.172%
376	21.664	21.570	21.816	VV	5326	498223	18.12%	1.112%
377	21.884	21.816	21.898	VV	2620	100647	3.66%	0.225%
378	21.915	21.898	22.007	VV	2689	104373	3.80%	0.233%
379	22.096	22.007	22.186	VV	2802	127105	4.62%	0.284%
					Sum of corrected areas:	44817284		

FF042225.M Sat May 17 04:03:10 2025



CALIBRATION SUMMARY

TPH GC INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: SCIA01
 ProjectID: 32 Sayer Pl, Hillsdale
 Lab Code: CHEM Case No.: Q2003 SAS No.: Q2003 SDG No.: Q2003

Calibration Sequence : FF042225		Test : TPH GC	
Concentration (PPM)	Area Count	Reference Factor	File ID
1700	171154261	100679	FF015786.D
850	88482232	104097	FF015787.D
340	33178146	97583	FF015788.D
170	17736847	104334	FF015789.D
85	10850659	127655	FF015790.D
AVG RF : 106870		% RSD : 11.177	AVG RT : 15.02

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: SCIA01
ProjectID: 32 Sayer Pl, Hillsdale
Lab Code: CHEM Case No.: Q2003 SAS No.: Q2003 SDG No.: Q2003
DataFile: FF015851.D Analyst Name: YP\AJ Analyst Date: 05-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	91013278	107074	106870	0.191

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
 Data File : FF015851.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 10:58
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 17 03:22:35 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 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...	15.020	5416282	47.996 ug/ml
Target Compounds			
1) N-OCTANE	2.024	5035157	44.415 ug/ml
2) N-DECANE	4.563	5651919	55.386 ug/ml
3) N-DODECANE	6.732	5858998	53.509 ug/ml
4) N-TETRADECANE	8.559	5857223	50.747 ug/ml
5) N-HEXADECANE	10.167	5922934	50.186 ug/ml
6) N-OCTADECANE	11.611	6115886	48.617 ug/ml
7) N-EICOSANE	12.921	6097403	46.739 ug/ml
8) N-DOCOSANE	14.120	5992526	47.045 ug/ml
10) N-TETRACOSANE	15.225	5985264	47.582 ug/ml
11) N-HEXACOSANE	16.246	5879573	48.234 ug/ml
12) N-OCTACOSANE	17.197	5885058	49.734 ug/ml
13) N-TRIACONTANE	18.085	6048254	51.318 ug/ml
14) N-DOTRIACONTANE	18.918	5854349	51.387 ug/ml
15) N-TETRATRIACONTANE	19.702	4871486	48.829 ug/ml
16) N-HEXATRIACONTANE	20.441	3788127	47.479 ug/ml
17) N-OCTATRIACONTANE	21.177	3226591	56.820 ug/ml
18) N-TETRACONTANE	22.087	2942530	72.360 ug/ml

(f)=RT Delta > 1/2 Window

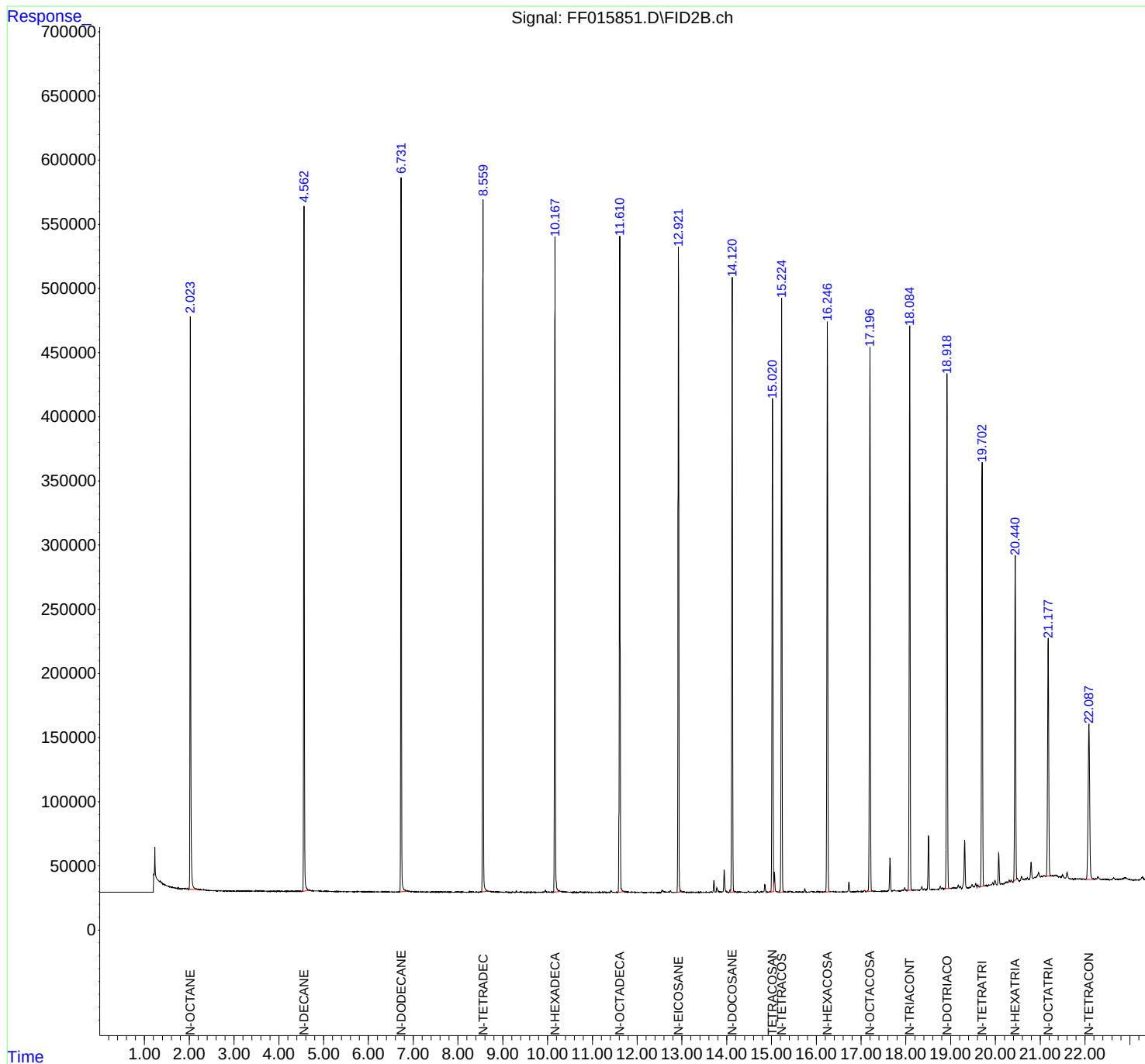
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015851.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 10:58
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 17 03:22:35 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015851.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 10:58
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.024	1.987	2.177	BB	444887	5035157	82.33%	5.222%
2	4.563	4.527	4.687	BB	533997	5651919	92.41%	5.861%
3	6.732	6.702	6.866	BB	556108	5858998	95.80%	6.076%
4	8.559	8.526	8.676	BB	539899	5857223	95.77%	6.074%
5	10.167	10.131	10.292	BB	512107	5922934	96.85%	6.142%
6	11.611	11.571	11.726	BB	510799	6115886	100.00%	6.342%
7	12.921	12.881	13.014	BB	502440	6097403	99.70%	6.323%
8	14.120	14.085	14.199	VB	479486	5992526	97.98%	6.214%
9	15.020	14.931	15.050	BV	384325	5416282	88.56%	5.617%
10	15.225	15.157	15.297	BB	461885	5985264	97.86%	6.207%
11	16.246	16.167	16.317	BB	444483	5879573	96.14%	6.097%
12	17.197	17.107	17.264	BB	423563	5885058	96.23%	6.103%
13	18.085	18.022	18.144	BB	437837	6048254	98.89%	6.272%
14	18.918	18.849	18.982	BB	400285	5854349	95.72%	6.071%
15	19.702	19.641	19.764	BB	330421	4871486	79.65%	5.052%
16	20.441	20.391	20.477	BV	252285	3788127	61.94%	3.928%
17	21.177	21.109	21.247	BB	185688	3226591	52.76%	3.346%
18	22.087	21.999	22.204	BB	121034	2942530	48.11%	3.051%
Sum of corrected areas:							96429559	

FF042225.M Sat May 17 04:00:06 2025

TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: SCIA01
ProjectID: 32 Sayer Pl, Hillsdale
Lab Code: CHEM Case No.: Q2003 SAS No.: Q2003 SDG No.: Q2003
DataFile: FF015860.D Analyst Name: YP\AJ Analyst Date: 05-16-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
850	93218015	109668	106870	2.618

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
 Data File : FF015860.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 15:25
 Operator : YP\AJ
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 50 PPM TRPH STD

Integration File: autoint1.e
 Quant Time: May 17 03:23:26 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 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...	15.022	5511246	48.838 ug/ml
Target Compounds			
1) N-OCTANE	2.023	5193231	45.810 ug/ml
2) N-DECANE	4.563	5840880	57.238 ug/ml
3) N-DODECANE	6.732	6018705	54.967 ug/ml
4) N-TETRADECANE	8.559	6009869	52.069 ug/ml
5) N-HEXADECANE	10.167	6057019	51.322 ug/ml
6) N-OCTADECANE	11.611	6249471	49.679 ug/ml
7) N-EICOSANE	12.922	6230842	47.762 ug/ml
8) N-DOCOSANE	14.121	6115185	48.008 ug/ml
10) N-TETRACOSANE	15.226	6117400	48.633 ug/ml
11) N-HEXACOSANE	16.248	5997523	49.201 ug/ml
12) N-OCTACOSANE	17.199	6013048	50.816 ug/ml
13) N-TRIACONTANE	18.088	6194967	52.563 ug/ml
14) N-DOTRIACONTANE	18.921	5983329	52.519 ug/ml
15) N-TETRATRIACONTANE	19.704	4887677	48.992 ug/ml
16) N-HEXATRIACONTANE	20.443	3925870	49.206 ug/ml
17) N-OCTATRIACONTANE	21.178	3334031	58.712 ug/ml
18) N-TETRACONTANE	22.089	3048968	74.977 ug/ml

(f)=RT Delta > 1/2 Window

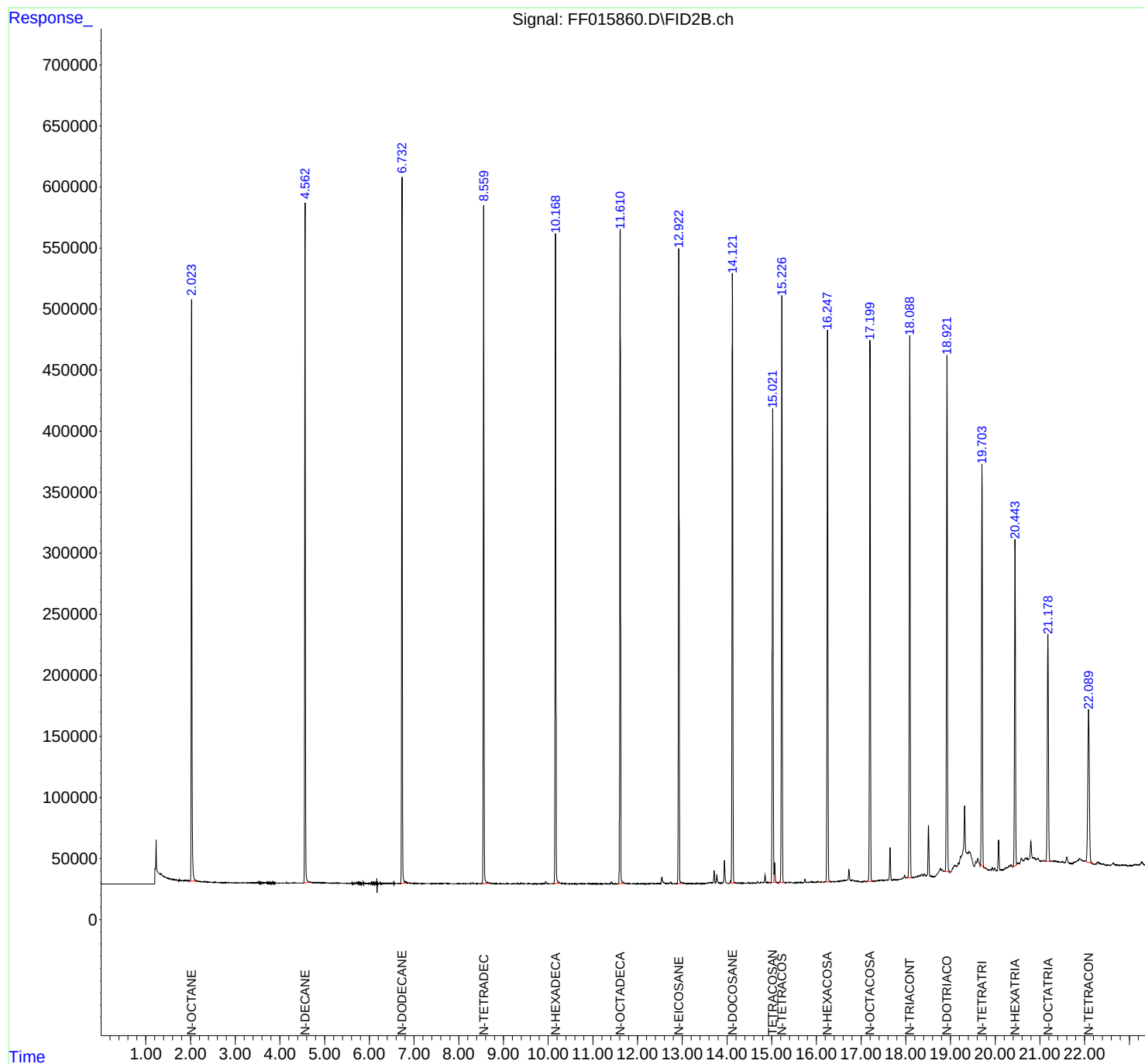
(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015860.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 15:25
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: May 17 03:23:26 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
 Data File : FF015860.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 15:25
 Sample : 50 PPM TRPH STD
 Misc :
 ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.023	1.987	2.152	BB	475590	5193231	83.10%	5.260%
2	4.563	4.514	4.674	BB	556950	5840880	93.46%	5.916%
3	6.732	6.696	6.842	BB	577612	6018705	96.31%	6.096%
4	8.559	8.527	8.672	BB	555308	6009869	96.17%	6.087%
5	10.167	10.129	10.267	BB	529697	6057019	96.92%	6.135%
6	11.611	11.561	11.711	BB	534896	6249471	100.00%	6.330%
7	12.922	12.882	13.006	BB	519783	6230842	99.70%	6.311%
8	14.121	14.087	14.186	VB	497967	6115185	97.85%	6.194%
9	15.022	14.952	15.052	BV	386826	5511246	88.19%	5.582%
10	15.226	15.131	15.296	BB	480489	6117400	97.89%	6.196%
11	16.248	16.182	16.311	BB	450751	5997523	95.97%	6.075%
12	17.199	17.104	17.269	BB	443371	6013048	96.22%	6.090%
13	18.088	18.019	18.141	BB	441455	6194967	99.13%	6.275%
14	18.921	18.852	18.997	BV	421991	5983329	95.74%	6.060%
15	19.704	19.641	19.774	BB	328406	4887677	78.21%	4.951%
16	20.443	20.391	20.477	BV	266288	3925870	62.82%	3.976%
17	21.178	21.102	21.254	BV	185961	3334031	53.35%	3.377%
18	22.089	21.999	22.227	BB	125391	3048968	48.79%	3.088%
Sum of corrected areas:							98729262	

FF042225.M Sat May 17 04:02:30 2025

Analytical Sequence

Client: Sciacca General Contractors, LLC

SDG No.: Q2003

Project: 32 Sayer Pl, Hillsdale

Instrument ID: FID_F

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 15.02					
EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	LBLK01	16 May 2025 10:28	FF015850.D	15.019	
50 PPM TRPH STD	50 PPM TRPH STD	16 May 2025 10:58	FF015851.D	15.020	
PB168042BL	PB168042BL	16 May 2025 12:00	FF015853.D	15.022	
PB168042BS	PB168042BS	16 May 2025 12:29	FF015854.D	15.018	
WASTE	Q2003-01	16 May 2025 12:58	FF015855.D	15.018	
WASTEMS	Q2003-01MS	16 May 2025 13:57	FF015857.D	15.017	
WASTEMSD	Q2003-01MSD	16 May 2025 14:27	FF015858.D	15.018	
PIBLK02	LBLK02	16 May 2025 14:56	FF015859.D	15.020	
50 PPM TRPH STD	50 PPM TRPH STD	16 May 2025 15:25	FF015860.D	15.022	



QC SAMPLE DATA

Report of Analysis

Client:	Sciacca General Contractors, LLC		Date Collected:		
Project:	32 Sayer Pl, Hillsdale		Date Received:		
Client Sample ID:	PB168042BL		SDG No.:	Q2003	
Lab Sample ID:	PB168042BL		Matrix:	SOIL	
Analytical Method:	8015D TPH		% Solid:	100	Decanted:
Sample Wt/Vol:	30.03	Units: g	Final Vol:	1	mL
Soil Aliquot Vol:		uL	Test:	TPH GC	
Extraction Type:			Injection Volume :		
GPC Factor :		PH :			
Prep Method :	SW3541				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015853.D	1	05/16/25 08:50	05/16/25 12:00	PB168042

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	16.2		37 - 130	81%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015853.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:00
Operator : YP\AJ
Sample : PB168042BL
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB168042BL

Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 05/19/2025
Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
Quant Time: May 17 02:43:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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...	15.021	1827497	16.194 ug/mlm
Target Compounds			

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015853.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:00
Operator : YP\AJ
Sample : PB168042BL
Misc :
ALS Vial : 71 Sample Multiplier: 1

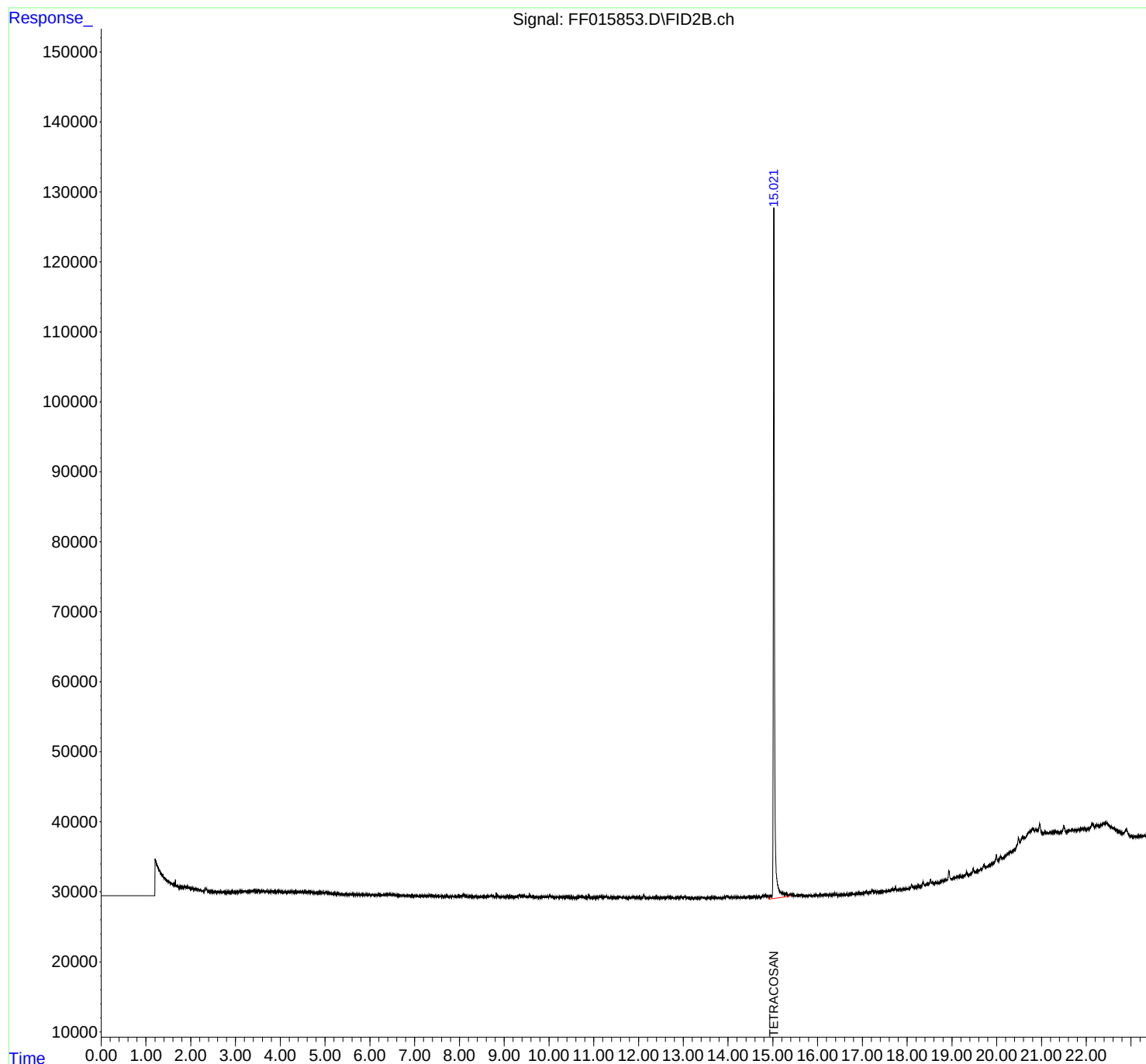
Instrument :
FID_F
ClientSampleId :
PB168042BL

