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

DATA PACKAGE

GC SEMI-VOLATILES

PROJECT NAME : FT MEADE TIPTON AIRFIELD PARCEL RI - PO 0111169

WESTON SOLUTIONS

1400 Weston Way

PO Box 2653

West Chester, PA - 19380

Phone No: 610-701-7400

ORDER ID : Q1109

ATTENTION : Nathan Fretz

Laboratory Certification ID # 20012

Table Of Contents for Q1109

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Cover Page

Order ID : Q1109

Project ID : Ft Meade Tipton Airfield Parcel RI - PO 0111169

Client : Weston Solutions

Lab Sample Number	Client Sample Number
Q1109-01	TAPIAL1-MW04I-011525-00-T3
Q1109-02	TAPIAL1-MW04S-011525-00-T2
Q1109-04	TAP-TB-01-011525

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

Signature : _____

Date: 1/21/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Weston Solutions
Project Name: Ft Meade Tipton Airfield Parcel RI - PO 0111169
Project # N/A
Chemtech Project # Q1109
Test Name: Diesel Range Organics

A. Number of Samples and Date of Receipt:
3 Water samples were received on 01/16/2025.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Ammonia, Anions Group5, Diesel Range Organics, Gasoline Range Organics, Hardness, Total, Hexavalent Chromium, Mercury, Metals ICP-TAL, METALS-TAL, Oil and Grease, PESTICIDE Group1, PESTICIDE Group3, SVOC-TCL BNA -20, TOC and VOC-TCLVOA-10. This data package contains results for Diesel Range Organics.

C. Analytical Techniques:
The analysis of Diesel Range Organics was based on method 8015D and extraction was done based on method 3510.

D. QA/ QC Samples:

The Holding Times were met for all analysis.
The Surrogate recoveries met the acceptable criteria.
The Retention Times were acceptable for all samples.
The RPD met criteria .
The Blank Spike met requirements for all samples .
The Blank Spike Duplicate met requirements for all samples .
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:

The not QT review data is reported in the Miscellaneous

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F. Calculation for Concentration in WATER samples :

The sample concentrations (Cs) in ug/L are calculated as follows:

$$Cs = \frac{\{\text{Extract DRO-net (ug/mL)}\}\{\text{Final vol. extract (mL)}\}\{Df\}}{Ws}$$

Where

DRO (net)ug/mL = DRO (total) ug /mL - DRO (solvent) ug /mL

Df = Dilution factor

Ws= Weight of sample in mL

.

G. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

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

Signature_____

284 Sheffield Street, Mountainside NJ 07092 Tel.
908-789-8900 Fax: 908-789-8922

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 is 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

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GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: Q1109 MATRIX: Water

METHOD: 8015D/3510

		NA	NO	YES
1.	Chromatograms Labeled/Compounds Identified.			✓
2.	Standard Summary Submitted.			✓
3.	Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis, 12 HOURS IF 8000 SERIES METHOD. The Initial Calibration met the requirements . The Continuous Calibration met the requirements .			✓
4.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
5.	Surrogate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable ranges.			✓
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range. The Blank Spike met requirements for all samples . The Blank Spike Duplicate met requirements for all samples . The RPD met criteria .			✓
7.	Retention Time Shift Meet Criteria (if applicable) Comments:			✓
8.	Extraction Holding Time Met If not met, list number of days exceeded for each sample:			✓
9.	Analysis Holding Time Met If not met, list those compounds and their recoveries which fall outside the acceptable range.			✓

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GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)

NA NO YES

ADDITIONAL COMMENTS:

The not QT review data is reported in the Miscellaneous.

_____ _____

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1109

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: SOHIL JODHANI **Date:** 01/21/2025

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LAB CHRONICLE

OrderID:	Q1109	**OrderDate:**	1/16/2025 11:32:00 AM
Client:	Weston Solutions	**Project:**	Ft Meade Tipton Airfield Parcel RI - PO 0111169
Contact:	Nathan Fretz	**Location:**	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1109-02	**TAPIAL1-MW04S-011 525-00-T2**	**Water**			**01/15/25**			**01/16/25**
			Diesel Range Organics	8015D		01/17/25	01/17/25	
			Gasoline Range Organics	8015D			01/17/25	

QC SUMMARY

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WATER DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: Weston Solutions

Lab Code: CHEM Case No.: Q1109 SAS No.: Q1109 SDG No.: Q1109

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FF015247.D	82				0
PIBLK-FF015254.D	84				0
PB166100BL	80				0
PB166100BS	97				0
PB166100BSD	96				0
TAPIAL1-MW04S-011525-00-T2	86				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

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WATER DIESEL RANGE ORGANICS LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

Lab Name: Chemtech **Client:** Weston Solutions

Lab Code: CHEM **Cas No:** Q1109 **SAS No :** Q1109 **SDG No:** Q1109

Matrix Spike - EPA Sample No : PB166100BS **Datafile:** FF015252.D

COMPOUND	SPIKE ADDED ug/L	CONCENTRATION ug/L	LCS/LCSD CONCENTRATION ug/L	% REC	QC LIMITS
DRO	200	0	198	99	78-117

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WATER DIESEL RANGE ORGANICS LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE

Lab Name: Chemtech **Client:** Weston Solutions

Lab Code: CHEM **Cas No:** Q1109 **SAS No :** Q1109 **SDG No:** Q1109

Matrix Spike - EPA Sample No : PB166100BSD **Datafile:** FF015253.D

COMPOUND	SPIKE ADDED ug/L	CONCENTRATION ug/L	LCS/LCSD CONCENTRATION ug/L	% REC	QC LIMITS
DRO	200	0	197	98	78-117

LCS/LCSD % Recovery RPD : 0.5

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4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.
PB166100BL

Lab Name: CHEMTECH Contract: WEST04

Lab Code: CHEM Case No.: Q1109 SAS No.: Q1109 SDG NO.: Q1109

Lab File ID: FF015251.D Lab Sample ID: PB166100BL

Instrument ID: FF Date Extracted: 01/17/2025

Matrix: (soil/water) Water Date Analyzed: 01/17/25

Level: (low/med) low Time Analyzed: 14:07

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
TAPIAL1-MW04S-011525-00-T2	Q1109-02	FF015250.D	01/17/25
PB166100BS	PB166100BS	FF015252.D	01/17/25
PB166100BSD	PB166100BSD	FF015253.D	01/17/25

COMMENTS:

SAMPLE DATA

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Report of Analysis

Client:	Weston Solutions	Date Collected:	01/15/25
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	01/16/25
Client Sample ID:	TAPIAL1-MW04S-011525-00-T2	SDG No.:	Q1109
Lab Sample ID:	Q1109-02	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	980 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015250.D	1	01/17/25 08:15	01/17/25 13:39	PB166100

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	13.0	J	10.0	26.0	51.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	17.2		29 - 130		86%	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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015250.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 13:39
Operator : YP\AJ
Sample : Q1109-02
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TAPIAL1-MW04S-011525-00-T2

Integration File: autoint1.e
Quant Time: Jan 17 22:12:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.014	2246986	17.160 ug/ml
Target Compounds			

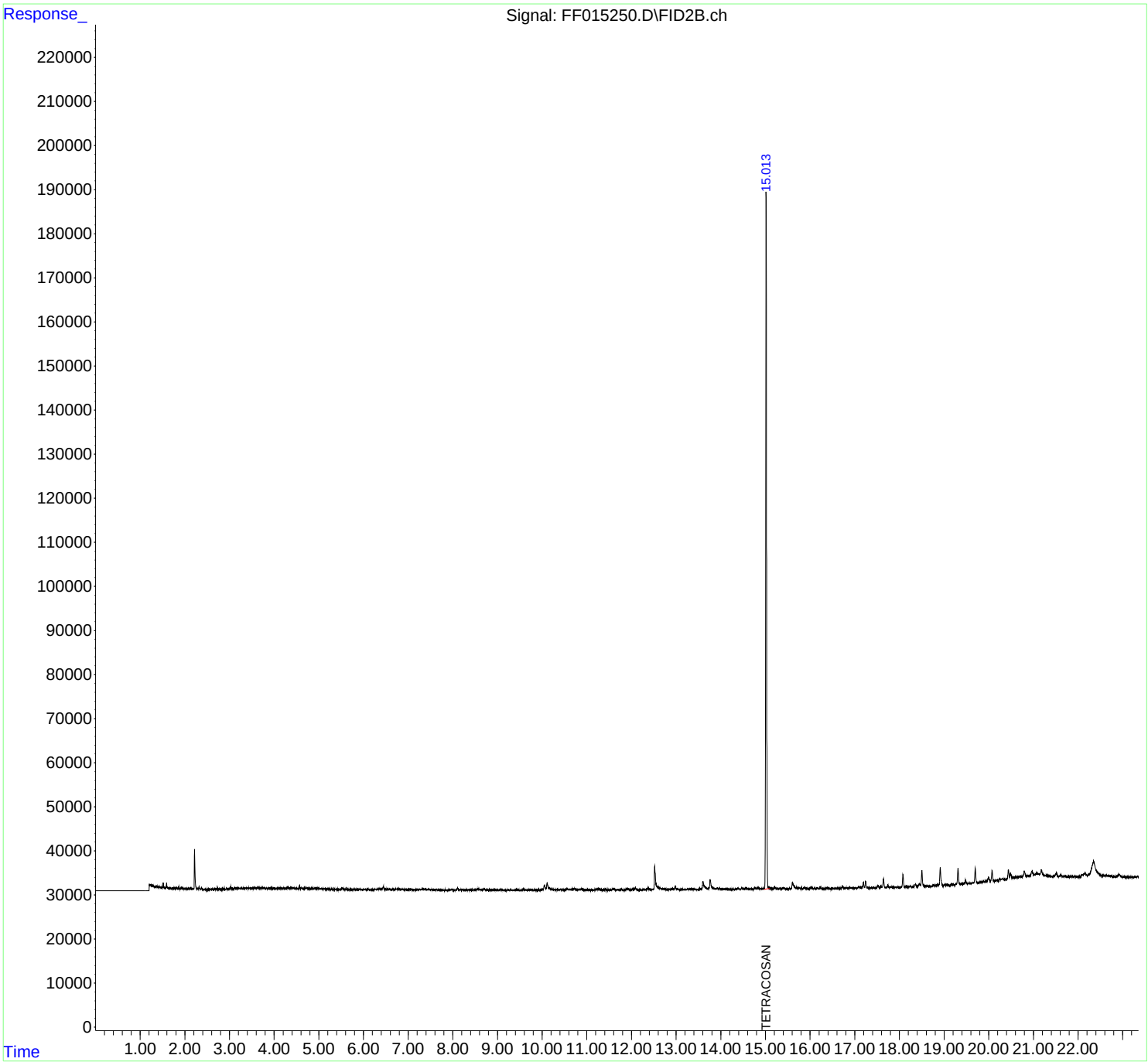
(f)=RT Delta > 1/2 Window (m)=manual int.

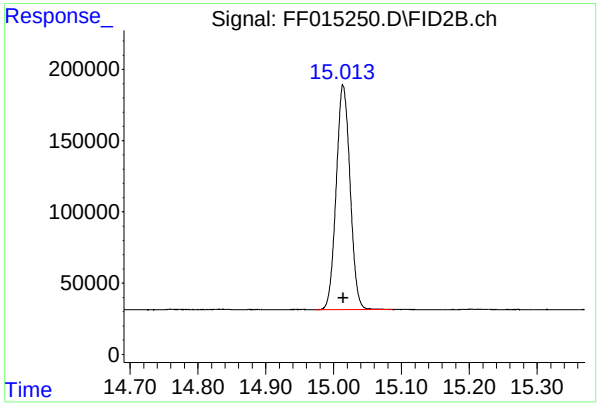
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015250.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 13:39
Operator : YP\AJ
Sample : Q1109-02
Misc :
ALS Vial : 71 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
TAPIAL1-MW04S-011525-00-T2

Integration File: autoint1.e
Quant Time: Jan 17 22:12:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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.: 15.014 min
Delta R.T.: 0.000 mi
Response: 2246986
Conc: 17.16 ug/m

Instrument :
FID_F
ClientSampleId :
TAPIAL1-MW04S-011525-00-T2

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015250.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 13:39
Sample : Q1109-02
Misc :
ALS Vial : 71 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.450	4.444	4.456	VV	538	3726	0.17%	0.093%
2	4.461	4.456	4.472	VV	539	5216	0.23%	0.130%
3	4.479	4.472	4.503	VV	579	9277	0.41%	0.231%
4	4.509	4.503	4.515	VV	552	3557	0.16%	0.088%
5	4.517	4.515	4.531	VV	537	5030	0.22%	0.125%
6	4.569	4.531	4.604	VV	932	27336	1.21%	0.679%
7	4.614	4.604	4.619	VV	624	5255	0.23%	0.131%
8	4.623	4.619	4.631	VV	568	3864	0.17%	0.096%
9	4.652	4.631	4.661	VV	550	9189	0.41%	0.228%
10	4.666	4.661	4.675	VV	478	4028	0.18%	0.100%
11	4.688	4.675	4.711	VV	617	11243	0.50%	0.279%
12	4.727	4.711	4.732	VV	566	6630	0.29%	0.165%
13	4.740	4.732	4.762	VV	589	9305	0.41%	0.231%
14	4.783	4.762	4.827	VV	563	18701	0.83%	0.465%
15	4.832	4.827	4.846	VV	456	4779	0.21%	0.119%
16	4.853	4.846	4.859	VV	466	3381	0.15%	0.084%
17	4.862	4.859	4.867	VV	494	2122	0.09%	0.053%
18	4.899	4.867	4.904	VV	513	10276	0.46%	0.255%
19	4.908	4.904	4.926	VV	524	6518	0.29%	0.162%
20	4.930	4.926	4.954	VV	508	8038	0.36%	0.200%
21	4.994	4.954	5.015	VV	573	17755	0.79%	0.441%
22	5.032	5.015	5.046	VV	540	8687	0.38%	0.216%
23	5.054	5.046	5.116	VV	519	17628	0.78%	0.438%
24	5.123	5.116	5.129	VV	404	3055	0.14%	0.076%
25	5.134	5.129	5.139	VV	393	2363	0.10%	0.059%
26	5.147	5.139	5.152	VV	407	3036	0.13%	0.075%
27	5.157	5.152	5.169	VV	417	3574	0.16%	0.089%
28	5.182	5.169	5.217	VV	404	10039	0.44%	0.249%
29	5.223	5.217	5.232	VV	436	3347	0.15%	0.083%
30	5.239	5.232	5.246	VV	381	2771	0.12%	0.069%
31	5.249	5.246	5.260	VV	350	2688	0.12%	0.067%
32	5.265	5.260	5.272	VV	336	2457	0.11%	0.061%
33	5.277	5.272	5.306	VV	356	6065	0.27%	0.151%
34	5.312	5.306	5.332	VV	323	4621	0.20%	0.115%
35	5.355	5.332	5.376	VV	361	7380	0.33%	0.183%
36	5.421	5.376	5.426	VV	311	7435	0.33%	0.185%

rteres

37	5.437	5.426	5.464	VV	297	6213	0.28%	0.154%
38	5.471	5.464	5.481	VV	286	2608	0.12%	0.065%
39	5.517	5.481	5.536	VV	647	13219	0.59%	0.328%
40	5.549	5.536	5.585	VV	423	9437	0.42%	0.234%
41	5.590	5.585	5.596	VV	300	1776	0.08%	0.044%
42	5.606	5.596	5.635	VV	384	6204	0.27%	0.154%
43	5.648	5.635	5.671	VV	320	5456	0.24%	0.136%
44	5.694	5.671	5.706	VV	321	4974	0.22%	0.124%
45	5.708	5.706	5.721	VV	237	2031	0.09%	0.050%
46	5.736	5.721	5.749	VV	271	4128	0.18%	0.103%
47	5.754	5.749	5.769	VV	289	2899	0.13%	0.072%
48	5.771	5.769	5.777	VV	251	1086	0.05%	0.027%
49	5.809	5.777	5.845	VV	291	9201	0.41%	0.229%
50	5.869	5.845	5.874	VV	284	4133	0.18%	0.103%
51	5.882	5.874	5.899	VV	281	3748	0.17%	0.093%
52	5.901	5.899	5.957	VV	323	8149	0.36%	0.202%
53	5.962	5.957	5.974	VV	259	2287	0.10%	0.057%
54	5.995	5.974	6.019	VV	281	6314	0.28%	0.157%
55	6.023	6.019	6.052	VV	259	4346	0.19%	0.108%
56	6.056	6.052	6.060	VV	233	941	0.04%	0.023%
57	6.069	6.060	6.077	VV	278	2213	0.10%	0.055%
58	6.092	6.077	6.097	VV	293	2734	0.12%	0.068%
59	6.102	6.097	6.152	VV	268	6673	0.30%	0.166%
60	6.177	6.152	6.190	VV	266	4764	0.21%	0.118%
61	6.199	6.190	6.227	VV	234	4420	0.20%	0.110%
62	6.232	6.227	6.238	VV	228	1424	0.06%	0.035%
63	6.246	6.238	6.269	VV	292	4818	0.21%	0.120%
64	6.280	6.269	6.295	VV	329	4726	0.21%	0.117%
65	6.302	6.295	6.306	VV	331	1848	0.08%	0.046%
66	6.328	6.306	6.338	VV	387	6231	0.28%	0.155%
67	6.342	6.338	6.345	VV	364	1495	0.07%	0.037%
68	6.351	6.345	6.356	VV	388	2112	0.09%	0.052%
69	6.361	6.356	6.364	VV	417	1854	0.08%	0.046%
70	6.369	6.364	6.387	VV	410	5101	0.23%	0.127%
71	6.400	6.387	6.415	VV	422	6115	0.27%	0.152%
72	6.420	6.415	6.429	VV	426	3135	0.14%	0.078%
73	6.447	6.429	6.484	VV	890	17645	0.78%	0.438%
74	6.503	6.484	6.522	VV	400	7664	0.34%	0.190%
75	6.530	6.522	6.554	VV	372	6283	0.28%	0.156%
76	6.557	6.554	6.570	VV	314	2701	0.12%	0.067%
77	6.573	6.570	6.586	VV	327	2615	0.12%	0.065%
78	6.592	6.586	6.599	VV	278	2105	0.09%	0.052%
79	6.604	6.599	6.651	VV	323	7739	0.34%	0.192%
80	6.666	6.651	6.686	VV	324	4841	0.21%	0.120%
81	6.740	6.686	6.780	VV	423	17867	0.79%	0.444%
82	6.799	6.780	6.821	VV	357	7148	0.32%	0.178%
83	6.873	6.821	6.917	VV	346	15578	0.69%	0.387%
84	6.926	6.917	6.944	VV	265	3955	0.18%	0.098%
85	6.952	6.944	6.972	VV	309	4057	0.18%	0.101%
86	7.026	6.972	7.131	VV	311	20647	0.91%	0.513%
87	7.139	7.131	7.164	VV	226	3449	0.15%	0.086%
88	7.173	7.164	7.184	VV	204	1872	0.08%	0.047%
89	7.204	7.184	7.212	VV	200	2821	0.13%	0.070%

rteres

90	7.241	7.212	7.249	VV	227	3970	0.18%	0.099%
91	7.306	7.249	7.334	VV	364	13638	0.60%	0.339%
92	7.342	7.334	7.356	VV	328	3909	0.17%	0.097%
93	7.367	7.356	7.394	VV	325	6402	0.28%	0.159%
94	7.403	7.394	7.433	VV	317	6134	0.27%	0.152%
95	7.449	7.433	7.507	VV	295	10511	0.47%	0.261%
96	7.516	7.507	7.541	VV	206	3576	0.16%	0.089%
97	7.572	7.541	7.629	VV	265	9303	0.41%	0.231%
98	7.637	7.629	7.677	VV	178	3804	0.17%	0.095%
99	7.691	7.677	7.699	VV	164	1537	0.07%	0.038%
100	7.747	7.699	7.835	VV	162	9057	0.40%	0.225%
101	7.846	7.835	7.864	VV	124	1801	0.08%	0.045%
102	7.873	7.864	7.903	VV	110	2038	0.09%	0.051%
103	7.963	7.903	8.052	VV	271	12894	0.57%	0.320%
104	8.110	8.052	8.154	VV	485	15136	0.67%	0.376%
105	8.167	8.154	8.181	VV	190	2334	0.10%	0.058%
106	8.205	8.181	8.236	VV	156	3992	0.18%	0.099%
107	8.319	8.236	8.327	VV	176	7059	0.31%	0.175%
108	8.337	8.327	8.394	VV	164	5438	0.24%	0.135%
109	8.411	8.394	8.453	VV	196	4809	0.21%	0.119%
110	8.479	8.453	8.510	VV	175	4676	0.21%	0.116%
111	8.568	8.510	8.580	VV	301	9829	0.44%	0.244%
112	8.588	8.580	8.633	VV	278	6689	0.30%	0.166%
113	8.644	8.633	8.668	VV	194	3073	0.14%	0.076%
114	8.698	8.668	8.786	VV	369	14868	0.66%	0.369%
115	8.801	8.786	8.813	VV	136	1797	0.08%	0.045%
116	8.824	8.813	8.849	VV	121	2100	0.09%	0.052%
117	8.860	8.849	8.870	VV	161	1141	0.05%	0.028%
118	8.881	8.870	8.890	VV	100	932	0.04%	0.023%
119	8.916	8.890	8.953	VV	193	4533	0.20%	0.113%
120	8.968	8.953	8.990	VV	104	1659	0.07%	0.041%
121	8.994	8.990	9.003	VV	125	656	0.03%	0.016%
122	9.014	9.003	9.019	VV	109	900	0.04%	0.022%
123	9.027	9.019	9.050	VV	146	1758	0.08%	0.044%
124	9.071	9.050	9.127	VV	249	6126	0.27%	0.152%
125	9.142	9.127	9.210	VV	118	3277	0.15%	0.081%
126	9.222	9.210	9.254	VV	142	2498	0.11%	0.062%
127	9.288	9.254	9.340	VV	131	4748	0.21%	0.118%
128	9.351	9.340	9.367	VV	65	620	0.03%	0.015%
129	9.385	9.367	9.405	PV	130	2283	0.10%	0.057%
130	9.430	9.405	9.500	VV	285	6877	0.30%	0.171%
131	9.514	9.500	9.535	PV	137	1473	0.07%	0.037%
132	9.572	9.535	9.617	VV	354	7706	0.34%	0.191%
133	9.623	9.617	9.653	VV	122	1952	0.09%	0.048%
134	9.657	9.653	9.717	VV	81	2207	0.10%	0.055%
135	9.744	9.717	9.837	VV	180	7877	0.35%	0.196%
136	9.853	9.837	9.873	VV	120	2153	0.10%	0.053%
137	9.919	9.873	9.968	VV	167	6062	0.27%	0.151%
138	9.995	9.968	10.013	VV	209	3602	0.16%	0.089%
139	10.050	10.013	10.086	VV	1172	26107	1.16%	0.649%
140	10.111	10.086	10.156	VV	1679	37483	1.66%	0.931%
141	10.166	10.156	10.219	VV	552	13065	0.58%	0.325%

rteres

142	10.232	10.219	10.303	VV	253	8629	0.38%	0.214%
143	10.326	10.303	10.338	VV	187	3177	0.14%	0.079%
144	10.347	10.338	10.379	VV	197	3301	0.15%	0.082%
145	10.398	10.379	10.406	VV	153	2127	0.09%	0.053%
146	10.420	10.406	10.486	VV	218	6490	0.29%	0.161%
147	10.502	10.486	10.527	VV	169	3317	0.15%	0.082%
148	10.547	10.527	10.633	VV	394	14959	0.66%	0.372%
149	10.641	10.633	10.650	VV	185	1665	0.07%	0.041%
150	10.659	10.650	10.672	VV	209	2167	0.10%	0.054%
151	10.724	10.672	10.788	VV	409	13501	0.60%	0.335%
152	10.831	10.788	10.853	VV	243	5765	0.26%	0.143%
153	10.885	10.853	10.938	VV	389	10351	0.46%	0.257%
154	10.952	10.938	10.966	VV	166	1808	0.08%	0.045%
155	10.975	10.966	10.990	VV	136	1416	0.06%	0.035%
156	11.017	10.990	11.054	VV	179	4176	0.19%	0.104%
157	11.060	11.054	11.083	VV	117	1634	0.07%	0.041%
158	11.094	11.083	11.114	VV	136	1610	0.07%	0.040%
159	11.123	11.114	11.133	VV	109	974	0.04%	0.024%
160	11.147	11.133	11.166	VV	101	1630	0.07%	0.041%
161	11.197	11.166	11.206	VV	243	3823	0.17%	0.095%
162	11.218	11.206	11.250	VV	270	5795	0.26%	0.144%
163	11.277	11.250	11.377	VV	327	11628	0.52%	0.289%
164	11.383	11.377	11.396	VV	106	1264	0.06%	0.031%
165	11.422	11.396	11.460	VV	250	5352	0.24%	0.133%
166	11.486	11.460	11.514	VV	124	1924	0.09%	0.048%
167	11.536	11.514	11.563	VV	115	2094	0.09%	0.052%
168	11.580	11.563	11.593	VV	242	3296	0.15%	0.082%
169	11.609	11.593	11.647	VV	267	4924	0.22%	0.122%
170	11.655	11.647	11.670	VV	97	1058	0.05%	0.026%
171	11.692	11.670	11.713	VV	184	2902	0.13%	0.072%
172	11.724	11.713	11.750	VV	96	1772	0.08%	0.044%
173	11.766	11.750	11.838	VV	245	5196	0.23%	0.129%
174	11.847	11.838	11.856	PV	75	436	0.02%	0.011%
175	11.885	11.856	11.910	VV	297	5847	0.26%	0.145%
176	11.923	11.910	11.957	VV	310	5874	0.26%	0.146%
177	11.963	11.957	11.988	VV	137	2085	0.09%	0.052%
178	11.997	11.988	12.002	VV	104	888	0.04%	0.022%
179	12.023	12.002	12.053	VV	391	7232	0.32%	0.180%
180	12.089	12.053	12.117	VV	716	11166	0.49%	0.277%
181	12.133	12.117	12.187	VV	67	2011	0.09%	0.050%
182	12.198	12.187	12.212	VV	71	555	0.02%	0.014%
183	12.224	12.212	12.237	VV	107	816	0.04%	0.020%
184	12.266	12.237	12.307	VV	270	5628	0.25%	0.140%
185	12.330	12.307	12.344	VV	181	3293	0.15%	0.082%
186	12.372	12.344	12.453	VV	618	16711	0.74%	0.415%
187	12.479	12.453	12.495	VV	190	3637	0.16%	0.090%
188	12.523	12.495	12.586	VV	5411	101640	4.50%	2.525%
189	12.600	12.586	12.704	VV	670	29607	1.31%	0.736%
190	12.715	12.704	12.797	VV	326	12814	0.57%	0.318%
191	12.808	12.797	12.827	VV	136	2235	0.10%	0.056%
192	12.843	12.827	12.854	VV	268	2976	0.13%	0.074%
193	12.859	12.854	12.892	VV	201	3180	0.14%	0.079%
194	12.914	12.892	12.930	VV	273	4674	0.21%	0.116%

rteres

195	12.982	12.930	13.019	VV	906	21306	0.94%	0.529%
196	13.040	13.019	13.079	VV	319	5689	0.25%	0.141%
197	13.107	13.079	13.123	VV	117	2164	0.10%	0.054%
198	13.137	13.123	13.157	VV	221	2645	0.12%	0.066%
199	13.181	13.157	13.225	VV	177	4026	0.18%	0.100%
200	13.275	13.225	13.294	VV	249	6736	0.30%	0.167%
201	13.330	13.294	13.347	VV	322	6646	0.29%	0.165%
202	13.363	13.347	13.395	VV	222	4158	0.18%	0.103%
203	13.430	13.395	13.470	VV	182	5210	0.23%	0.129%
204	13.483	13.470	13.503	VV	89	1041	0.05%	0.026%
205	13.531	13.503	13.565	PV	373	7597	0.34%	0.189%
206	13.601	13.565	13.709	VV	1910	61058	2.71%	1.517%
207	13.762	13.709	13.883	VV	2294	68666	3.04%	1.706%
208	13.919	13.883	13.962	VV	397	13311	0.59%	0.331%
209	13.977	13.962	14.034	VV	316	8353	0.37%	0.208%
210	14.060	14.034	14.088	VV	185	4365	0.19%	0.108%
211	14.115	14.088	14.159	VV	225	5553	0.25%	0.138%
212	14.175	14.159	14.212	VV	149	2927	0.13%	0.073%
213	14.223	14.212	14.295	VV	142	4070	0.18%	0.101%
214	14.353	14.295	14.365	PV	195	4568	0.20%	0.113%
215	14.384	14.365	14.440	VV	343	8100	0.36%	0.201%
216	14.475	14.440	14.504	VV	442	8674	0.38%	0.216%
217	14.551	14.504	14.571	VV	327	8789	0.39%	0.218%
218	14.586	14.571	14.653	VV	247	7544	0.33%	0.187%
219	14.676	14.653	14.703	VV	264	4824	0.21%	0.120%
220	14.714	14.703	14.727	VV	142	1469	0.07%	0.036%
221	14.760	14.727	14.797	VV	416	8997	0.40%	0.224%
222	14.836	14.797	14.867	VV	453	11038	0.49%	0.274%
223	14.877	14.867	14.920	VV	263	5999	0.27%	0.149%
224	14.953	14.920	14.973	VV	260	6044	0.27%	0.150%
225	15.014	14.973	15.090	VV	157855	2256845	100.00%	56.074%
226	15.104	15.090	15.169	VV	312	8127	0.36%	0.202%
227	15.204	15.169	15.250	VV	415	13203	0.59%	0.328%
228	15.258	15.250	15.262	VV	211	1333	0.06%	0.033%
229	15.270	15.262	15.287	VV	234	2573	0.11%	0.064%
230	15.413	15.287	15.505	VV	281	13971	0.62%	0.347%
231	15.541	15.505	15.569	VV	168	3564	0.16%	0.089%
232	15.604	15.569	15.705	VV	1602	49315	2.19%	1.225%
233	15.714	15.705	15.722	VV	243	2251	0.10%	0.056%
234	15.744	15.722	15.840	VV	308	13342	0.59%	0.332%
235	15.879	15.840	15.973	VV	317	11815	0.52%	0.294%
236	16.030	15.973	16.087	VV	366	10176	0.45%	0.253%
237	16.109	16.087	16.119	VV	166	1776	0.08%	0.044%
238	16.128	16.119	16.139	VV	95	874	0.04%	0.022%
239	16.167	16.139	16.200	VV	166	4158	0.18%	0.103%
240	16.240	16.200	16.272	VV	392	7828	0.35%	0.194%
241	16.279	16.272	16.300	VV	109	957	0.04%	0.024%
242	16.307	16.300	16.337	VV	70	1474	0.07%	0.037%
243	16.383	16.337	16.400	VV	292	5573	0.25%	0.138%
244	16.418	16.400	16.488	VV	183	4512	0.20%	0.112%
245	16.504	16.488	16.513	PV	88	724	0.03%	0.018%
246	16.522	16.513	16.566	VV	88	1656	0.07%	0.041%

rteres

247	16.630	16.566	16.681	VV	119	5088	0.23%	0.126%
248	16.690	16.681	16.698	VV	122	813	0.04%	0.020%
249	16.725	16.698	16.753	VV	603	10096	0.45%	0.251%
250	16.767	16.753	16.787	VV	179	2709	0.12%	0.067%
251	16.808	16.787	16.843	VV	203	4785	0.21%	0.119%
252	16.895	16.843	16.990	VV	176	8822	0.39%	0.219%
253	17.000	16.990	17.040	VV	74	952	0.04%	0.024%
254	17.087	17.040	17.120	PV	302	6278	0.28%	0.156%
255	17.146	17.120	17.161	VV	94	1407	0.06%	0.035%
256	17.192	17.161	17.217	VV	1233	16362	0.72%	0.407%
257	17.242	17.217	17.253	PBA	955	10598	0.47%	0.263%

Sum of corrected areas: 4024790

FF011425.M Sat Jan 18 01:12:41 2025

CALIBRATION SUMMARY

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

DIESEL RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: WEST04

ProjectID: Ft Meade Tipton Airfield Parcel RI - PO 0111169

Lab Code: CHEM Case No.: Q1109 SAS No.: Q1109 SDG No.: Q1109

Calibration Sequence : FF011425		Test : Diesel Range Organics	
Concentration (PPM)	**Area Count**	**Reference Factor**	**File ID**
1000	143840778	143841	FF015220.D
500	64031184	128062	FF015221.D
200	27101566	135508	FF015222.D
100	14693450	146934	FF015223.D
50	7168378	143368	FF015224.D
AVG RF : 139543	**% RSD : 5.502**		**AVG RT : 15.0138**

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015220.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:07
Operator : YP\AJ
Sample : 100 TRPH STD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
100 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 09:48:42 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:47:40 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	13278165	111.533 ug/ml
	Target Compounds			
1)	N-OCTANE	2.037	13689388	112.061 ug/ml
2)	N-DECANE	4.570	13709069	112.030 ug/ml
3)	N-DODECANE	6.737	14175163	112.585 ug/ml
4)	N-TETRADECANE	8.562	13773937	113.827 ug/ml
5)	N-HEXADECANE	10.168	14292399	113.846 ug/ml
6)	N-OCTADECANE	11.611	15095741	112.004 ug/ml
7)	N-EICOSANE	12.921	14906843	111.586 ug/ml
8)	N-DOCOSANE	14.121	14747088	111.562 ug/ml
10)	N-TETRACOSANE	15.225	14685916	111.513 ug/ml
11)	N-HEXACOSANE	16.245	14390792	112.109 ug/ml
12)	N-OCTACOSANE	17.197	14063830	112.349 ug/ml
13)	N-TRIACONTANE	18.083	13677817	112.942 ug/ml
14)	N-DOTRIACONTANE	18.915	13012135	112.613 ug/ml
15)	N-TETRATRIACONTANE	19.699	11514825	114.248 ug/ml
16)	N-HEXATRIACONTANE	20.438	9647817	115.825 ug/ml
17)	N-OCTATRIACONTANE	21.175	8552248	116.953 ug/ml
18)	N-TETRACONTANE	22.089	8250343	118.949 ug/ml

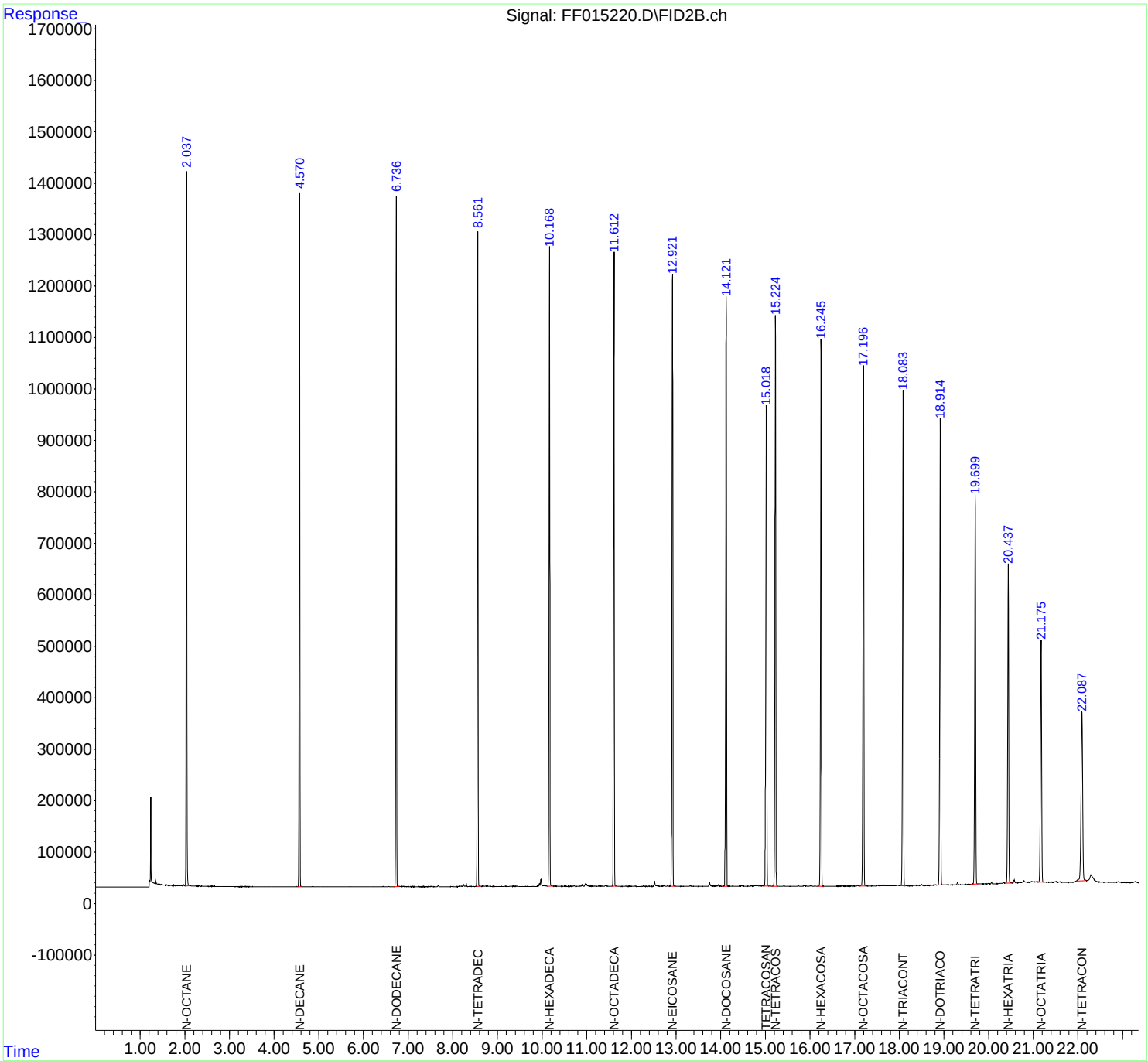
(f)=RT Delta > 1/2 Window (m)=manual int.

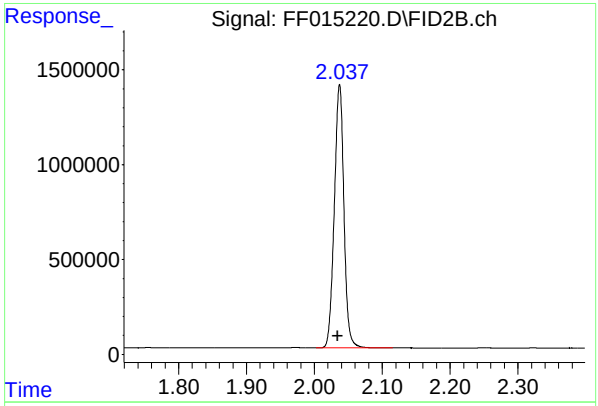
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015220.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:07
Operator : YP\AJ
Sample : 100 TRPH STD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
100 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 09:48:42 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:47:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

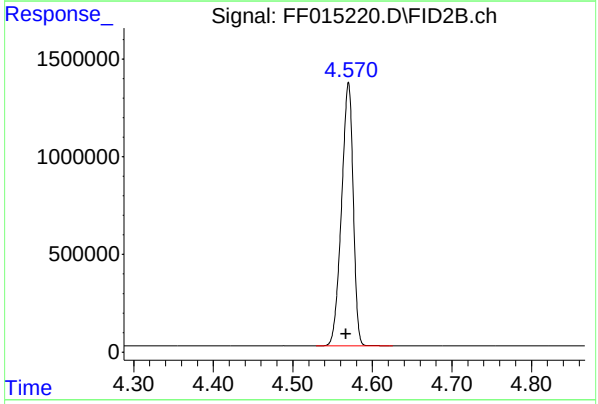




#1 N-OCTANE

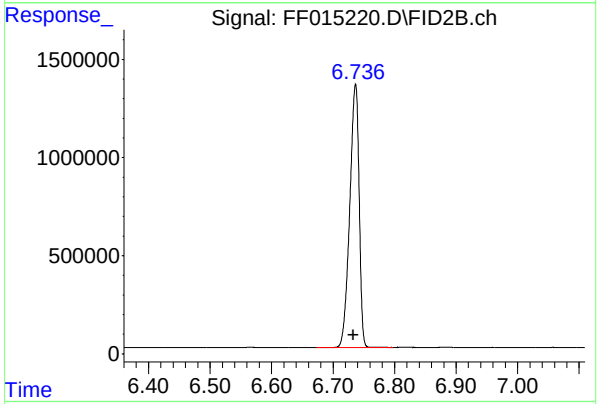
R.T.: 2.037 min
Delta R.T.: 0.003 min
Response: 13689388
Conc: 112.06 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



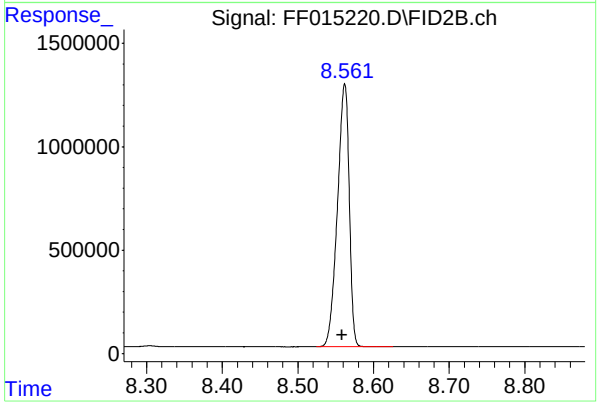
#2 N-DECANE

R.T.: 4.570 min
Delta R.T.: 0.003 min
Response: 13709069
Conc: 112.03 ug/ml



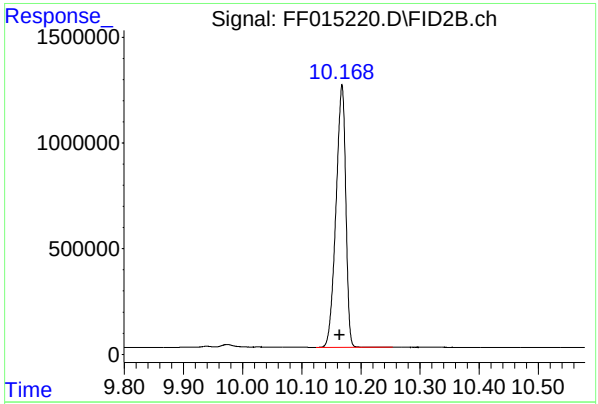
#3 N-DODECANE

R.T.: 6.737 min
Delta R.T.: 0.004 min
Response: 14175163
Conc: 112.58 ug/ml



#4 N-TETRADECANE

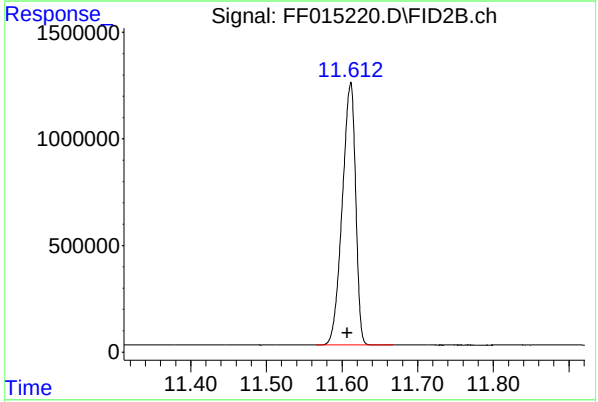
R.T.: 8.562 min
Delta R.T.: 0.003 min
Response: 13773937
Conc: 113.83 ug/ml



#5 N-HEXADECANE

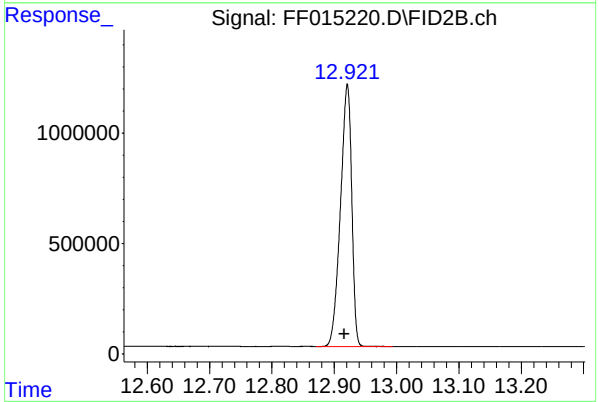
R.T.: 10.168 min
Delta R.T.: 0.004 min
Response: 14292399
Conc: 113.85 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



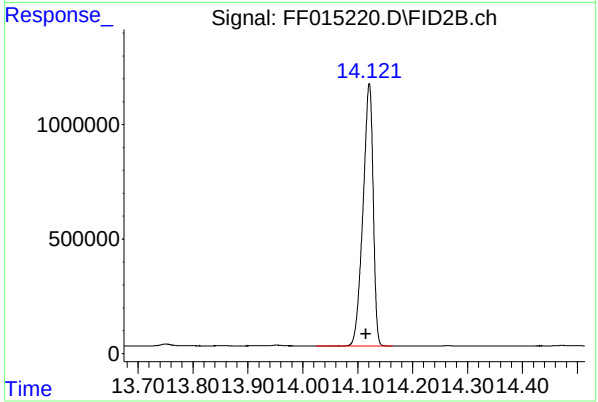
#6 N-OCTADECANE

R.T.: 11.611 min
Delta R.T.: 0.004 min
Response: 15095741
Conc: 112.00 ug/ml



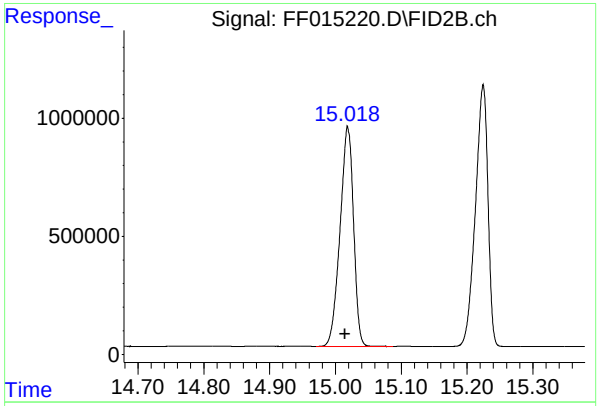
#7 N-EICOSANE

R.T.: 12.921 min
Delta R.T.: 0.005 min
Response: 14906843
Conc: 111.59 ug/ml



#8 N-DOCOSANE

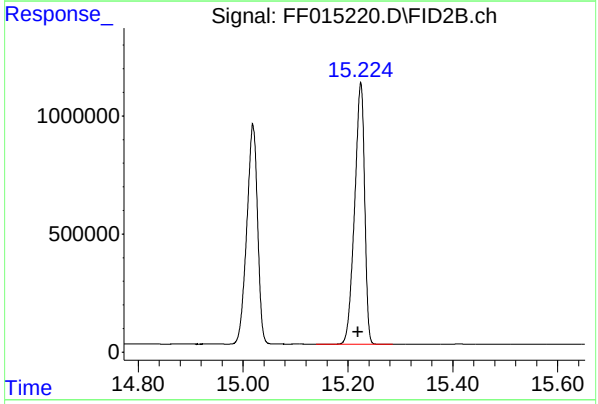
R.T.: 14.121 min
Delta R.T.: 0.006 min
Response: 14747088
Conc: 111.56 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

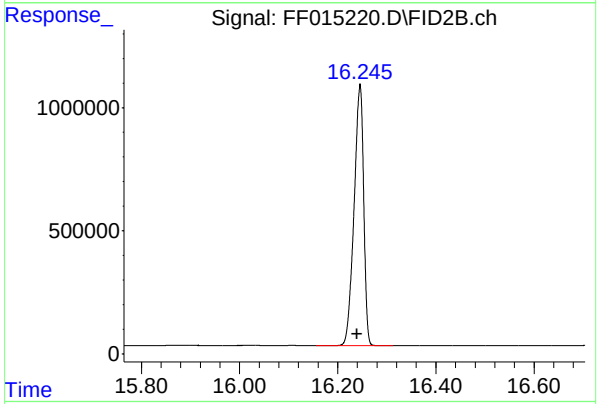
R.T.: 15.019 min
Delta R.T.: 0.004 min
Response: 13278165
Conc: 111.53 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



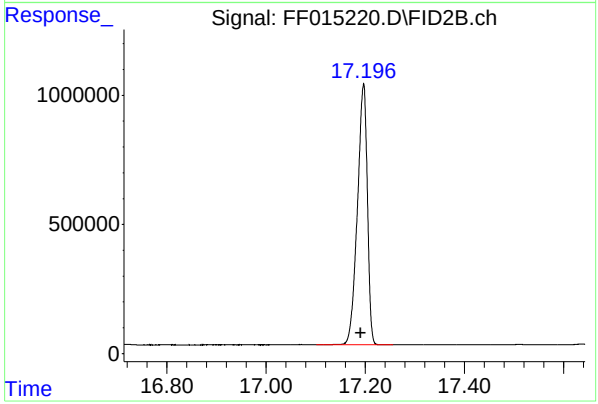
#10 N-TETRACOSANE

R.T.: 15.225 min
Delta R.T.: 0.006 min
Response: 14685916
Conc: 111.51 ug/ml



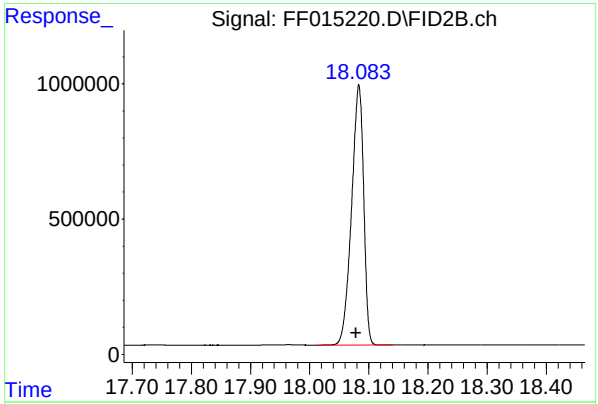
#11 N-HEXACOSANE

R.T.: 16.245 min
Delta R.T.: 0.006 min
Response: 14390792
Conc: 112.11 ug/ml



#12 N-OCTACOSANE

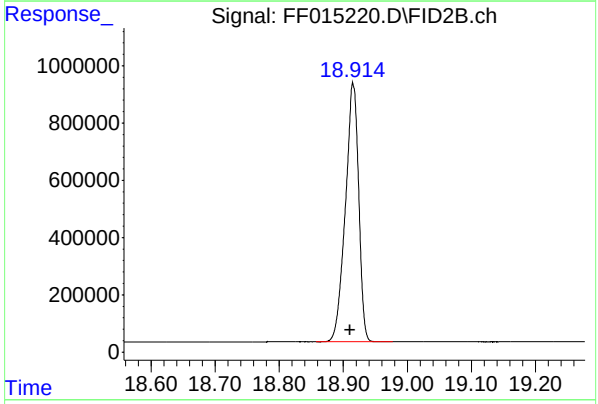
R.T.: 17.197 min
Delta R.T.: 0.006 min
Response: 14063830
Conc: 112.35 ug/ml



#13 N-TRIACONTANE

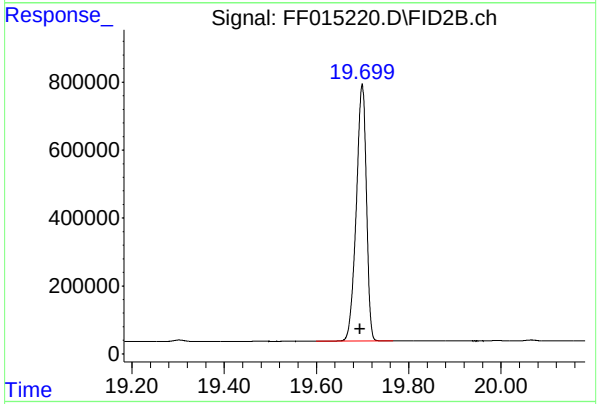
R.T.: 18.083 min
Delta R.T.: 0.005 min
Response: 13677817
Conc: 112.94 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



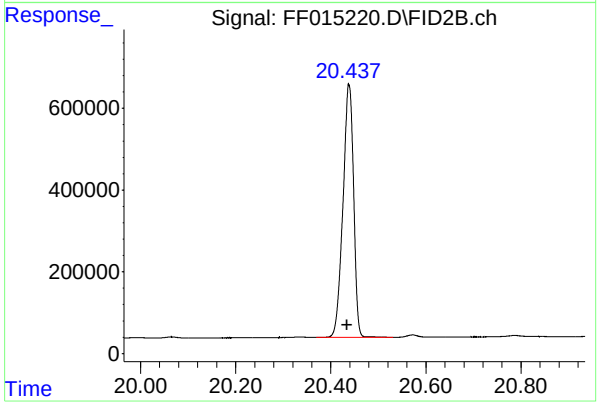
#14 N-DOTRIACONTANE

R.T.: 18.915 min
Delta R.T.: 0.004 min
Response: 13012135
Conc: 112.61 ug/ml



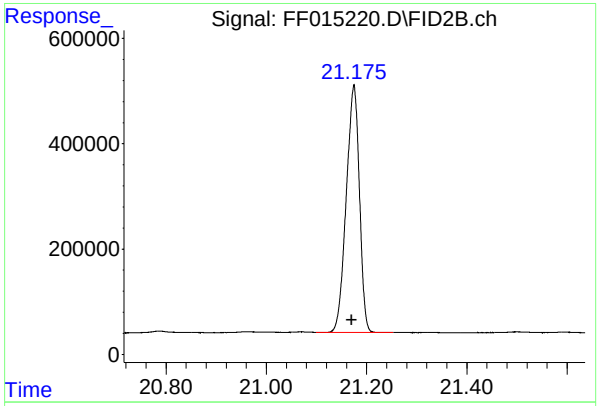
#15 N-TETRATRIACONTANE

R.T.: 19.699 min
Delta R.T.: 0.005 min
Response: 11514825
Conc: 114.25 ug/ml



#16 N-HEXATRIACONTANE

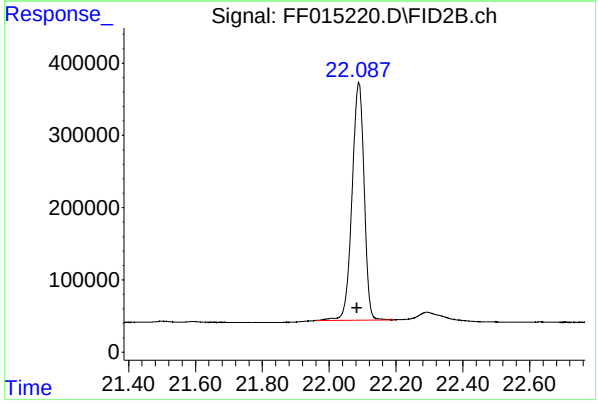
R.T.: 20.438 min
Delta R.T.: 0.004 min
Response: 9647817
Conc: 115.82 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.175 min
Delta R.T.: 0.004 min
Response: 8552248
Conc: 116.95 ug/ml

Instrument :
FID_F
ClientSampleId :
100 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.089 min
Delta R.T.: 0.005 min
Response: 8250343
Conc: 118.95 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015220.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:07
Sample : 100 TRPH STD
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.037	2.002	2.116	PV	1389142	13689388	90.68%	5.814%
2	4.570	4.529	4.626	BB	1347196	13709069	90.81%	5.822%
3	6.737	6.672	6.797	BB	1346657	14175163	93.90%	6.020%
4	8.562	8.524	8.626	PB	1272237	13773937	91.24%	5.850%
5	10.168	10.124	10.254	BB	1241399	14292399	94.68%	6.070%
6	11.611	11.566	11.667	BB	1223989	15095741	100.00%	6.411%
7	12.921	12.871	12.994	BB	1189568	14906843	98.75%	6.331%
8	14.121	14.024	14.164	BB	1147034	14747088	97.69%	6.263%
9	15.019	14.971	15.087	PV	926990	13278165	87.96%	5.639%
10	15.225	15.139	15.286	BB	1107532	14685916	97.29%	6.237%
11	16.245	16.156	16.312	BB	1062529	14390792	95.33%	6.112%
12	17.197	17.101	17.256	BB	1014587	14063830	93.16%	5.973%
13	18.083	18.011	18.141	BB	961671	13677817	90.61%	5.809%
14	18.915	18.857	18.977	BB	897263	13012135	86.20%	5.526%
15	19.699	19.599	19.766	BB	755095	11514825	76.28%	4.890%
16	20.438	20.369	20.531	BV	616214	9647817	63.91%	4.097%
17	21.175	21.099	21.252	BB	469504	8552248	56.65%	3.632%
18	22.089	21.961	22.191	BV	328032	8250343	54.65%	3.504%

Sum of corrected areas: 235463514

FF011425.M Wed Jan 15 00:52:54 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015221.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:35
Operator : YP\AJ
Sample : 50 TRPH STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 09:47:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:47:40 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...	15.015	5952584	50.000 ug/ml
Target Compounds				
1)	N-OCTANE	2.034	6107985	50.000 ug/ml
2)	N-DECANE	4.567	6118500	50.000 ug/ml
3)	N-DODECANE	6.733	6295342	50.000 ug/ml
4)	N-TETRADECANE	8.558	6050379	50.000 ug/ml
5)	N-HEXADECANE	10.165	6277067	50.000 ug/ml
6)	N-OCTADECANE	11.607	6738908	50.000 ug/ml
7)	N-EICOSANE	12.916	6679553	50.000 ug/ml
8)	N-DOCOSANE	14.115	6609364	50.000 ug/ml
10)	N-TETRACOSANE	15.219	6584865	50.000 ug/ml
11)	N-HEXACOSANE	16.240	6418208	50.000 ug/ml
12)	N-OCTACOSANE	17.191	6258998	50.000 ug/ml
13)	N-TRIACONTANE	18.078	6055233	50.000 ug/ml
14)	N-DOTRIACONTANE	18.911	5777373	50.000 ug/ml
15)	N-TETRATRIACONTANE	19.695	5039410	50.000 ug/ml
16)	N-HEXATRIACONTANE	20.434	4164827	50.000 ug/ml
17)	N-OCTATRIACONTANE	21.170	3656268	50.000 ug/ml
18)	N-TETRACONTANE	22.084	3468021	50.000 ug/ml