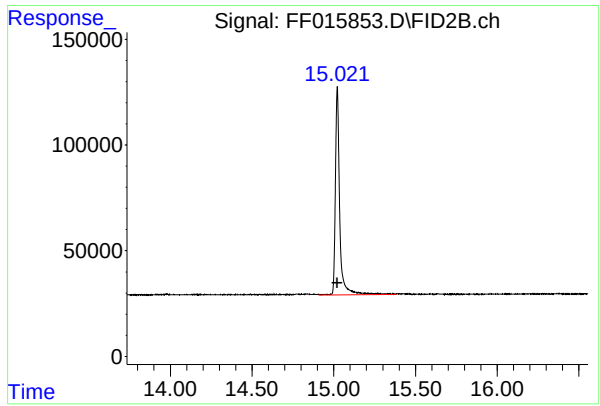
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 05/19/2025
Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
Quant Time: May 17 02:43:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.021 min
Delta R.T.: -0.001 min
Response: 1827497
Conc: 16.19 ug/ml

Instrument :

FID_F

ClientSampleId :

PB168042BL

Manual Integrations

APPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

rteres

Instrument :

FID_F

ClientSampleId :

PB168042BL

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF05162
Data File : FF015853.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:00
Sample : PB168042BL
Misc :
ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.022	14.979	15.164	BB	98509	1698390	100.00%	100.000%
Sum of corrected areas:						1698390		

FF042225.M Sat May 17 04:00:43 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	05/16/25
Project:	32 Sayer Pl, Hillsdale	Date Received:	05/16/25
Client Sample ID:	PIBLK-FF015850.D	SDG No.:	Q2003
Lab Sample ID:	I.BLK-FF015850.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
FF015850.D	1		05/16/25	FF051625

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	17.1		29 - 130	85%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015850.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 10:28
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 17 02:42:13 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.019	1928549	17.090 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

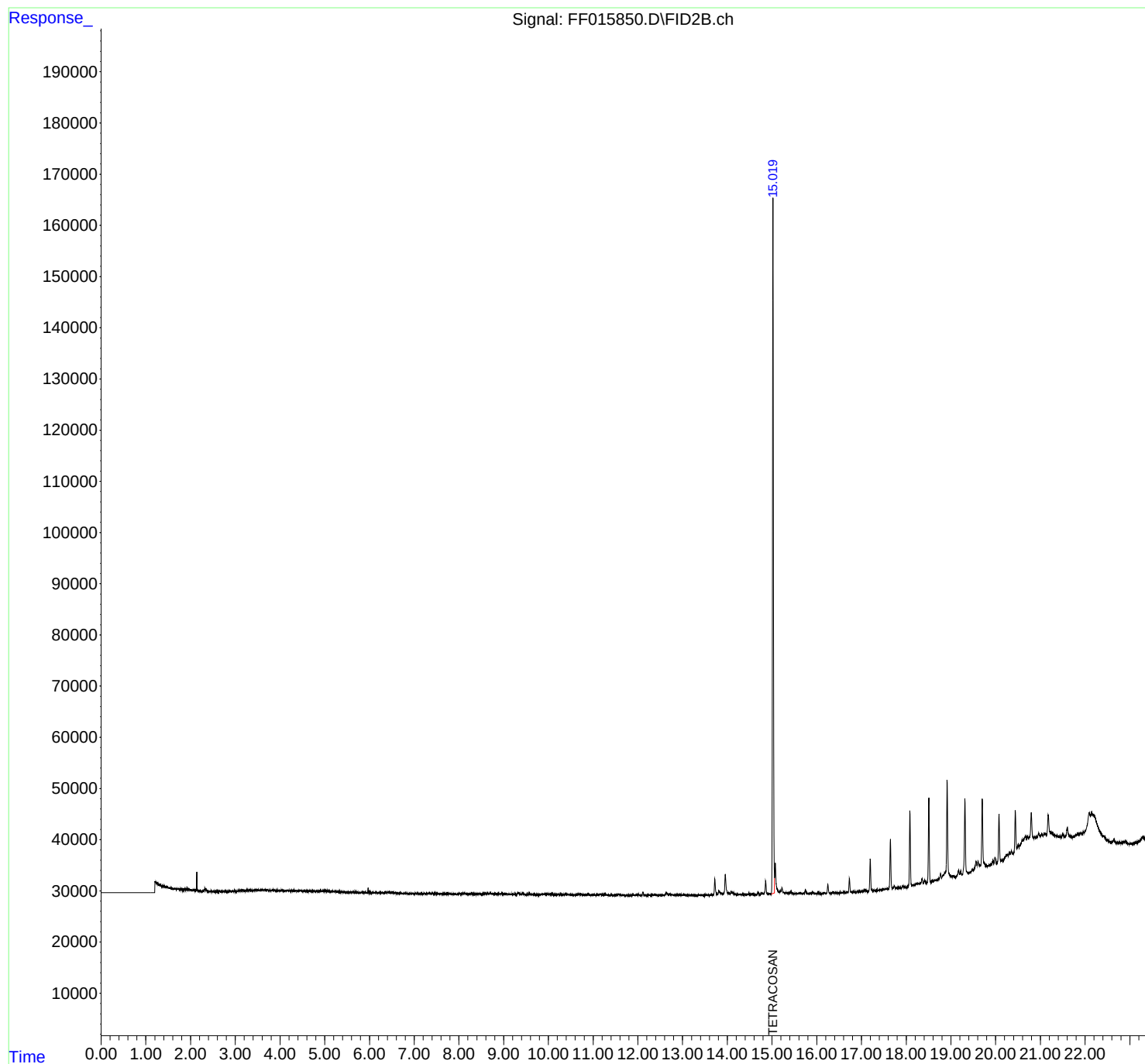
(m)=manual int.

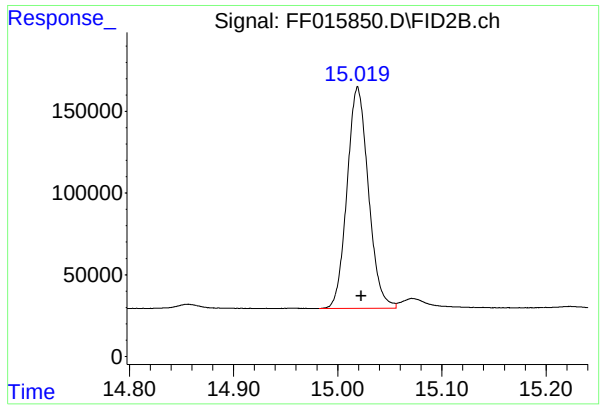
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015850.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 10:28
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 17 02:42:13 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.019 min

Delta R.T.: -0.003 min

Response: 1928549

Conc: 17.09 ug/ml

Instrument :

FID_F

ClientSampleId :

I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015850.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 10:28
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.019	14.982	15.056	BV	135125	1928549	100.00%	100.000%
Sum of corrected areas:						1928549		

FF042225.M Sat May 17 03:59:26 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	05/16/25
Project:	32 Sayer Pl, Hillsdale	Date Received:	05/16/25
Client Sample ID:	PIBLK-FF015859.D	SDG No.:	Q2003
Lab Sample ID:	I.BLK-FF015859.D	Matrix:	Water
Analytical Method:	8015D TPH	% Solid:	0
Sample Wt/Vol:	1000	Units:	mL
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TPH GC
GPC Factor :		Injection Volume :	
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015859.D	1		05/16/25	FF051625

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	18.4		29 - 130	92%	SPK: 20

Comments:

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

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015859.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 14:56
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 17 02:44:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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...	15.020	2070522	18.348 ug/ml

Target Compounds

(f)=RT Delta > 1/2 Window

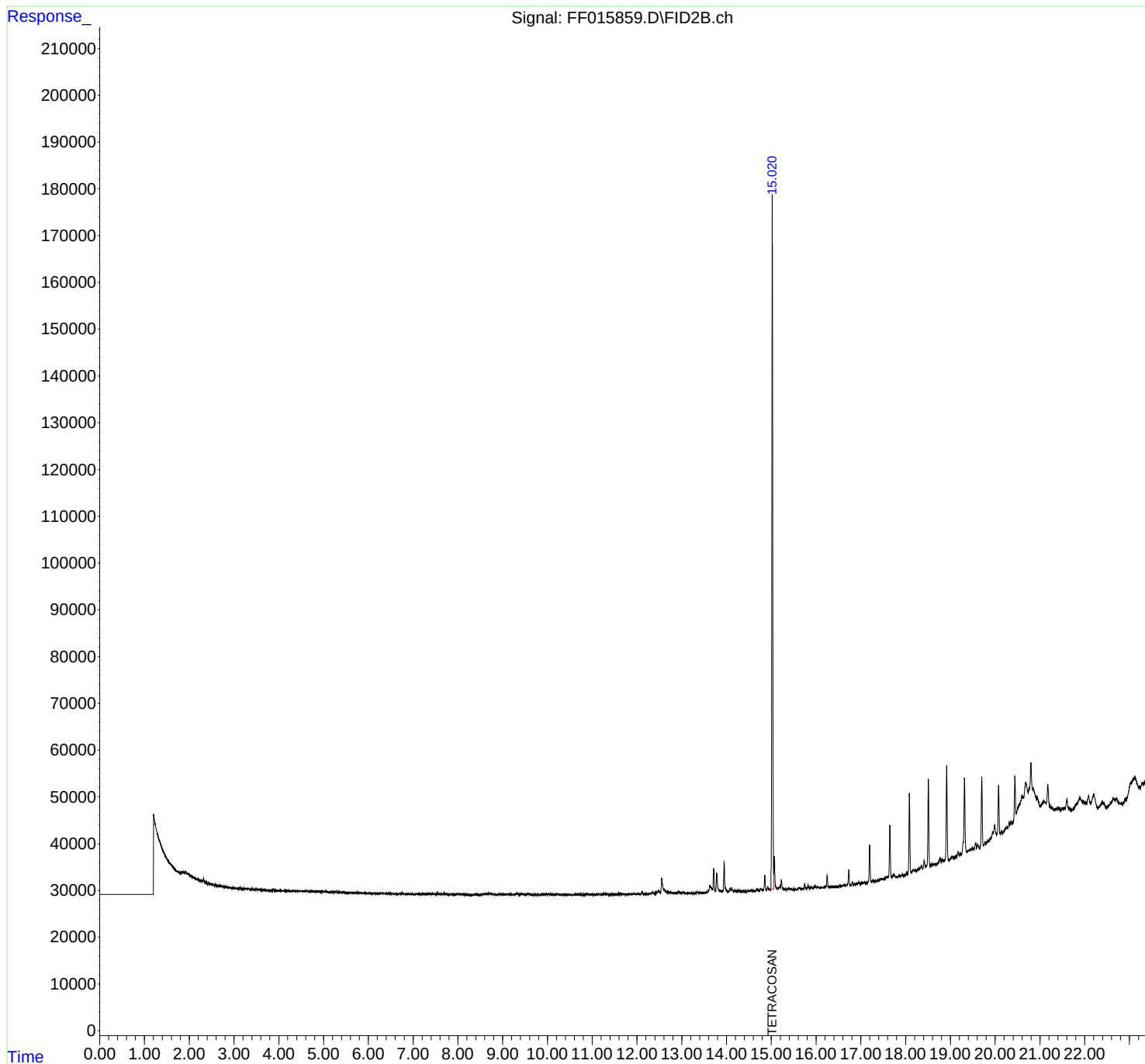
(m)=manual int.

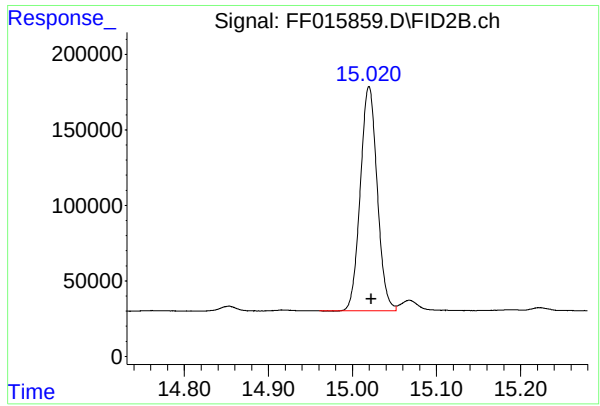
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015859.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 14:56
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: May 17 02:44:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 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.: 15.020 min

Delta R.T.: -0.003 min

Response: 2070522

Conc: 18.35 ug/ml

Instrument :

FID_F

ClientSampleId :

I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015859.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 14:56
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.020	14.960	15.052	BV	148707	2070522	100.00%	100.000%
Sum of corrected areas:						2070522		

FF042225.M Sat May 17 04:01:33 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	
Project:	32 Sayer Pl, Hillsdale	Date Received:	
Client Sample ID:	PB168042BS	SDG No.:	Q2003
Lab Sample ID:	PB168042BS	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	100
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	TPH GC
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015854.D	1	05/16/25 08:50	05/16/25 12:29	PB168042

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	9080		384	2830	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	17.4		37 - 130	87%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
 Data File : FF015854.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 12:29
 Operator : YP\AJ
 Sample : PB168042BS
 Misc :
 ALS Vial : 72 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 PB168042BS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 05/19/2025
 Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
 Quant Time: May 17 03:25:02 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.018	1959426	17.363 ug/ml
Target Compounds			
1) N-OCTANE	2.026	1762581	15.548 ug/ml
2) N-DECANE	4.563	1971501	19.320 ug/ml
3) N-DODECANE	6.731	2084779	19.040 ug/ml
4) N-TETRADECANE	8.558	2040941	17.683 ug/ml
5) N-HEXADECANE	10.166	2083484	17.654 ug/ml
6) N-OCTADECANE	11.609	2199205	17.482 ug/ml
7) N-EICOSANE	12.919	2189733	16.785 ug/ml
8) N-DOCOSANE	14.118	2176079	17.083 ug/ml
10) N-TETRACOSANE	15.222	2181844	17.345 ug/ml
11) N-HEXACOSANE	16.244	2126546	17.445 ug/ml
12) N-OCTACOSANE	17.195	2071334	17.505 ug/ml
13) N-TRIACONTANE	18.084	1992244	16.904 ug/ml
14) N-DOTRIACONTANE	18.916	1653692	14.515 ug/ml
15) N-TETRATRIACONTANE	19.700	994749	9.971 ug/ml
16) N-HEXATRIACONTANE	20.440	633505	7.940 ug/mlm
17) N-OCTATRIACONTANE	21.176	507067	8.929 ug/ml
18) N-TETRACONTANE	22.087	474592	11.671 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015854.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:29
Operator : YP\AJ
Sample : PB168042BS
Misc :
ALS Vial : 72 Sample Multiplier: 1

Instrument :

FID_F

Client SampleId :

PB168042BS

Manual Integrations

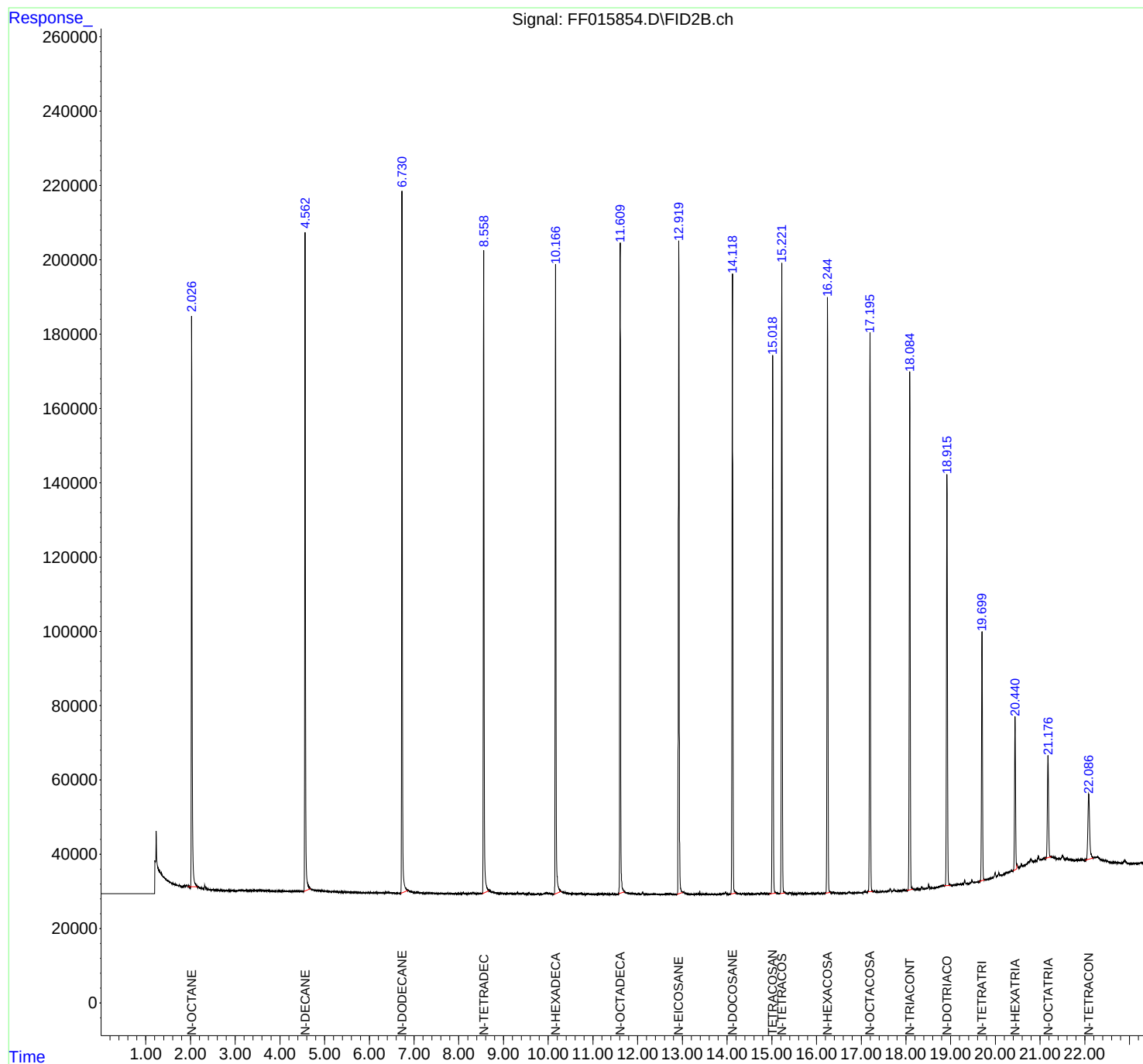
APPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
Quant Time: May 17 03:25:02 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Instrument :

FID_F

ClientSampleId :

PB168042BS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF05162
Data File : FF015854.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 12:29
Sample : PB168042BS
Misc :
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.026	1.941	2.151	BB	153490	1762581	80.15%	5.672%
2	4.563	4.536	4.682	BB	177440	1971501	89.65%	6.344%
3	6.731	6.699	6.859	BB	188867	2084779	94.80%	6.709%
4	8.558	8.529	8.672	BB	172914	2040941	92.80%	6.568%
5	10.166	10.131	10.287	BB	169096	2083484	94.74%	6.705%
6	11.609	11.577	11.707	BB	175139	2199205	100.00%	7.077%
7	12.919	12.879	13.009	BB	175689	2189733	99.57%	7.047%
8	14.118	14.076	14.197	BB	166534	2176079	98.95%	7.003%
9	15.018	14.941	15.091	BB	144898	1959426	89.10%	6.305%
10	15.222	15.184	15.296	BB	169979	2181844	99.21%	7.021%
11	16.244	16.206	16.312	BB	160294	2126546	96.70%	6.843%
12	17.195	17.152	17.261	BB	151013	2071334	94.19%	6.666%
13	18.084	18.022	18.157	BB	139368	1992244	90.59%	6.411%
14	18.916	18.859	18.996	BB	110552	1653692	75.19%	5.322%
15	19.700	19.641	19.757	BB	66530	994749	45.23%	3.201%
16	20.440	20.391	20.474	BV	40428	605555	27.54%	1.949%
17	21.176	21.109	21.247	BB	27412	507067	23.06%	1.632%
18	22.087	22.009	22.187	BB	17555	474592	21.58%	1.527%
Sum of corrected areas:						31075352		

FF042225.M Sat May 17 04:01:01 2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	05/09/25
Project:	32 Sayer Pl, Hillsdale	Date Received:	05/09/25
Client Sample ID:	WASTEMS	SDG No.:	Q2003
Lab Sample ID:	Q2003-01MS	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	86.3
Sample Wt/Vol:	30.04	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	TPH GC
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015857.D	1	05/16/25 08:50	05/16/25 13:57	PB168042

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	27100		444	3280	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_F\Data\FF051625\
 Data File : FF015857.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 13:57
 Operator : YP\AJ
 Sample : Q2003-01MS
 Misc :
 ALS Vial : 75 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 WASTEMS