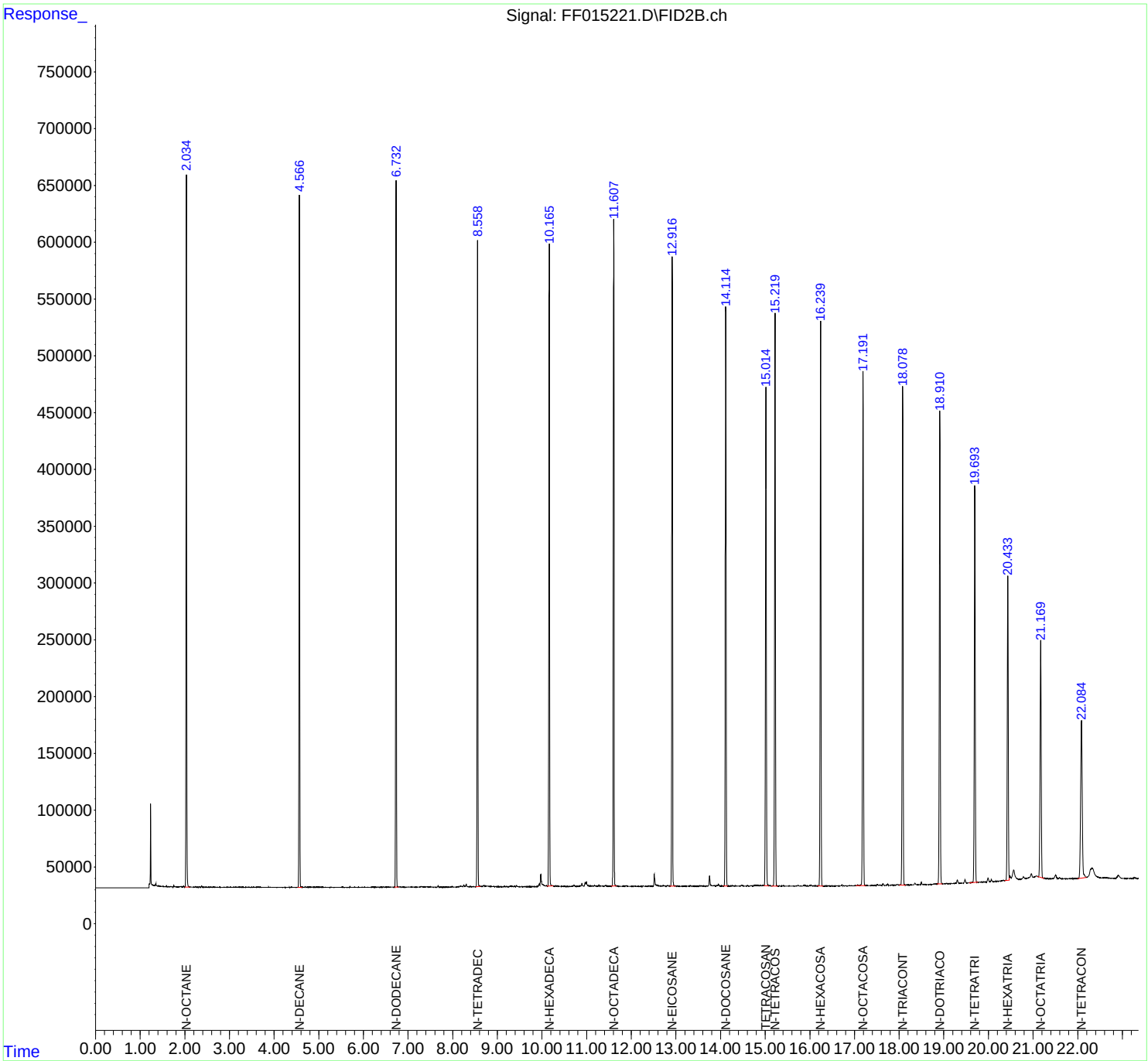
(f)=RT Delta > 1/2 Window (m)=manual int.

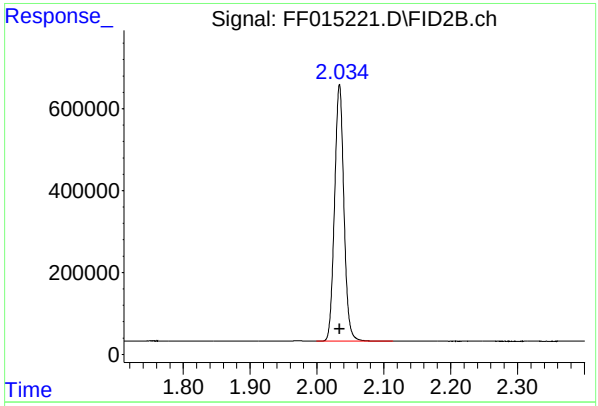
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015221.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:35
Operator : YP\AJ
Sample : 50 TRPH STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 09:47:56 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:47:40 2025
Response via : Initial Calibration
Integrator: ChemStation

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

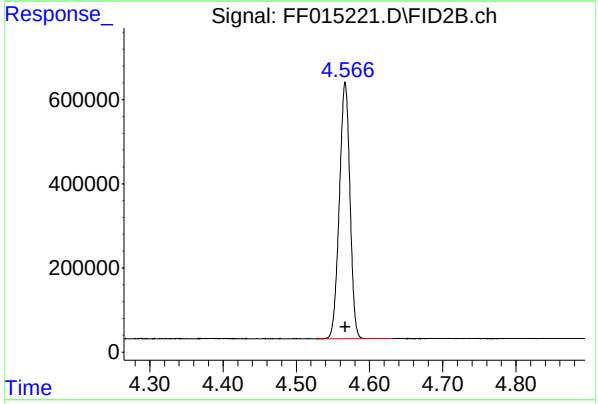




#1 N-OCTANE

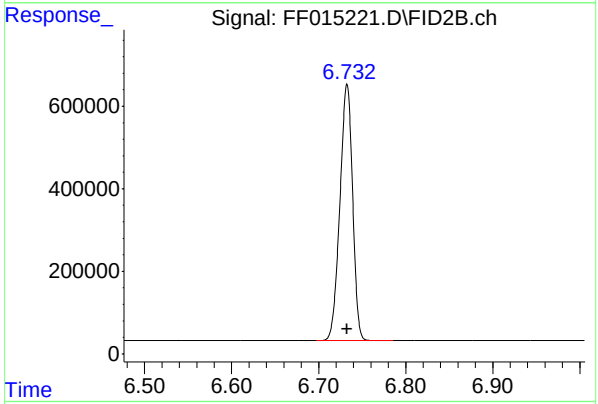
R.T.: 2.034 min
Delta R.T.: 0.000 min
Response: 6107985
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



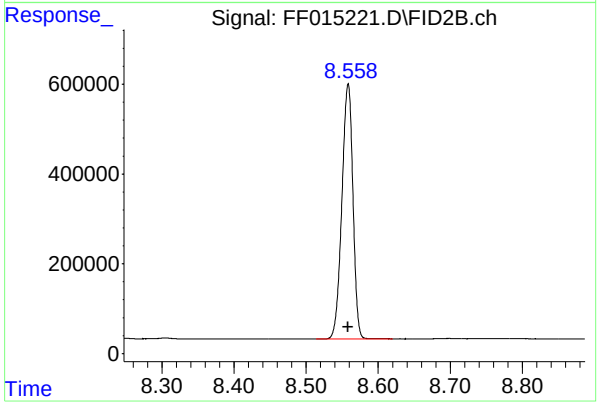
#2 N-DECANE

R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 6118500
Conc: 50.00 ug/ml



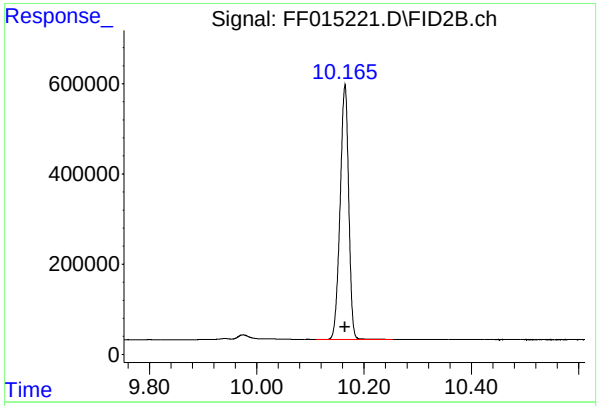
#3 N-DODECANE

R.T.: 6.733 min
Delta R.T.: 0.000 min
Response: 6295342
Conc: 50.00 ug/ml



#4 N-TETRADECANE

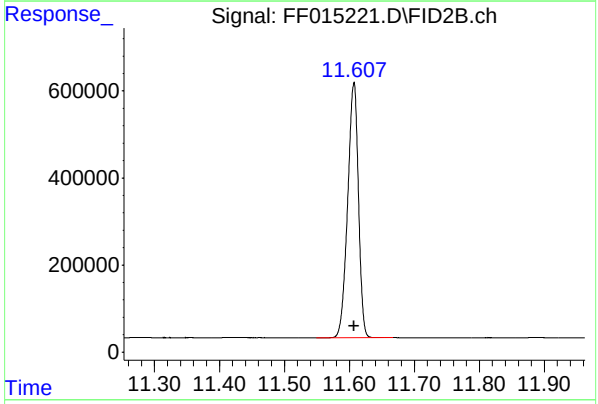
R.T.: 8.558 min
Delta R.T.: 0.000 min
Response: 6050379
Conc: 50.00 ug/ml



#5 N-HEXADECANE

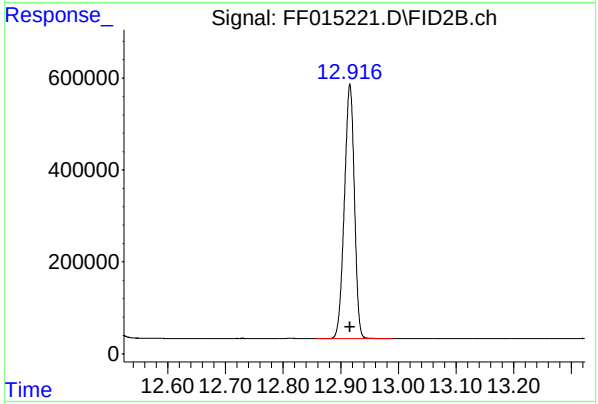
R.T.: 10.165 min
Delta R.T.: 0.000 min
Response: 6277067
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



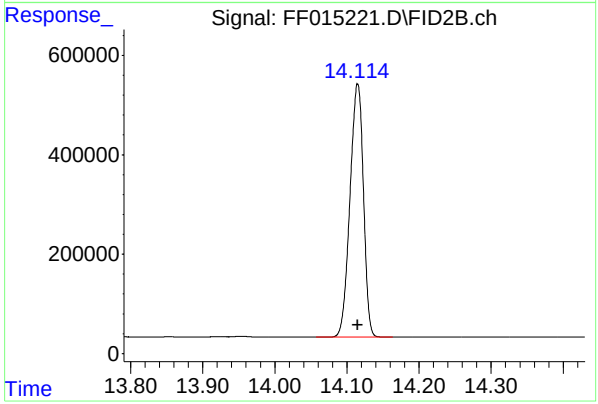
#6 N-OCTADECANE

R.T.: 11.607 min
Delta R.T.: 0.000 min
Response: 6738908
Conc: 50.00 ug/ml



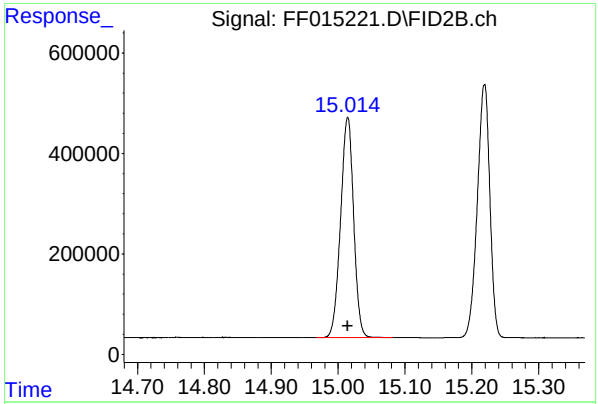
#7 N-EICOSANE

R.T.: 12.916 min
Delta R.T.: 0.000 min
Response: 6679553
Conc: 50.00 ug/ml



#8 N-DOCOSANE

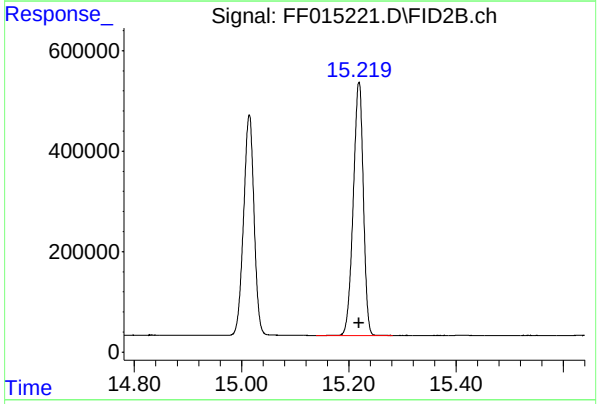
R.T.: 14.115 min
Delta R.T.: 0.000 min
Response: 6609364
Conc: 50.00 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

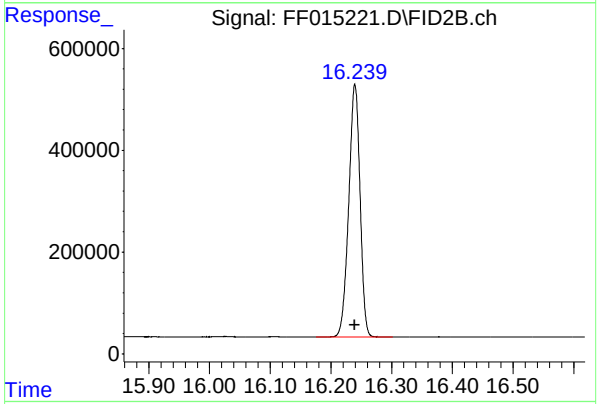
R.T.: 15.015 min
Delta R.T.: 0.000 min
Response: 5952584
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



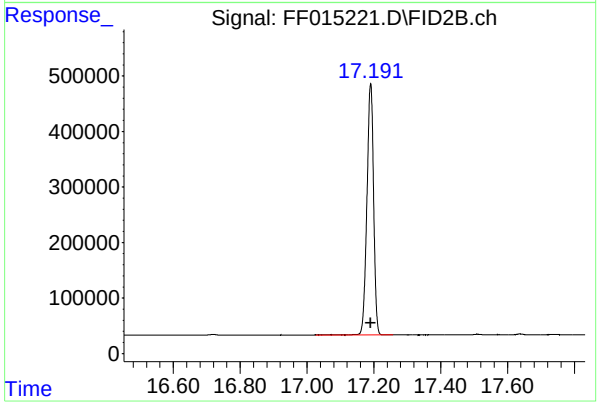
#10 N-TETRACOSANE

R.T.: 15.219 min
Delta R.T.: 0.000 min
Response: 6584865
Conc: 50.00 ug/ml



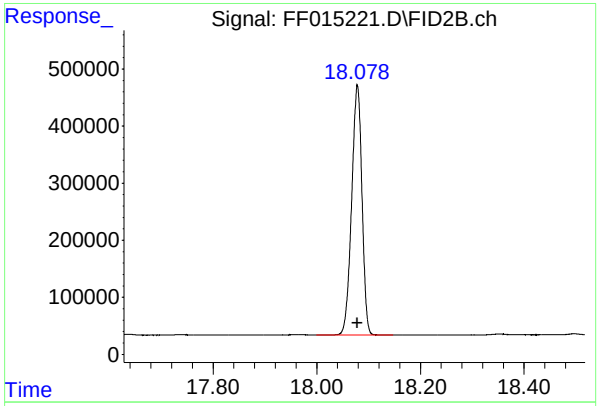
#11 N-HEXACOSANE

R.T.: 16.240 min
Delta R.T.: 0.000 min
Response: 6418208
Conc: 50.00 ug/ml



#12 N-OCTACOSANE

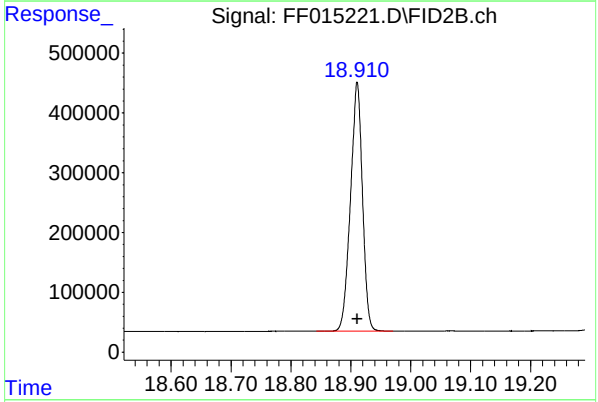
R.T.: 17.191 min
Delta R.T.: 0.000 min
Response: 6258998
Conc: 50.00 ug/ml



#13 N-TRIACONTANE

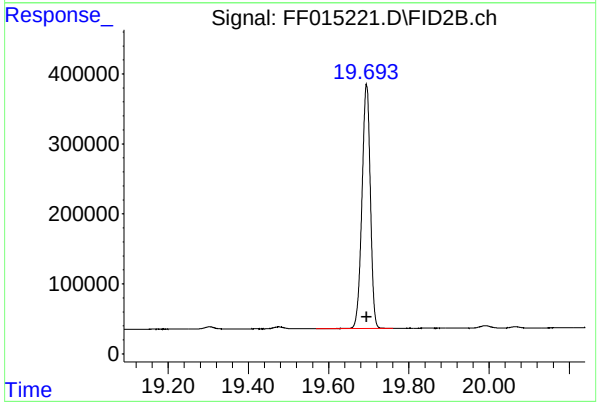
R.T.: 18.078 min
Delta R.T.: 0.000 min
Response: 6055233
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



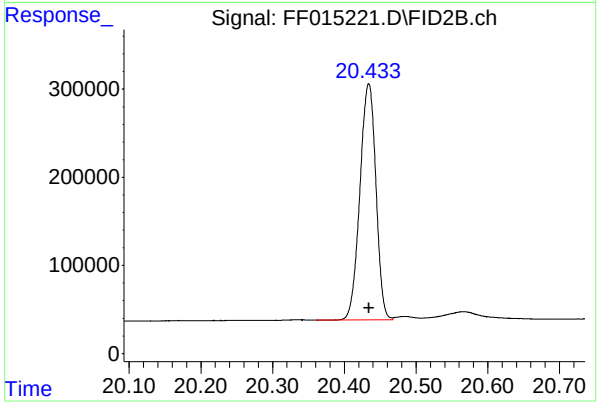
#14 N-DOTRIACONTANE

R.T.: 18.911 min
Delta R.T.: 0.000 min
Response: 5777373
Conc: 50.00 ug/ml



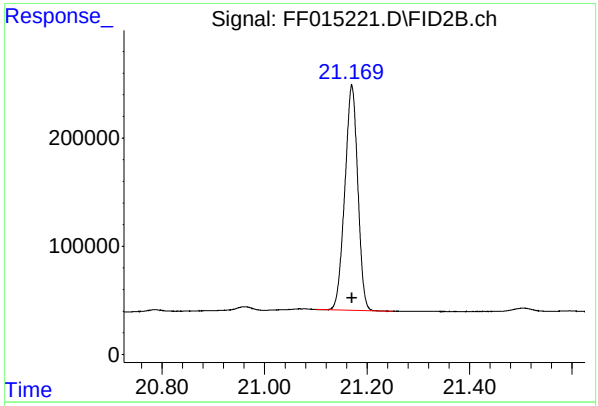
#15 N-TETRATRIACONTANE

R.T.: 19.695 min
Delta R.T.: 0.000 min
Response: 5039410
Conc: 50.00 ug/ml



#16 N-HEXATRIACONTANE

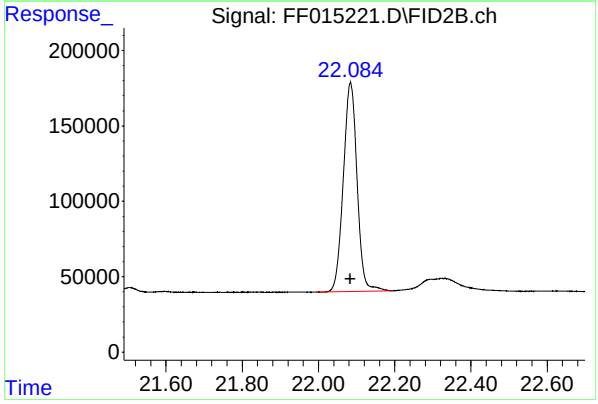
R.T.: 20.434 min
Delta R.T.: 0.000 min
Response: 4164827
Conc: 50.00 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.170 min
Delta R.T.: 0.000 min
Response: 3656268
Conc: 50.00 ug/ml

Instrument :
FID_F
ClientSampleId :
50 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.084 min
Delta R.T.: 0.000 min
Response: 3468021
Conc: 50.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015221.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 09:35
Sample : 50 TRPH STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.034	1.999	2.114	BB	627223	6107985	90.64%	5.859%
2	4.567	4.527	4.632	BB	608807	6118500	90.79%	5.869%
3	6.733	6.697	6.785	BB	622315	6295342	93.42%	6.039%
4	8.558	8.514	8.620	BB	569092	6050379	89.78%	5.804%
5	10.165	10.110	10.254	BB	562302	6277067	93.15%	6.021%
6	11.607	11.549	11.667	BB	585777	6738908	100.00%	6.464%
7	12.916	12.857	12.990	BB	552973	6679553	99.12%	6.407%
8	14.115	14.057	14.164	BB	509232	6609364	98.08%	6.340%
9	15.015	14.967	15.082	BV	438947	5952584	88.33%	5.710%
10	15.219	15.139	15.282	BB	504373	6584865	97.71%	6.316%
11	16.240	16.175	16.302	BB	494747	6418208	95.24%	6.156%
12	17.191	17.027	17.257	BB	452368	6258998	92.88%	6.004%
13	18.079	17.999	18.147	BB	437389	6055233	89.85%	5.808%
14	18.911	18.842	18.970	BB	416870	5777373	85.73%	5.542%
15	19.695	19.569	19.760	BB	348913	5039410	74.78%	4.834%
16	20.434	20.360	20.468	BV	268235	4164827	61.80%	3.995%
17	21.170	21.100	21.250	BB	208458	3656268	54.26%	3.507%
18	22.084	21.994	22.195	BV	138385	3468021	51.46%	3.327%

Sum of corrected areas: 104252884

FF011425.M Wed Jan 15 00:54:12 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015222.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:04
Operator : YP\AJ
Sample : 20 TRPH STD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
20 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 10:16:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:49:20 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...	15.012	2537326	20.151 ug/ml
Target Compounds				
1)	N-OCTANE	2.036	2589116	19.989 ug/ml
2)	N-DECANE	4.567	2592371	19.983 ug/ml
3)	N-DODECANE	6.731	2660659	19.881 ug/ml
4)	N-TETRADECANE	8.556	2528544	19.545 ug/ml
5)	N-HEXADECANE	10.162	2598796	19.360 ug/ml
6)	N-OCTADECANE	11.603	2846220	19.922 ug/ml
7)	N-EICOSANE	12.914	2834717	20.057 ug/ml
8)	N-DOCOSANE	14.113	2812210	20.112 ug/ml
10)	N-TETRACOSANE	15.216	2811736	20.188 ug/ml
11)	N-HEXACOSANE	16.237	2742459	20.145 ug/ml
12)	N-OCTACOSANE	17.187	2673854	20.118 ug/ml
13)	N-TRIACONTANE	18.076	2592796	20.108 ug/ml
14)	N-DOTRIACONTANE	18.908	2454056	19.979 ug/ml
15)	N-TETRATRIACONTANE	19.693	2112330	19.564 ug/ml
16)	N-HEXATRIACONTANE	20.432	1674385	18.628 ug/ml
17)	N-OCTATRIACONTANE	21.168	1454409	18.335 ug/ml
18)	N-TETRACONTANE	22.084	1319770	17.381 ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

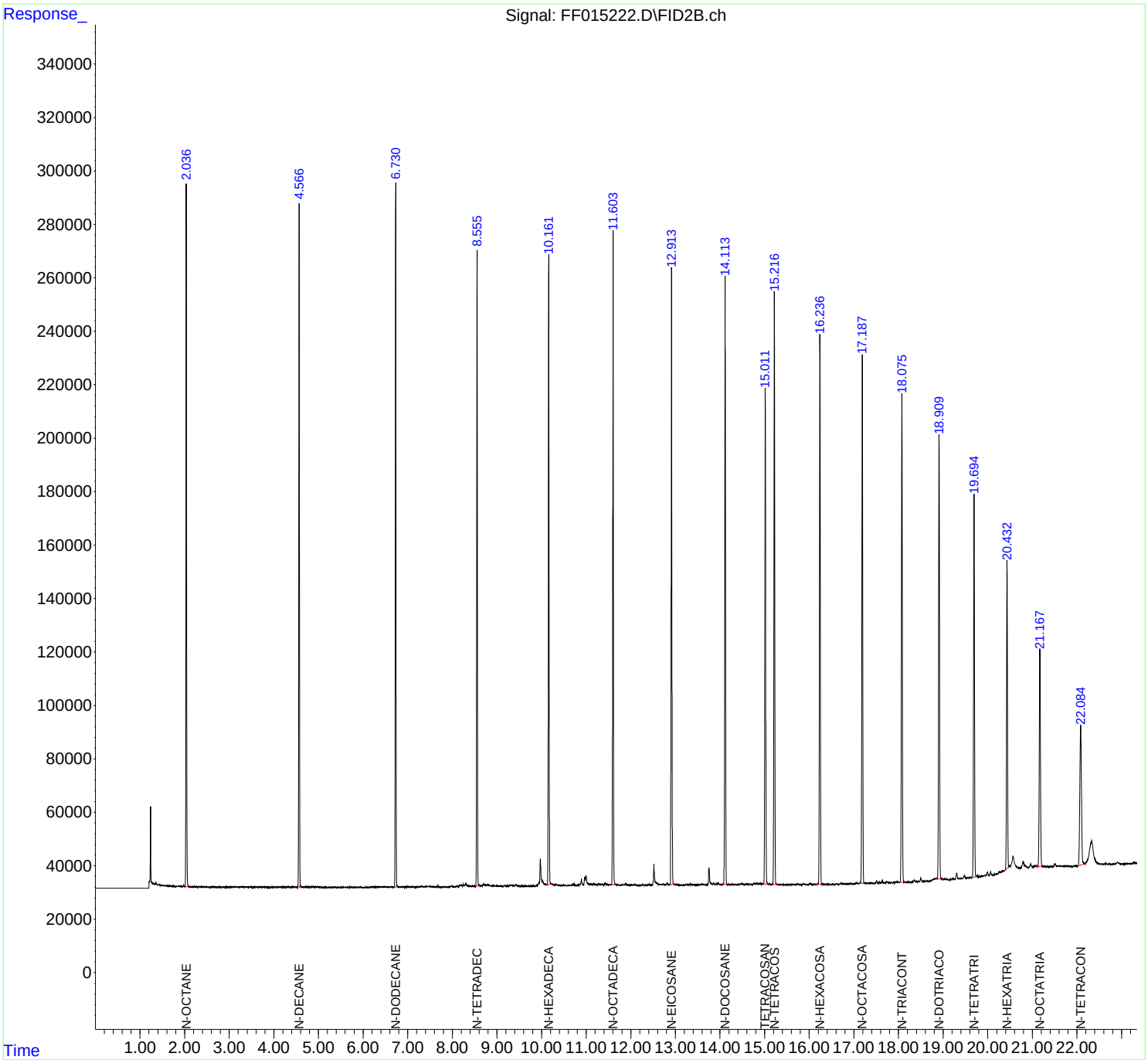
Quantitation Report (QT Reviewed)

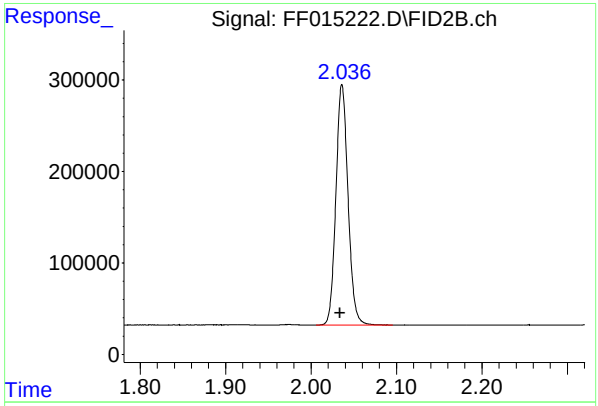
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015222.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:04
Operator : YP\AJ
Sample : 20 TRPH STD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
20 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 10:16:33 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 09:49:20 2025
Response via : Initial Calibration
Integrator: ChemStation

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

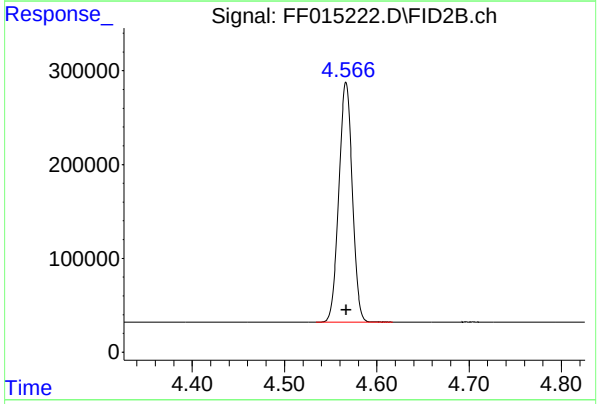




#1 N-OCTANE

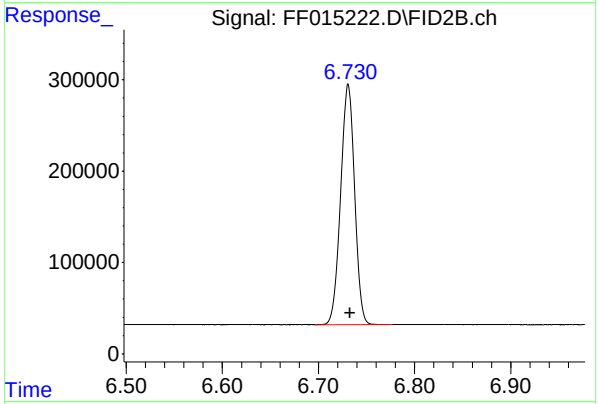
R.T.: 2.036 min
Delta R.T.: 0.002 min
Response: 2589116
Conc: 19.99 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



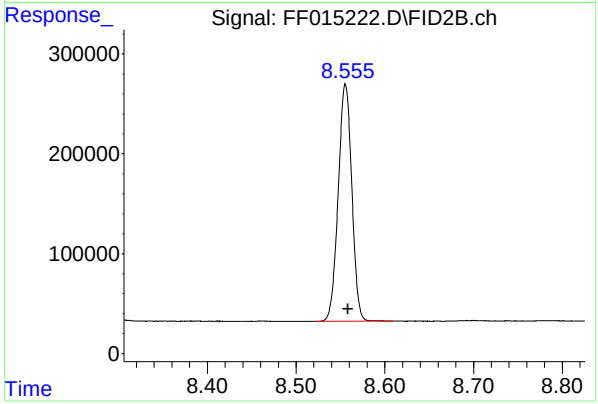
#2 N-DECANE

R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 2592371
Conc: 19.98 ug/ml



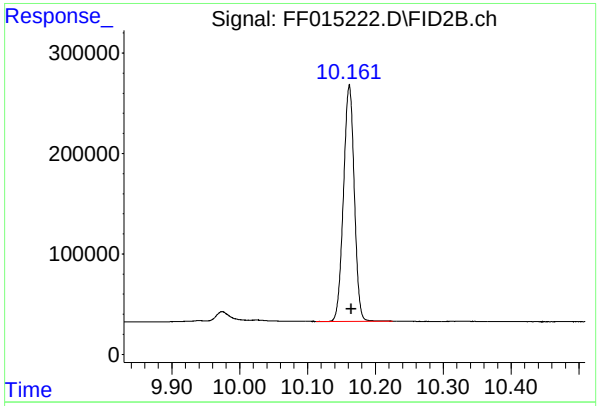
#3 N-DODECANE

R.T.: 6.731 min
Delta R.T.: -0.002 min
Response: 2660659
Conc: 19.88 ug/ml



#4 N-TETRADECANE

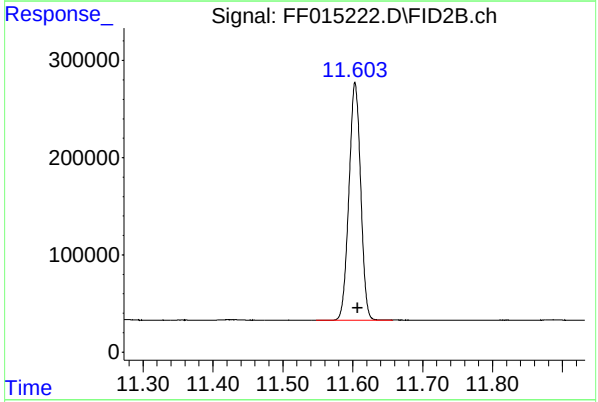
R.T.: 8.556 min
Delta R.T.: -0.003 min
Response: 2528544
Conc: 19.54 ug/ml



#5 N-HEXADECANE

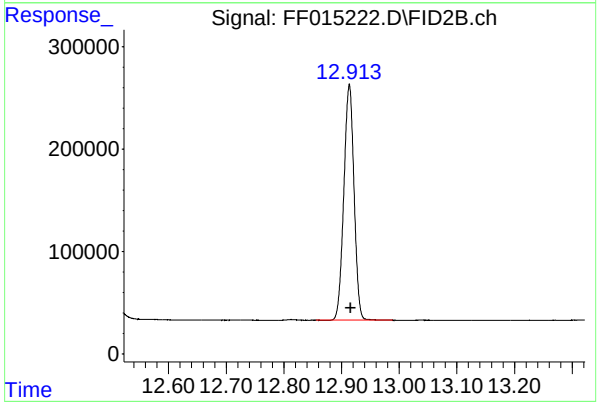
R.T.: 10.162 min
Delta R.T.: -0.003 min
Response: 2598796
Conc: 19.36 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



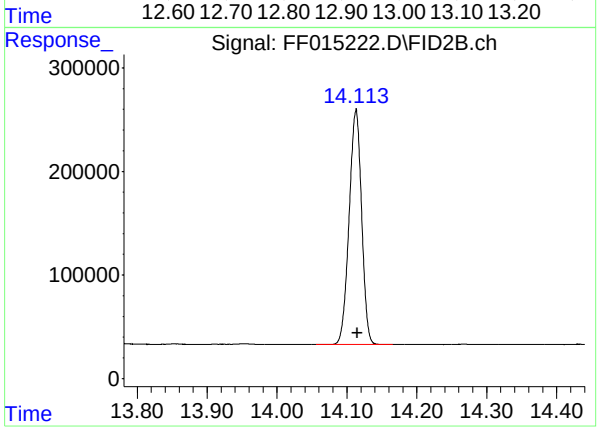
#6 N-OCTADECANE

R.T.: 11.603 min
Delta R.T.: -0.004 min
Response: 2846220
Conc: 19.92 ug/ml



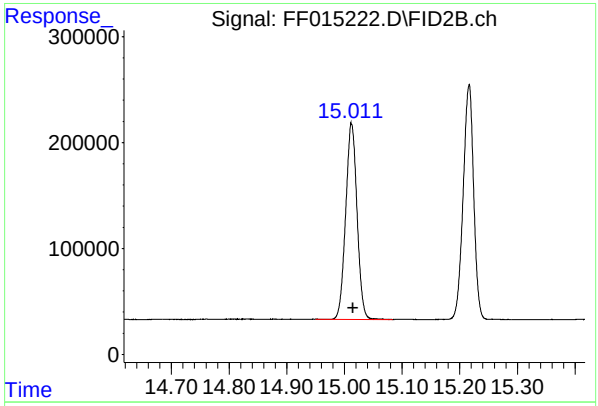
#7 N-EICOSANE

R.T.: 12.914 min
Delta R.T.: -0.002 min
Response: 2834717
Conc: 20.06 ug/ml



#8 N-DOCOSANE

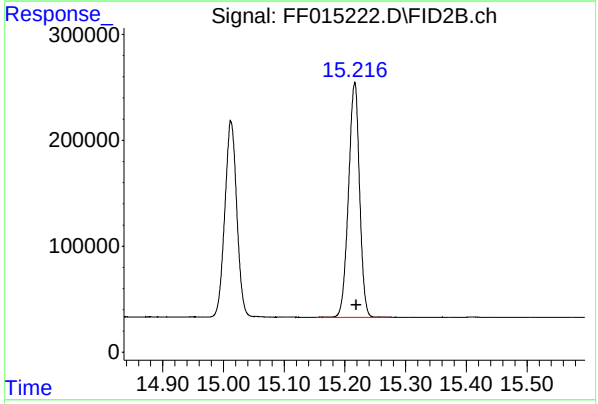
R.T.: 14.113 min
Delta R.T.: -0.002 min
Response: 2812210
Conc: 20.11 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

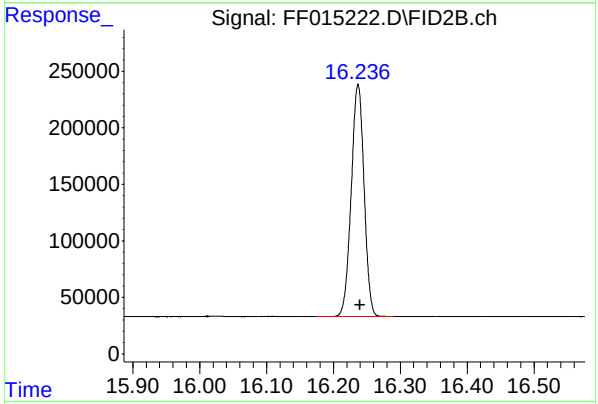
R.T.: 15.012 min
Delta R.T.: -0.002 min
Response: 2537326
Conc: 20.15 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



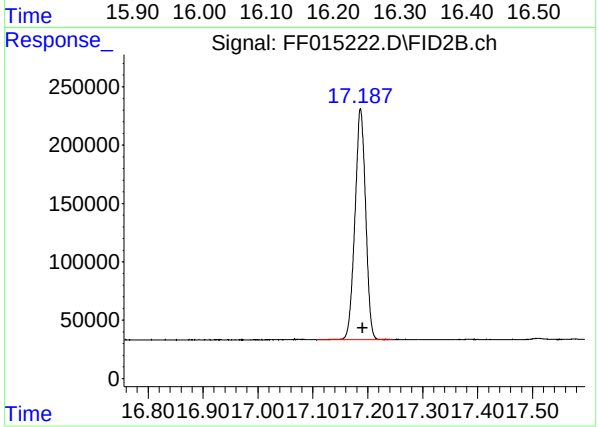
#10 N-TETRACOSANE

R.T.: 15.216 min
Delta R.T.: -0.003 min
Response: 2811736
Conc: 20.19 ug/ml



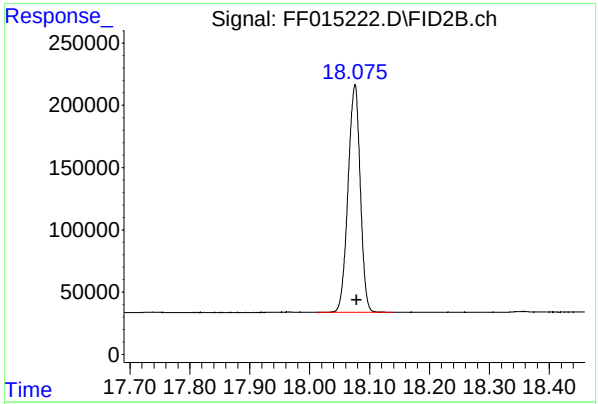
#11 N-HEXACOSANE

R.T.: 16.237 min
Delta R.T.: -0.003 min
Response: 2742459
Conc: 20.14 ug/ml



#12 N-OCTACOSANE

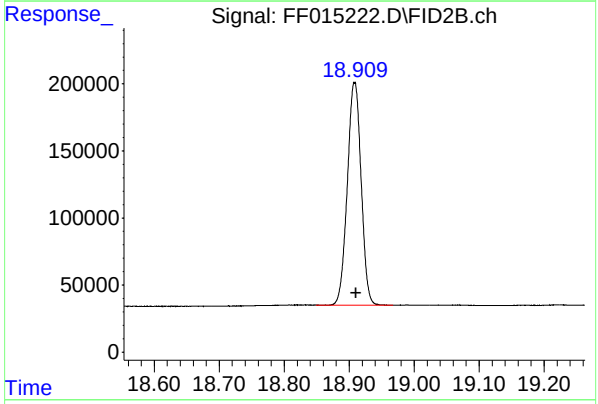
R.T.: 17.187 min
Delta R.T.: -0.004 min
Response: 2673854
Conc: 20.12 ug/ml



#13 N-TRIACONTANE

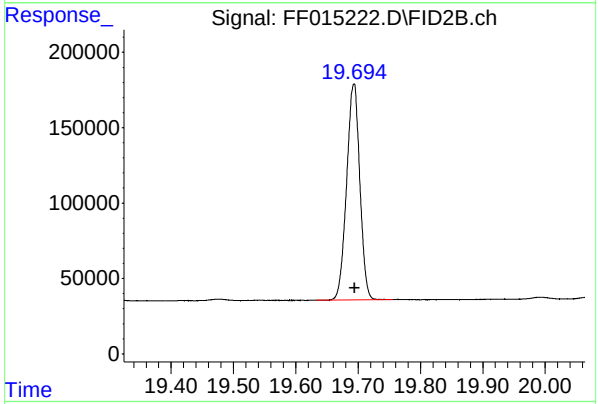
R.T.: 18.076 min
Delta R.T.: -0.003 min
Response: 2592796
Conc: 20.11 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



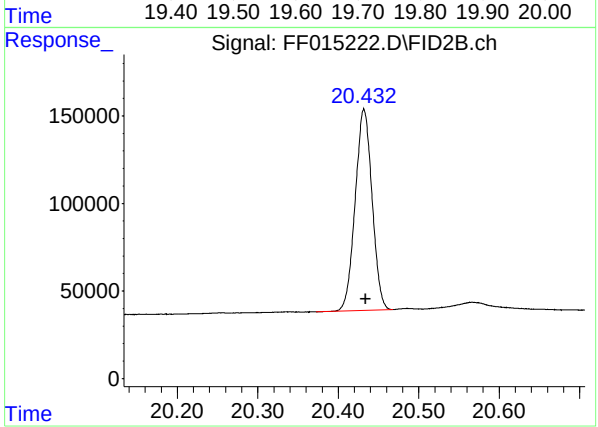
#14 N-DOTRIACONTANE

R.T.: 18.908 min
Delta R.T.: -0.002 min
Response: 2454056
Conc: 19.98 ug/ml



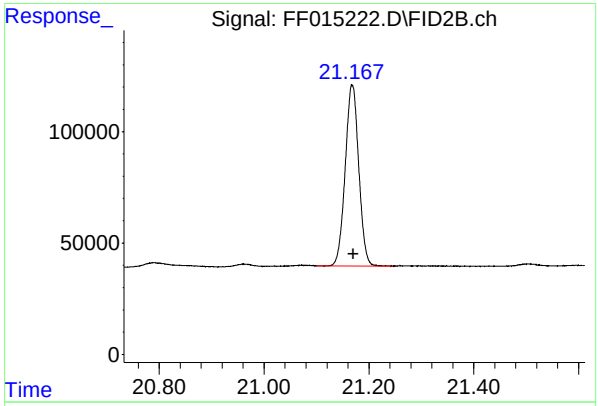
#15 N-TETRATRIACONTANE

R.T.: 19.693 min
Delta R.T.: -0.001 min
Response: 2112330
Conc: 19.56 ug/ml



#16 N-HEXATRIACONTANE

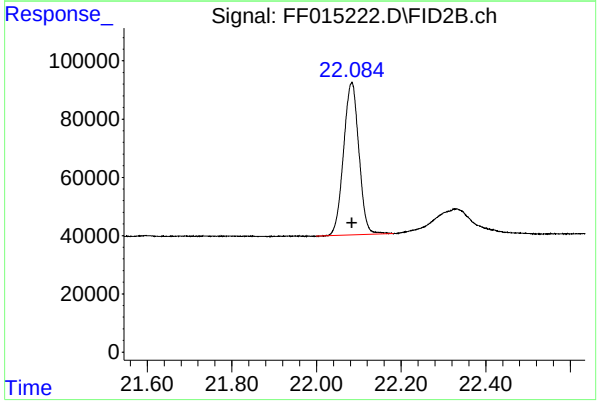
R.T.: 20.432 min
Delta R.T.: -0.002 min
Response: 1674385
Conc: 18.63 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.168 min
Delta R.T.: -0.002 min
Response: 1454409
Conc: 18.34 ug/ml

Instrument :
FID_F
ClientSampleId :
20 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.084 min
Delta R.T.: 0.000 min
Response: 1319770
Conc: 17.38 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015222.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:04
Sample : 20 TRPH STD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.036	2.006	2.096	BB	263009	2589116	90.97%	5.906%
2	4.567	4.534	4.617	BB	255741	2592371	91.08%	5.914%
3	6.731	6.697	6.777	BB	263446	2660659	93.48%	6.070%
4	8.556	8.522	8.609	BB	237465	2528544	88.84%	5.768%
5	10.162	10.112	10.226	BB	235437	2598796	91.31%	5.928%
6	11.603	11.547	11.657	BB	244004	2846220	100.00%	6.493%
7	12.914	12.856	12.989	BB	230621	2834717	99.60%	6.467%
8	14.113	14.056	14.166	BB	225893	2812210	98.81%	6.415%
9	15.012	14.951	15.084	BB	184541	2537326	89.15%	5.788%
10	15.216	15.152	15.279	BB	221148	2811736	98.79%	6.414%
11	16.237	16.174	16.289	BB	205415	2742459	96.35%	6.256%
12	17.187	17.106	17.246	BB	197733	2673854	93.94%	6.100%
13	18.076	18.011	18.139	BB	182893	2592796	91.10%	5.915%
14	18.908	18.849	18.967	BB	166135	2454056	86.22%	5.598%
15	19.693	19.632	19.756	BB	143715	2112330	74.22%	4.819%
16	20.432	20.372	20.468	BV	114894	1674385	58.83%	3.820%
17	21.168	21.099	21.246	BB	81386	1454409	51.10%	3.318%
18	22.084	21.999	22.181	BB	52487	1319770	46.37%	3.011%

Sum of corrected areas: 43835752

FF011425.M Wed Jan 15 00:55:03 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015223.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:32
Operator : YP\AJ
Sample : 10 TRPH STD
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
10 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 10:43:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 10:17:08 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...	15.012	1384781	10.970 ug/ml
Target Compounds				
1)	N-OCTANE	2.037	1409071	10.881 ug/ml
2)	N-DECANE	4.567	1406416	10.844 ug/ml
3)	N-DODECANE	6.731	1441330	10.791 ug/ml
4)	N-TETRADECANE	8.556	1361743	10.606 ug/ml
5)	N-HEXADECANE	10.162	1380799	10.397 ug/ml
6)	N-OCTADECANE	11.604	1549680	10.861 ug/ml
7)	N-EICOSANE	12.914	1551896	10.970 ug/ml
8)	N-DOCOSANE	14.112	1536342	10.967 ug/ml
10)	N-TETRACOSANE	15.216	1537280	11.003 ug/ml
11)	N-HEXACOSANE	16.237	1487783	10.902 ug/ml
12)	N-OCTACOSANE	17.187	1440181	10.815 ug/ml
13)	N-TRIACONTANE	18.075	1391000	10.768 ug/ml
14)	N-DOTRIACONTANE	18.908	1332604	10.853 ug/ml
15)	N-TETRATRIACONTANE	19.692	1186558	11.070 ug/ml
16)	N-HEXATRIACONTANE	20.432	992679	11.302 ug/ml
17)	N-OCTATRIACONTANE	21.169	922048	11.956 ug/ml
18)	N-TETRACONTANE	22.081	895474	12.331 ug/ml

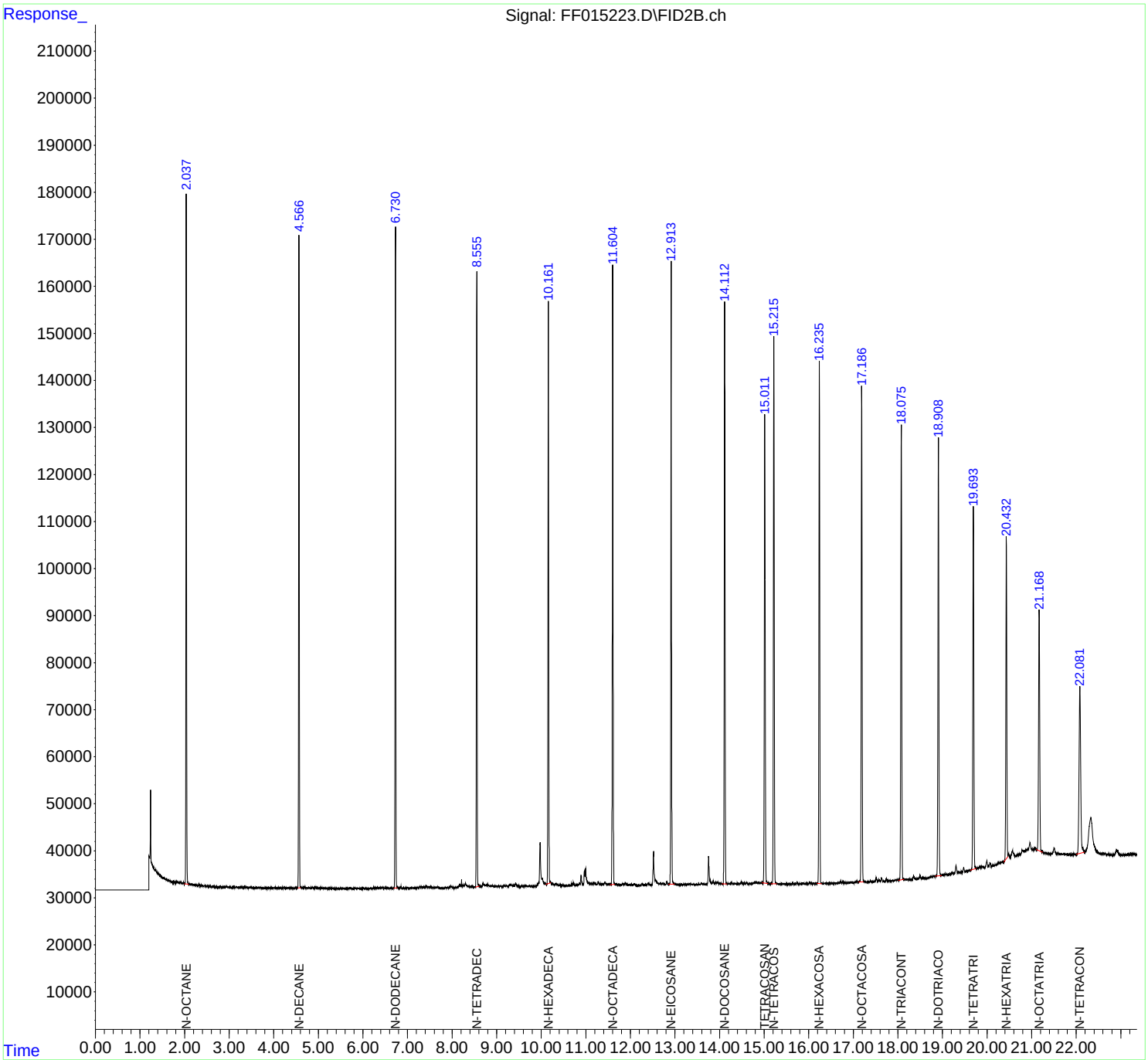
(f)=RT Delta > 1/2 Window (m)=manual int.

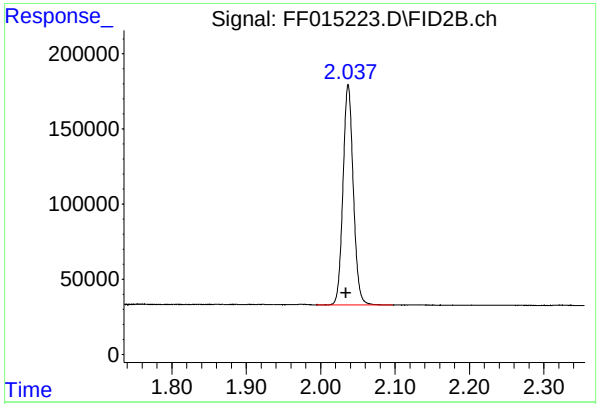
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015223.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:32
Operator : YP\AJ
Sample : 10 TRPH STD
Misc :
ALS Vial : 14 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
10 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 10:43:53 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 10:17:08 2025
Response via : Initial Calibration
Integrator: ChemStation

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

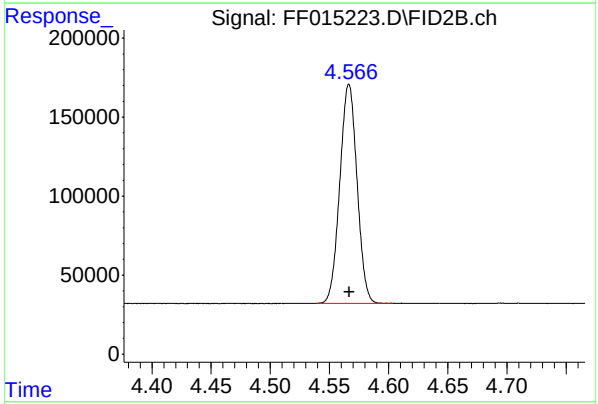




#1 N-OCTANE

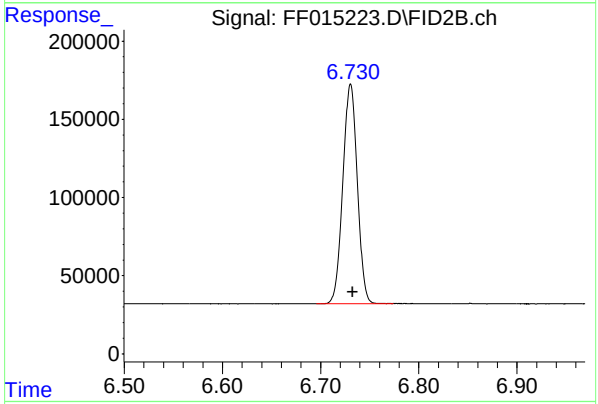
R.T.: 2.037 min
Delta R.T.: 0.003 min
Response: 1409071
Conc: 10.88 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



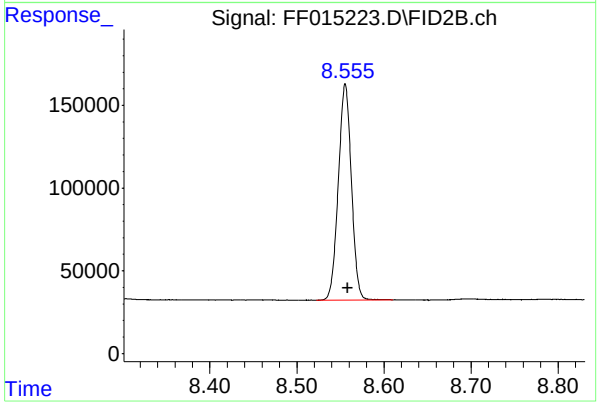
#2 N-DECANE

R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 1406416
Conc: 10.84 ug/ml



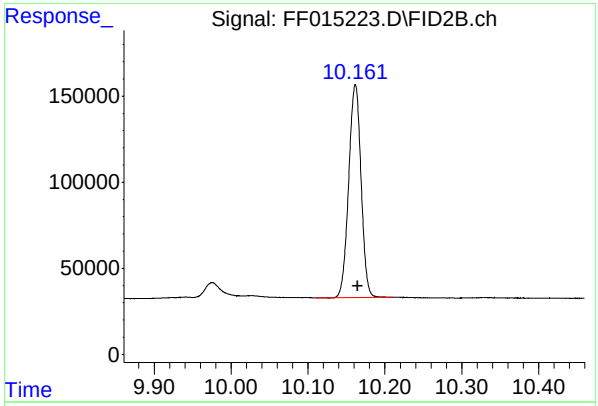
#3 N-DODECANE

R.T.: 6.731 min
Delta R.T.: -0.002 min
Response: 1441330
Conc: 10.79 ug/ml



#4 N-TETRADECANE

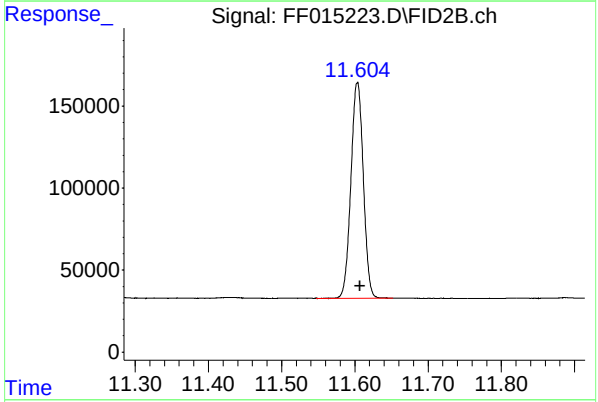
R.T.: 8.556 min
Delta R.T.: -0.003 min
Response: 1361743
Conc: 10.61 ug/ml