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 05/19/2025
 Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
 Quant Time: May 17 03:24:38 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.016	1373093	12.168 ug/mlm
Target Compounds			
1) N-OCTANE	2.026	1623322	14.319 ug/ml
2) N-DECANE	4.562	2002738	19.626 ug/ml
3) N-DODECANE	6.730	2265631	20.691 ug/ml
4) N-TETRADECANE	8.557	2382439	20.641 ug/ml
5) N-HEXADECANE	10.164	2617565	22.179 ug/ml
6) N-OCTADECANE	11.608	2653469	21.093 ug/ml
7) N-EICOSANE	12.918	2682627	20.563 ug/ml
8) N-DOCOSANE	14.118	2646499	20.777 ug/ml
10) N-TETRACOSANE	15.222	2879499	22.892 ug/ml
11) N-HEXACOSANE	16.244	2572039	21.100 ug/ml
12) N-OCTACOSANE	17.196	2741040	23.164 ug/ml
13) N-TRIACONTANE	18.084	2508708	21.286 ug/ml
14) N-DOTRIACONTANE	18.917	2392858	21.004 ug/mlm
15) N-TETRATRIACONTANE	19.700	1236131	12.390 ug/ml
16) N-HEXATRIACONTANE	20.440	778716	9.760 ug/mlm
17) N-OCTATRIACONTANE	21.176	706510	12.442 ug/mlm
18) N-TETRACONTANE	22.084	647754	15.929 ug/ml

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015857.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 13:57
Operator : YP\AJ
Sample : Q2003-01MS
Misc :
ALS Vial : 75 Sample Multiplier: 1

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual Integrations

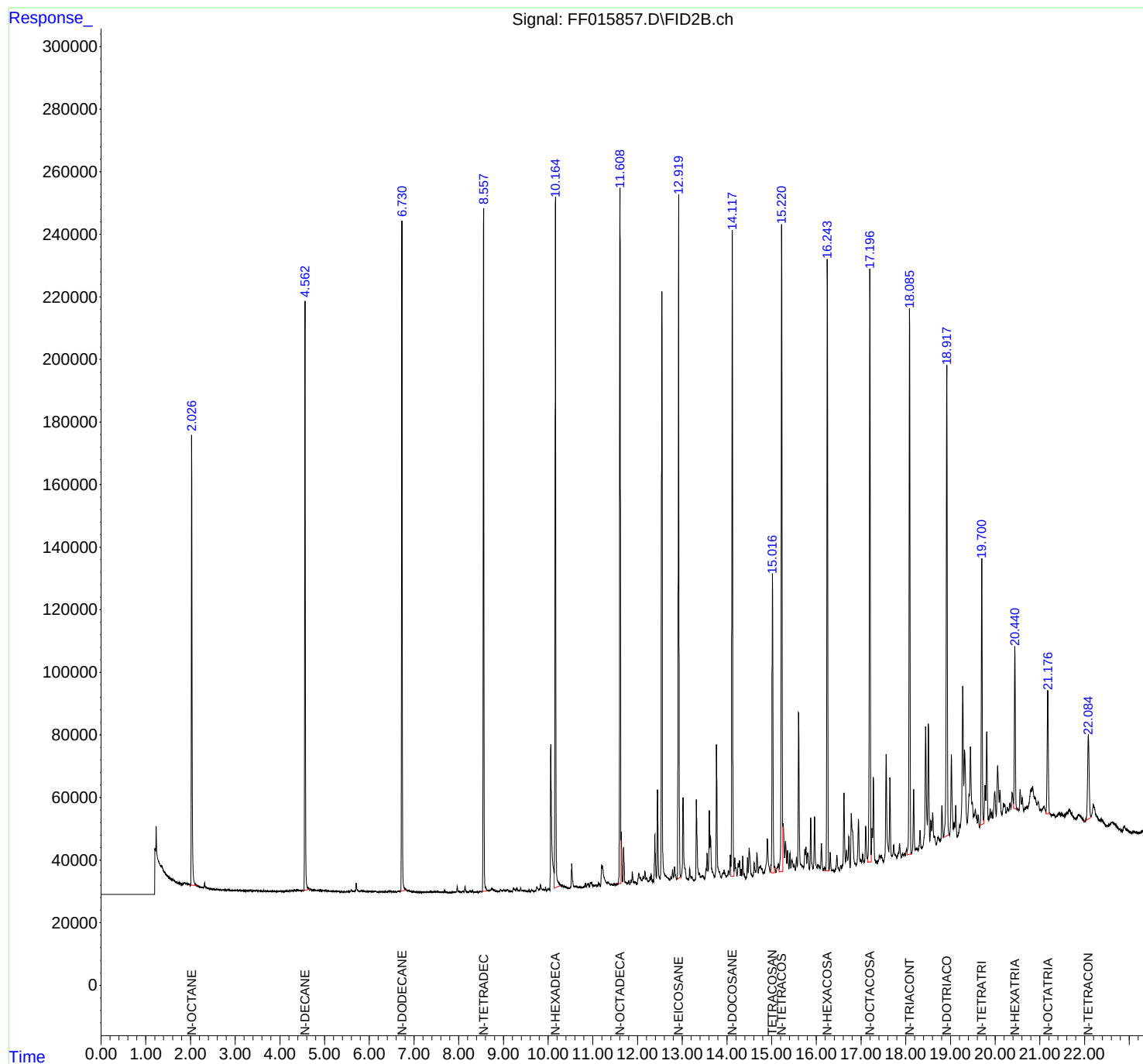
APPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
Quant Time: May 17 03:24:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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



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Instrument :

FID_F

ClientSampleId :

WASTEMS

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF05162
Data File : FF015857.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 13:57
Sample : Q2003-01MS
Misc :
ALS Vial : 75 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.918	1.900	1.948	BV	385	3751	0.12%	0.005%
2	1.965	1.948	1.999	PV	349	4861	0.15%	0.006%
3	2.026	1.999	2.214	PV	144105	1656204	51.18%	2.165%
4	2.225	2.214	2.235	VV	169	1683	0.05%	0.002%
5	2.239	2.235	2.265	VV	193	2457	0.08%	0.003%
6	2.269	2.265	2.297	VV	189	2352	0.07%	0.003%
7	2.316	2.297	2.351	VV	1723	22372	0.69%	0.029%
8	2.359	2.351	2.377	VV	382	4441	0.14%	0.006%
9	2.381	2.377	2.412	VV	207	2903	0.09%	0.004%
10	2.418	2.412	2.423	PV	125	363	0.01%	0.000%
11	2.426	2.423	2.429	PV	40	187	0.01%	0.000%
12	2.433	2.429	2.437	VV	103	279	0.01%	0.000%
13	2.441	2.437	2.452	VV	156	978	0.03%	0.001%
14	2.459	2.452	2.464	VV	192	773	0.02%	0.001%
15	2.474	2.464	2.485	VV	205	1433	0.04%	0.002%
16	2.489	2.485	2.529	VV	122	2022	0.06%	0.003%
17	2.535	2.529	2.556	VV	87	903	0.03%	0.001%
18	2.560	2.556	2.587	VV	99	1357	0.04%	0.002%
19	2.593	2.587	2.638	VV	134	1949	0.06%	0.003%
20	2.644	2.638	2.678	VV	102	1666	0.05%	0.002%
21	2.687	2.678	2.693	PV	161	871	0.03%	0.001%
22	2.697	2.693	2.708	VV	112	733	0.02%	0.001%
23	2.711	2.708	2.747	VV	124	1906	0.06%	0.002%
24	2.761	2.747	2.766	VV	122	1106	0.03%	0.001%
25	2.768	2.766	2.784	VV	188	1250	0.04%	0.002%
26	2.788	2.784	2.804	VV	140	1137	0.04%	0.001%
27	2.831	2.804	2.846	VV	190	3474	0.11%	0.005%
28	2.851	2.846	2.871	VV	218	2164	0.07%	0.003%
29	2.875	2.871	2.905	VV	160	1780	0.06%	0.002%
30	2.913	2.905	2.928	PV	123	984	0.03%	0.001%
31	2.933	2.928	2.956	VV	118	1296	0.04%	0.002%
32	2.967	2.956	2.984	VV	102	903	0.03%	0.001%
33	2.997	2.984	3.012	VV	126	1197	0.04%	0.002%
34	3.023	3.012	3.052	VV	207	3476	0.11%	0.005%
35	3.060	3.052	3.069	VV	188	1392	0.04%	0.002%
36	3.074	3.069	3.081	VV	149	943	0.03%	0.001%

					retention			
37	3.087	3.081	3.095	VV	178	1201	0.04%	0.002%
38	3.101	3.095	3.116	VV	186	1681		
39	3.123	3.116	3.136	VV	194	1378		
40	3.139	3.136	3.146	VV	127	591		
41	3.151	3.146	3.170	PV	136	1285		
42	3.177	3.170	3.192	VV	128	1330		
43	3.196	3.192	3.215	VV	111	1164	0.04%	0.002%
44	3.241	3.215	3.247	VV	166	1772	0.05%	0.002%
45	3.251	3.247	3.268	VV	129	1448	0.04%	0.002%
46	3.285	3.268	3.297	VV	201	1972	0.06%	0.003%
47	3.299	3.297	3.303	VV	139	407	0.01%	0.001%
48	3.319	3.303	3.346	VV	271	3953	0.12%	0.005%
49	3.348	3.346	3.358	VV	213	850	0.03%	0.001%
50	3.362	3.358	3.375	VV	135	882	0.03%	0.001%
51	3.379	3.375	3.413	VV	108	1828	0.06%	0.002%
52	3.416	3.413	3.420	VV	82	346	0.01%	0.000%
53	3.428	3.420	3.436	PV	168	1120	0.03%	0.001%
54	3.451	3.436	3.501	VV	164	5903	0.18%	0.008%
55	3.505	3.501	3.517	VV	203	1263	0.04%	0.002%
56	3.521	3.517	3.543	VV	211	2222	0.07%	0.003%
57	3.551	3.543	3.560	VV	199	1372	0.04%	0.002%
58	3.564	3.560	3.578	VV	174	1191	0.04%	0.002%
59	3.584	3.578	3.596	VV	152	1092	0.03%	0.001%
60	3.605	3.596	3.613	VV	161	1215	0.04%	0.002%
61	3.626	3.613	3.642	VV	249	2574	0.08%	0.003%
62	3.647	3.642	3.659	VV	154	1257	0.04%	0.002%
63	3.667	3.659	3.672	VV	170	901	0.03%	0.001%
64	3.674	3.672	3.679	VV	145	537	0.02%	0.001%
65	3.684	3.679	3.701	VV	163	1663	0.05%	0.002%
66	3.707	3.701	3.737	VV	210	2101	0.06%	0.003%
67	3.753	3.737	3.790	VV	169	2629	0.08%	0.003%
68	3.813	3.790	3.833	VV	191	2468	0.08%	0.003%
69	3.838	3.833	3.844	VV	102	635	0.02%	0.001%
70	3.851	3.844	3.864	VV	109	958	0.03%	0.001%
71	3.879	3.864	3.889	VV	155	1424	0.04%	0.002%
72	3.893	3.889	3.902	VV	125	622	0.02%	0.001%
73	3.907	3.902	3.913	VV	122	396	0.01%	0.001%
74	3.940	3.913	3.957	VV	163	1925	0.06%	0.003%
75	3.961	3.957	3.971	VV	94	586	0.02%	0.001%
76	3.973	3.971	3.984	VV	96	564	0.02%	0.001%
77	4.031	3.984	4.052	VV	236	5108	0.16%	0.007%
78	4.062	4.052	4.077	VV	189	1481	0.05%	0.002%
79	4.081	4.077	4.092	PV	86	642	0.02%	0.001%
80	4.100	4.092	4.125	VV	120	1883	0.06%	0.002%
81	4.137	4.125	4.169	VV	207	3918	0.12%	0.005%
82	4.177	4.169	4.192	VV	196	1914	0.06%	0.003%
83	4.213	4.192	4.224	VV	252	3961	0.12%	0.005%
84	4.227	4.224	4.232	VV	270	1142	0.04%	0.001%
85	4.237	4.232	4.244	VV	276	1661	0.05%	0.002%
86	4.248	4.244	4.252	VV	297	1194	0.04%	0.002%
87	4.258	4.252	4.261	VV	318	1529	0.05%	0.002%
88	4.264	4.261	4.269	VV	336	1387	0.04%	0.002%
89	4.278	4.269	4.292	VV	379	4626	0.14%	0.006%

Instrument :

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ClientSampleId :

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					retention				
90	4.295	4.292	4.300	VV	349	1701	0.05%	0.002%	
91	4.313	4.300	4.320	VV	451	4414			
92	4.331	4.320	4.349	VV	430	7318			
93	4.353	4.349	4.357	VV	462	1900			
94	4.374	4.357	4.388	VV	470	7752			
95	4.399	4.388	4.409	VV	499	5687			
96	4.414	4.409	4.423	VV	437	3272	0.10%	0.004%	
97	4.457	4.423	4.464	VV	433	9430	0.29%	0.012%	
98	4.469	4.464	4.510	VV	408	9636	0.30%	0.013%	
99	4.515	4.510	4.521	VV	350	2184	0.07%	0.003%	
100	4.562	4.521	4.672	VV	188600	2056715	63.55%	2.688%	
101	4.681	4.672	4.731	VV	801	22171	0.69%	0.029%	
102	4.755	4.731	4.763	VV	648	10184	0.31%	0.013%	
103	4.769	4.763	4.775	VV	601	4029	0.12%	0.005%	
104	4.788	4.775	4.794	VV	573	6365	0.20%	0.008%	
105	4.798	4.794	4.836	VV	534	11727	0.36%	0.015%	
106	4.848	4.836	4.861	VV	546	7274	0.22%	0.010%	
107	4.881	4.861	4.904	VV	533	11290	0.35%	0.015%	
108	4.914	4.904	4.944	VV	498	10232	0.32%	0.013%	
109	4.948	4.944	4.956	VV	437	2664	0.08%	0.003%	
110	4.962	4.956	4.970	VV	421	3132	0.10%	0.004%	
111	4.982	4.970	4.994	VV	394	4881	0.15%	0.006%	
112	5.000	4.994	5.018	VV	369	4827	0.15%	0.006%	
113	5.024	5.018	5.030	VV	378	2367	0.07%	0.003%	
114	5.035	5.030	5.064	VV	534	5626	0.17%	0.007%	
115	5.087	5.064	5.105	VV	379	7169	0.22%	0.009%	
116	5.112	5.105	5.116	VV	302	1779	0.05%	0.002%	
117	5.124	5.116	5.180	VV	320	8727	0.27%	0.011%	
118	5.191	5.180	5.220	VV	243	4147	0.13%	0.005%	
119	5.229	5.220	5.272	VV	227	5422	0.17%	0.007%	
120	5.275	5.272	5.299	VV	177	2030	0.06%	0.003%	
121	5.309	5.299	5.399	VV	175	6373	0.20%	0.008%	
122	5.403	5.399	5.417	VV	73	656	0.02%	0.001%	
123	5.430	5.417	5.434	VV	122	776	0.02%	0.001%	
124	5.439	5.434	5.464	VV	130	1861	0.06%	0.002%	
125	5.472	5.464	5.479	VV	127	836	0.03%	0.001%	
126	5.480	5.479	5.515	VV	154	1939	0.06%	0.003%	
127	5.522	5.515	5.530	VV	129	915	0.03%	0.001%	
128	5.536	5.530	5.542	VV	106	763	0.02%	0.001%	
129	5.550	5.542	5.574	VV	156	2275	0.07%	0.003%	
130	5.598	5.574	5.637	VV	586	14232	0.44%	0.019%	
131	5.644	5.637	5.658	VV	319	3582	0.11%	0.005%	
132	5.664	5.658	5.680	VV	302	3468	0.11%	0.005%	
133	5.707	5.680	5.795	VV	2864	55899	1.73%	0.073%	
134	5.801	5.795	5.805	VV	383	1887	0.06%	0.002%	
135	5.809	5.805	5.822	VV	437	3850	0.12%	0.005%	
136	5.829	5.822	5.838	VV	400	3418	0.11%	0.004%	
137	5.841	5.838	5.857	VV	379	3906	0.12%	0.005%	
138	5.862	5.857	5.866	VV	372	1636	0.05%	0.002%	
139	5.873	5.866	5.884	VV	364	3481	0.11%	0.005%	
140	5.891	5.884	5.925	VV	327	5835	0.18%	0.008%	
141	5.931	5.925	5.941	VV	194	1490	0.05%	0.002%	

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						Instrument : FID_F ClientSampleId : WASTEMS		
142	5.945	5.941	5.948	VV	174	736	0.02%	0.001%
143	5.952	5.948	5.973	VV	217	2523		
144	5.981	5.973	5.999	VV	259	3313		
145	6.014	5.999	6.040	VV	284	5689		
146	6.042	6.040	6.060	VV	254	2404		
147	6.064	6.060	6.069	VV	249	1085		
148	6.071	6.069	6.085	VV	243	2085	0.06%	0.003%
149	6.091	6.085	6.102	VV	258	2459	0.08%	0.003%
150	6.114	6.102	6.129	VV	265	3615	0.11%	0.005%
151	6.134	6.129	6.159	VV	213	3278	0.10%	0.004%
152	6.162	6.159	6.175	VV	187	1632	0.05%	0.002%
153	6.180	6.175	6.199	VV	193	2514	0.08%	0.003%
154	6.202	6.199	6.223	VV	159	2193	0.07%	0.003%
155	6.233	6.223	6.238	VV	219	1560	0.05%	0.002%
156	6.244	6.238	6.261	VV	236	2236	0.07%	0.003%
157	6.279	6.261	6.317	VV	253	5570	0.17%	0.007%
158	6.337	6.317	6.348	VV	271	3329	0.10%	0.004%
159	6.353	6.348	6.384	VV	235	3844	0.12%	0.005%
160	6.387	6.384	6.394	VV	223	940	0.03%	0.001%
161	6.443	6.394	6.473	VV	603	13642	0.42%	0.018%
162	6.477	6.473	6.498	VV	278	3451	0.11%	0.005%
163	6.503	6.498	6.510	VV	238	1604	0.05%	0.002%
164	6.515	6.510	6.522	VV	278	1812	0.06%	0.002%
165	6.524	6.522	6.557	VV	268	4311	0.13%	0.006%
166	6.563	6.557	6.566	VV	226	980	0.03%	0.001%
167	6.573	6.566	6.620	VV	260	5033	0.16%	0.007%
168	6.638	6.620	6.645	VV	353	3900	0.12%	0.005%
169	6.649	6.645	6.652	VV	330	1336	0.04%	0.002%
170	6.669	6.652	6.684	VV	375	5926	0.18%	0.008%
171	6.687	6.684	6.699	VV	311	2573	0.08%	0.003%
172	6.730	6.699	6.867	VV	214660	2323499	71.79%	3.037%
173	6.883	6.867	6.901	VV	666	10759	0.33%	0.014%
174	6.908	6.901	6.914	VV	444	3177	0.10%	0.004%
175	6.918	6.914	6.979	VV	379	9990	0.31%	0.013%
176	6.984	6.979	6.990	VV	257	1499	0.05%	0.002%
177	7.004	6.990	7.029	VV	257	5025	0.16%	0.007%
178	7.034	7.029	7.040	VV	260	1435	0.04%	0.002%
179	7.050	7.040	7.059	VV	242	2312	0.07%	0.003%
180	7.062	7.059	7.079	VV	195	1902	0.06%	0.002%
181	7.085	7.079	7.151	VV	164	3850	0.12%	0.005%
182	7.162	7.151	7.177	VV	111	892	0.03%	0.001%
183	7.182	7.177	7.190	PV	137	678	0.02%	0.001%
184	7.198	7.190	7.219	VV	117	1439	0.04%	0.002%
185	7.227	7.219	7.239	VV	126	970	0.03%	0.001%
186	7.244	7.239	7.248	VV	109	441	0.01%	0.001%
187	7.261	7.248	7.282	VV	163	2503	0.08%	0.003%
188	7.319	7.282	7.338	VV	190	4811	0.15%	0.006%
189	7.372	7.338	7.439	VV	288	12554	0.39%	0.016%
190	7.452	7.439	7.490	VV	343	8565	0.26%	0.011%
191	7.498	7.490	7.507	VV	292	2429	0.08%	0.003%
192	7.519	7.507	7.571	VV	318	7370	0.23%	0.010%
193	7.629	7.571	7.660	VV	256	9934	0.31%	0.013%
194	7.684	7.660	7.765	VV	603	14581	0.45%	0.019%