#5 N-HEXADECANE

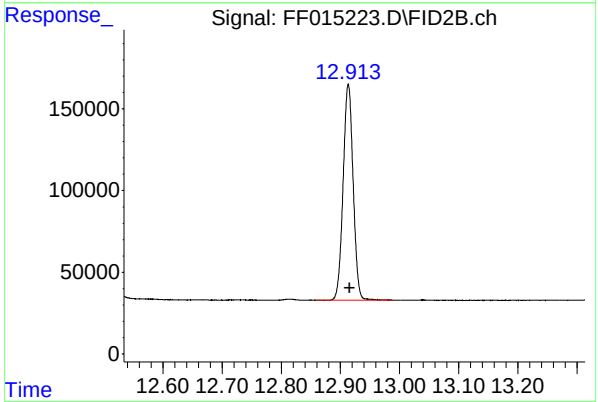
R.T.: 10.162 min
Delta R.T.: -0.003 min
Response: 1380799
Conc: 10.40 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



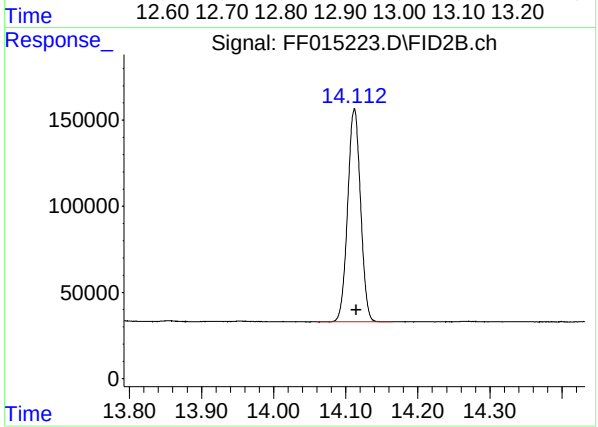
#6 N-OCTADECANE

R.T.: 11.604 min
Delta R.T.: -0.003 min
Response: 1549680
Conc: 10.86 ug/ml



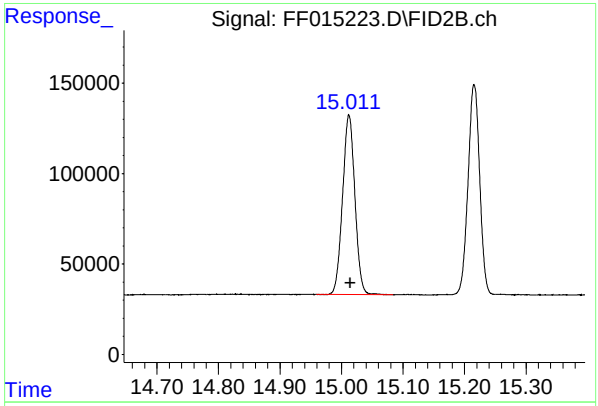
#7 N-EICOSANE

R.T.: 12.914 min
Delta R.T.: -0.002 min
Response: 1551896
Conc: 10.97 ug/ml



#8 N-DOCOSANE

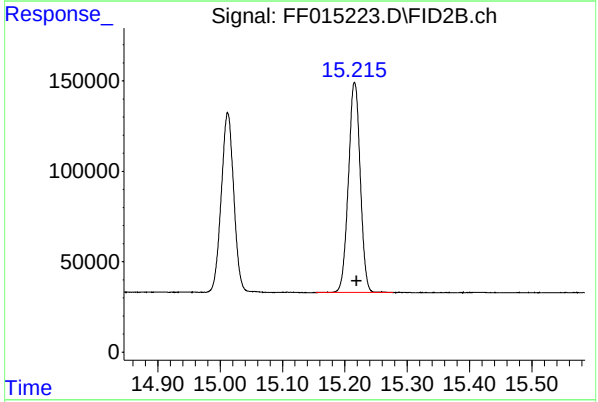
R.T.: 14.112 min
Delta R.T.: -0.003 min
Response: 1536342
Conc: 10.97 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

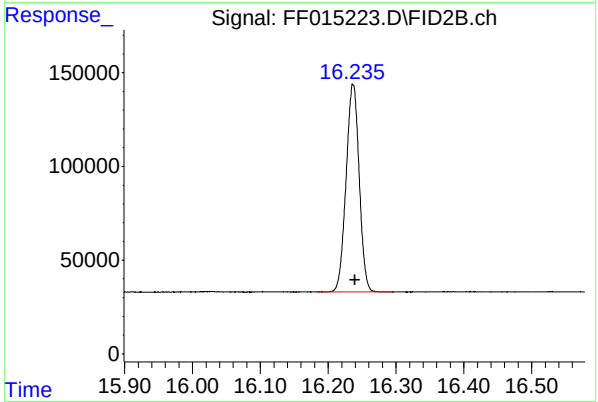
R.T.: 15.012 min
Delta R.T.: -0.002 min
Response: 1384781
Conc: 10.97 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



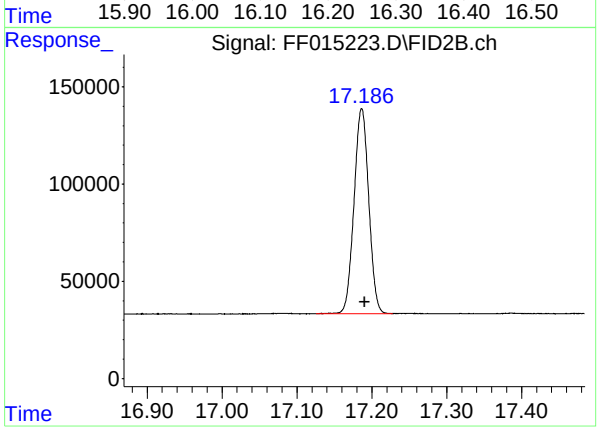
#10 N-TETRACOSANE

R.T.: 15.216 min
Delta R.T.: -0.003 min
Response: 1537280
Conc: 11.00 ug/ml



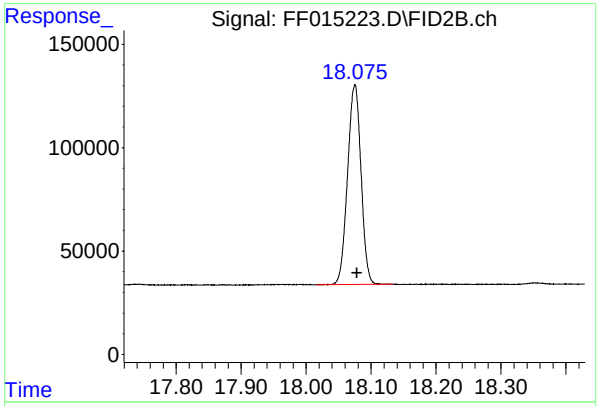
#11 N-HEXACOSANE

R.T.: 16.237 min
Delta R.T.: -0.003 min
Response: 1487783
Conc: 10.90 ug/ml



#12 N-OCTACOSANE

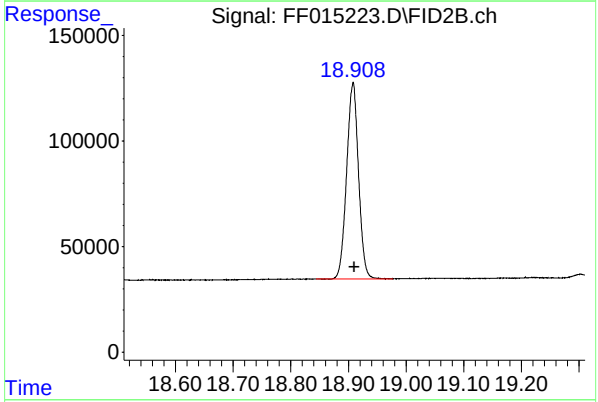
R.T.: 17.187 min
Delta R.T.: -0.004 min
Response: 1440181
Conc: 10.81 ug/ml



#13 N-TRIACONTANE

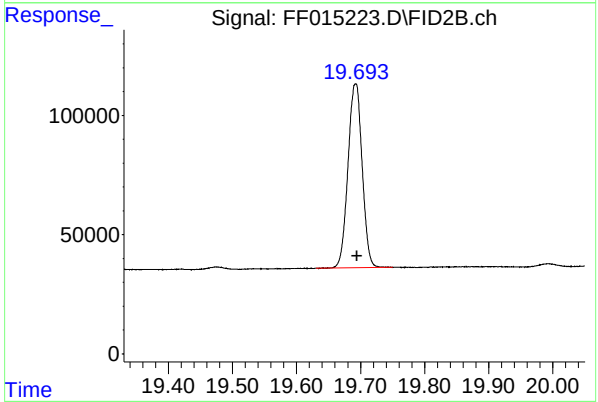
R.T.: 18.075 min
Delta R.T.: -0.003 min
Response: 1391000
Conc: 10.77 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



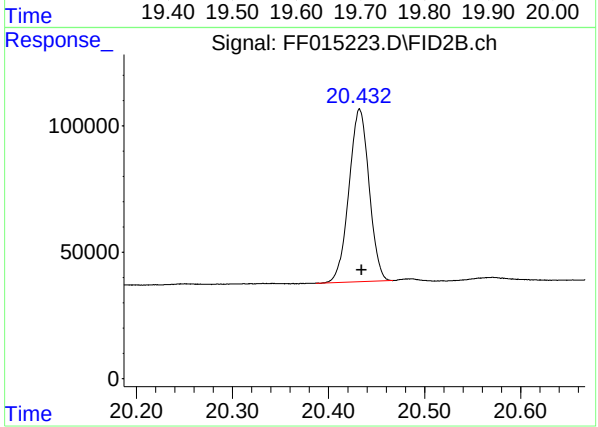
#14 N-DOTRIACONTANE

R.T.: 18.908 min
Delta R.T.: -0.003 min
Response: 1332604
Conc: 10.85 ug/ml



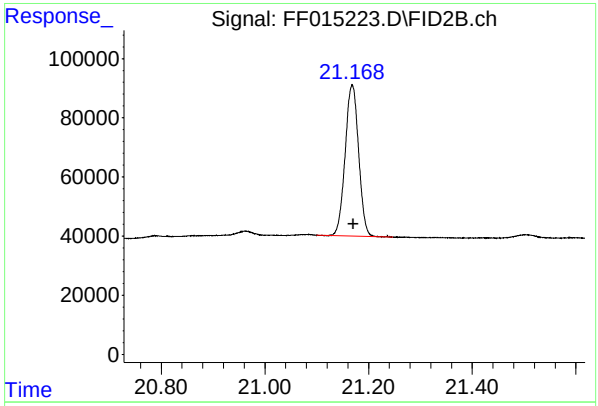
#15 N-TETRATRIACONTANE

R.T.: 19.692 min
Delta R.T.: -0.002 min
Response: 1186558
Conc: 11.07 ug/ml



#16 N-HEXATRIACONTANE

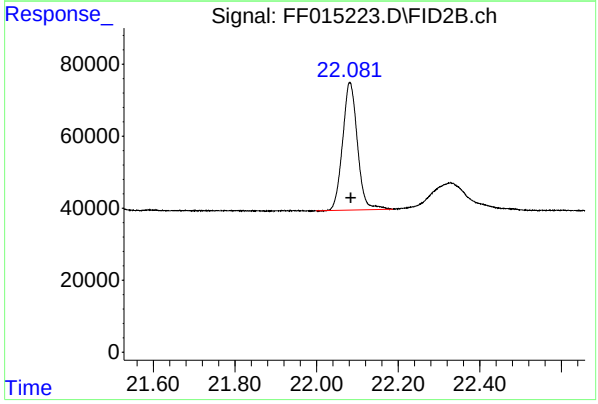
R.T.: 20.432 min
Delta R.T.: -0.002 min
Response: 992679
Conc: 11.30 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.169 min
Delta R.T.: -0.002 min
Response: 922048
Conc: 11.96 ug/ml

Instrument :
FID_F
ClientSampleId :
10 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.081 min
Delta R.T.: -0.002 min
Response: 895474
Conc: 12.33 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015223.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 10:32
Sample : 10 TRPH STD
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.037	1.994	2.097	BB	146582	1409071	90.80%	5.821%
2	4.567	4.539	4.604	BB	138870	1406416	90.63%	5.810%
3	6.731	6.695	6.774	BB	140642	1441330	92.88%	5.954%
4	8.556	8.522	8.610	BB	130672	1361743	87.75%	5.625%
5	10.162	10.110	10.210	BB	123770	1380799	88.97%	5.704%
6	11.604	11.547	11.652	BB	131647	1549680	99.86%	6.402%
7	12.914	12.859	12.989	BB	132313	1551896	100.00%	6.411%
8	14.112	14.059	14.165	BB	123588	1536342	99.00%	6.347%
9	15.012	14.959	15.084	BB	99498	1384781	89.23%	5.720%
10	15.216	15.154	15.277	BB	116347	1537280	99.06%	6.350%
11	16.237	16.182	16.295	BB	110473	1487783	95.87%	6.146%
12	17.187	17.125	17.228	BB	105473	1440181	92.80%	5.949%
13	18.075	18.015	18.134	BB	96776	1391000	89.63%	5.746%
14	18.908	18.844	18.977	BB	93293	1332604	85.87%	5.505%
15	19.692	19.630	19.750	BB	77127	1186558	76.46%	4.902%
16	20.432	20.387	20.467	BV	68344	992679	63.97%	4.101%
17	21.169	21.099	21.247	BB	51194	922048	59.41%	3.809%
18	22.081	21.999	22.187	BB	35538	895474	57.70%	3.699%
			Sum of corrected areas:			24207662		

FF011425.M Wed Jan 15 00:55:37 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015224.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:00
Operator : YP\AJ
Sample : 5 TRPH STD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
5 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 11:12:21 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 10:44:30 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...	15.011	687752	5.319 ug/ml
	Target Compounds			
1)	N-OCTANE	2.036	680976	5.145 ug/ml
2)	N-DECANE	4.566	683007	5.157 ug/ml
3)	N-DODECANE	6.730	695655	5.107 ug/ml
4)	N-TETRADECANE	8.555	657629	5.046 ug/ml
5)	N-HEXADECANE	10.162	674001	5.025 ug/ml
6)	N-OCTADECANE	11.603	754642	5.178 ug/ml
7)	N-EICOSANE	12.914	757068	5.225 ug/ml
8)	N-DOCOSANE	14.112	750425	5.230 ug/ml
10)	N-TETRACOSANE	15.215	755711	5.277 ug/ml
11)	N-HEXACOSANE	16.237	731778	5.244 ug/ml
12)	N-OCTACOSANE	17.188	708462	5.214 ug/ml
13)	N-TRIACONTANE	18.075	692119	5.257 ug/ml
14)	N-DOTRIACONTANE	18.908	667720	5.324 ug/ml
15)	N-TETRATRIACONTANE	19.692	569208	5.172 ug/ml
16)	N-HEXATRIACONTANE	20.433	446100	4.919 ug/ml
17)	N-OCTATRIACONTANE	21.169	402483	4.975 ug/ml
18)	N-TETRACONTANE	22.083	359388	4.676 ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

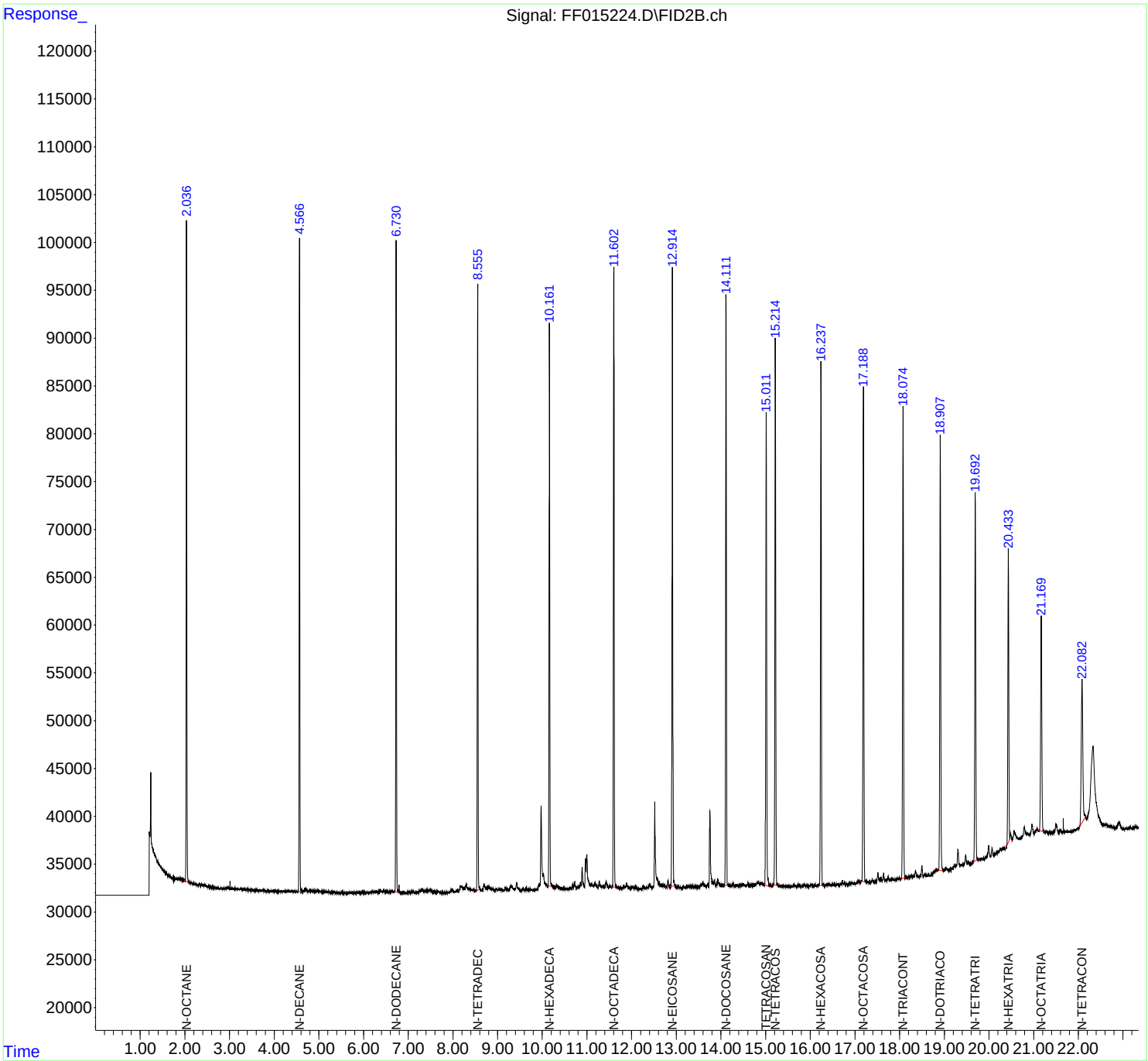
Quantitation Report (QT Reviewed)

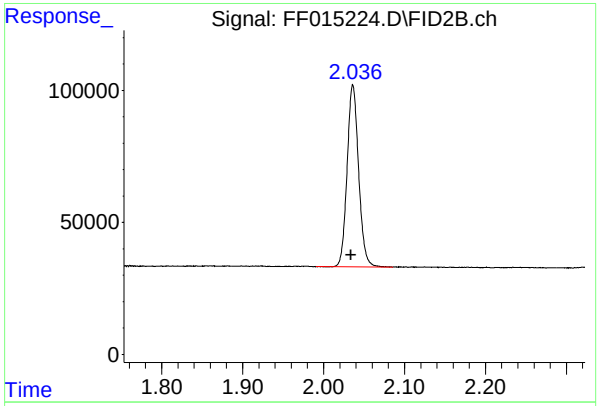
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015224.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:00
Operator : YP\AJ
Sample : 5 TRPH STD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
5 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 14 11:12:21 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 10:44:30 2025
Response via : Initial Calibration
Integrator: ChemStation

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

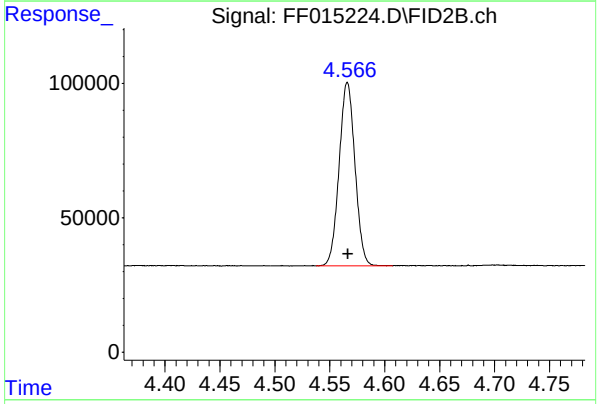




#1 N-OCTANE

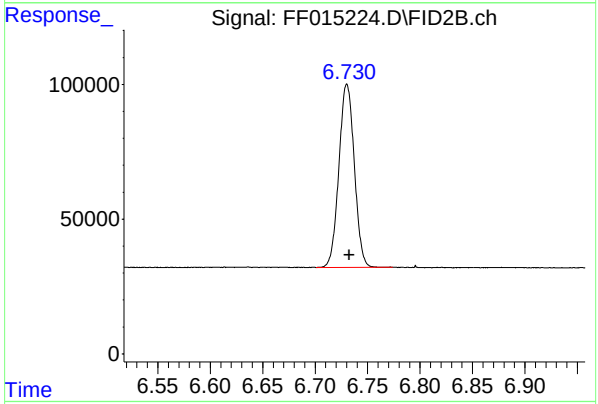
R.T.: 2.036 min
Delta R.T.: 0.002 min
Response: 680976
Conc: 5.15 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



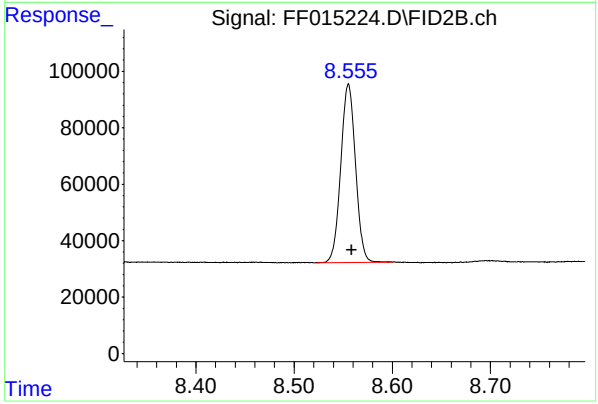
#2 N-DECANE

R.T.: 4.566 min
Delta R.T.: 0.000 min
Response: 683007
Conc: 5.16 ug/ml



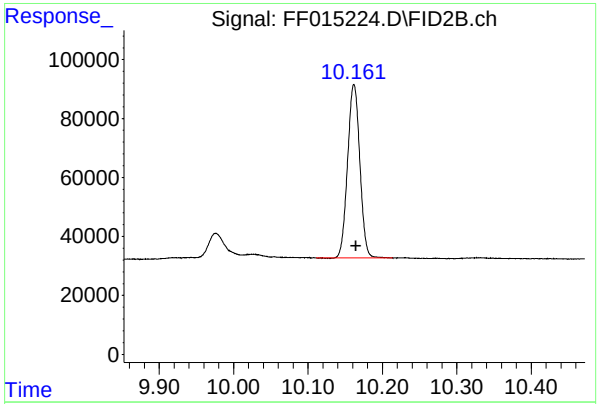
#3 N-DODECANE

R.T.: 6.730 min
Delta R.T.: -0.002 min
Response: 695655
Conc: 5.11 ug/ml



#4 N-TETRADECANE

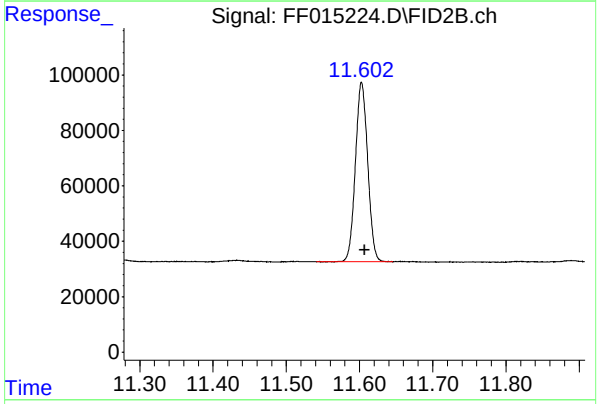
R.T.: 8.555 min
Delta R.T.: -0.003 min
Response: 657629
Conc: 5.05 ug/ml



#5 N-HEXADECANE

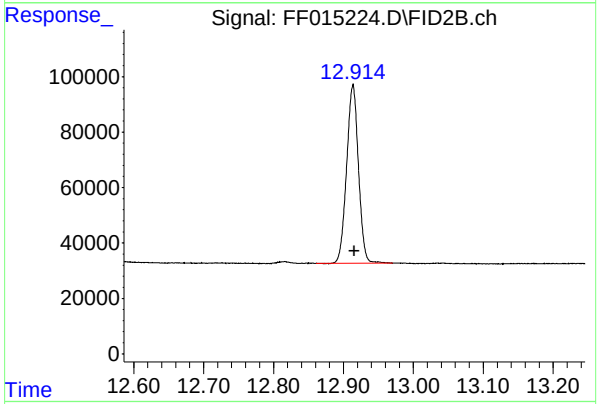
R.T.: 10.162 min
Delta R.T.: -0.003 min
Response: 674001
Conc: 5.03 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



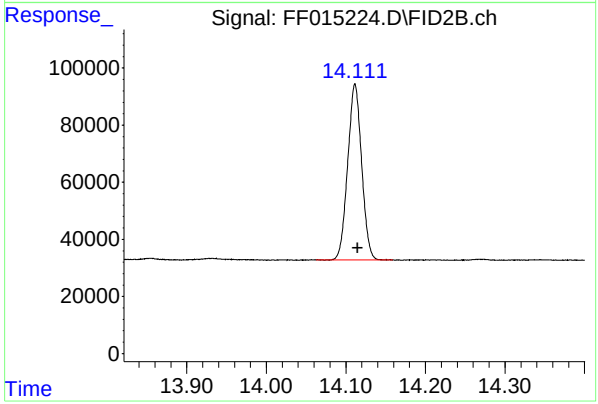
#6 N-OCTADECANE

R.T.: 11.603 min
Delta R.T.: -0.004 min
Response: 754642
Conc: 5.18 ug/ml



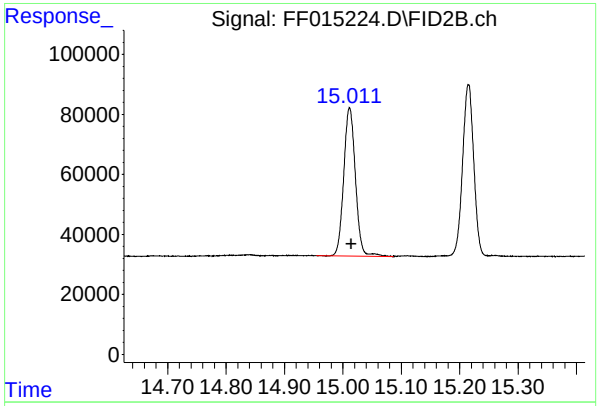
#7 N-EICOSANE

R.T.: 12.914 min
Delta R.T.: -0.002 min
Response: 757068
Conc: 5.22 ug/ml



#8 N-DOCOSANE

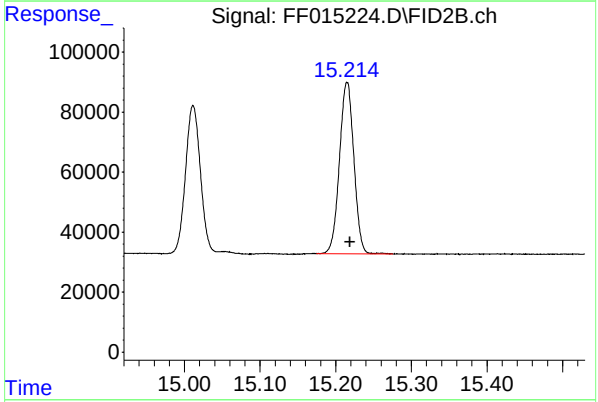
R.T.: 14.112 min
Delta R.T.: -0.003 min
Response: 750425
Conc: 5.23 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

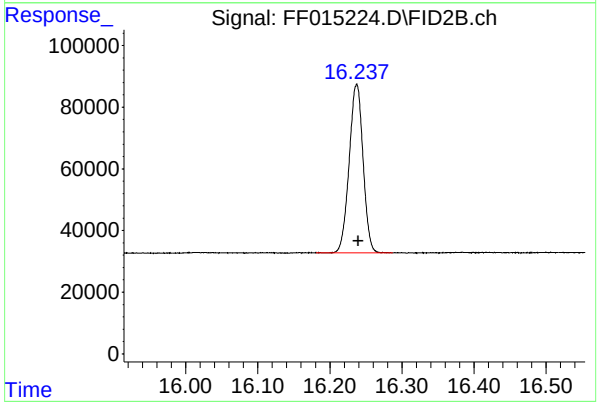
R.T.: 15.011 min
Delta R.T.: -0.003 min
Response: 687752
Conc: 5.32 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



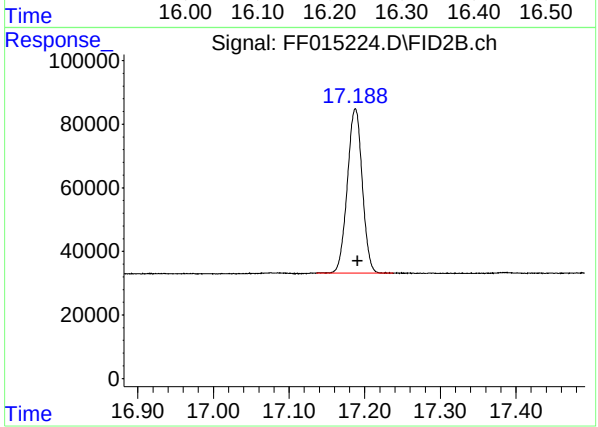
#10 N-TETRACOSANE

R.T.: 15.215 min
Delta R.T.: -0.004 min
Response: 755711
Conc: 5.28 ug/ml



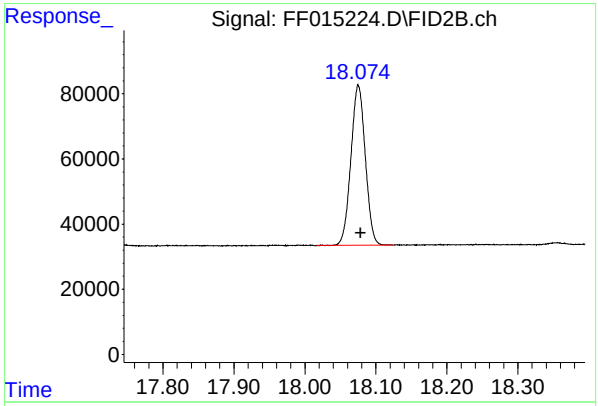
#11 N-HEXACOSANE

R.T.: 16.237 min
Delta R.T.: -0.002 min
Response: 731778
Conc: 5.24 ug/ml



#12 N-OCTACOSANE

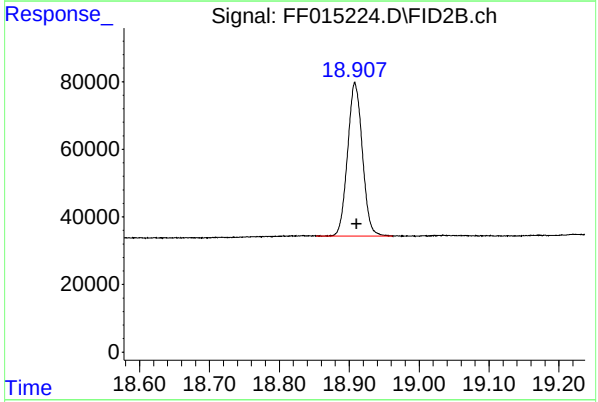
R.T.: 17.188 min
Delta R.T.: -0.003 min
Response: 708462
Conc: 5.21 ug/ml



#13 N-TRIACONTANE

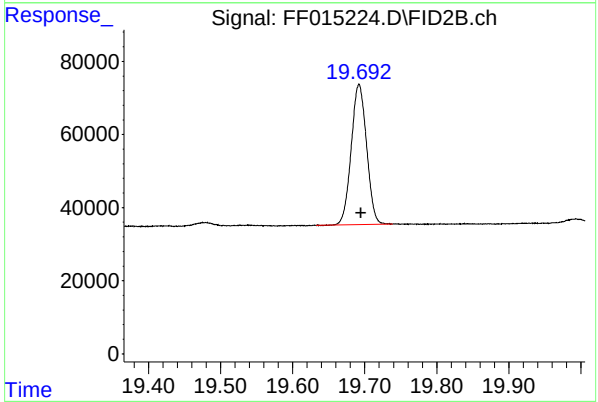
R.T.: 18.075 min
Delta R.T.: -0.003 min
Response: 692119
Conc: 5.26 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



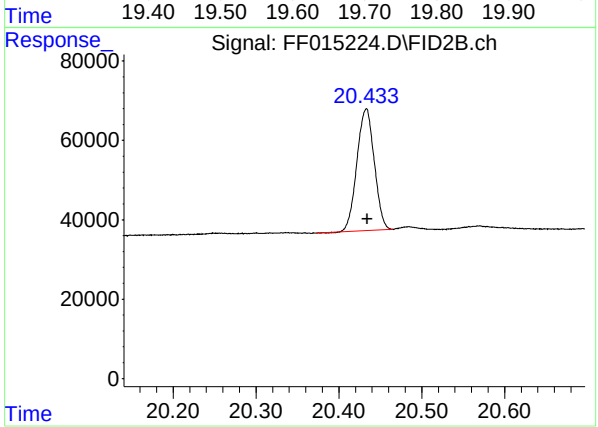
#14 N-DOTRIACONTANE

R.T.: 18.908 min
Delta R.T.: -0.003 min
Response: 667720
Conc: 5.32 ug/ml



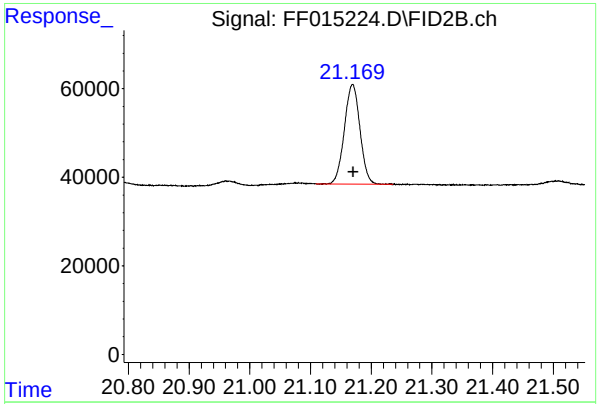
#15 N-TETRATRIACONTANE

R.T.: 19.692 min
Delta R.T.: -0.002 min
Response: 569208
Conc: 5.17 ug/ml



#16 N-HEXATRIACONTANE

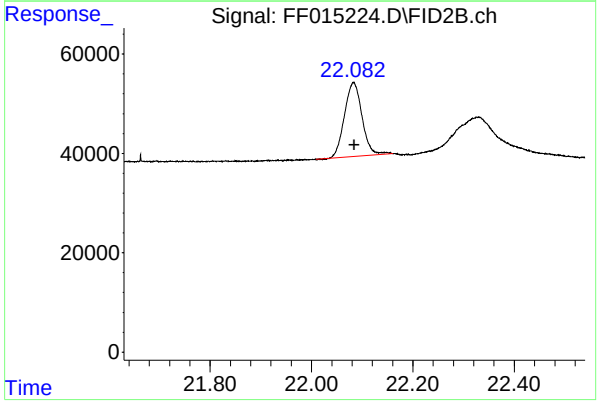
R.T.: 20.433 min
Delta R.T.: -0.001 min
Response: 446100
Conc: 4.92 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.169 min
Delta R.T.: 0.000 min
Response: 402483
Conc: 4.98 ug/ml

Instrument :
FID_F
ClientSampleId :
5 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.083 min
Delta R.T.: 0.000 min
Response: 359388
Conc: 4.68 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015224.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:00
Sample : 5 TRPH STD
Misc :
ALS Vial : 15 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.036	1.991	2.086	BB	68984	680976	89.95%	5.833%
2	4.566	4.537	4.607	BB	68282	683007	90.22%	5.851%
3	6.730	6.701	6.774	BB	68074	695655	91.89%	5.959%
4	8.555	8.522	8.601	BB	63215	657629	86.87%	5.633%
5	10.162	10.111	10.214	BB	58865	674001	89.03%	5.773%
6	11.603	11.541	11.646	BB	64831	754642	99.68%	6.464%
7	12.914	12.861	12.971	BB	64672	757068	100.00%	6.485%
8	14.112	14.062	14.159	BB	61604	750425	99.12%	6.428%
9	15.011	14.954	15.086	BB	49417	687752	90.84%	5.891%
10	15.215	15.174	15.276	BB	57148	755711	99.82%	6.473%
11	16.237	16.181	16.287	BB	54707	731778	96.66%	6.268%
12	17.188	17.136	17.237	BB	51704	708462	93.58%	6.069%
13	18.075	18.016	18.124	BB	49004	692119	91.42%	5.929%
14	18.908	18.852	18.962	BB	45333	667720	88.20%	5.720%
15	19.692	19.632	19.739	BB	38468	569208	75.19%	4.876%
16	20.433	20.372	20.465	BV	30642	446100	58.92%	3.821%
17	21.169	21.109	21.236	BB	22529	402483	53.16%	3.448%
18	22.083	22.009	22.161	BB	14977	359388	47.47%	3.079%
			Sum of corrected areas:			11674124		

FF011425.M Wed Jan 15 00:58:18 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015225.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:29
Operator : YP\AJ
Sample : FF011425ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
FF011425ICV

Integration File: autoint1.e
Quant Time: Jan 14 11:40:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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	5961169	45.524 ug/ml
	Target Compounds			
1)	N-OCTANE	2.035	6112886	45.919 ug/ml
2)	N-DECANE	4.568	6129033	45.992 ug/ml
3)	N-DODECANE	6.733	6337399	46.329 ug/ml
4)	N-TETRADECANE	8.559	6164454	47.210 ug/ml
5)	N-HEXADECANE	10.165	6386176	47.567 ug/ml
6)	N-OCTADECANE	11.608	6766165	46.095 ug/ml
7)	N-EICOSANE	12.918	6686678	45.737 ug/ml
8)	N-DOCOSANE	14.115	6617164	45.699 ug/ml
10)	N-TETRACOSANE	15.219	6595993	45.552 ug/ml
11)	N-HEXACOSANE	16.240	6436771	45.681 ug/ml
12)	N-OCTACOSANE	17.192	6278722	45.815 ug/ml
13)	N-TRIACONTANE	18.078	6088905	45.778 ug/ml
14)	N-DOTRIACONTANE	18.913	5856309	46.100 ug/ml
15)	N-TETRATRIACONTANE	19.697	5068570	45.741 ug/ml
16)	N-HEXATRIACONTANE	20.435	4198058	46.441 ug/ml
17)	N-OCTATRIACONTANE	21.172	3691384	45.678 ug/ml
18)	N-TETRACONTANE	22.087	3681961	48.539 ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

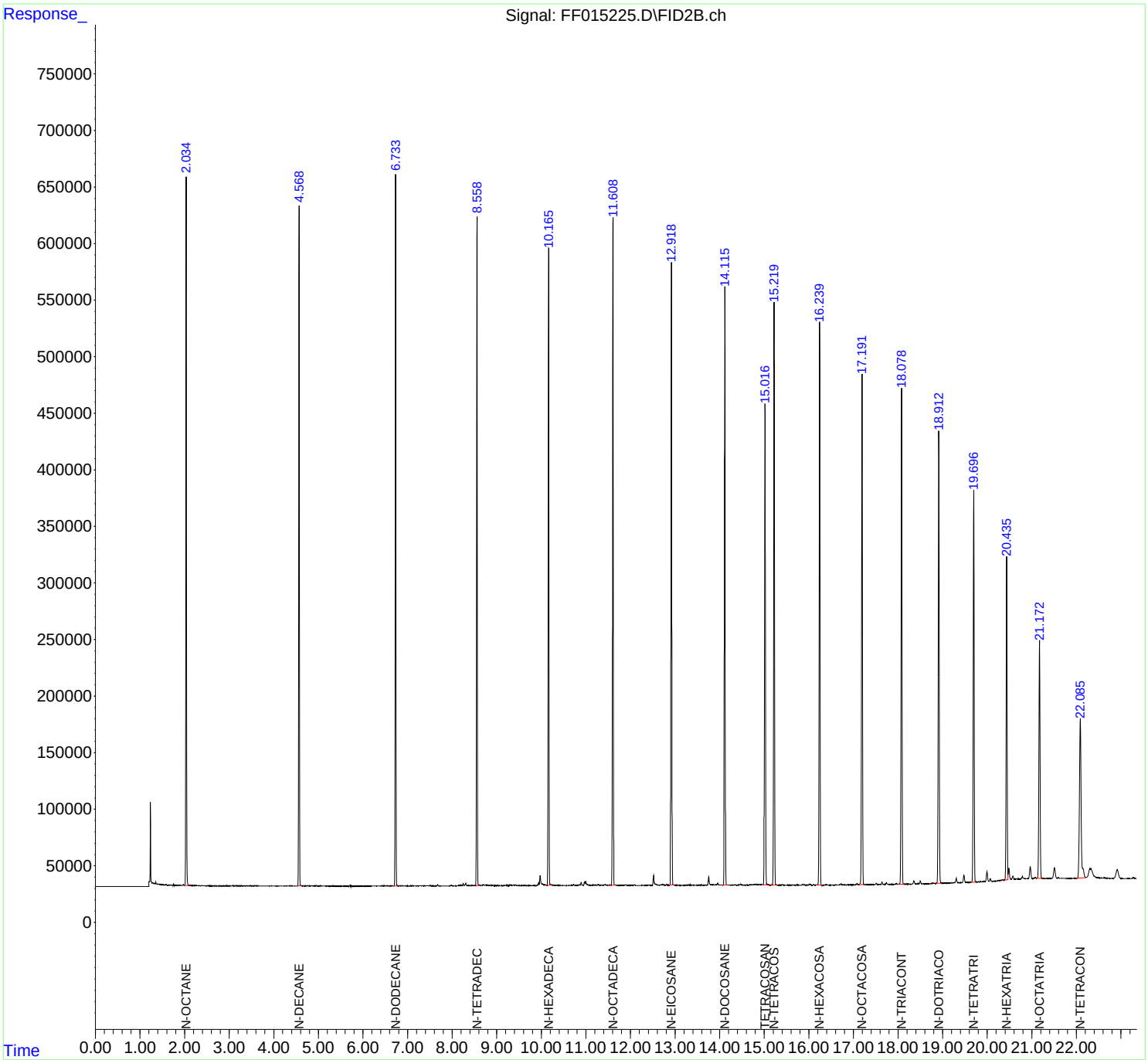
Quantitation Report (QT Reviewed)

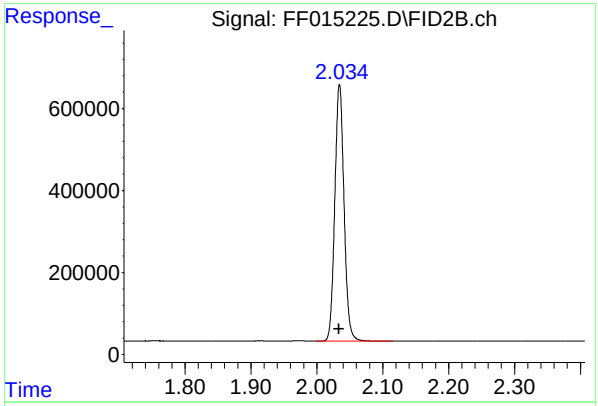
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015225.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:29
Operator : YP\AJ
Sample : FF011425ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
FF011425ICV

Integration File: autoint1.e
Quant Time: Jan 14 11:40:45 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

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

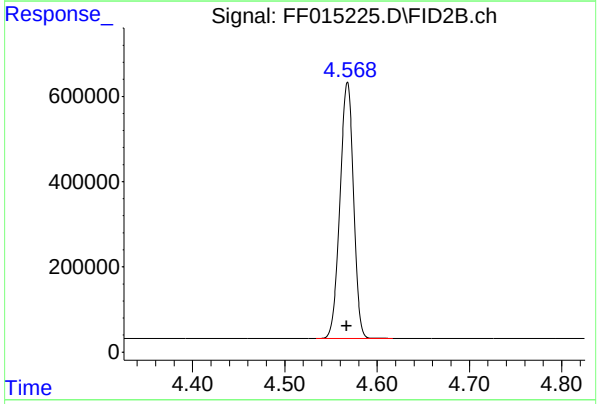




#1 N-OCTANE

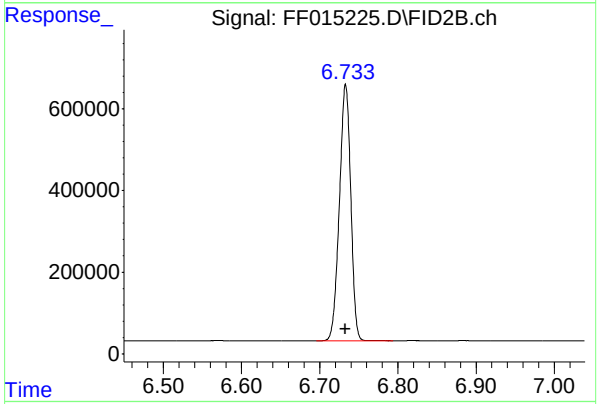
R.T.: 2.035 min
Delta R.T.: 0.000 min
Response: 6112886
Conc: 45.92 ug/ml

Instrument :
FID_F
ClientSampleId :
FF011425ICV



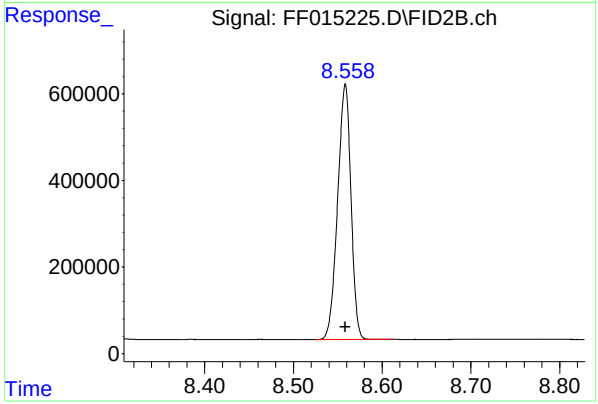
#2 N-DECANE

R.T.: 4.568 min
Delta R.T.: 0.001 min
Response: 6129033
Conc: 45.99 ug/ml



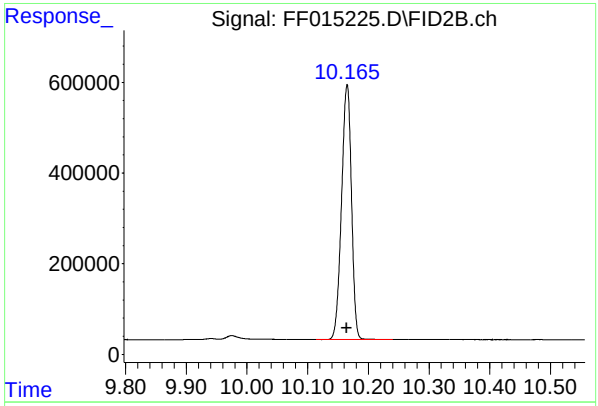
#3 N-DODECANE

R.T.: 6.733 min
Delta R.T.: 0.000 min
Response: 6337399
Conc: 46.33 ug/ml



#4 N-TETRADECANE

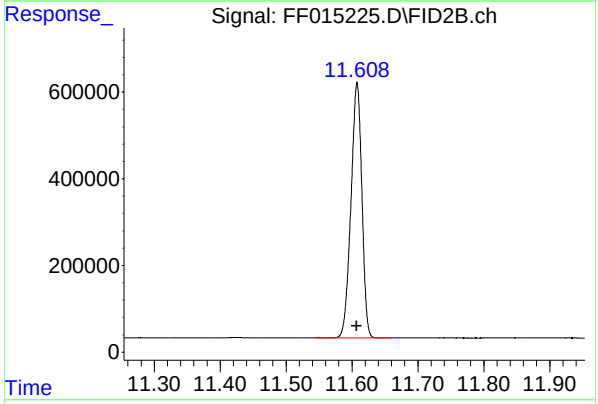
R.T.: 8.559 min
Delta R.T.: 0.000 min
Response: 6164454
Conc: 47.21 ug/ml



#5 N-HEXADECANE

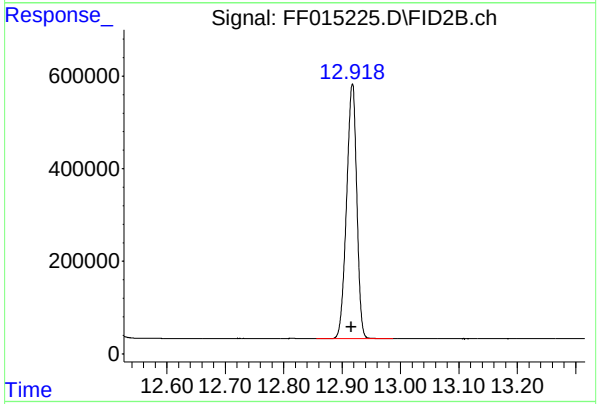
R.T.: 10.165 min
Delta R.T.: 0.000 min
Response: 6386176
Conc: 47.57 ug/ml

Instrument :
FID_F
ClientSampleId :
FF011425ICV



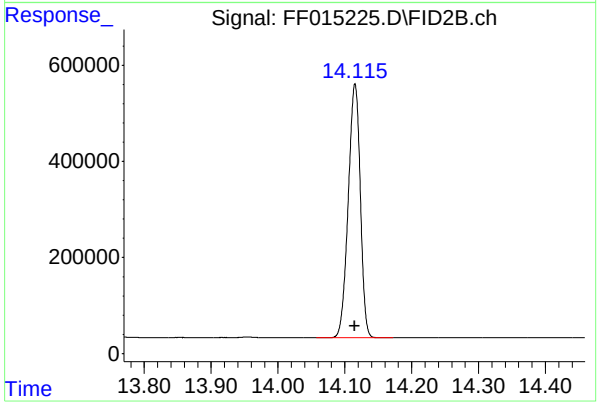
#6 N-OCTADECANE

R.T.: 11.608 min
Delta R.T.: 0.000 min
Response: 6766165
Conc: 46.09 ug/ml



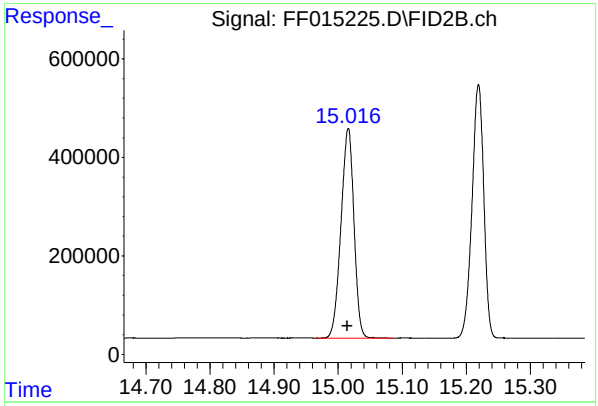
#7 N-EICOSANE

R.T.: 12.918 min
Delta R.T.: 0.002 min
Response: 6686678
Conc: 45.74 ug/ml



#8 N-DOCOSANE

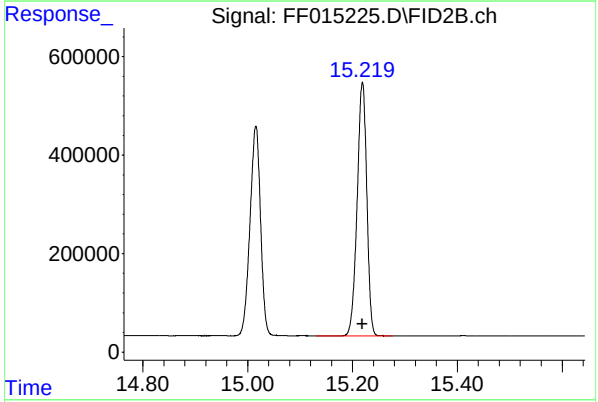
R.T.: 14.115 min
Delta R.T.: 0.000 min
Response: 6617164
Conc: 45.70 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

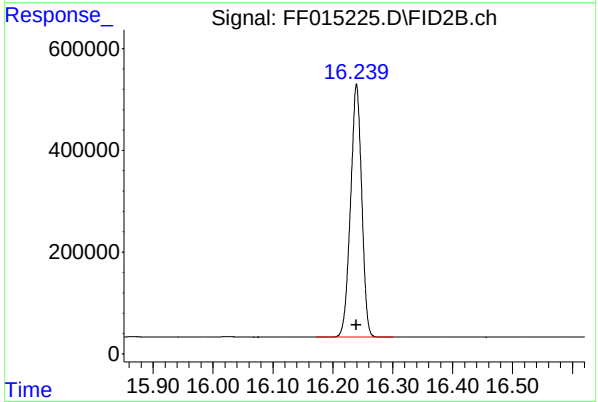
R.T.: 15.016 min
Delta R.T.: 0.001 min
Response: 5961169
Conc: 45.52 ug/ml

Instrument :
FID_F
ClientSampleId :
FF011425ICV



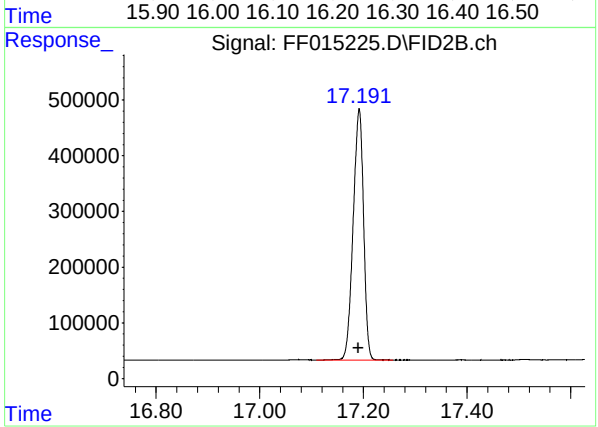
#10 N-TETRACOSANE

R.T.: 15.219 min
Delta R.T.: 0.000 min
Response: 6595993
Conc: 45.55 ug/ml



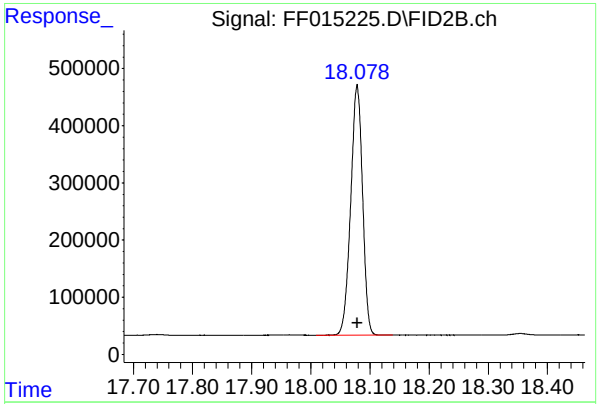
#11 N-HEXACOSANE

R.T.: 16.240 min
Delta R.T.: 0.000 min
Response: 6436771
Conc: 45.68 ug/ml



#12 N-OCTACOSANE

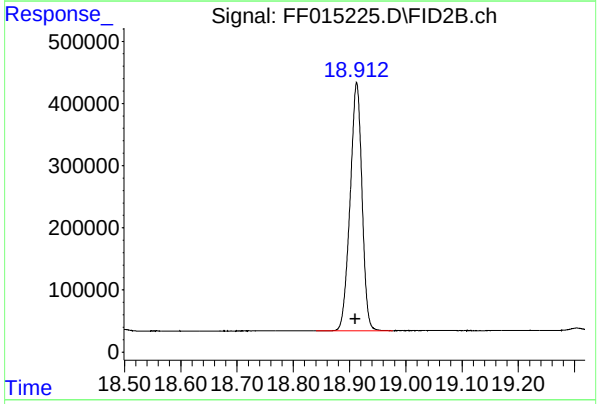
R.T.: 17.192 min
Delta R.T.: 0.001 min
Response: 6278722
Conc: 45.82 ug/ml



#13 N-TRIACONTANE

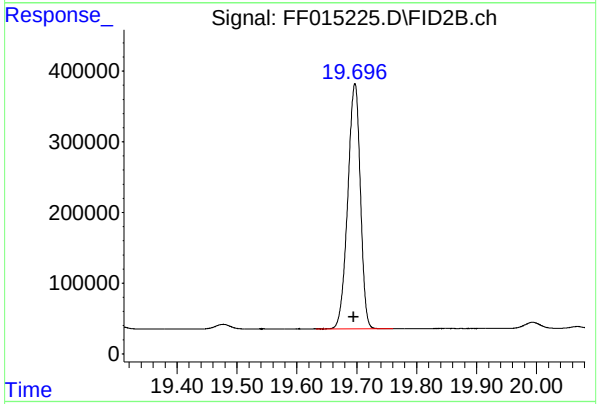
R.T.: 18.078 min
Delta R.T.: 0.000 min
Response: 6088905
Conc: 45.78 ug/ml