195	7.771	7.765	7.794	VV	69	599	0.02%	0.001%
196	7.803	7.794	7.825	VV	88	841		
197	7.862	7.825	7.892	PV	133	4228		
198	7.914	7.892	7.932	VV	182	3364		
199	7.969	7.932	8.067	VV	1879	34611		
200	8.098	8.067	8.119	VV	433	8656		
201	8.143	8.119	8.193	VV	1949	29724	0.92%	0.039%
202	8.209	8.193	8.225	VV	326	3618	0.11%	0.005%
203	8.253	8.225	8.288	VV	677	11254	0.35%	0.015%
204	8.309	8.288	8.352	VV	761	11087	0.34%	0.014%
205	8.379	8.352	8.395	VV	204	3517	0.11%	0.005%
206	8.419	8.395	8.439	VV	141	3170	0.10%	0.004%
207	8.466	8.439	8.515	PV	325	10271	0.32%	0.013%
208	8.557	8.515	8.680	VV	217790	2419212	74.75%	3.162%
209	8.702	8.680	8.711	VV	648	10855	0.34%	0.014%
210	8.741	8.711	8.912	VV	1112	62272	1.92%	0.081%
211	8.934	8.912	8.978	VV	713	19206	0.59%	0.025%
212	9.009	8.978	9.041	VV	735	20265	0.63%	0.026%
213	9.068	9.041	9.082	VV	613	12829	0.40%	0.017%
214	9.097	9.082	9.137	VV	678	14092	0.44%	0.018%
215	9.151	9.137	9.195	VV	271	5538	0.17%	0.007%
216	9.226	9.195	9.274	VV	1057	30932	0.96%	0.040%
217	9.299	9.274	9.366	VV	1305	32861	1.02%	0.043%
218	9.388	9.366	9.415	VV	1151	17567	0.54%	0.023%
219	9.431	9.415	9.464	VV	453	9351	0.29%	0.012%
220	9.473	9.464	9.516	VV	303	5627	0.17%	0.007%
221	9.522	9.516	9.545	VV	89	852	0.03%	0.001%
222	9.571	9.545	9.609	VV	472	7840	0.24%	0.010%
223	9.633	9.609	9.687	PV	531	10142	0.31%	0.013%
224	9.748	9.687	9.790	PV	1439	34667	1.07%	0.045%
225	9.833	9.790	9.925	VV	1934	52266	1.61%	0.068%
226	9.944	9.925	9.979	VV	1065	12746	0.39%	0.017%
227	10.004	9.979	10.039	VV	734	10646	0.33%	0.014%
228	10.061	10.039	10.137	VV	46369	925528	28.60%	1.210%
229	10.164	10.137	10.350	VV	221130	2752835	85.06%	3.598%
230	10.363	10.350	10.470	VV	955	45701	1.41%	0.060%
231	10.530	10.470	10.584	VV	8005	148865	4.60%	0.195%
232	10.615	10.584	10.674	VV	877	37144	1.15%	0.049%
233	10.698	10.674	10.754	VV	582	19446	0.60%	0.025%
234	10.770	10.754	10.785	VV	336	6003	0.19%	0.008%
235	10.808	10.785	10.816	VV	554	8819	0.27%	0.012%
236	10.838	10.816	10.859	VV	1668	23165	0.72%	0.030%
237	10.878	10.859	10.891	VV	1290	18267	0.56%	0.024%
238	10.905	10.891	10.928	VV	1492	21002	0.65%	0.027%
239	10.949	10.928	10.962	VV	1865	24967	0.77%	0.033%
240	10.974	10.962	11.010	VV	1710	31933	0.99%	0.042%
241	11.027	11.010	11.045	VV	761	13725	0.42%	0.018%
242	11.066	11.045	11.105	VV	808	22946	0.71%	0.030%
243	11.129	11.105	11.172	VV	1498	34378	1.06%	0.045%
244	11.199	11.172	11.207	VV	7005	79167	2.45%	0.103%
245	11.217	11.207	11.313	VV	6862	212821	6.58%	0.278%
246	11.332	11.313	11.398	VV	1451	56793	1.75%	0.074%

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247	11.414	11.398	11.456	VV	792	22283	0.69% 0.029%
248	11.479	11.456	11.497	VV	897	16524	
249	11.533	11.497	11.554	VV	836	22244	
250	11.608	11.554	11.669	VV	221498	2877650	88
251	11.691	11.669	11.789	VV	12364	211396	6
252	11.807	11.789	11.830	VV	1620	23553	0
253	11.853	11.830	11.865	VV	1711	22986	0.71% 0.030%
254	11.883	11.865	11.929	VV	4296	77547	2.40% 0.101%
255	11.943	11.929	11.985	VV	1018	24602	0.76% 0.032%
256	12.031	11.985	12.095	VV	3608	136427	4.22% 0.178%
257	12.127	12.095	12.144	VV	2574	57285	1.77% 0.075%
258	12.166	12.144	12.187	VV	4367	77481	2.39% 0.101%
259	12.200	12.187	12.239	VV	2107	47437	1.47% 0.062%
260	12.277	12.239	12.289	VV	2366	42934	1.33% 0.056%
261	12.304	12.289	12.327	VV	3460	47066	1.45% 0.062%
262	12.341	12.327	12.358	VV	1469	20841	0.64% 0.027%
263	12.389	12.358	12.422	VV	15676	252191	7.79% 0.330%
264	12.446	12.422	12.502	VV	30033	443081	13.69% 0.579%
265	12.545	12.502	12.624	VV	189532	2583881	79.84% 3.377%
266	12.637	12.624	12.724	VV	2434	101883	3.15% 0.133%
267	12.744	12.724	12.761	VV	1900	33018	1.02% 0.043%
268	12.782	12.761	12.807	VV	4312	74964	2.32% 0.098%
269	12.826	12.807	12.879	VV	5067	113603	3.51% 0.148%
270	12.919	12.879	12.975	VV	219856	2763918	85.40% 3.613%
271	13.017	12.975	13.120	VV	27067	580767	17.95% 0.759%
272	13.130	13.120	13.143	VV	973	11878	0.37% 0.016%
273	13.166	13.143	13.205	VV	4241	79326	2.45% 0.104%
274	13.211	13.205	13.262	VV	1442	30607	0.95% 0.040%
275	13.317	13.262	13.369	VV	26023	463398	14.32% 0.606%
276	13.382	13.369	13.409	VV	2648	48772	1.51% 0.064%
277	13.415	13.409	13.429	VV	1432	15854	0.49% 0.021%
278	13.445	13.429	13.497	VV	1735	55888	1.73% 0.073%
279	13.531	13.497	13.538	VV	3778	53007	1.64% 0.069%
280	13.556	13.538	13.578	VV	8682	129894	4.01% 0.170%
281	13.606	13.578	13.622	VV	22349	326006	10.07% 0.426%
282	13.632	13.622	13.725	VV	13833	286603	8.86% 0.375%
283	13.767	13.725	13.875	VV	43325	701045	21.66% 0.916%
284	13.935	13.875	13.984	VV	3083	120722	3.73% 0.158%
285	14.033	13.984	14.050	VV	2764	65918	2.04% 0.086%
286	14.074	14.050	14.089	VV	7854	115365	3.56% 0.151%
287	14.118	14.089	14.156	VV	206788	2684021	82.93% 3.508%
288	14.174	14.156	14.227	VV	6725	149323	4.61% 0.195%
289	14.250	14.227	14.266	VV	4898	82764	2.56% 0.108%
290	14.281	14.266	14.302	VV	5740	81194	2.51% 0.106%
291	14.317	14.302	14.332	VV	3094	37094	1.15% 0.048%
292	14.353	14.332	14.374	VV	7203	93639	2.89% 0.122%
293	14.384	14.374	14.417	VV	1642	21197	0.65% 0.028%
294	14.459	14.417	14.475	PV	6620	80738	2.49% 0.106%
295	14.495	14.475	14.578	VV	9505	229456	7.09% 0.300%
296	14.608	14.578	14.637	VV	4805	86322	2.67% 0.113%
297	14.670	14.637	14.700	VV	7711	151885	4.69% 0.199%
298	14.719	14.700	14.734	VV	3320	55404	1.71% 0.072%
299	14.751	14.734	14.774	VV	3559	74502	2.30% 0.097%

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					rters			
300	14.783	14.774	14.807	VV	2732	41441	1.28%	0.054%
301	14.904	14.807	14.964	VV	12046	377063	11.28%	0.054%
302	15.017	14.964	15.096	VV	96803	1507174	40.63%	0.054%
303	15.153	15.096	15.168	VV	3788	110559	3.03%	0.054%
304	15.222	15.168	15.289	VV	207004	3236302	100.00%	0.054%
305	15.309	15.289	15.336	VV	10865	219005	6.31%	0.054%
306	15.354	15.336	15.386	VV	7752	151522	4.68%	0.198%
307	15.407	15.386	15.427	VV	6962	108125	3.34%	0.141%
308	15.454	15.427	15.487	VV	4690	127299	3.93%	0.166%
309	15.503	15.487	15.530	VV	2923	60089	1.86%	0.079%
310	15.555	15.530	15.573	VV	5464	92104	2.85%	0.120%
311	15.603	15.573	15.649	VV	51651	796988	24.63%	1.042%
312	15.659	15.649	15.680	VV	3117	51673	1.60%	0.068%
313	15.698	15.680	15.719	VV	2518	51575	1.59%	0.067%
314	15.741	15.719	15.753	VV	7626	110754	3.42%	0.145%
315	15.766	15.753	15.784	VV	8439	118119	3.65%	0.154%
316	15.803	15.784	15.847	VV	6599	159884	4.94%	0.209%
317	15.873	15.847	15.926	VV	17588	292303	9.03%	0.382%
318	15.959	15.926	16.015	VV	17886	311760	9.63%	0.407%
319	16.036	16.015	16.059	VV	2476	52937	1.64%	0.069%
320	16.069	16.059	16.086	VV	1844	26853	0.83%	0.035%
321	16.112	16.086	16.154	VV	9254	153821	4.75%	0.201%
322	16.183	16.154	16.204	VV	1329	30469	0.94%	0.040%
323	16.244	16.204	16.284	VV	195516	2571464	79.46%	3.361%
324	16.310	16.284	16.344	VV	6081	85212	2.63%	0.111%
325	16.361	16.344	16.404	VV	435	7857	0.24%	0.010%
326	16.458	16.404	16.519	PV	5092	98885	3.06%	0.129%
327	16.545	16.519	16.564	PV	1604	25624	0.79%	0.033%
328	16.617	16.564	16.654	VV	24632	418372	12.93%	0.547%
329	16.674	16.654	16.700	VV	5966	117425	3.63%	0.153%
330	16.726	16.700	16.755	VV	10185	162929	5.03%	0.213%
331	16.781	16.755	16.897	VV	17370	528344	16.33%	0.691%
332	16.941	16.897	16.980	VV	15256	290642	8.98%	0.380%
333	16.994	16.980	17.014	VV	1830	33189	1.03%	0.043%
334	17.035	17.014	17.072	VV	3795	71391	2.21%	0.093%
335	17.103	17.072	17.144	VV	12512	229886	7.10%	0.300%
336	17.196	17.144	17.226	VV	188425	2783639	86.01%	3.638%
337	17.245	17.226	17.257	VV	11422	153596	4.75%	0.201%
338	17.275	17.257	17.360	VV	27586	421288	13.02%	0.551%
339	17.409	17.360	17.428	VV	2400	47861	1.48%	0.063%
340	17.452	17.428	17.502	VV	2244	57964	1.79%	0.076%
341	17.561	17.502	17.618	VV	34074	653312	20.19%	0.854%
342	17.645	17.618	17.689	VV	26594	406071	12.55%	0.531%
343	17.729	17.689	17.802	VV	4666	128386	3.97%	0.168%
344	17.860	17.802	17.902	VV	4841	115727	3.58%	0.151%
345	17.926	17.902	17.946	VV	1132	23079	0.71%	0.030%
346	17.969	17.946	17.987	VV	1199	23956	0.74%	0.031%
347	18.015	17.987	18.030	VV	2519	45533	1.41%	0.060%
348	18.084	18.030	18.127	VV	173771	2552115	78.86%	3.336%
349	18.176	18.127	18.205	VV	21158	344652	10.65%	0.450%
350	18.233	18.205	18.250	VV	2387	53486	1.65%	0.070%
351	18.262	18.250	18.279	VV	1976	30271	0.94%	0.040%

Instrument :

FID_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

rteres									
352	18.319	18.279	18.347	VV	7780	156620	4.84%	0.205%	
353	18.444	18.347	18.481	VV	40499	922775	28.11%	0.428%	
354	18.506	18.481	18.538	VV	41234	696693	21.09%	0.364%	
355	18.561	18.538	18.582	VV	10109	198333	6.25%	0.265%	
356	18.602	18.582	18.632	VV	12435	252742	7.05%	0.298%	
357	18.641	18.632	18.684	VV	5059	112974	3.38%	0.143%	
358	18.727	18.684	18.764	VV	4393	168174	5.20%	0.220%	
359	18.808	18.764	18.844	VV	14268	327261	10.11%	0.428%	
360	18.917	18.844	18.979	VV	154252	2735734	84.53%	3.576%	
361	19.020	18.979	19.062	VV	29801	682628	21.09%	0.892%	
362	19.081	19.062	19.096	VV	7985	146950	4.54%	0.192%	
363	19.117	19.096	19.160	VV	13246	278694	8.61%	0.364%	
364	19.204	19.160	19.216	VV	7063	172917	5.34%	0.226%	
365	19.274	19.216	19.298	VV	51016	1129773	34.91%	1.477%	
366	19.316	19.298	19.375	VV	30277	862147	26.64%	1.127%	
367	19.447	19.375	19.482	VV	31159	1067396	32.98%	1.395%	
368	19.489	19.482	19.516	VV	13139	228046	7.05%	0.298%	
369	19.555	19.516	19.603	VV	10755	470922	14.55%	0.616%	
370	19.621	19.603	19.649	VV	8879	191061	5.90%	0.250%	
371	19.700	19.649	19.742	VV	90848	1551864	47.95%	2.028%	
372	19.774	19.742	19.788	VV	17939	362763	11.21%	0.474%	
373	19.811	19.788	19.844	VV	34668	657266	20.31%	0.859%	
374	19.858	19.844	19.869	VV	7622	109402	3.38%	0.143%	
375	19.889	19.869	19.909	VV	10042	202426	6.25%	0.265%	
376	19.926	19.909	19.947	VV	8972	184230	5.69%	0.241%	
377	19.989	19.947	20.023	VV	15197	502205	15.52%	0.656%	
378	20.055	20.023	20.090	VV	23155	637710	19.70%	0.834%	
379	20.107	20.090	20.148	VV	15478	393940	12.17%	0.515%	
380	20.188	20.148	20.204	VV	10881	314414	9.72%	0.411%	
381	20.216	20.204	20.252	VV	10532	268265	8.29%	0.351%	
382	20.273	20.252	20.303	VV	9418	268691	8.30%	0.351%	
383	20.330	20.303	20.352	VV	10609	278614	8.61%	0.364%	
384	20.382	20.352	20.410	VV	13728	407042	12.58%	0.532%	
385	20.440	20.410	20.530	VV	60440	1379852	42.64%	1.804%	
386	20.558	20.530	20.582	VV	14345	345585	10.68%	0.452%	
387	20.606	20.582	20.637	VV	11606	321035	9.92%	0.420%	
388	20.709	20.637	20.724	VV	8360	416758	12.88%	0.545%	
389	20.839	20.724	20.940	VV	14561	1445724	44.67%	1.890%	
390	20.964	20.940	21.000	VV	9270	296592	9.16%	0.388%	
391	21.016	21.000	21.032	VV	6829	123945	3.83%	0.162%	
392	21.092	21.032	21.135	VV	7299	410451	12.68%	0.536%	
393	21.176	21.135	21.272	VV	44302	1090399	33.69%	1.425%	
394	21.321	21.272	21.360	VV	4160	206313	6.37%	0.270%	
395	21.439	21.360	21.465	VV	4274	241251	7.45%	0.315%	
396	21.497	21.465	21.544	VV	3803	166572	5.15%	0.218%	
397	21.602	21.544	21.622	VV	3924	163763	5.06%	0.214%	
398	21.666	21.622	21.802	VV	4703	333772	10.31%	0.436%	
399	21.870	21.802	22.000	VV	2599	183061	5.66%	0.239%	
400	22.084	22.000	22.147	PV	26794	646487	19.98%	0.845%	

Sum of corrected areas: 76505819

Instrument :

FID_F

ClientSampleId :

WASTEMS

4.84% 0.205%

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Report of Analysis

Client:	Sciacca General Contractors, LLC	Date Collected:	05/09/25
Project:	32 Sayer Pl, Hillsdale	Date Received:	05/09/25
Client Sample ID:	WASTEMSD	SDG No.:	Q2003
Lab Sample ID:	Q2003-01MSD	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	86.3
Sample Wt/Vol:	30.02	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Final Vol:	1
GPC Factor :		Test:	TPH GC
Prep Method :	SW3541	Injection Volume :	

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015858.D	1	05/16/25 08:50	05/16/25 14:27	PB168042

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	26700		445	3280	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	11.7		37 - 130	58%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

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

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
 Data File : FF015858.D
 Signal(s) : FID2B.ch
 Acq On : 16 May 2025 14:27
 Operator : YP\AJ
 Sample : Q2003-01MSD
 Misc :
 ALS Vial : 76 Sample Multiplier: 1

Instrument :
 FID_F
 ClientSampleId :
 WASTEMSD

Manual Integrations
 APPROVED

Reviewed By :Yogesh Patel 05/19/2025
 Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
 Quant Time: May 17 03:24:25 2025
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
 Quant Title :
 QLast Update : Tue Apr 22 11:27:50 2025
 Response via : Initial Calibration
 Integrator: ChemStation

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
9) S TETRACOSANE-d50 (SURR...	15.018	1317768	11.677 ug/mlm
Target Compounds			
1) N-OCTANE	2.026	1621472	14.303 ug/ml
2) N-DECANE	4.562	1995294	19.553 ug/ml
3) N-DODECANE	6.730	2228952	20.356 ug/ml
4) N-TETRADECANE	8.557	2335988	20.239 ug/ml
5) N-HEXADECANE	10.165	2552194	21.625 ug/ml
6) N-OCTADECANE	11.609	2586327	20.560 ug/ml
7) N-EICOSANE	12.919	2611738	20.020 ug/ml
8) N-DOCOSANE	14.118	2539659	19.938 ug/ml
10) N-TETRACOSANE	15.221	2761791	21.956 ug/ml
11) N-HEXACOSANE	16.245	2415260	19.814 ug/ml
12) N-OCTACOSANE	17.195	2604215	22.008 ug/ml
13) N-TRIACONTANE	18.084	2327754	19.750 ug/ml
14) N-DOTRIACONTANE	18.918	2275672	19.975 ug/mlm
15) N-TETRATRIACONTANE	19.700	1160630	11.634 ug/ml
16) N-HEXATRIACONTANE	20.439	715498	8.968 ug/mlm
17) N-OCTATRIACONTANE	21.174	654355	11.523 ug/ml
18) N-TETRACONTANE	22.084	639224	15.719 ug/mlm

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF051625\
Data File : FF015858.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 14:27
Operator : YP\AJ
Sample : Q2003-01MSD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Manual Integrations

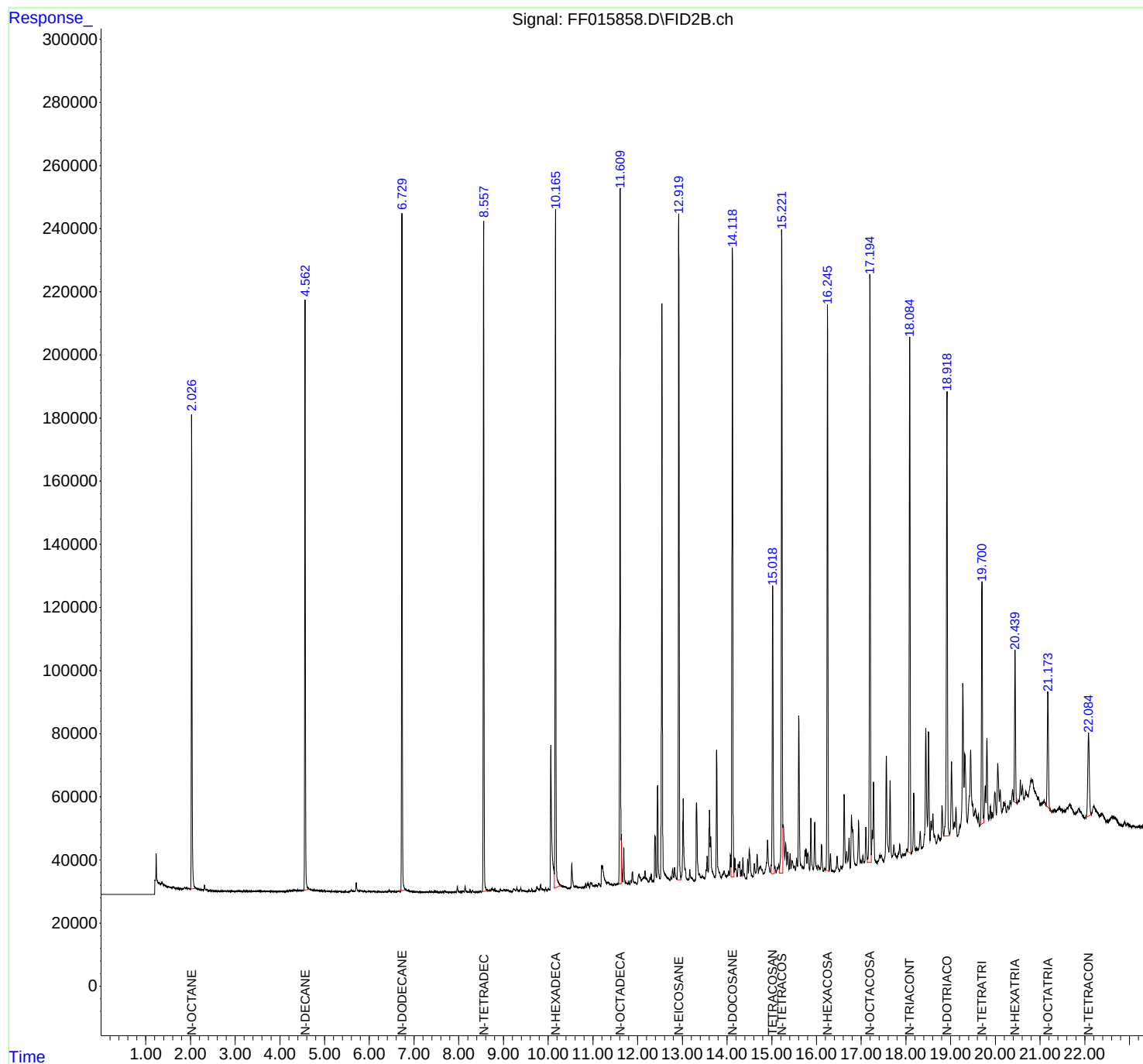
APPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Integration File: autoint1.e
Quant Time: May 17 03:24:25 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Quant Title :
QLast Update : Tue Apr 22 11:27:50 2025
Response via : Initial Calibration
Integrator: ChemStation