Instrument :
FID_F
ClientSampleId :
FF011425ICV



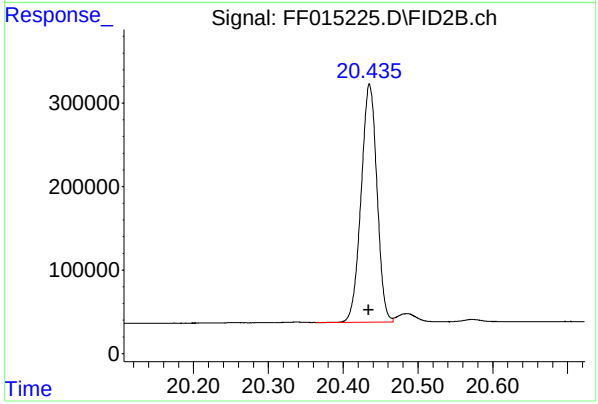
#14 N-DOTRIACONTANE

R.T.: 18.913 min
Delta R.T.: 0.002 min
Response: 5856309
Conc: 46.10 ug/ml



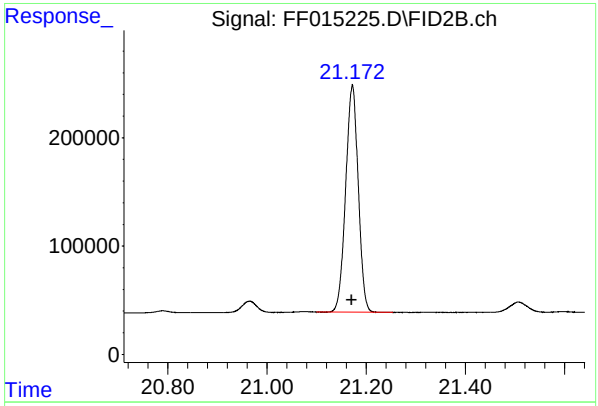
#15 N-TETRATRIACONTANE

R.T.: 19.697 min
Delta R.T.: 0.002 min
Response: 5068570
Conc: 45.74 ug/ml



#16 N-HEXATRIACONTANE

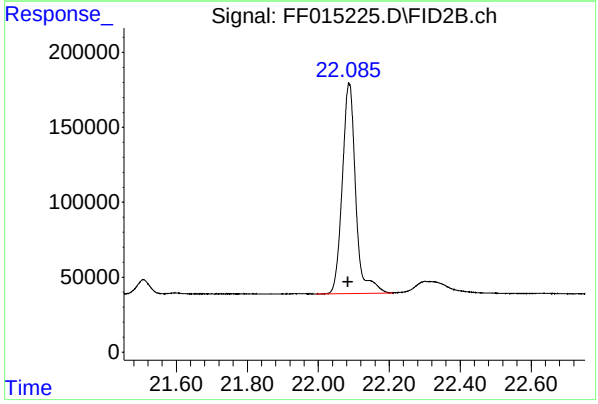
R.T.: 20.435 min
Delta R.T.: 0.001 min
Response: 4198058
Conc: 46.44 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.172 min
Delta R.T.: 0.002 mi
Response: 3691384
Conc: 45.68 ug/m

Instrument :
FID_F
ClientSampleId :
FF011425ICV



#18 N-TETRACONTANE

R.T.: 22.087 min
Delta R.T.: 0.003 min
Response: 3681961
Conc: 48.54 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011425\
Data File : FF015225.D
Signal(s) : FID2B.ch
Acq On : 14 Jan 2025 11:29
Sample : FF011425ICV
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.035	1.999	2.115	BB	627211	6112886	90.34%	5.819%
2	4.568	4.534	4.617	BB	602563	6129033	90.58%	5.834%
3	6.733	6.695	6.794	BB	626214	6337399	93.66%	6.032%
4	8.559	8.525	8.612	BB	591574	6164454	91.11%	5.868%
5	10.165	10.114	10.240	BB	563558	6386176	94.38%	6.079%
6	11.608	11.545	11.662	BB	587961	6766165	100.00%	6.440%
7	12.918	12.855	12.987	BB	550286	6686678	98.83%	6.365%
8	14.115	14.057	14.172	BB	528613	6617164	97.80%	6.299%
9	15.016	14.965	15.085	BV	425883	5961169	88.10%	5.674%
10	15.219	15.130	15.277	BB	514990	6595993	97.48%	6.278%
11	16.240	16.172	16.300	BB	497639	6436771	95.13%	6.127%
12	17.192	17.109	17.257	BB	451415	6278722	92.80%	5.976%
13	18.078	18.009	18.139	BB	438361	6088905	89.99%	5.796%
14	18.913	18.840	18.977	BB	399317	5856309	86.55%	5.574%
15	19.697	19.632	19.760	BB	346682	5068570	74.91%	4.825%
16	20.435	20.364	20.467	BV	285298	4198058	62.04%	3.996%
17	21.172	21.099	21.254	BB	210131	3691384	54.56%	3.514%
18	22.087	21.994	22.210	BV	139557	3681961	54.42%	3.505%

Sum of corrected areas: 105057796

FF011425.M Wed Jan 15 00:57:35 2025

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

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: WEST04

ProjectID: Ft Meade Tipton Airfield Parcel RI - PO 0111169

Lab Code: CHEM Case No.: Q1109 SAS No.: Q1109 SDG No.: Q1109

DataFile: FF015248.D Analyst Name: YP\AJ Analyst Date: 01-17-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	78607429	157215	139543	12.664

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015248.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:45
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: Jan 17 22:11:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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	7134702	54.486	ug/ml
	Target Compounds				
2)	N-DECANE	4.568	7611898	57.119	ug/ml
3)	N-DODECANE	6.734	7910871	57.832	ug/ml
4)	N-TETRADECANE	8.561	7761336	59.440	ug/ml
5)	N-HEXADECANE	10.166	7957043	59.267	ug/ml
6)	N-OCTADECANE	11.610	8286774	56.454	ug/ml
7)	N-EICOSANE	12.920	8105148	55.439	ug/ml
8)	N-DOCOSANE	14.118	7961582	54.984	ug/ml
10)	N-TETRACOSANE	15.223	7865949	54.322	ug/ml
11)	N-HEXACOSANE	16.244	7648530	54.281	ug/ml
12)	N-OCTACOSANE	17.194	7498298	54.714	ug/ml

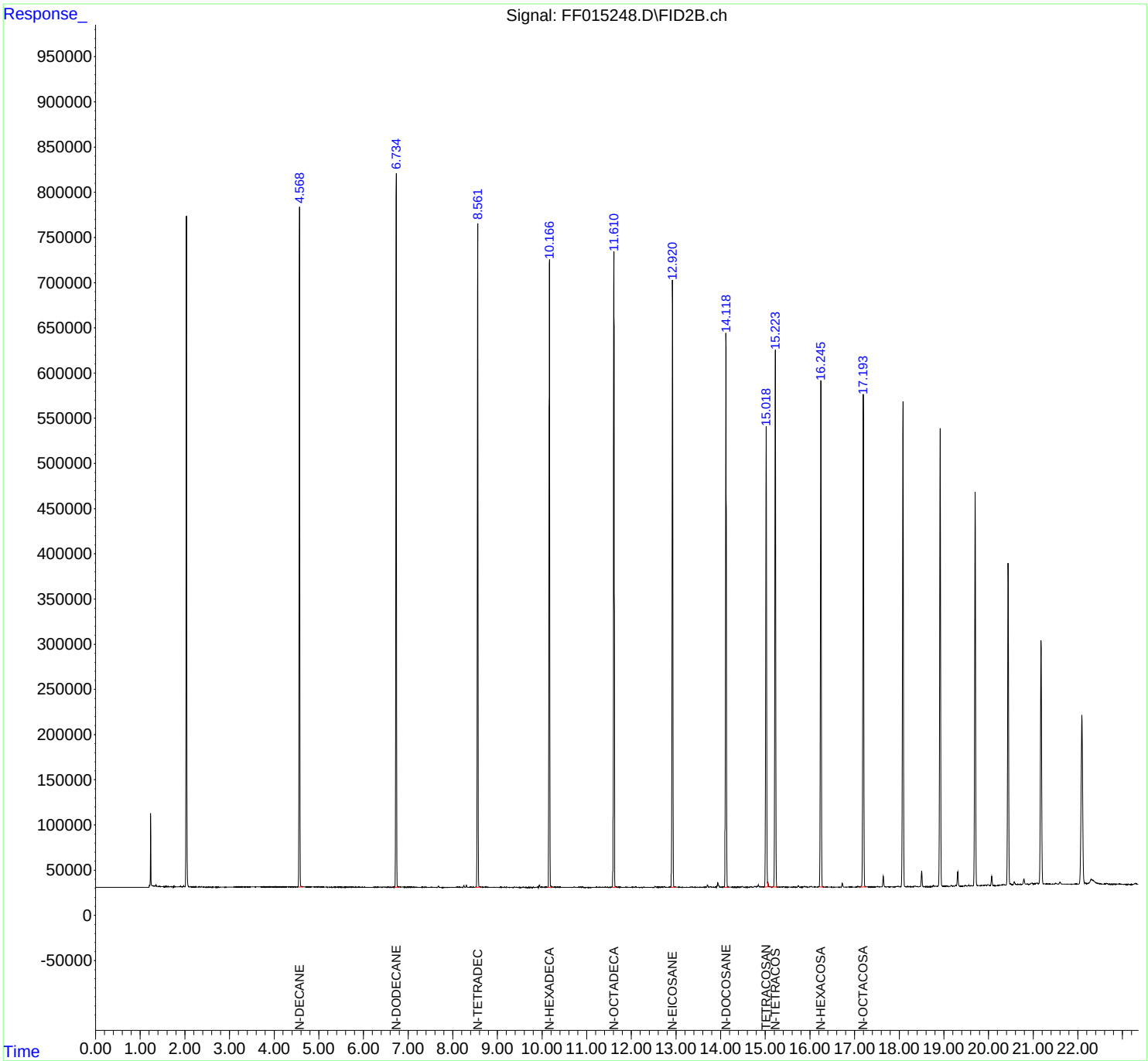
(f)=RT Delta > 1/2 Window (m)=manual int.

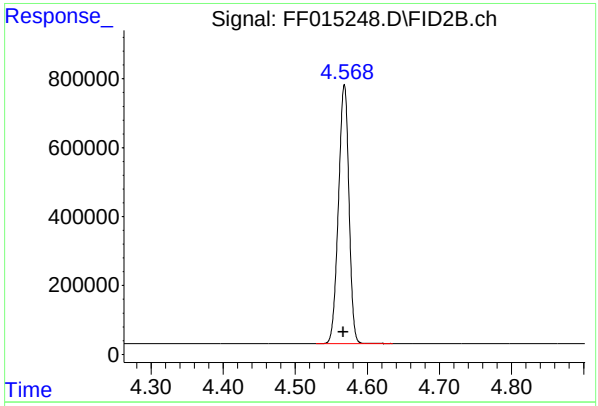
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015248.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:45
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jan 17 22:11:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

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

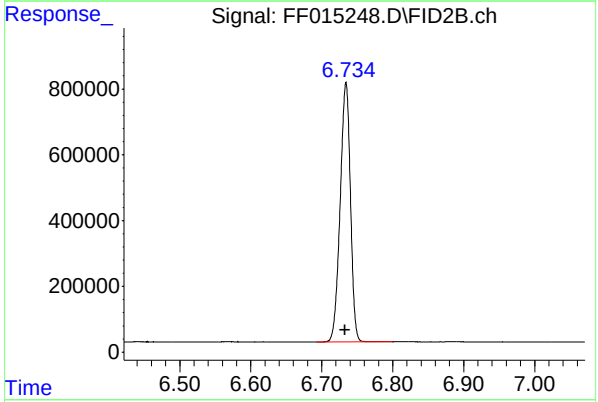




#2 N-DECANE

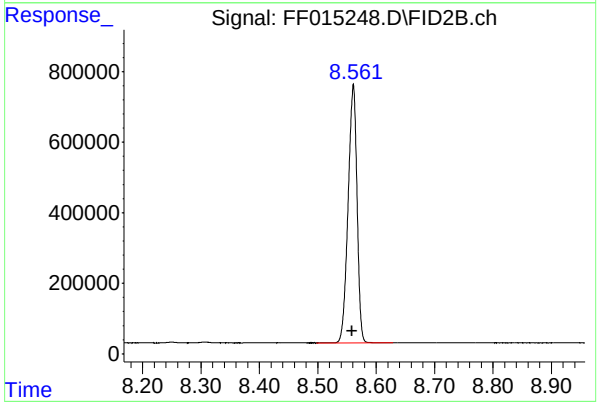
R.T.: 4.568 min
Delta R.T.: 0.001 min
Response: 7611898
Conc: 57.12 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



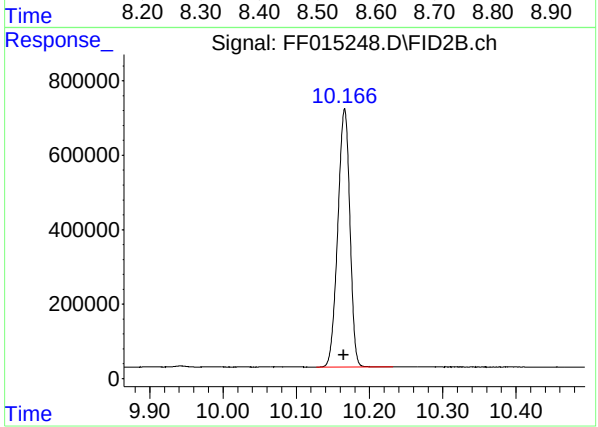
#3 N-DODECANE

R.T.: 6.734 min
Delta R.T.: 0.002 min
Response: 7910871
Conc: 57.83 ug/ml



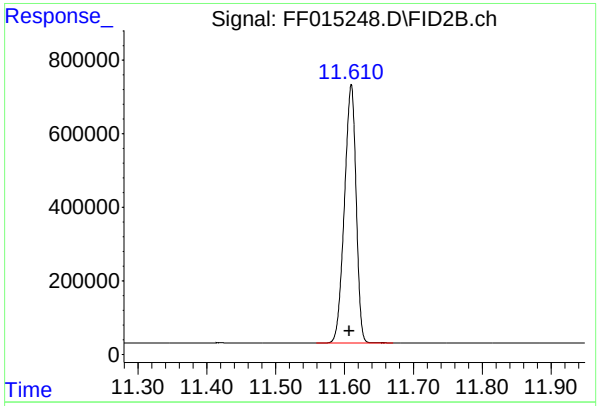
#4 N-TETRADECANE

R.T.: 8.561 min
Delta R.T.: 0.002 min
Response: 7761336
Conc: 59.44 ug/ml



#5 N-HEXADECANE

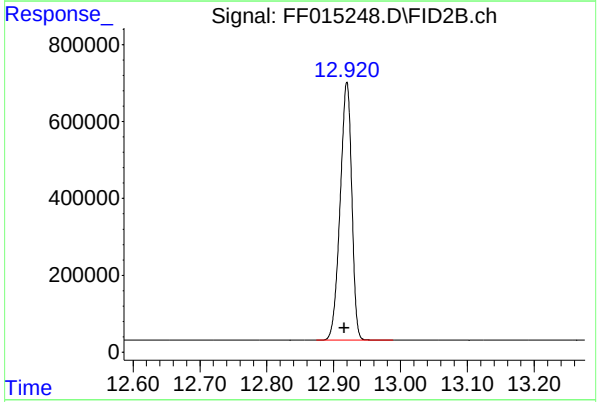
R.T.: 10.166 min
Delta R.T.: 0.002 min
Response: 7957043
Conc: 59.27 ug/ml



#6 N-OCTADECANE

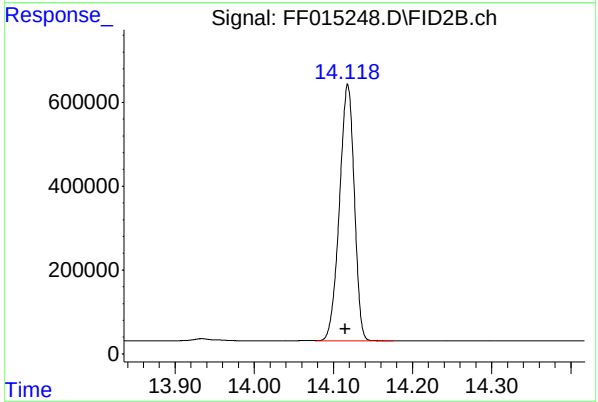
R.T.: 11.610 min
Delta R.T.: 0.003 min
Response: 8286774
Conc: 56.45 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



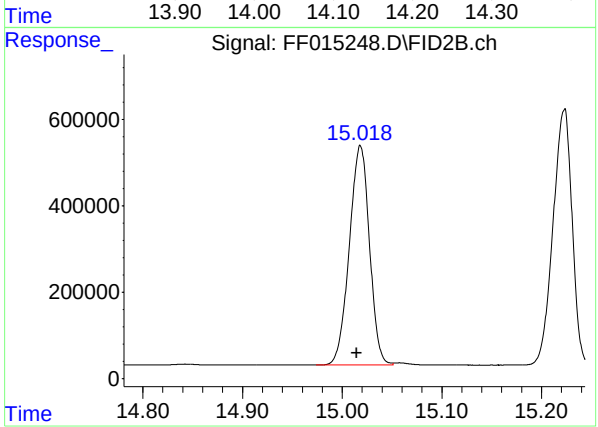
#7 N-EICOSANE

R.T.: 12.920 min
Delta R.T.: 0.004 min
Response: 8105148
Conc: 55.44 ug/ml



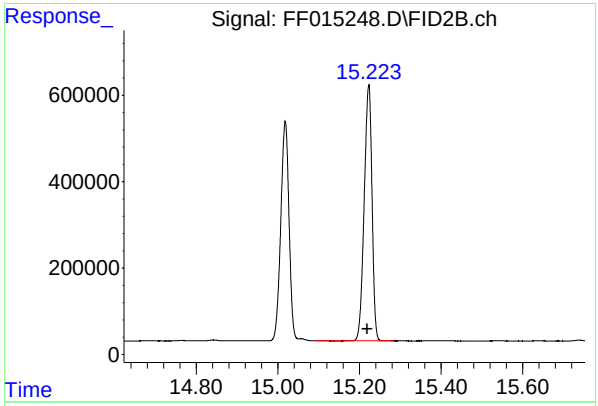
#8 N-DOCOSANE

R.T.: 14.118 min
Delta R.T.: 0.003 min
Response: 7961582
Conc: 54.98 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

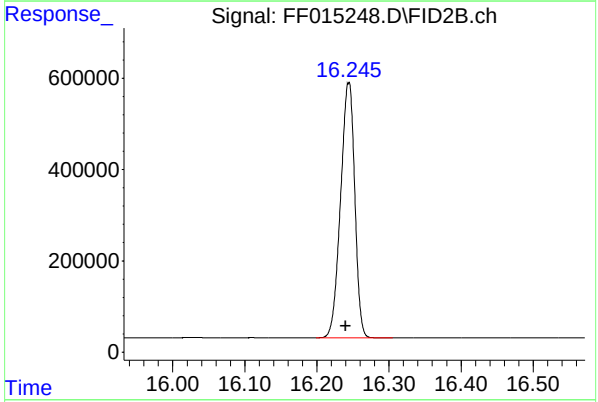
R.T.: 15.018 min
Delta R.T.: 0.004 min
Response: 7134702
Conc: 54.49 ug/ml



#10 N-TETRACOSANE

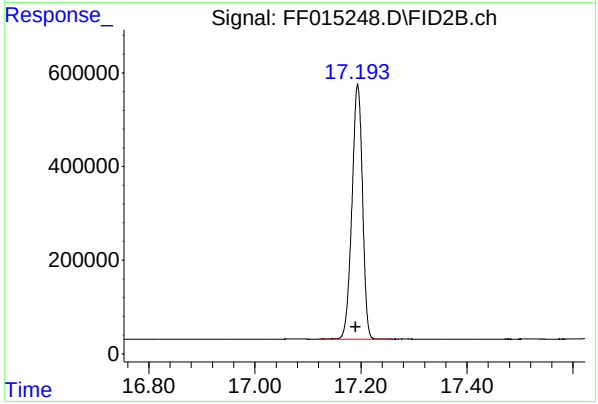
R.T.: 15.223 min
Delta R.T.: 0.004 min
Response: 7865949
Conc: 54.32 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



#11 N-HEXACOSANE

R.T.: 16.244 min
Delta R.T.: 0.005 min
Response: 7648530
Conc: 54.28 ug/ml



#12 N-OCTACOSANE

R.T.: 17.194 min
Delta R.T.: 0.003 min
Response: 7498298
Conc: 54.71 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015248.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:45
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.568	4.529	4.635	BB	752327	7611898	91.86%	8.878%
2	6.734	6.692	6.800	BB	787555	7910871	95.46%	9.226%
3	8.561	8.497	8.629	BB	731261	7761336	93.66%	9.052%
4	10.166	10.127	10.232	BB	692907	7957043	96.02%	9.280%
5	11.610	11.559	11.670	BB	704269	8286774	100.00%	9.665%
6	12.920	12.874	12.989	BB	672787	8105148	97.81%	9.453%
7	14.118	14.078	14.175	VB	609785	7961582	96.08%	9.285%
8	15.018	14.974	15.051	BV	508070	7134702	86.10%	8.321%
9	15.223	15.094	15.282	BB	596864	7865949	94.92%	9.174%
10	16.244	16.199	16.305	BB	558562	7648530	92.30%	8.920%
11	17.194	17.115	17.260	BB	544102	7498298	90.49%	8.745%
			Sum of corrected areas:			85742130		

FF011425.M Fri Jan 17 22:42:59 2025

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Fax : 908 789 8922

DIESEL RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Chemtech Contract: WEST04

ProjectID: Ft Meade Tipton Airfield Parcel RI - PO 0111169

Lab Code: CHEM Case No.: Q1109 SAS No.: Q1109 SDG No.: Q1109

DataFile: FF015255.D Analyst Name: YP\AJ Analyst Date: 01-17-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	71369690	142739	139543	2.29

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015255.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 16:01
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: Jan 17 22:14:19 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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	6478445	49.474 ug/ml
	Target Compounds			
2)	N-DECANE	4.568	6954290	52.184 ug/ml
3)	N-DODECANE	6.734	7205181	52.673 ug/ml
4)	N-TETRADECANE	8.560	7043317	53.941 ug/ml
5)	N-HEXADECANE	10.166	7203474	53.654 ug/ml
6)	N-OCTADECANE	11.609	7494718	51.058 ug/ml
7)	N-EICOSANE	12.919	7334920	50.171 ug/ml
8)	N-DOCOSANE	14.118	7218147	49.850 ug/ml
10)	N-TETRACOSANE	15.222	7150252	49.379 ug/ml
11)	N-HEXACOSANE	16.244	6948960	49.316 ug/ml
12)	N-OCTACOSANE	17.195	6816431	49.739 ug/ml

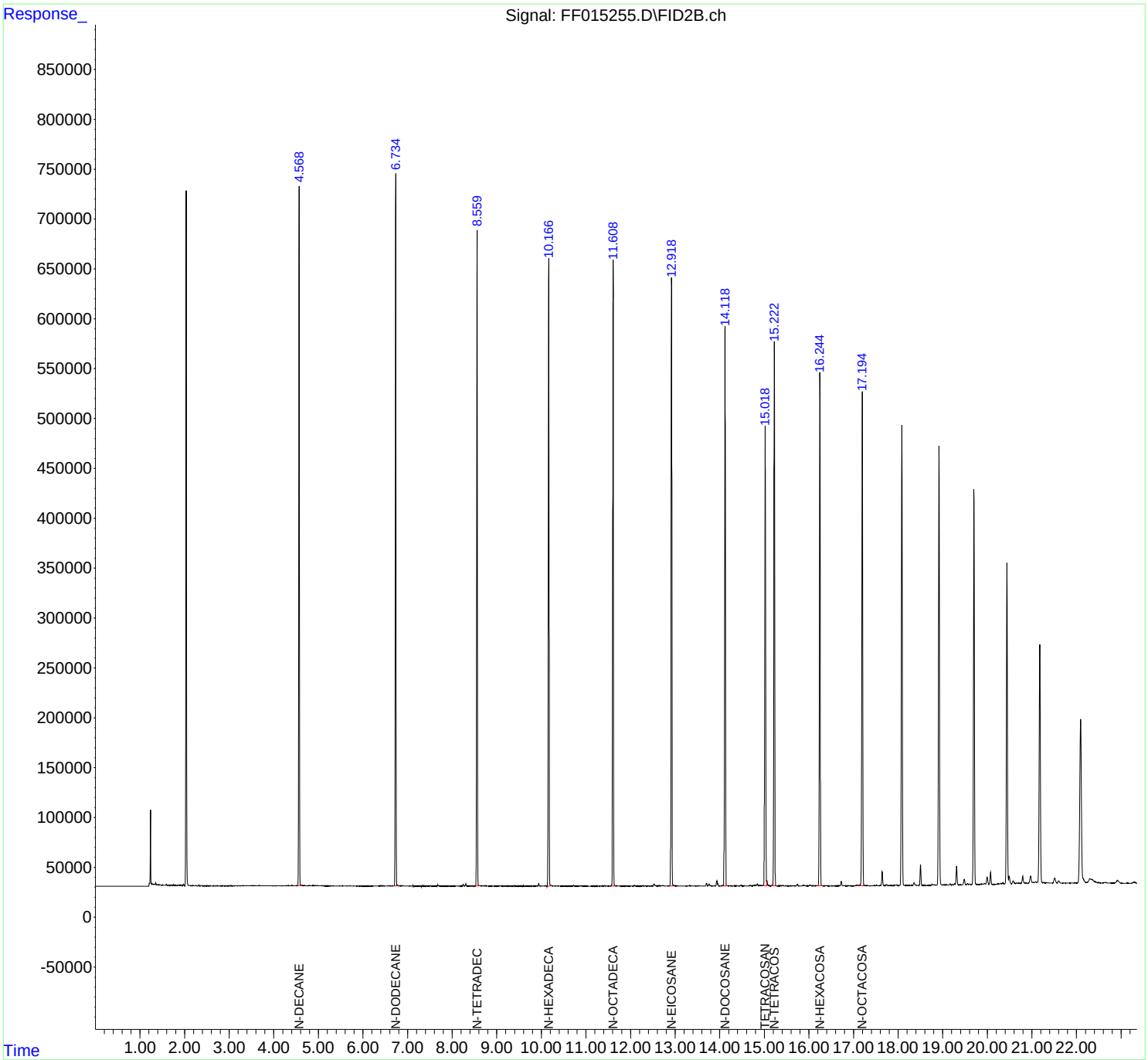
(f)=RT Delta > 1/2 Window (m)=manual int.