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



rteres

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF05162
Data File : FF015858.D
Signal(s) : FID2B.ch
Acq On : 16 May 2025 14:27
Sample : Q2003-01MSD
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF042225.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	1.916	1.900	1.945	BV	298	2587	0.08%	0.003%
2	1.964	1.945	1.999	PV	397	5288	0.17%	0.007%
3	2.026	1.999	2.168	PV	150220	1656143	53.52%	2.202%
4	2.173	2.168	2.179	VV	274	1594	0.05%	0.002%
5	2.182	2.179	2.232	VV	288	6052	0.20%	0.008%
6	2.262	2.232	2.291	VV	260	5935	0.19%	0.008%
7	2.314	2.291	2.345	VV	1643	22165	0.72%	0.029%
8	2.357	2.345	2.421	VV	431	8303	0.27%	0.011%
9	2.424	2.421	2.430	PV	86	184	0.01%	0.000%
10	2.445	2.430	2.465	VV	154	1668	0.05%	0.002%
11	2.474	2.465	2.518	VV	173	2829	0.09%	0.004%
12	2.522	2.518	2.544	VV	144	994	0.03%	0.001%
13	2.551	2.544	2.560	VV	137	819	0.03%	0.001%
14	2.567	2.560	2.574	VV	108	671	0.02%	0.001%
15	2.583	2.574	2.599	VV	120	1306	0.04%	0.002%
16	2.605	2.599	2.608	VV	137	412	0.01%	0.001%
17	2.616	2.608	2.622	PV	149	696	0.02%	0.001%
18	2.636	2.622	2.652	VV	155	1539	0.05%	0.002%
19	2.656	2.652	2.665	VV	91	573	0.02%	0.001%
20	2.676	2.665	2.696	VV	155	1330	0.04%	0.002%
21	2.702	2.696	2.721	VV	130	1139	0.04%	0.002%
22	2.731	2.721	2.773	VV	163	3641	0.12%	0.005%
23	2.779	2.773	2.788	VV	161	1211	0.04%	0.002%
24	2.793	2.788	2.807	VV	162	1430	0.05%	0.002%
25	2.816	2.807	2.825	VV	175	1475	0.05%	0.002%
26	2.841	2.825	2.866	VV	162	2490	0.08%	0.003%
27	2.885	2.866	2.906	VV	115	1601	0.05%	0.002%
28	2.915	2.906	2.924	VV	51	492	0.02%	0.001%
29	2.926	2.924	2.929	VV	87	154	0.00%	0.000%
30	2.939	2.929	2.976	VV	140	1566	0.05%	0.002%
31	2.991	2.976	3.000	PV	70	569	0.02%	0.001%
32	3.006	3.000	3.011	VV	86	304	0.01%	0.000%
33	3.024	3.011	3.057	VV	205	4043	0.13%	0.005%
34	3.063	3.057	3.069	VV	157	993	0.03%	0.001%
35	3.091	3.069	3.144	VV	223	6435	0.21%	0.009%
36	3.149	3.144	3.153	VV	95	310	0.01%	0.000%

					retention			
37	3.172	3.153	3.177	VV	122	1222	0.04%	0.002%
38	3.181	3.177	3.208	VV	205	1988		
39	3.236	3.208	3.247	VV	193	2534		
40	3.250	3.247	3.254	VV	107	472		
41	3.259	3.254	3.266	VV	154	758		
42	3.274	3.266	3.284	VV	161	1192		
43	3.321	3.284	3.344	VV	231	5291	0.17%	0.007%
44	3.348	3.344	3.375	VV	179	1904	0.06%	0.003%
45	3.380	3.375	3.389	VV	125	745	0.02%	0.001%
46	3.393	3.389	3.397	VV	111	369	0.01%	0.000%
47	3.406	3.397	3.440	VV	162	2981	0.10%	0.004%
48	3.450	3.440	3.464	VV	240	2411	0.08%	0.003%
49	3.469	3.464	3.486	VV	198	1889	0.06%	0.003%
50	3.490	3.486	3.517	VV	184	2511	0.08%	0.003%
51	3.530	3.517	3.541	VV	177	2143	0.07%	0.003%
52	3.545	3.541	3.567	VV	185	2187	0.07%	0.003%
53	3.573	3.567	3.581	VV	170	1034	0.03%	0.001%
54	3.594	3.581	3.601	VV	179	1421	0.05%	0.002%
55	3.603	3.601	3.606	VV	122	348	0.01%	0.000%
56	3.624	3.606	3.636	VV	223	2658	0.09%	0.004%
57	3.645	3.636	3.650	VV	155	1044	0.03%	0.001%
58	3.655	3.650	3.677	VV	177	1939	0.06%	0.003%
59	3.681	3.677	3.691	VV	161	998	0.03%	0.001%
60	3.694	3.691	3.730	VV	171	2903	0.09%	0.004%
61	3.757	3.730	3.774	VV	187	3214	0.10%	0.004%
62	3.785	3.774	3.797	VV	117	1180	0.04%	0.002%
63	3.819	3.797	3.879	VV	157	4836	0.16%	0.006%
64	3.888	3.879	3.902	VV	113	1039	0.03%	0.001%
65	3.909	3.902	3.934	VV	120	1074	0.03%	0.001%
66	3.945	3.934	3.958	VV	174	1493	0.05%	0.002%
67	3.966	3.958	3.971	PV	108	506	0.02%	0.001%
68	4.000	3.971	4.005	VV	131	1506	0.05%	0.002%
69	4.013	4.005	4.015	VV	134	640	0.02%	0.001%
70	4.031	4.015	4.057	VV	197	3200	0.10%	0.004%
71	4.061	4.057	4.067	VV	108	583	0.02%	0.001%
72	4.069	4.067	4.073	VV	132	278	0.01%	0.000%
73	4.079	4.073	4.091	VV	144	1053	0.03%	0.001%
74	4.106	4.091	4.114	VV	168	1689	0.05%	0.002%
75	4.181	4.114	4.185	VV	294	7700	0.25%	0.010%
76	4.216	4.185	4.226	VV	401	7840	0.25%	0.010%
77	4.234	4.226	4.245	VV	383	4083	0.13%	0.005%
78	4.251	4.245	4.261	VV	431	3351	0.11%	0.004%
79	4.330	4.261	4.356	VV	573	26380	0.85%	0.035%
80	4.359	4.356	4.385	VV	544	8564	0.28%	0.011%
81	4.390	4.385	4.415	VV	501	8839	0.29%	0.012%
82	4.421	4.415	4.425	VV	491	2719	0.09%	0.004%
83	4.431	4.425	4.451	VV	472	7096	0.23%	0.009%
84	4.456	4.451	4.472	VV	465	5110	0.17%	0.007%
85	4.477	4.472	4.492	VV	414	4722	0.15%	0.006%
86	4.522	4.492	4.532	VV	476	10036	0.32%	0.013%
87	4.562	4.532	4.704	VV	187558	2066755	66.78%	2.747%
88	4.707	4.704	4.739	VV	618	11937	0.39%	0.016%
89	4.760	4.739	4.782	VV	660	15144	0.49%	0.020%

Instrument :

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ClientSampleId :

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90	4.787	4.782	4.831	VV	654	14253	0.46%	0.019%
91	4.850	4.831	4.862	VV	519	8659		
92	4.866	4.862	4.896	VV	470	8533		
93	4.914	4.896	4.932	VV	474	8923		
94	4.934	4.932	4.948	VV	444	3312		
95	4.955	4.948	5.021	VV	388	14675		
96	5.030	5.021	5.051	VV	351	5025	0.16%	0.007%
97	5.068	5.051	5.082	VV	329	5481	0.18%	0.007%
98	5.086	5.082	5.149	VV	286	9499	0.31%	0.013%
99	5.154	5.149	5.172	VV	313	2921	0.09%	0.004%
100	5.180	5.172	5.190	VV	212	1868	0.06%	0.002%
101	5.203	5.190	5.226	VV	194	3329	0.11%	0.004%
102	5.249	5.226	5.261	VV	227	3355	0.11%	0.004%
103	5.278	5.261	5.304	VV	167	3222	0.10%	0.004%
104	5.320	5.304	5.335	VV	173	2590	0.08%	0.003%
105	5.344	5.335	5.374	VV	159	2828	0.09%	0.004%
106	5.387	5.374	5.440	VV	170	3855	0.12%	0.005%
107	5.470	5.440	5.531	VV	171	5741	0.19%	0.008%
108	5.592	5.531	5.629	VV	634	17401	0.56%	0.023%
109	5.638	5.629	5.678	VV	393	8891	0.29%	0.012%
110	5.707	5.678	5.796	VV	2935	60391	1.95%	0.080%
111	5.811	5.796	5.927	VV	488	25200	0.81%	0.033%
112	5.948	5.927	5.969	VV	255	4783	0.15%	0.006%
113	5.992	5.969	6.001	VV	306	4408	0.14%	0.006%
114	6.010	6.001	6.049	VV	234	6104	0.20%	0.008%
115	6.067	6.049	6.086	VV	216	4246	0.14%	0.006%
116	6.096	6.086	6.168	VV	293	9690	0.31%	0.013%
117	6.183	6.168	6.210	VV	247	4282	0.14%	0.006%
118	6.220	6.210	6.254	VV	225	4264	0.14%	0.006%
119	6.265	6.254	6.276	VV	193	1992	0.06%	0.003%
120	6.283	6.276	6.322	VV	198	3703	0.12%	0.005%
121	6.352	6.322	6.398	VV	225	7949	0.26%	0.011%
122	6.444	6.398	6.486	VV	612	15413	0.50%	0.020%
123	6.488	6.486	6.553	VV	273	8895	0.29%	0.012%
124	6.567	6.553	6.616	VV	261	6477	0.21%	0.009%
125	6.656	6.616	6.702	VV	371	14389	0.46%	0.019%
126	6.730	6.702	6.866	VV	213916	2296730	74.22%	3.053%
127	6.884	6.866	6.970	VV	611	22160	0.72%	0.029%
128	6.980	6.970	7.034	VV	270	7784	0.25%	0.010%
129	7.059	7.034	7.087	VV	211	4976	0.16%	0.007%
130	7.094	7.087	7.159	VV	139	3685	0.12%	0.005%
131	7.183	7.159	7.231	VV	153	2859	0.09%	0.004%
132	7.237	7.231	7.249	VV	92	1069	0.03%	0.001%
133	7.267	7.249	7.316	VV	226	4786	0.15%	0.006%
134	7.355	7.316	7.402	VV	252	11043	0.36%	0.015%
135	7.452	7.402	7.503	VV	380	13525	0.44%	0.018%
136	7.517	7.503	7.567	VV	224	5864	0.19%	0.008%
137	7.576	7.567	7.586	VV	152	1501	0.05%	0.002%
138	7.592	7.586	7.610	VV	222	2553	0.08%	0.003%
139	7.618	7.610	7.664	VV	231	5144	0.17%	0.007%
140	7.682	7.664	7.769	VV	642	13134	0.42%	0.017%
141	7.781	7.769	7.829	VV	82	1626	0.05%	0.002%

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142	7.861	7.829	7.906	PV	238	6269	0.20%	0.008%
143	7.912	7.906	7.924	VV	189	1571		
144	7.970	7.924	8.038	VV	1907	32366		
145	8.051	8.038	8.068	VV	223	2778		
146	8.098	8.068	8.126	VV	449	9271		
147	8.144	8.126	8.194	VV	2010	27778		
148	8.208	8.194	8.231	VV	220	3345	0.11%	0.004%
149	8.252	8.231	8.291	VV	626	9352	0.30%	0.012%
150	8.309	8.291	8.344	VV	713	9039	0.29%	0.012%
151	8.377	8.344	8.399	PV	284	3351	0.11%	0.004%
152	8.418	8.399	8.439	VV	191	2160	0.07%	0.003%
153	8.470	8.439	8.487	VV	318	5408	0.17%	0.007%
154	8.492	8.487	8.521	VV	269	3813	0.12%	0.005%
155	8.557	8.521	8.659	VV	212565	2362044	76.33%	3.140%
156	8.675	8.659	8.684	VV	524	7531	0.24%	0.010%
157	8.698	8.684	8.711	VV	627	8918	0.29%	0.012%
158	8.741	8.711	8.907	VV	1137	62163	2.01%	0.083%
159	8.933	8.907	8.972	VV	811	18588	0.60%	0.025%
160	9.011	8.972	9.043	VV	718	21895	0.71%	0.029%
161	9.066	9.043	9.077	VV	591	10847	0.35%	0.014%
162	9.098	9.077	9.141	VV	723	16988	0.55%	0.023%
163	9.150	9.141	9.191	VV	207	4114	0.13%	0.005%
164	9.226	9.191	9.277	VV	929	27388	0.89%	0.036%
165	9.300	9.277	9.364	VV	1263	30253	0.98%	0.040%
166	9.389	9.364	9.414	VV	1126	18719	0.60%	0.025%
167	9.429	9.414	9.456	VV	429	8220	0.27%	0.011%
168	9.471	9.456	9.523	VV	278	6298	0.20%	0.008%
169	9.570	9.523	9.609	PV	462	8130	0.26%	0.011%
170	9.634	9.609	9.684	PV	546	9128	0.29%	0.012%
171	9.748	9.684	9.792	VV	1440	33949	1.10%	0.045%
172	9.832	9.792	9.924	VV	2021	50281	1.62%	0.067%
173	9.945	9.924	9.973	VV	1031	12586	0.41%	0.017%
174	10.004	9.973	10.039	VV	686	9946	0.32%	0.013%
175	10.061	10.039	10.136	VV	45739	906460	29.29%	1.205%
176	10.165	10.136	10.439	VV	214991	2720934	87.92%	3.617%
177	10.445	10.439	10.474	VV	435	6865	0.22%	0.009%
178	10.530	10.474	10.581	VV	8012	141028	4.56%	0.187%
179	10.612	10.581	10.676	VV	880	35596	1.15%	0.047%
180	10.696	10.676	10.714	VV	529	9463	0.31%	0.013%
181	10.724	10.714	10.747	VV	388	6723	0.22%	0.009%
182	10.768	10.747	10.784	VV	309	5750	0.19%	0.008%
183	10.838	10.784	10.859	VV	1571	28766	0.93%	0.038%
184	10.878	10.859	10.891	VV	1342	17748	0.57%	0.024%
185	10.903	10.891	10.929	VV	1491	20050	0.65%	0.027%
186	10.949	10.929	10.962	VV	1780	22474	0.73%	0.030%
187	10.976	10.962	11.012	VV	1601	30849	1.00%	0.041%
188	11.030	11.012	11.043	VV	714	11416	0.37%	0.015%
189	11.063	11.043	11.100	VV	817	21422	0.69%	0.028%
190	11.130	11.100	11.169	VV	1497	34882	1.13%	0.046%
191	11.198	11.169	11.207	VV	6953	80290	2.59%	0.107%
192	11.216	11.207	11.312	VV	6764	208420	6.73%	0.277%
193	11.332	11.312	11.404	VV	1510	60950	1.97%	0.081%
194	11.419	11.404	11.454	VV	864	19444	0.63%	0.026%

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195	11.478	11.454	11.496	VV	974	17334	0.56%	0.023%
196	11.531	11.496	11.549	VV	855	21402		
197	11.609	11.549	11.669	VV	221140	2798707	90	
198	11.691	11.669	11.786	VV	12007	203273	6	
199	11.807	11.786	11.828	VV	1610	24220	0	
200	11.853	11.828	11.864	VV	1669	22381	0	
201	11.883	11.864	11.929	VV	4198	77317	2.50%	0.103%
202	11.943	11.929	11.982	VV	1012	23718	0.77%	0.032%
203	12.032	11.982	12.090	VV	3530	130806	4.23%	0.174%
204	12.125	12.090	12.144	VV	2496	64523	2.08%	0.086%
205	12.165	12.144	12.187	VV	4370	76718	2.48%	0.102%
206	12.198	12.187	12.242	VV	1975	47856	1.55%	0.064%
207	12.278	12.242	12.291	VV	2247	41699	1.35%	0.055%
208	12.305	12.291	12.329	VV	3237	45009	1.45%	0.060%
209	12.342	12.329	12.359	VV	1389	18389	0.59%	0.024%
210	12.389	12.359	12.422	VV	15244	251628	8.13%	0.335%
211	12.447	12.422	12.501	VV	31111	448058	14.48%	0.596%
212	12.545	12.501	12.722	VV	184399	2622029	84.73%	3.486%
213	12.744	12.722	12.762	VV	1920	35622	1.15%	0.047%
214	12.782	12.762	12.805	VV	4390	71166	2.30%	0.095%
215	12.826	12.805	12.879	VV	4954	113744	3.68%	0.151%
216	12.919	12.879	12.972	VV	211730	2666030	86.15%	3.544%
217	13.018	12.972	13.121	VV	26563	559403	18.08%	0.744%
218	13.129	13.121	13.142	VV	882	9967	0.32%	0.013%
219	13.165	13.142	13.201	VV	4052	72589	2.35%	0.096%
220	13.212	13.201	13.266	VV	1330	32197	1.04%	0.043%
221	13.317	13.266	13.370	VV	24802	443939	14.35%	0.590%
222	13.381	13.370	13.431	VV	2466	61498	1.99%	0.082%
223	13.446	13.431	13.462	VV	1583	26756	0.86%	0.036%
224	13.472	13.462	13.501	VV	1449	25422	0.82%	0.034%
225	13.555	13.501	13.579	VV	7908	171818	5.55%	0.228%
226	13.606	13.579	13.622	VV	22524	322561	10.42%	0.429%
227	13.632	13.622	13.725	VV	14004	284046	9.18%	0.378%
228	13.766	13.725	13.874	VV	41251	672840	21.74%	0.894%
229	13.906	13.874	13.917	VV	2024	39366	1.27%	0.052%
230	13.933	13.917	13.987	VV	2898	77434	2.50%	0.103%
231	14.033	13.987	14.050	VV	2781	63262	2.04%	0.084%
232	14.074	14.050	14.088	VV	7888	112769	3.64%	0.150%
233	14.118	14.088	14.157	VV	199033	2576247	83.25%	3.425%
234	14.174	14.157	14.224	VV	6733	139487	4.51%	0.185%
235	14.250	14.224	14.266	VV	4704	83043	2.68%	0.110%
236	14.281	14.266	14.302	VV	5596	77658	2.51%	0.103%
237	14.317	14.302	14.332	VV	2784	36236	1.17%	0.048%
238	14.353	14.332	14.373	VV	6789	89074	2.88%	0.118%
239	14.383	14.373	14.431	VV	1650	20604	0.67%	0.027%
240	14.460	14.431	14.476	PV	6140	75688	2.45%	0.101%
241	14.495	14.476	14.579	VV	9304	220401	7.12%	0.293%
242	14.608	14.579	14.637	VV	4605	81804	2.64%	0.109%
243	14.671	14.637	14.701	VV	7568	148125	4.79%	0.197%
244	14.719	14.701	14.732	VV	3150	50900	1.64%	0.068%
245	14.749	14.732	14.774	VV	3564	76917	2.49%	0.102%
246	14.783	14.774	14.806	VV	2591	39501	1.28%	0.053%

Instrument :

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Instrument : FID_F ClientSampleId : WASTEMSD									
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247	14.904	14.806	14.964	VV	11792	364543	11.78%	0.485%	
248	15.018	14.964	15.061	VV	92244	1397157	45.27%	0.217%	
249	15.070	15.061	15.099	VV	2970	49298	0.01%	0.001%	
250	15.153	15.099	15.169	VV	3666	106149	0.03%	0.003%	
251	15.222	15.169	15.289	VV	203298	3094652	100.00%	0.000%	
252	15.309	15.289	15.336	VV	10348	209269	0.05%	0.005%	
253	15.355	15.336	15.386	VV	7424	146397	4.73%	0.195%	
254	15.408	15.386	15.429	VV	6855	108022	3.49%	0.144%	
255	15.451	15.429	15.487	VV	4431	121631	3.93%	0.162%	
256	15.503	15.487	15.527	VV	2826	55663	1.80%	0.074%	
257	15.555	15.527	15.574	VV	5203	93718	3.03%	0.125%	
258	15.603	15.574	15.685	VV	50224	827416	26.74%	1.100%	
259	15.698	15.685	15.715	VV	2422	38858	1.26%	0.052%	
260	15.743	15.715	15.754	VV	7460	109482	3.54%	0.146%	
261	15.767	15.754	15.784	VV	7903	111933	3.62%	0.149%	
262	15.803	15.784	15.846	VV	6392	163200	5.27%	0.217%	
263	15.873	15.846	15.929	VV	17560	281257	9.09%	0.374%	
264	15.959	15.929	16.016	VV	16130	287921	9.30%	0.383%	
265	16.035	16.016	16.060	VV	2373	49617	1.60%	0.066%	
266	16.070	16.060	16.086	VV	1635	22993	0.74%	0.031%	
267	16.112	16.086	16.152	VV	8898	147180	4.76%	0.196%	
268	16.180	16.152	16.196	VV	1210	23624	0.76%	0.031%	
269	16.245	16.196	16.281	VV	180396	2445769	79.03%	3.251%	
270	16.310	16.281	16.346	VV	5891	82375	2.66%	0.110%	
271	16.361	16.346	16.406	VV	393	6984	0.23%	0.009%	
272	16.459	16.406	16.518	VV	4857	93628	3.03%	0.124%	
273	16.544	16.518	16.565	PV	1565	26090	0.84%	0.035%	
274	16.618	16.565	16.653	VV	24053	401304	12.97%	0.533%	
275	16.673	16.653	16.699	VV	5697	109460	3.54%	0.146%	
276	16.727	16.699	16.755	VV	9853	155990	5.04%	0.207%	
277	16.782	16.755	16.899	VV	16986	511003	16.51%	0.679%	
278	16.941	16.899	16.981	VV	14729	270858	8.75%	0.360%	
279	16.992	16.981	17.016	VV	1930	33944	1.10%	0.045%	
280	17.035	17.016	17.069	VV	3435	64575	2.09%	0.086%	
281	17.103	17.069	17.139	VV	12261	217701	7.03%	0.289%	
282	17.195	17.139	17.226	VV	186932	2648105	85.57%	3.520%	
283	17.246	17.226	17.255	VV	10894	139070	4.49%	0.185%	
284	17.275	17.255	17.356	VV	26147	403338	13.03%	0.536%	
285	17.411	17.356	17.428	VV	2405	50260	1.62%	0.067%	
286	17.447	17.428	17.504	VV	2269	57291	1.85%	0.076%	
287	17.561	17.504	17.619	PV	33354	634030	20.49%	0.843%	
288	17.645	17.619	17.686	VV	25294	378192	12.22%	0.503%	
289	17.729	17.686	17.799	VV	4775	128208	4.14%	0.170%	
290	17.828	17.799	17.837	VV	1709	25670	0.83%	0.034%	
291	17.860	17.837	17.902	VV	4458	83085	2.68%	0.110%	
292	17.928	17.902	17.946	VV	1234	22932	0.74%	0.030%	
293	17.961	17.946	17.986	VV	1151	22866	0.74%	0.030%	
294	18.015	17.986	18.029	VV	2383	43432	1.40%	0.058%	
295	18.084	18.029	18.121	VV	164332	2402053	77.62%	3.193%	
296	18.175	18.121	18.214	VV	19777	335678	10.85%	0.446%	
297	18.232	18.214	18.251	VV	2118	40315	1.30%	0.054%	
298	18.267	18.251	18.281	VV	1761	30546	0.99%	0.041%	
299	18.318	18.281	18.347	VV	7267	150797	4.87%	0.200%	

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300	18.444	18.347	18.480	VV	39282	881025	28.47%	1.171%	
301	18.506	18.480	18.538	VV	38212	654165	21.60%	0.436%	
302	18.560	18.538	18.581	VV	9806	189131	6.00%	0.192%	
303	18.602	18.581	18.629	VV	11984	241726	7.70%	0.321%	
304	18.639	18.629	18.679	VV	4995	112843	3.30%	0.101%	
305	18.728	18.679	18.767	VV	4444	185125	5.88%	0.242%	
306	18.808	18.767	18.846	VV	13812	327902	10.60%	0.436%	
307	18.917	18.846	18.981	VV	144706	2597304	83.93%	3.453%	
308	19.019	18.981	19.062	VV	27102	643741	20.80%	0.856%	
309	19.081	19.062	19.097	VV	7817	144644	4.67%	0.192%	
310	19.118	19.097	19.149	VV	12321	241348	7.80%	0.321%	
311	19.204	19.149	19.216	VV	6536	181986	5.88%	0.242%	
312	19.273	19.216	19.297	VV	51095	1082848	34.99%	1.440%	
313	19.319	19.297	19.374	VV	28467	820030	26.50%	1.090%	
314	19.446	19.374	19.514	VV	29451	1242147	40.14%	1.651%	
315	19.555	19.514	19.606	VV	10534	474673	15.34%	0.631%	
316	19.622	19.606	19.646	VV	8525	166970	5.40%	0.222%	
317	19.700	19.646	19.740	VV	81832	1464294	47.32%	1.947%	
318	19.773	19.740	19.789	VV	17223	359985	11.63%	0.479%	
319	19.811	19.789	19.845	VV	32063	620416	20.05%	0.825%	
320	19.858	19.845	19.869	VV	7315	98922	3.20%	0.132%	
321	19.888	19.869	19.909	VV	10317	200399	6.48%	0.266%	
322	19.926	19.909	19.945	VV	8230	157141	5.08%	0.209%	
323	19.988	19.945	20.022	VV	14418	483062	15.61%	0.642%	
324	20.055	20.022	20.091	VV	23396	638043	20.62%	0.848%	
325	20.107	20.091	20.147	VV	14875	380642	12.30%	0.506%	
326	20.187	20.147	20.203	VV	10784	307020	9.92%	0.408%	
327	20.215	20.203	20.245	VV	10231	228116	7.37%	0.303%	
328	20.282	20.245	20.304	VV	9145	301177	9.73%	0.400%	
329	20.329	20.304	20.352	VV	10839	278400	9.00%	0.370%	
330	20.384	20.352	20.408	VV	14223	399231	12.90%	0.531%	
331	20.440	20.408	20.491	VV	58266	1205522	38.96%	1.603%	
332	20.514	20.491	20.528	VV	10295	222903	7.20%	0.296%	
333	20.559	20.528	20.581	VV	16505	410199	13.26%	0.545%	
334	20.606	20.581	20.637	VV	14532	424598	13.72%	0.564%	
335	20.684	20.637	20.729	VV	12395	626122	20.23%	0.832%	
336	20.800	20.729	20.818	VV	16062	740218	23.92%	0.984%	
337	20.833	20.818	20.951	VV	15941	982360	31.74%	1.306%	
338	20.965	20.951	21.002	VV	9819	274088	8.86%	0.364%	
339	21.017	21.002	21.039	VV	7797	167417	5.41%	0.223%	
340	21.091	21.039	21.136	VV	8471	445103	14.38%	0.592%	
341	21.174	21.136	21.264	VV	42641	1089847	35.22%	1.449%	
342	21.281	21.264	21.303	VV	4629	105856	3.42%	0.141%	
343	21.325	21.303	21.348	VV	4958	124424	4.02%	0.165%	
344	21.440	21.348	21.462	VV	5090	319534	10.33%	0.425%	
345	21.471	21.462	21.492	VV	4360	75840	2.45%	0.101%	
346	21.511	21.492	21.565	VV	4117	170072	5.50%	0.226%	
347	21.607	21.565	21.614	VV	4631	122560	3.96%	0.163%	
348	21.663	21.614	21.786	VV	5541	412619	13.33%	0.549%	
349	21.861	21.786	21.997	VV	3614	265831	8.59%	0.353%	
350	22.084	21.997	22.146	PV	26309	641529	20.73%	0.853%	

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Sum of corrected areas: 75223261

Page 7

rteres

FF042225.M Sat May 17 04:04:39 2025

Instrument :

FID_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 05/19/2025

Supervised By :mohammad ahmed 05/20/2025

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
5 TRPH STD		FF015790.D	FF042225	N-TETRACONTANE	mohammad	4/24/2025 6:33:56 AM	Peak Integrated by Software incorrectly

Manual Integration Report

Sample ID	ClientID ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
PB168042BL		FF015853.D	FF051625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
PB168042BS		FF015854.D	FF051625	N-HEXATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MS		FF015857.D	FF051625	N-DOTRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MS		FF015857.D	FF051625	N-HEXATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MS		FF015857.D	FF051625	N-OCTATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MS		FF015857.D	FF051625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly
Q2003-01MSD		FF015858.D	FF051625	N-DOTRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MSD		FF015858.D	FF051625	N-HEXATRIACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MSD		FF015858.D	FF051625	N-TETRACONTANE	 	 	Peak Integrated by Software incorrectly
Q2003-01MSD		FF015858.D	FF051625	TETRACOSANE-d50 (SURROGA	 	 	Peak Integrated by Software incorrectly

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF042225

Review By	yogesh	Review On	4/22/2025 1:28:06 PM
Supervise By	mohammad	Supervise On	4/24/2025 6:33:56 AM
SubDirectory	FF042225	HP Acquire Method	HP Processing Method FF042225
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	FF015784.D	22 Apr 2025 08:12	YP\AJ	Ok
2	I.BLK	FF015785.D	22 Apr 2025 08:42	YP\AJ	Ok
3	100 TRPH STD	FF015786.D	22 Apr 2025 09:11	YP\AJ	Ok
4	50 TRPH STD	FF015787.D	22 Apr 2025 09:40	YP\AJ	Ok
5	20 TRPH STD	FF015788.D	22 Apr 2025 10:09	YP\AJ	Ok
6	10 TRPH STD	FF015789.D	22 Apr 2025 10:39	YP\AJ	Ok
7	5 TRPH STD	FF015790.D	22 Apr 2025 11:08	YP\AJ	Ok,M
8	FF042225ICV	FF015791.D	22 Apr 2025 11:39	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051625

Review By	yogesh	Review On	5/16/2025 12:28:26 PM
Supervise By		Supervise On	
SubDirectory	FF051625	HP Acquire Method	HP Processing Method FF042225
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	PP24467,PP24469,PP24470,PP24471,PP24472		
CCC Internal Standard/PEM	PP24469		
ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	PP24468,PP24473		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015849.D	16 May 2025 09:59	YP\AJ	Ok
2	I.BLK	FF015850.D	16 May 2025 10:28	YP\AJ	Ok
3	50 PPM TRPH STD	FF015851.D	16 May 2025 10:58	YP\AJ	Ok
4	RT MARKER	FF015852.D	16 May 2025 11:30	YP\AJ	Ok
5	PB168042BL	FF015853.D	16 May 2025 12:00	YP\AJ	Ok,NS
6	PB168042BS	FF015854.D	16 May 2025 12:29	YP\AJ	Ok,NS
7	Q2003-01	FF015855.D	16 May 2025 12:58	YP\AJ	Ok
8	Q2021-01	FF015856.D	16 May 2025 13:28	YP\AJ	Ok
9	Q2003-01MS	FF015857.D	16 May 2025 13:57	YP\AJ	Ok,NS
10	Q2003-01MSD	FF015858.D	16 May 2025 14:27	YP\AJ	Ok,NS
11	I.BLK	FF015859.D	16 May 2025 14:56	YP\AJ	Ok
12	50 PPM TRPH STD	FF015860.D	16 May 2025 15:25	YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF042225

Review By	yogesh	Review On	4/22/2025 1:28:06 PM
Supervise By	mohammad	Supervise On	4/24/2025 6:33:56 AM
SubDirectory	FF042225	HP Acquire Method	HP Processing Method FF042225

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		FF015784.D	22 Apr 2025 08:12		YP\AJ	Ok
2	I.BLK		FF015785.D	22 Apr 2025 08:42		YP\AJ	Ok
3	100 TRPH STD		FF015786.D	22 Apr 2025 09:11		YP\AJ	Ok
4	50 TRPH STD		FF015787.D	22 Apr 2025 09:40		YP\AJ	Ok
5	20 TRPH STD		FF015788.D	22 Apr 2025 10:09		YP\AJ	Ok
6	10 TRPH STD		FF015789.D	22 Apr 2025 10:39		YP\AJ	Ok
7	5 TRPH STD		FF015790.D	22 Apr 2025 11:08		YP\AJ	Ok,M
8	FF042225ICV		FF015791.D	22 Apr 2025 11:39		YP\AJ	Ok

M : Manual Integration

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QC Batch ID # FF051625

Review By	yogesh	Review On	5/16/2025 12:28:26 PM
Supervise By		Supervise On	
SubDirectory	FF051625	HP Acquire Method	HP Processing Method FF042225

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

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015849.D	16 May 2025 09:59		YP\AJ	Ok
2	I.BLK		FF015850.D	16 May 2025 10:28		YP\AJ	Ok
3	50 PPM TRPH STD		FF015851.D	16 May 2025 10:58		YP\AJ	Ok
4	RT MARKER		FF015852.D	16 May 2025 11:30		YP\AJ	Ok
5	PB168042BL		FF015853.D	16 May 2025 12:00		YP\AJ	Ok,NS
6	PB168042BS		FF015854.D	16 May 2025 12:29		YP\AJ	Ok,NS
7	Q2003-01		FF015855.D	16 May 2025 12:58		YP\AJ	Ok
8	Q2021-01		FF015856.D	16 May 2025 13:28		YP\AJ	Ok
9	Q2003-01MS		FF015857.D	16 May 2025 13:57		YP\AJ	Ok,NS
10	Q2003-01MSD		FF015858.D	16 May 2025 14:27		YP\AJ	Ok,NS
11	I.BLK		FF015859.D	16 May 2025 14:56		YP\AJ	Ok
12	50 PPM TRPH STD		FF015860.D	16 May 2025 15:25		YP\AJ	Ok

M : Manual Integration



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/12/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:18
Out Date: 05/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135715

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
Q1994-05	SVOC-GPC-BLANK	1	1.00	1.00	2.00	2.00	100.0	
Q1994-06	PEST-GPC-BLANK	2	1.00	1.00	2.00	2.00	100.0	
Q1994-07	PEST-GPC-BLANK-SPIKE	3	1.00	1.00	2.00	2.00	100.0	
Q1994-08	PCB-GPC-BLANK	4	1.00	1.00	2.00	2.00	100.0	
Q1994-09	PCB-GPC-BLANK-SPIKE	5	1.00	1.00	2.00	2.00	100.0	
Q1994-10	SVOC-GPC2-BLANK	6	1.00	1.00	2.00	2.00	100.0	
Q1994-11	PEST-GPC2-BLANK	7	1.00	1.00	2.00	2.00	100.0	
Q1994-12	PEST-GPC2-BLANK-SPIKE	8	1.00	1.00	2.00	2.00	100.0	
Q1994-13	PCB-GPC2-BLANK	9	1.00	1.00	2.00	2.00	100.0	
Q1994-14	PCB-GPC2-BLANK-SPIKE	10	1.00	1.00	2.00	2.00	100.0	
Q1995-01	ERT-273	11	1.15	9.91	11.06	10.55	94.9	
Q1995-02	ERT-274	12	1.15	10.40	11.55	8.68	72.4	
Q1995-03	ERT-275	13	1.15	10.01	11.16	10.95	97.9	
Q1995-04	ERT-276	14	1.15	9.94	11.09	9.35	82.5	
Q1995-05	ERT-277	15	1.18	10.23	11.41	10.18	88.0	
Q1995-06	ERT-278	16	1.14	10.63	11.77	9.42	77.9	
Q1995-07	ERT-279	17	1.15	9.98	11.13	9.7	85.7	
Q2002-01	EO-02-05092025	18	1.14	9.88	11.02	10.35	93.2	
Q2002-02	EO-02-05092025-E2	19	1.19	10.34	11.53	10.29	88.0	
Q2003-01	WASTE	20	1.16	10.55	11.71	10.26	86.3	
Q2003-02	VOC	21	1.18	10.20	11.38	10.17	88.1	
Q2003-03	1	22	1.12	10.35	11.47	10.07	86.5	
Q2003-04	2	23	1.17	10.30	11.47	10.17	87.4	
Q2003-05	3	24	1.18	10.36	11.54	10.13	86.4	
Q2003-06	4	25	1.16	9.99	11.15	9.83	86.8	
Q2003-07	5	26	1.15	10.18	11.33	10.00	86.9	
Q2004-01	VNJ-220	27	1.14	9.69	10.83	10.44	96.0	
Q2004-03	2811	28	1.16	10.70	11.86	11.3	94.8	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 5/12/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 05/09/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:18
Out Date: 05/10/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135715

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
Q2004-05	R0202	29	1.15	10.32	11.47	10.87	94.2	
Q2004-07	205510	30	1.14	10.34	11.48	10.97	95.1	
Q2004-09	SOIL-STOCK	31	1.13	10.07	11.2	11.03	98.3	
Q2004-11	STONE-STOCK	32	1.00	1.00	2.00	2.00	100.0	stone sample, 100 % solids

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

WORKLIST(Hardcopy Internal Chain)

135715

WorkList Name : %1-050925

WorkList ID : 189399

Department : Wet-Chemistry

Date : 05-09-2025 08:13:33

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1994-05	SVOC-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-06	PEST-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-07	PEST-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-08	PCB-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-09	PCB-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-10	SVOC-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-11	PEST-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-12	PEST-GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-13	PCB-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1994-14	PCB-GCP2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	05/02/2025	Chemtech -SO
Q1995-01	ERT-273	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/06/2025	Chemtech -SO
Q1995-02	ERT-274	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q1995-03	ERT-275	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q1995-04	ERT-276	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q1995-05	ERT-277	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q1995-06	ERT-278	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q1995-07	ERT-279	Solid	Percent Solids	Cool 4 deg C	TECH05	L51	05/07/2025	Chemtech -SO
Q2002-01	EO-02-05092025	Solid	Percent Solids	Cool 4 deg C	PSEG05	L41	05/09/2025	Chemtech -SO
Q2002-02	EO-02-05092025-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	L41	05/09/2025	Chemtech -SO
Q2003-01	WASTE	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2003-02	VOC	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO

Date/Time 05/09/25 15:30

Raw Sample Received by: 30 wpc

Raw Sample Relinquished by: [Signature]

Date/Time 05/09/25 17:30

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

WORKLIST(Hardcopy Internal Chain)

NA 135715

WorkList Name : %1-050925 WorkList ID : 189399 Department : Wet-Chemistry Date : 05-09-2025 08:13:33

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2003-03	1	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2003-04	2	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2003-05	3	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2003-06	4	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2003-07	5	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2004-01	VNJ-220	Solid	Percent Solids	Cool 4 deg C	SCIA01	L41	05/09/2025	Chemtech -SO
Q2004-03	2811	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2004-05	R0202	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2004-07	205510	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2004-09	SOIL-STOCK	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO
Q2004-11	STONE-STOCK	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	05/09/2025	Chemtech -SO

Date/Time 05/09/25 15:30
Raw Sample Received by: SB JPC
Raw Sample Relinquished by: SA SM

Date/Time 05/09/25 17:30
Raw Sample Received by: SB JPC
Raw Sample Relinquished by: SB CWC

SOP ID: M3541-ASE Extraction-14

Clean Up SOP #: N/A

Matrix : Solid

Weight By: EH **Extraction By:** RJ

Balance check: RJ **Filter By:** RJ

Balance ID: EX-SC-2 **pH Meter ID:** N/A

pH Strip Lot#: N/A **Hood ID:** 3,7

Extraction Method: ☐ Separatory Funnel ☐ Continuous Liquid/Liquid ☐ Sonication ☐ Waste Dilution ☒ Soxhlet

Extraction Start Date : 05/16/2025

Extraction Start Time : 08:50

Extraction End Date : 05/16/2025

Extraction End Time : 11:50

Concentration By: EH

Supervisor By : RUPESH

Standard Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	PP24162
Surrogate	1.0ML	20 PPM	PP24180
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2612
Baked Na2SO4	N/A	EP2611
Sand	N/A	E2865
Methylene Chloride	N/A	E3930
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210673.

KD Bath ID: N/A **Envap ID:** NEVAP-02

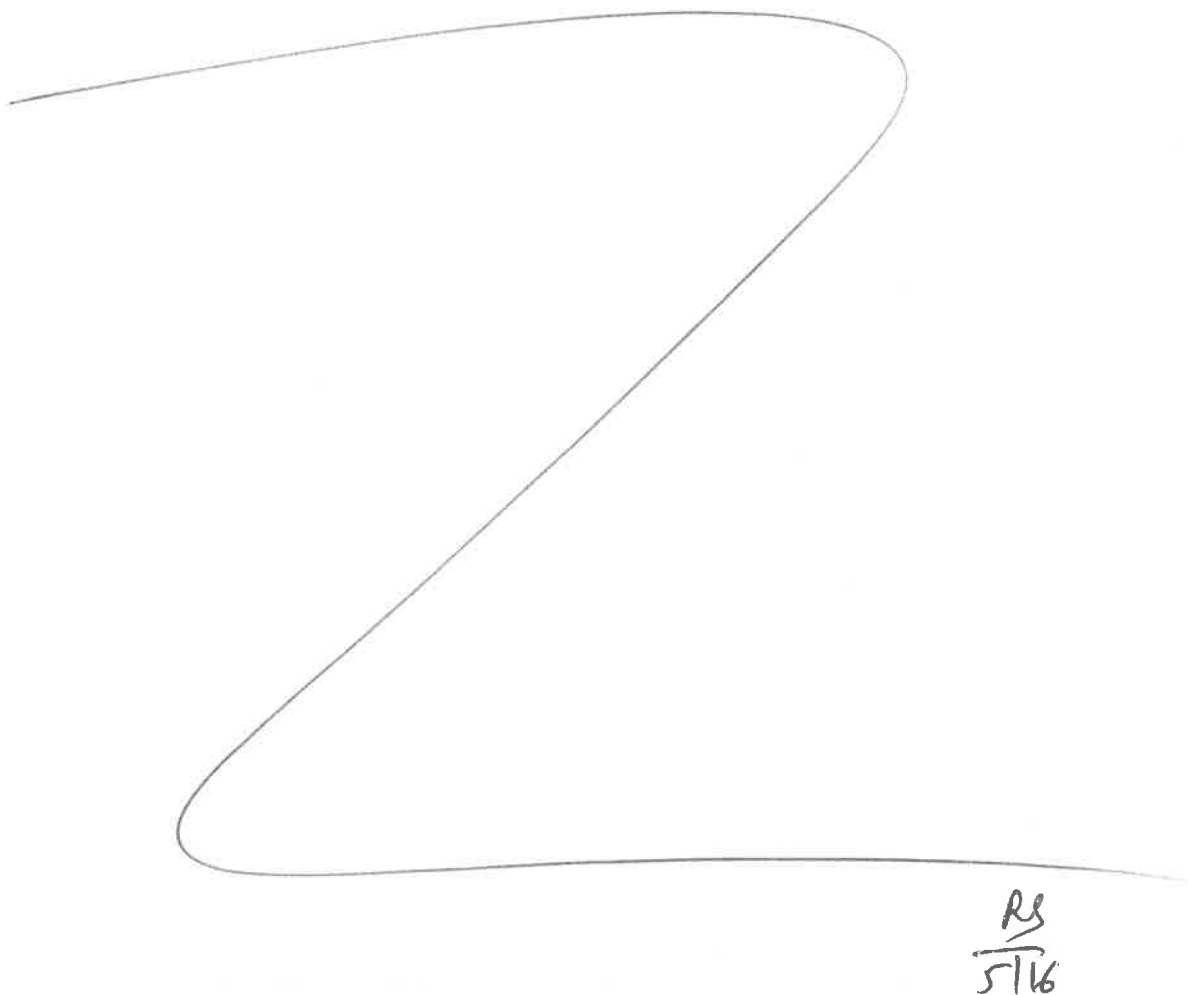
KD Bath Temperature: N/A **Envap Temperature:** 40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
5/16/25	RS (Ext Lab)	Y-P-Pes + IP SB.
11:55	Preparation Group	Analysis Group

Analytical Method: M3541-ASE Extraction-14

Concentration Date: 05/16/2025

Sample ID	Client Sample ID	Test	g mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB168042BL	PB168042BL	TPH GC	30.03	N/A	ritesh	Evelyn	1			U2-1
PB168042BS	PB168042BS	TPH GC	30.02	N/A	ritesh	Evelyn	1			2
Q2003-01	WASTE	TPH GC	30.07	N/A	ritesh	Evelyn	1			3
Q2003-01MS	WASTEMS	TPH GC	30.04	N/A	ritesh	Evelyn	1			4
Q2003-01MS D	WASTEMSD	TPH GC	30.02	N/A	ritesh	Evelyn	1			5
Q2021-01	WASTE	TPH GC	30.05	N/A	ritesh	Evelyn	1			6



168042
2012-05-16

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q2003 WorkList ID : 189563 Department : Extraction Date : 05-16-2025 08:42:41

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2003-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	L41	05/09/2025	8015D
Q2021-01	WASTE	Solid	TPH GC	Cool 4 deg C	SCIA01	L41	05/12/2025	8015D

Date/Time	5/16/25	8:45	5/16/25	9:00
Raw Sample Received by:	RJ (Ext 661)		CP 8	
Raw Sample Relinquished by:	CP 8		RJ (Ext 661)	

Prep Standard - Chemical Standard Summary

Order ID : Q2003

Test : TPH GC

Prepbatch ID : PB168042,

Sequence ID/Qc Batch ID: FF051625,

Standard ID :

EP2611,EP2612,PP24162,PP24180,PP24467,PP24468,PP24469,PP24470,PP24471,PP24472,PP24473,

Chemical ID :

E2865,E3551,E3874,E3926,E3930,E3932,P11951,P11952,P11955,P11956,P13106,P13108,P13477,P13479,P13487,P13488,P13489,P13490,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2611	05/09/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 05/09/2025
<u>FROM</u> 4000.00000gram of E3551 = Final Quantity: 4000.000 gram								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipettelD</u>	<u>Supervised By</u>
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2612	05/09/2025	11/05/2025	RUPESHKUMAR SHAH	None	None	Riteshkumar Patel 05/09/2025
<u>FROM</u> 8000.00000ml of E3930 + 8000.00000ml of E3932 = Final Quantity: 16000.000 ml								

Pest/Pcb STANDARD PREPARATION LOG

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

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
147	20 PPM DRO Surrogate Spike Solution	PP24180	02/03/2025	07/30/2025	Yogesh Patel	None	None	Ankita Jodhani
								02/03/2025

FROM 1.00000ml of P13487 + 1.00000ml of P13488 + 1.00000ml of P13489 + 1.00000ml of P13490 + 196.00000ml of E3874 = Final Quantity: 200.000 ml

Pest/Pcb STANDARD PREPARATION LOG

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

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

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

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

Pest/Pcb STANDARD PREPARATION LOG

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

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

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

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

Pest/Pcb STANDARD PREPARATION LOG

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

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

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

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3608	50 PPM ICV DRO STD (RESTEK)	PP24473	04/22/2025	10/08/2025	Yogesh Patel	None	None	Abdul Mirza 05/08/2025
<u>FROM</u>	0.50000ml of E3926 + 0.50000ml of PP24468 = Final Quantity: 1.000 ml							

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	07/01/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	07/30/2025	01/30/2025 / Rajesh	01/20/2025 / Rajesh	E3874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	10/08/2025	04/08/2025 / Rajesh	02/07/2025 / Rajesh	E3926

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	25A0262002	02/20/2026	05/02/2025 / RUPESH	03/09/2025 / RUPESH	E3930

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	11/05/2025	05/05/2025 / RUPESH	04/23/2025 / RUPESH	E3932

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	10/22/2025	04/22/2025 / yogesh	07/11/2022 / Yogesh	P11951

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	10/22/2025	04/22/2025 / yogesh	07/11/2022 / Yogesh	P11952

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	07/31/2025	01/31/2025 / yogesh	07/11/2022 / Yogesh	P11955

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	07/31/2025	01/31/2025 / yogesh	07/11/2022 / Yogesh	P11956

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	10/22/2025	04/22/2025 / yogesh	01/12/2024 / Yogesh	P13106

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	10/22/2025	04/22/2025 / yogesh	01/12/2024 / Yogesh	P13108

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	10/22/2025	04/22/2025 / yogesh	07/24/2024 / yogesh	P13477

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	10/22/2025	04/22/2025 / yogesh	07/24/2024 / yogesh	P13479

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13487

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13488

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13489

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	72072 / n-Tetracosane-d50, 1000 ug/ml	101122	08/03/2025	02/03/2025 / yogesh	07/24/2024 / yogesh	P13490

Sand
Purified
Washed and Ignited



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

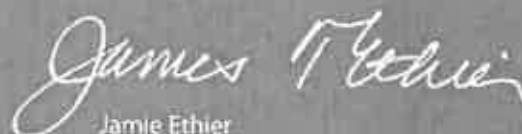
Certificate of Analysis

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

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

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

E 2865


Jamie Ethier
Vice President Global Quality

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

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



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

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

CERTIFICATE OF ANALYSIS

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

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

COMMENTS

QC: PhC Irma Belmares

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

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

RC-02-01, Ed. 3

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



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

Certificate of Analysis

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

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

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

E 3874

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

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

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

E 3926

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

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

avantor



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

Certificate of Analysis

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

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

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

E3930

J. Croak

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials, LLC

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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

 **avantor™**



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

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

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

RS

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E 3932



Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

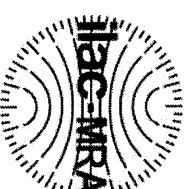
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

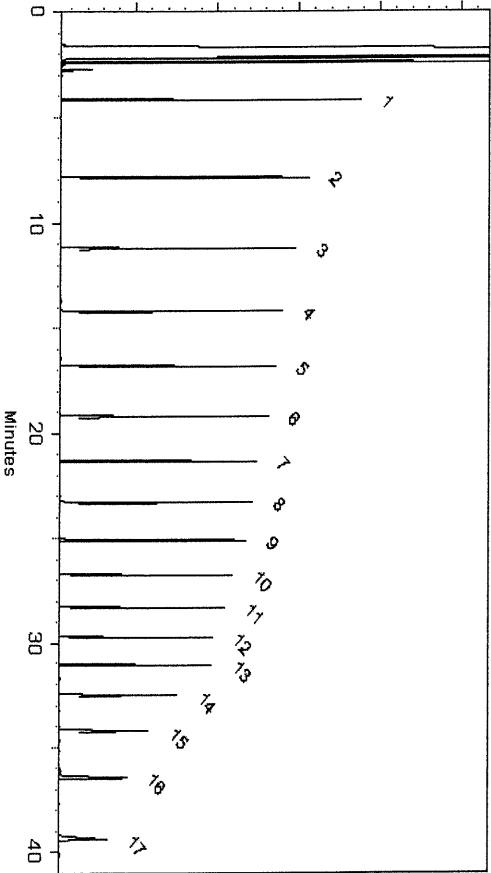
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

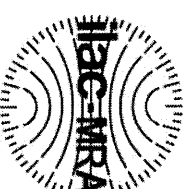
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description : Florida TRPH Standard

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

Container Size : 2 mL

Pkg Amt: > 1 mL

Expiration Date : July 31, 2029

Storage: 25°C nominal

Handling: Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

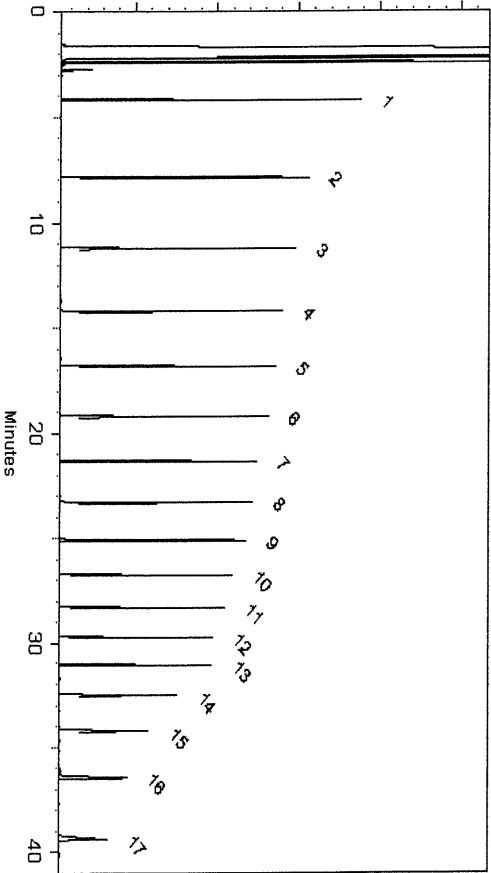
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko
Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills
Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



CERTIFIED REFERENCE MATERIAL

110 Benner Circle

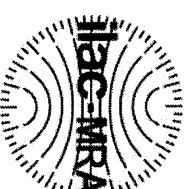
Bellefonte, PA 16823-8812

Tel: (800)356-1688

Fax: (814)353-1309

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description :

Florida TRPH Standard

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

Container Size :

2 mL

Pkg Amt: > 1 mL

Expiration Date :

July 31, 2029

Storage: 25°C nominal

Handling:

Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948 } 7.8
P11962 } 07/11/16

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

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

Column:

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

Carrier Gas:

hydrogen-constant pressure 10 psi.

Temp. Program:

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

Inj. Temp:

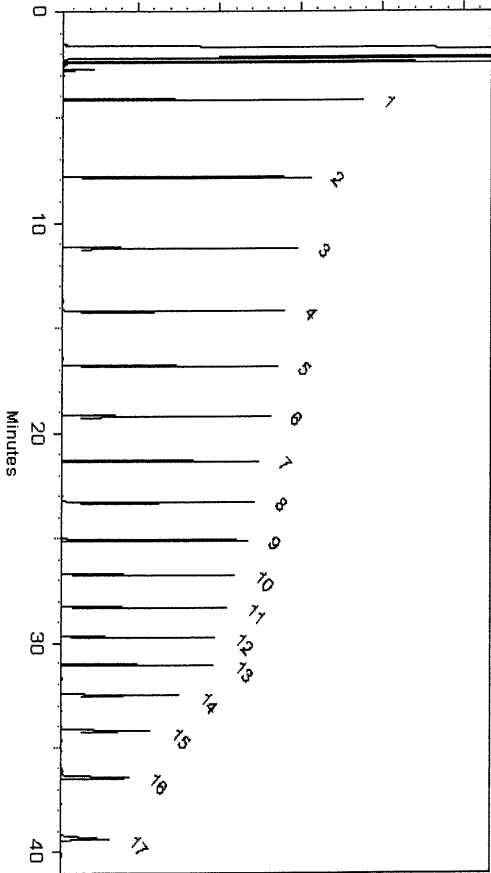
250°C

Det. Temp:

330°C

Det. Type:

FID



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

Brittany Federinko

Brittany Federinko - Operations Tech I

Date Mixed: 29-Jun-2022

Balance: 1128360905

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 01-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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Certified Uncertainty Value Notes:

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

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- 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

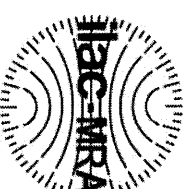
Bellefonte, PA 16823-8812

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266

Lot No.: A0186840

Description :

Florida TRPH Standard

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

Container Size :

2 mL

Pkg Amt: > 1 mL

Expiration Date :

July 31, 2029

Storage: 25°C nominal

Handling:

Sonicate prior to use.

Ship: Ambient

CERTIFIED VALUES

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

P11948
P11962 } 7.8
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:

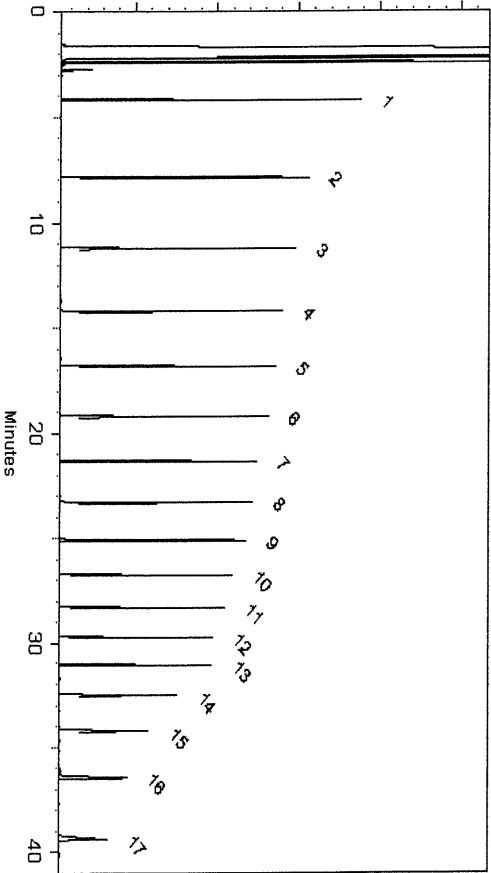
250°C

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.



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Florida TRPH Standard

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

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

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

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

P13103 } Y.P.
↓
P13112 } 01/12/2024

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	n-Octane (C8)	111-65-9	SHBP9758	99%	504.4 µg/mL	+/- 13.0305
2	n-Decane (C10)	124-18-5	SHBQ1342	99%	503.6 µg/mL	+/- 13.0098
3	n-Dodecane (C12)	112-40-3	SHBP7054	99%	503.6 µg/mL	+/- 13.0098
4	n-Tetradecane (C14)	629-59-4	STBK5437	99%	504.0 µg/mL	+/- 13.0201
5	n-Hexadecane (C16)	544-76-3	SHBP8192	99%	504.0 µg/mL	+/- 13.0201
6	n-Octadecane (C18)	593-45-3	UE5NG	98%	504.1 µg/mL	+/- 13.0230
7	n-Eicosane (C20)	112-95-8	MKCN8767	97%	504.0 µg/mL	+/- 13.0204
8	n-Docosane (C22)	629-97-0	MKQC3882	99%	503.6 µg/mL	+/- 13.0098
9	n-Tetracosane (C24)	646-31-1	MKQC8345	99%	504.0 µg/mL	+/- 13.0201
10	n-Hexacosane (C26)	630-01-3	MKQC4814	99%	504.0 µg/mL	+/- 13.0201
11	n-Octacosane (C28)	630-02-4	BCCG0084	99%	504.0 µg/mL	+/- 13.0201
12	n-Triacontane (C30)	638-68-6	MKQC9436	97%	504.0 µg/mL	+/- 13.0204
13	n-Dotriacontane (C32)	544-85-4	BCBW0661	99%	504.0 µg/mL	+/- 13.0201
14	n-Tetratriacontane (C34)	14167-59-0	OML4N	99%	504.4 µg/mL	+/- 13.0305
15	n-Hexatriacontane (C36)	630-06-8	Z27H018	99%	504.0 µg/mL	+/- 13.0201
16	n-Octatriacontane (C38)	7194-85-6	0000145137	96%	503.8 µg/mL	+/- 13.0152
17	n-Tetracontane (C40)	4181-95-7	OKEGA	99%	503.6 µg/mL	+/- 13.0098

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

Quality Confirmation Test

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

Carrier Gas:
hydrogen-constant pressure 10 psi.

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

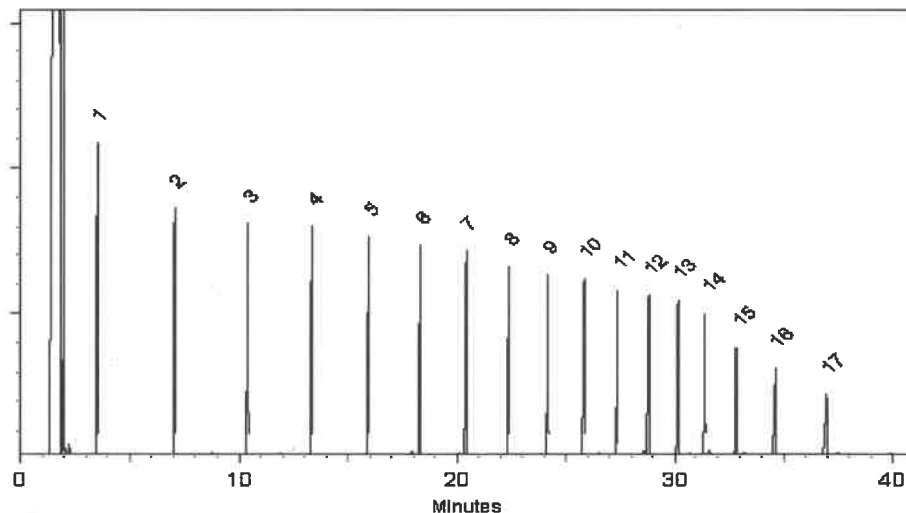
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

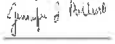


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 29-Nov-2023

Balance Serial # B442140311


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 01-Dec-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/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 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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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.)

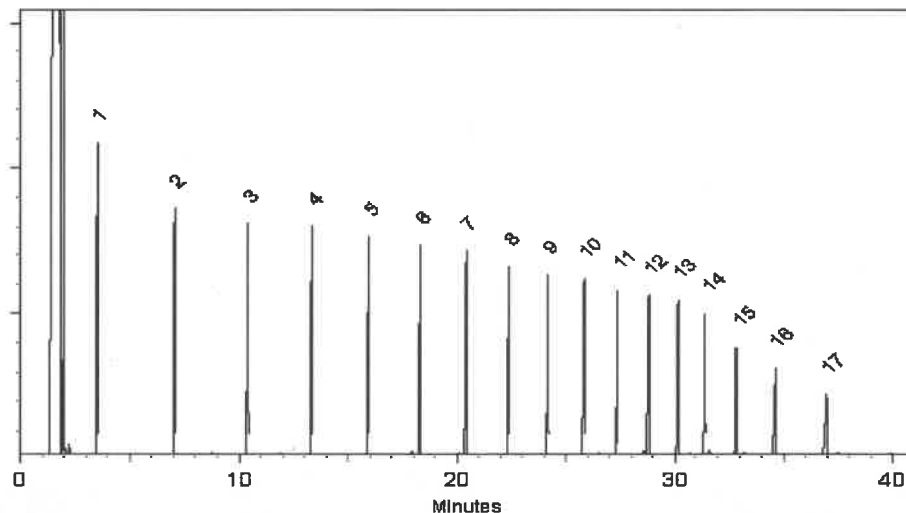
Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID

Split Vent:
2 ml/min.

Inj. Vol
1µl

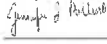


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


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	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

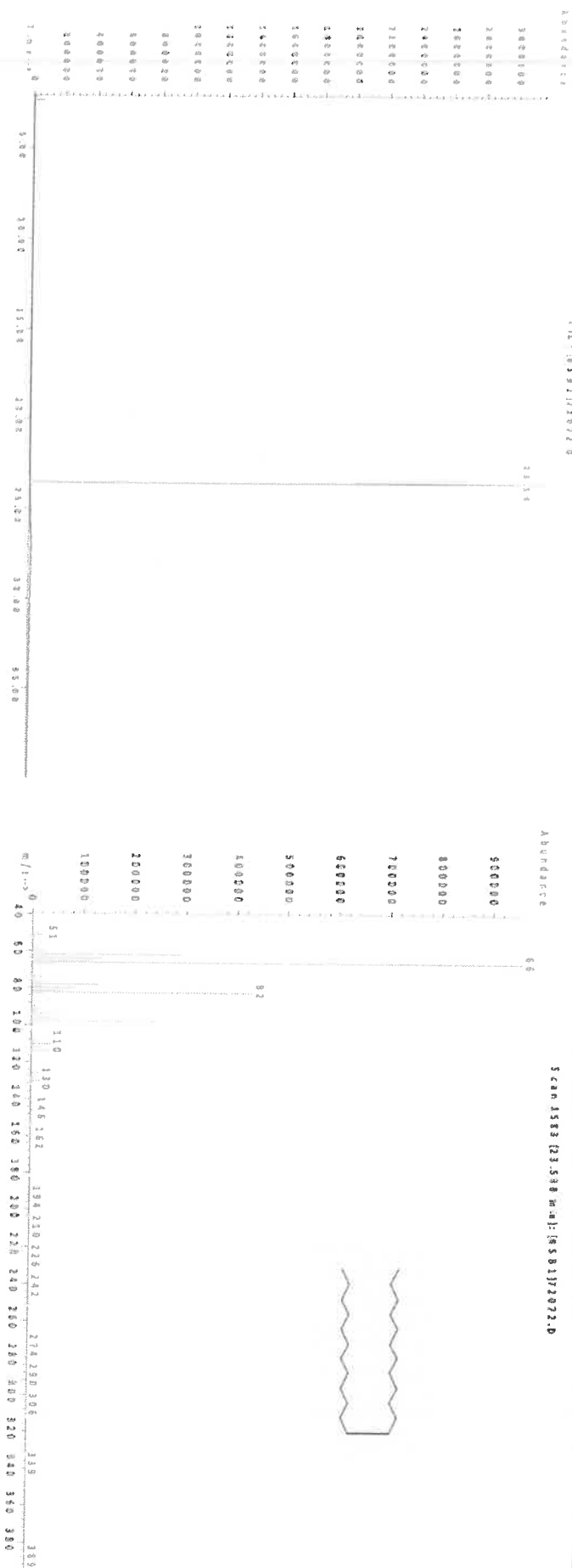
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

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, (1994).

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

Compound	SMW	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (µg)	Actual Weight (µg)	Actual Conc (µg/mL)	Expanded Uncertainty (µg/mL)	CAS#	MSDS Information (Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-1845M07287CB1	4000	98	0.2	2.04093	2.04335	4004.7	15.4	2055-02-1	N/A	en-ra 500mg/kg	
2. Naphthalene-d8	223	PR-2339M031612HP1	4000	99	0.2	2.02032	2.02084	4001.0	15.2	1146-85-2	10 ppm (50mg/m3RH)	en-ra 400mg/kg	
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	15.2	15067-28-2	N/A	en-ra 500mg/kg	
4. Phenanthrene-d10	248	PR-2305M081711PM1	4000	98	0.2	2.04093	2.04135	4000.8	15.4	1517-25-2	N/A	N/A	
5. Chrysene-d12	92	I-19290	4000	98	0.2	2.04093	2.04150	4001.3	15.4	1719-03-5	N/A	N/A	
6. Perylene-d12	247	PR-24113	4000	98	0.2	2.04093	2.04155	4001.2	15.4	1503-58-3	N/A	N/A	

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration
Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

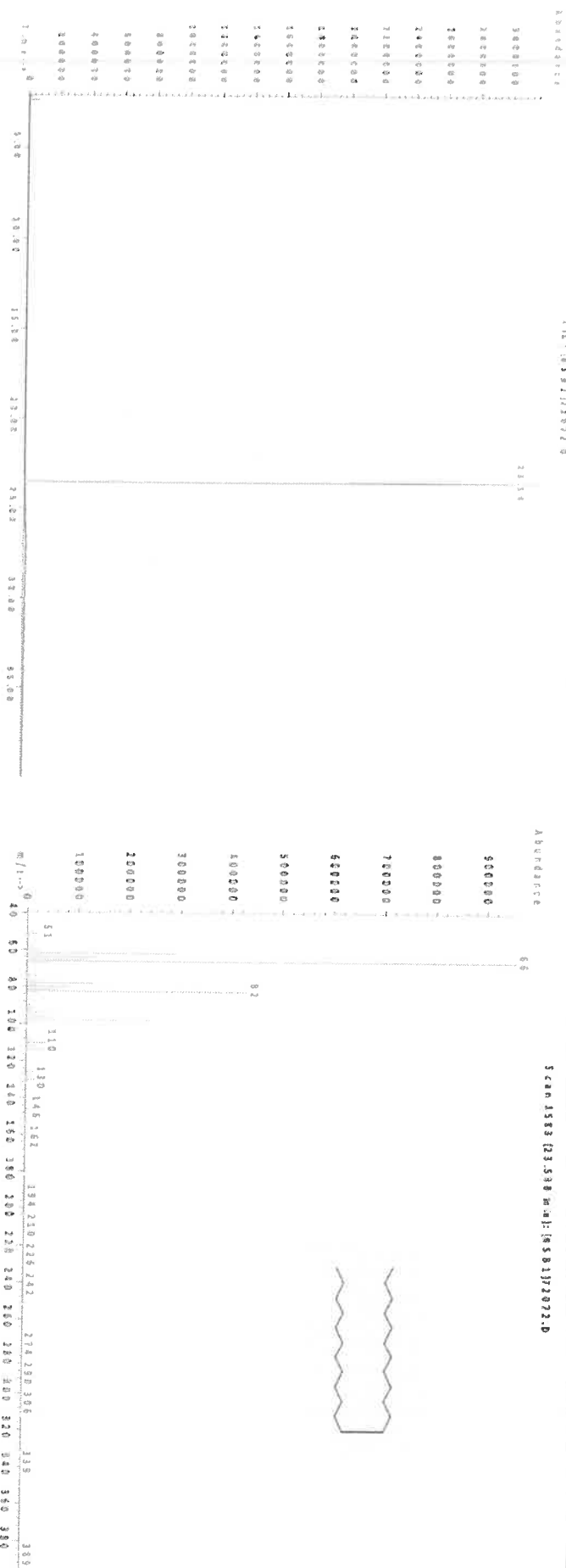
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

1	1,4-Dichlorobenzene-d4	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

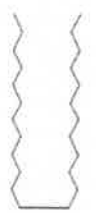
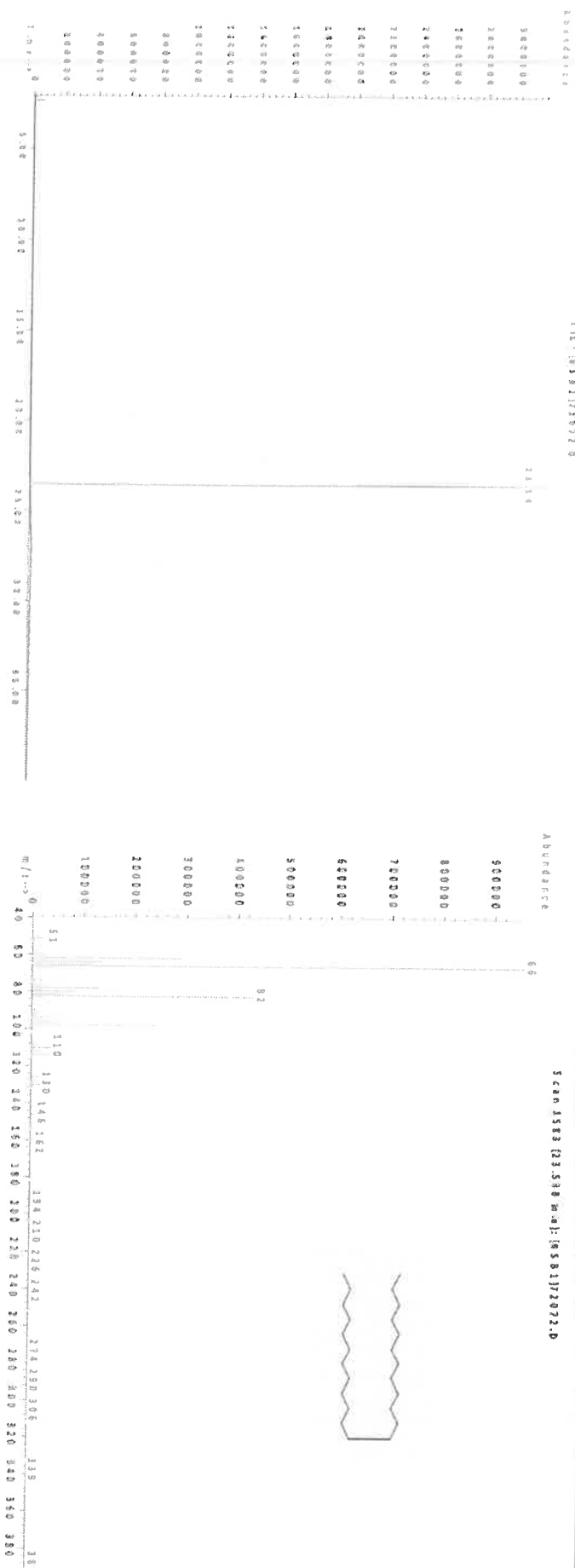


CERTIFIED WEIGHT REPORT

Part Number: <u>72072</u>		Solvent(s): <u>Methylene chloride</u>	Lot# <u>105345</u>				
Lot Number: <u>101122</u>							
Description: <u>n-Tetracosane-d50</u>							
Expiration Date: <u>101132</u>							
Recommended Storage: <u>Ambient (20 °C)</u>							
Nominal Concentration (µg/mL): <u>1000</u>							
NIST Test ID#: <u>6UB3</u>							
Weight(s) shown below were combined and diluted to (mL): <u>200.0</u>							
		Balance Uncertainty <u>5E-05</u>					
		Flask Uncertainty <u>0.058</u>					
		Handwritten: <u>P13437</u> , <u>13436</u> , <u>07/24/24</u> , <u>X.F.</u>					
<table border="1"><tr><td>Formulated By: <u>Prashant Chauhan</u></td><td>DATE <u>101122</u></td></tr><tr><td>Reviewed By: <u>Pedro L. Rentas</u></td><td>DATE <u>101122</u></td></tr></table>				Formulated By: <u>Prashant Chauhan</u>	DATE <u>101122</u>	Reviewed By: <u>Pedro L. Rentas</u>	DATE <u>101122</u>
Formulated By: <u>Prashant Chauhan</u>	DATE <u>101122</u>						
Reviewed By: <u>Pedro L. Rentas</u>	DATE <u>101122</u>						

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

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

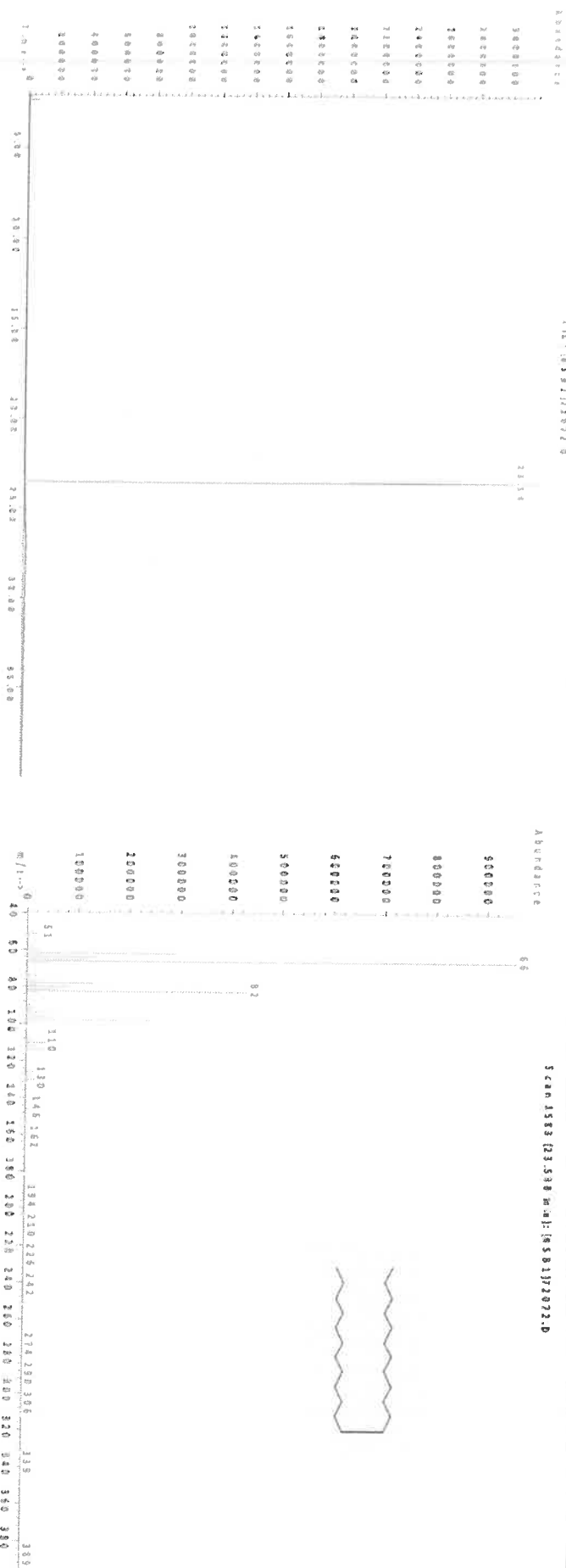
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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

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

Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

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

Solvent(s): Methylene chloride
Lot# 78782

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

070716
070716

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

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

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

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

Peak No. Name FID RT (min)

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

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

Part # 10009R Lot # 041219 1 of 2

Formulator
Reviewer

Actual
Concentration

Uncertainty
Values

Health &
Safety

3rd Party
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2



CERTIFIED WEIGHT REPORT

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

Solvent(s):
Methylene chloride
Lot#
105345

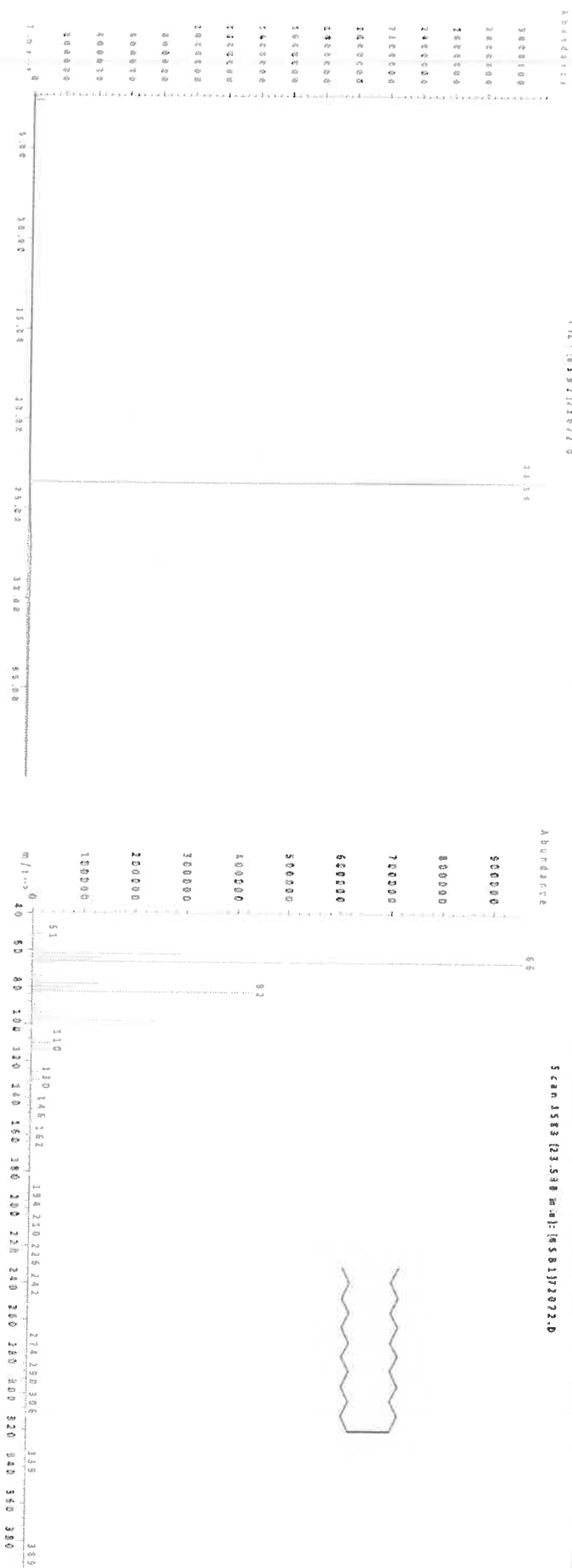
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13436
07/24/24
X.F.

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

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

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



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

ABSOLUTE STANDARDS, INC.

ISO - 17034



Certificate of Analysis



Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Page 1 of 2



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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

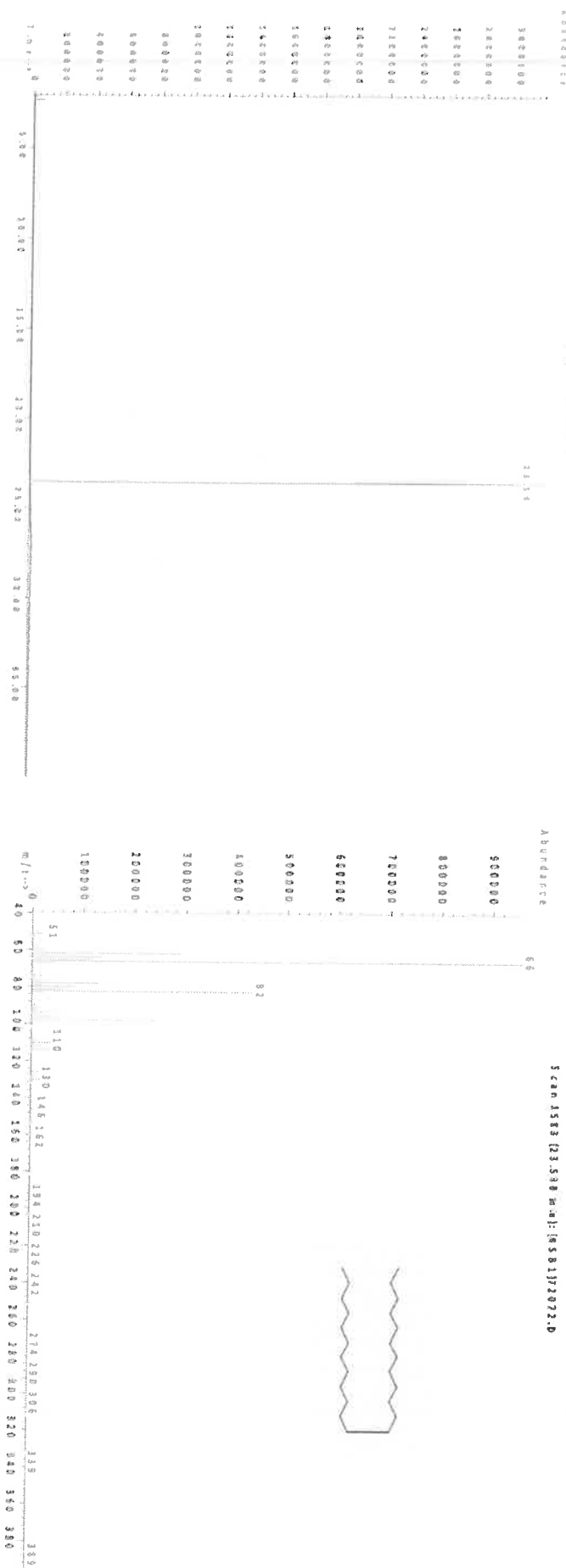
Expiration Date: **101132**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test ID#: **6UB3**
Weight(s) shown below were combined and diluted to (mL): **200.0**
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

P13437
13496
07/24/24
X.F.

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

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

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



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



SHIPPING DOCUMENTS

PINK - SAMPLER COPY

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2003 SCIA01

Order Date : 5/9/2025 12:53:14 PM

Project Mgr :

Client Name : Sciacca General Contractor

Project Name : 32 Sager Pl, Hillsdale

Report Type : Results Only

Client Contact : Rosanne Scirica

Receive DateTime : 5/9/2025 12:00:00 AM

EDD Type : EXCEL NJCLEANUP

Invoice Name : Sciacca General Contractor

Purchase Order :

Hard Copy Date :

Invoice Contact : Rosanne Scirica

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2003-02	VOC	Solid	05/09/2025	09:00	VOC-TCLVOA-10		8260D		10 Bus. Days

Relinquished By :

Date / Time : 5.9.2025 1400

Received By :

Date / Time :

Storage Area : VOA Refridgerator Room