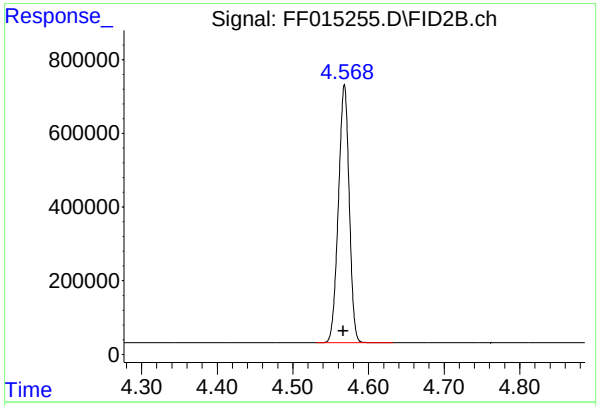
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015255.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 16:01
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD

Integration File: autoint1.e
Quant Time: Jan 17 22:14:19 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

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

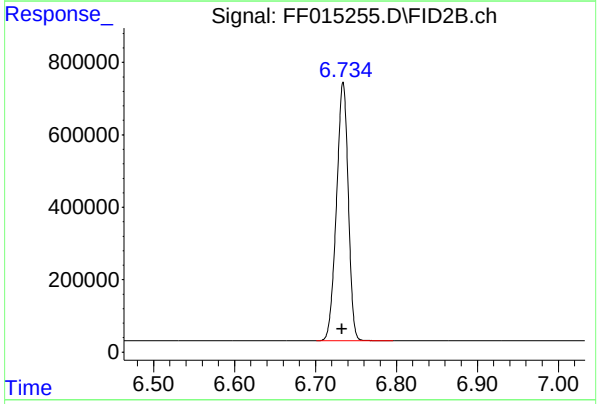




#2 N-DECANE

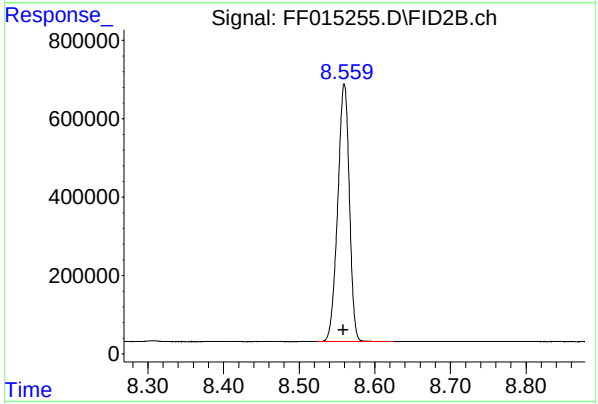
R.T.: 4.568 min
Delta R.T.: 0.001 min
Response: 6954290
Conc: 52.18 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



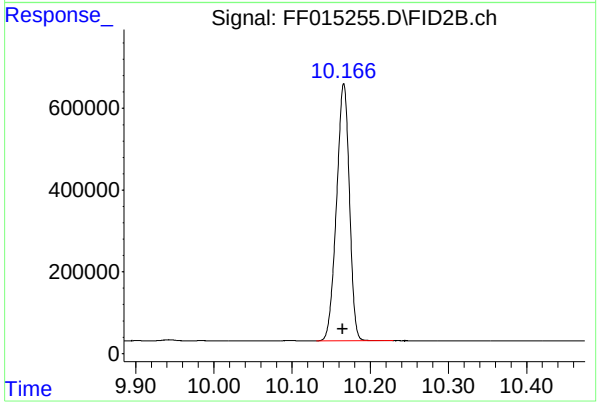
#3 N-DODECANE

R.T.: 6.734 min
Delta R.T.: 0.001 min
Response: 7205181
Conc: 52.67 ug/ml



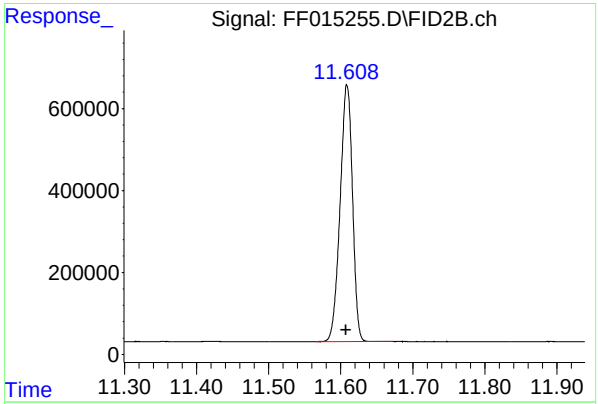
#4 N-TETRADECANE

R.T.: 8.560 min
Delta R.T.: 0.001 min
Response: 7043317
Conc: 53.94 ug/ml



#5 N-HEXADECANE

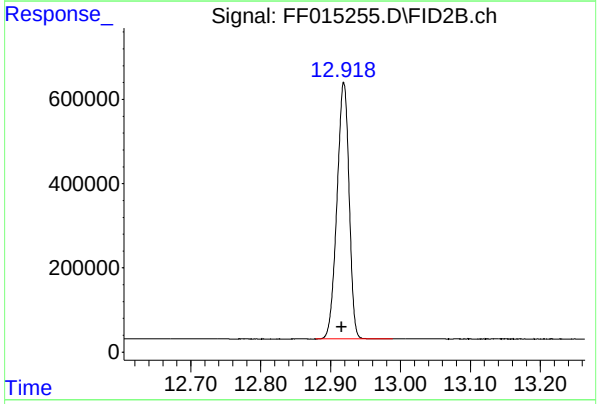
R.T.: 10.166 min
Delta R.T.: 0.002 min
Response: 7203474
Conc: 53.65 ug/ml



#6 N-OCTADECANE

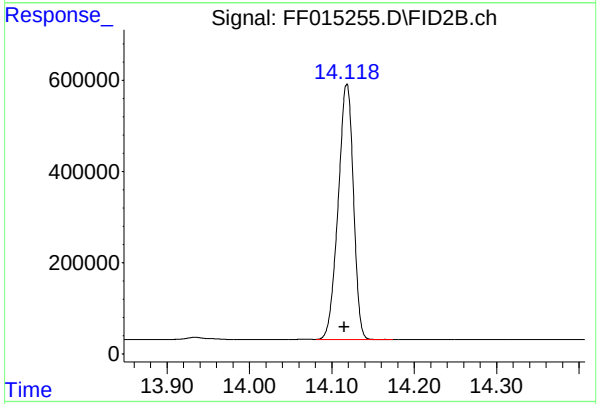
R.T.: 11.609 min
Delta R.T.: 0.002 min
Response: 7494718
Conc: 51.06 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



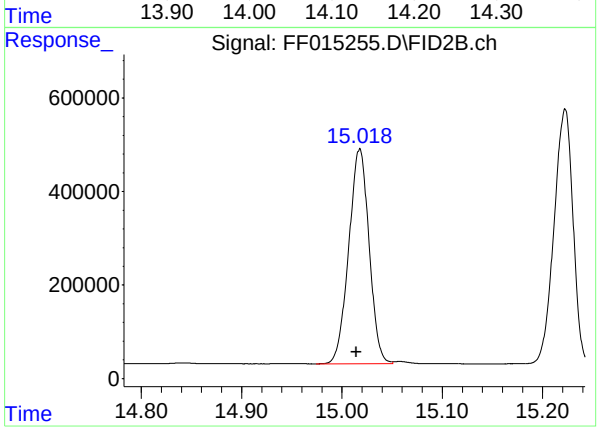
#7 N-EICOSANE

R.T.: 12.919 min
Delta R.T.: 0.003 min
Response: 7334920
Conc: 50.17 ug/ml



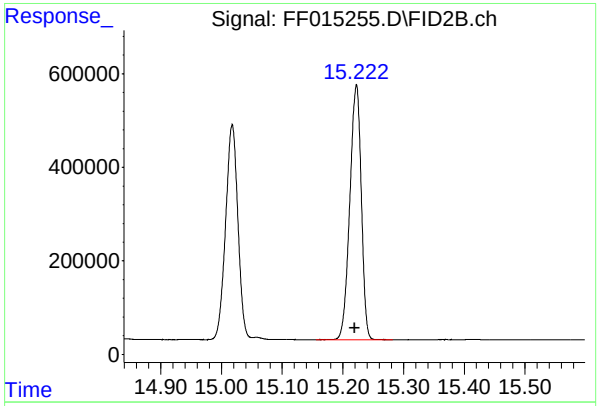
#8 N-DOCOSANE

R.T.: 14.118 min
Delta R.T.: 0.003 min
Response: 7218147
Conc: 49.85 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

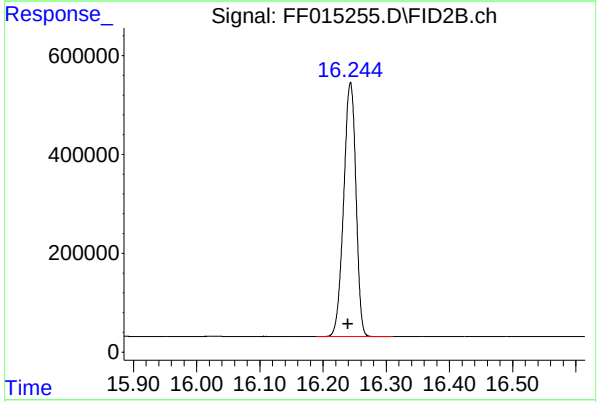
R.T.: 15.018 min
Delta R.T.: 0.003 min
Response: 6478445
Conc: 49.47 ug/ml



#10 N-TETRACOSANE

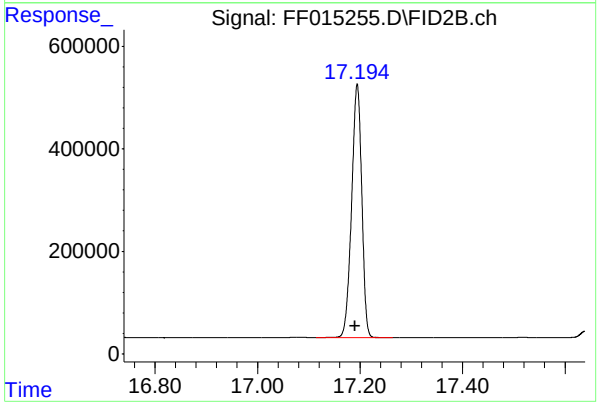
R.T.: 15.222 min
Delta R.T.: 0.003 min
Response: 7150252
Conc: 49.38 ug/ml

Instrument :
FID_F
ClientSampleId :
50 PPM TRPH STD



#11 N-HEXACOSANE

R.T.: 16.244 min
Delta R.T.: 0.004 min
Response: 6948960
Conc: 49.32 ug/ml



#12 N-OCTACOSANE

R.T.: 17.195 min
Delta R.T.: 0.004 min
Response: 6816431
Conc: 49.74 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015255.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 16:01
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.568	4.531	4.632	BB	699794	6954290	92.79%	8.933%
2	6.734	6.701	6.796	BB	714016	7205181	96.14%	9.255%
3	8.560	8.522	8.624	BB	658681	7043317	93.98%	9.048%
4	10.166	10.131	10.229	BB	629474	7203474	96.11%	9.253%
5	11.609	11.566	11.672	BB	625073	7494718	100.00%	9.627%
6	12.919	12.879	12.989	BB	608469	7334920	97.87%	9.422%
7	14.118	14.081	14.174	VB	560081	7218147	96.31%	9.272%
8	15.018	14.974	15.051	BV	458995	6478445	86.44%	8.322%
9	15.222	15.156	15.282	BB	545812	7150252	95.40%	9.185%
10	16.244	16.189	16.311	BB	515388	6948960	92.72%	8.926%
11	17.195	17.114	17.264	BB	495357	6816431	90.95%	8.756%
			Sum of corrected areas:			77848135		

FF011425.M Fri Jan 17 22:45:35 2025

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Fax : 908 789 8922

Analytical Sequence

Client: Weston Solutions **SDG No.:** Q1109

Project: Ft Meade Tipton Airfield Parcel RI - PO 0111169 **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 **15.0138**

EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	I.BLK01	17 Jan 2025 11:17	FF015247.D	15.016	
50 PPM TRPH STD	50 PPM TRPH STD	17 Jan 2025 11:45	FF015248.D	15.018	
TAPIAL1-MW04S-011525-00-T2	Q1109-02	17 Jan 2025 13:39	FF015250.D	15.014	
PB166100BL	PB166100BL	17 Jan 2025 14:07	FF015251.D	15.015	
PB166100BS	PB166100BS	17 Jan 2025 14:36	FF015252.D	15.014	
PB166100BSD	PB166100BSD	17 Jan 2025 15:04	FF015253.D	15.014	
PIBLK02	I.BLK02	17 Jan 2025 15:32	FF015254.D	15.015	
50 PPM TRPH STD	50 PPM TRPH STD	17 Jan 2025 16:01	FF015255.D	15.018	

 # Column used to flag RT values with an * values outside of QC limits

QC Limits	Lower Limit	Upper Limits
(± 0.10 minutes)	14.9138	15.1138

QC SAMPLE DATA

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Fax : 908 789 8922

Report of Analysis

Client:	Weston Solutions	Date Collected:	
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	
Client Sample ID:	PB166100BL	SDG No.:	Q1109
Lab Sample ID:	PB166100BL	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015251.D	1	01/17/25 08:15	01/17/25 14:07	PB166100

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	25.0	U	10.0	25.0	50.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	16.0		29 - 130		80%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015251.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:07
Operator : YP\AJ
Sample : PB166100BL
Misc :
ALS Vial : 72 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BL

Integration File: autoint1.e
Quant Time: Jan 17 22:12:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.015	2095703	16.004 ug/ml
Target Compounds			

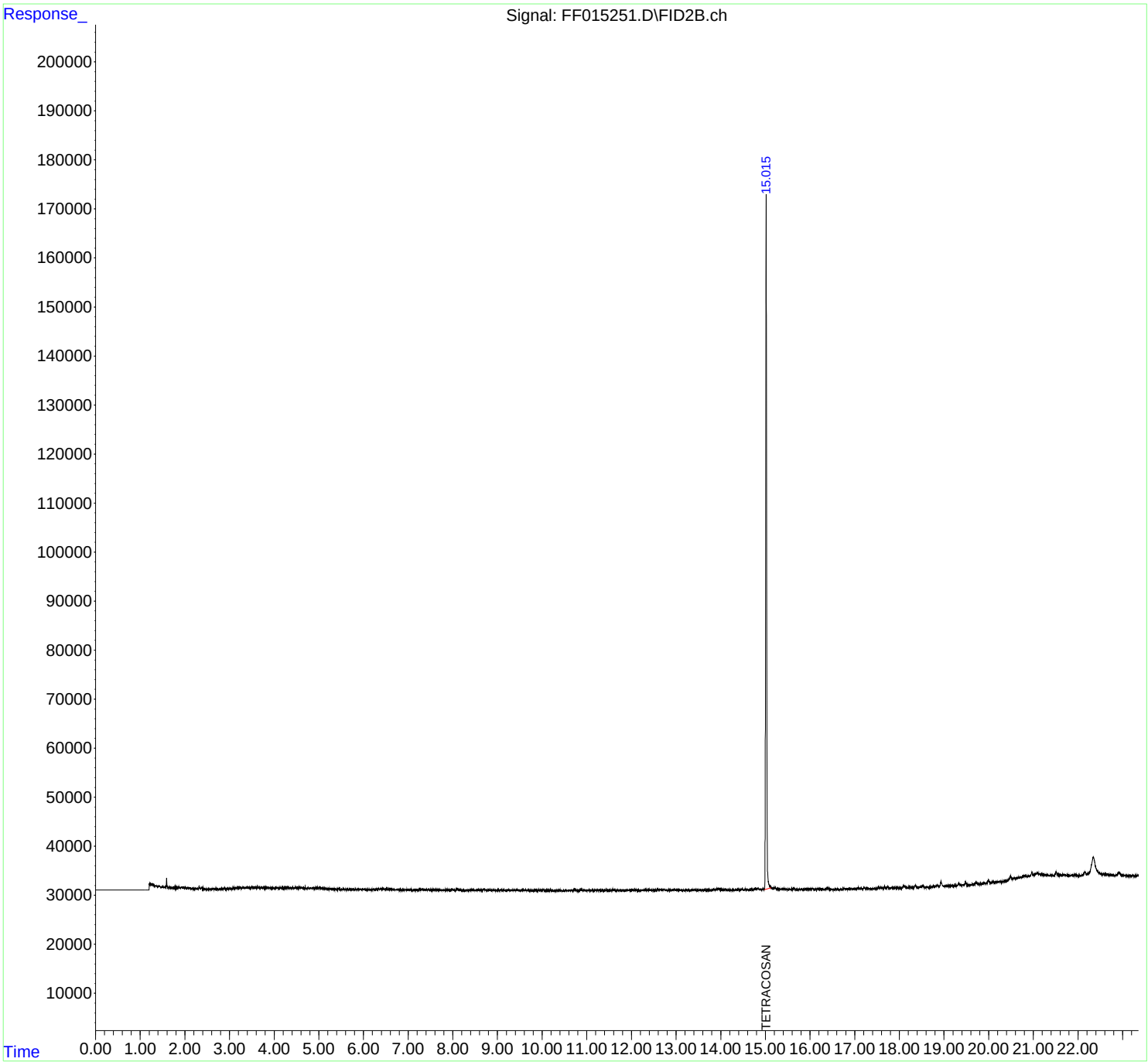
(f)=RT Delta > 1/2 Window (m)=manual int.

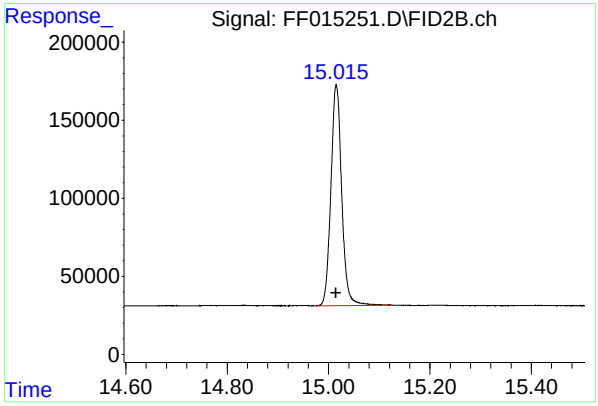
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015251.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:07
Operator : YP\AJ
Sample : PB166100BL
Misc :
ALS Vial : 72 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BL

Integration File: autoint1.e
Quant Time: Jan 17 22:12:55 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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.: 15.015 min
Delta R.T.: 0.000 mi
Response: 2095703
Conc: 16.00 ug/m

Instrument :
FID_F
ClientSampleId :
PB166100BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015251.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:07
Sample : PB166100BL
Misc :
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.015	14.975	15.127	BB	141443	2095703	100.00%	100.000%
			Sum of corrected areas:			2095703		

FF011425.M Fri Jan 17 22:43:46 2025

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Fax : 908 789 8922

Report of Analysis

Client:	Weston Solutions	Date Collected:	01/17/25
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	01/17/25
Client Sample ID:	PIBLK-FF015247.D	SDG No.:	Q1109
Lab Sample ID:	I.BLK-FF015247.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015247.D	1		01/17/25	FF011725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	25.0	U	10.0	25.0	50.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	16.4		29 - 130		82%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015247.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:17
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: Jan 17 22:11:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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	2145065	16.381 ug/ml
Target Compounds			

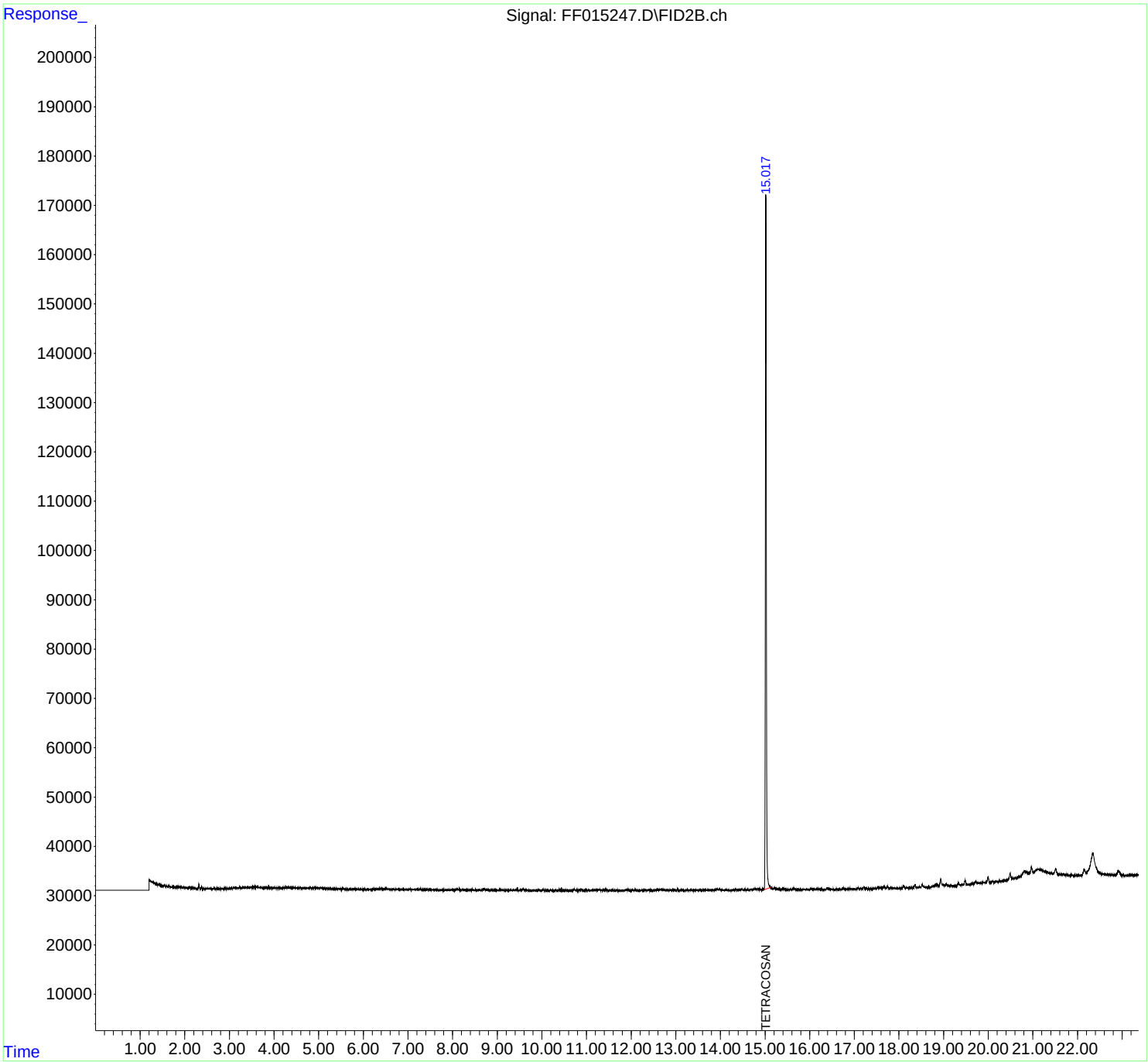
(f)=RT Delta > 1/2 Window (m)=manual int.

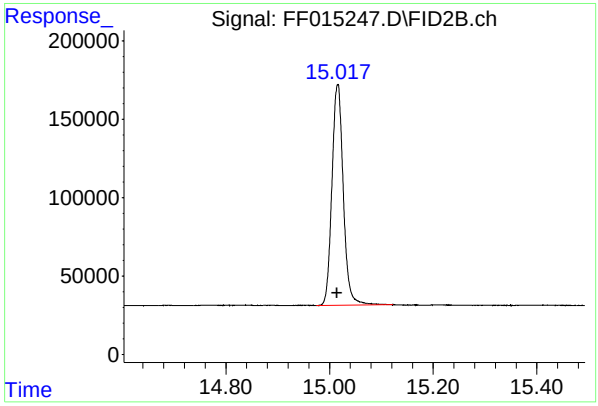
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015247.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:17
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 17 22:11:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

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





#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.016 min
Delta R.T.: 0.001 mi
Response: 2145065
Conc: 16.38 ug/m

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015247.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 11:17
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.016	14.974	15.122	BB	140767	2145065	100.00%	100.000%

Sum of corrected areas: 2145065

FF011425.M Fri Jan 17 22:42:02 2025

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

Report of Analysis

Client:	Weston Solutions	Date Collected:	01/17/25
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	01/17/25
Client Sample ID:	PIBLK-FF015254.D	SDG No.:	Q1109
Lab Sample ID:	I.BLK-FF015254.D	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015254.D	1		01/17/25	FF011725

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	25.0	U	10.0	25.0	50.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	16.7		29 - 130		84%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015254.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:32
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: Jan 17 22:14:03 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.015	2192351	16.742 ug/ml
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

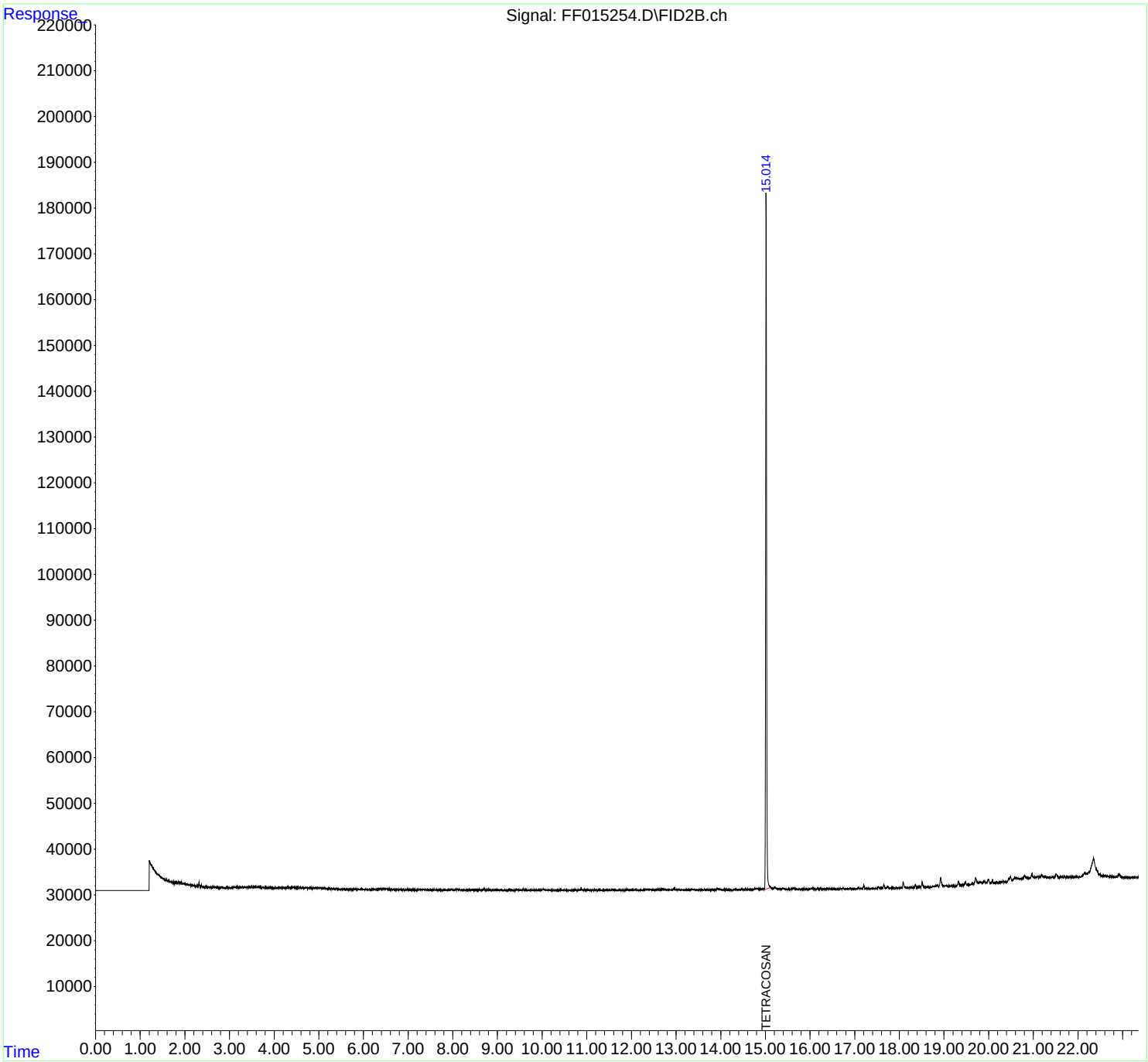
Quantitation Report (QT Reviewed)

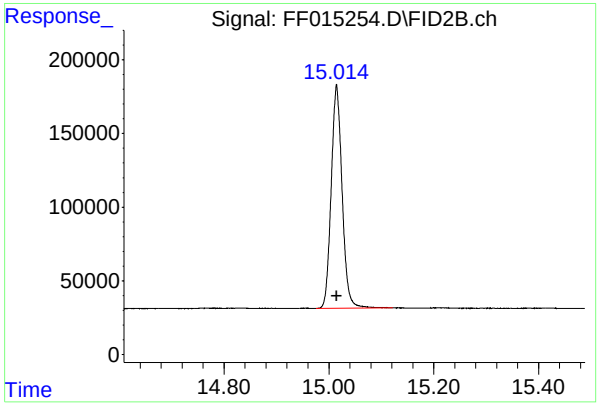
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015254.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:32
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 17 22:14:03 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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.: 15.015 min
Delta R.T.: 0.000 mi
Response: 2192351
Conc: 16.74 ug/m

Instrument :
FID_F
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015254.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:32
Sample : I.BLK
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.015	14.975	15.122	BB	151319	2192351	100.00%	100.000%
			Sum of corrected areas:			2192351		

FF011425.M Fri Jan 17 22:44:56 2025

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

Report of Analysis

Client:	Weston Solutions	Date Collected:	
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	
Client Sample ID:	PB166100BS	SDG No.:	Q1109
Lab Sample ID:	PB166100BS	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015252.D	1	01/17/25 08:15	01/17/25 14:36	PB166100

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	198		10.0	25.0	50.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	19.3		29 - 130		97%	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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015252.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:36
Operator : YP\AJ
Sample : PB166100BS
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BS

Integration File: autoint1.e
Quant Time: Jan 17 22:13:10 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.014	2529781	19.319 ug/ml
	Target Compounds			
2)	N-DECANE	4.567	2693348	20.211 ug/ml
3)	N-DODECANE	6.732	2785978	20.367 ug/ml
4)	N-TETRADECANE	8.557	2713377	20.780 ug/ml
5)	N-HEXADECANE	10.163	2762180	20.574 ug/ml
6)	N-OCTADECANE	11.605	2887226	19.669 ug/ml
7)	N-EICOSANE	12.916	2843005	19.446 ug/ml
8)	N-DOCOSANE	14.114	2801939	19.351 ug/ml
10)	N-TETRACOSANE	15.218	2782394	19.215 ug/ml
11)	N-HEXACOSANE	16.240	2696066	19.134 ug/ml
12)	N-OCTACOSANE	17.191	2622150	19.134 ug/ml

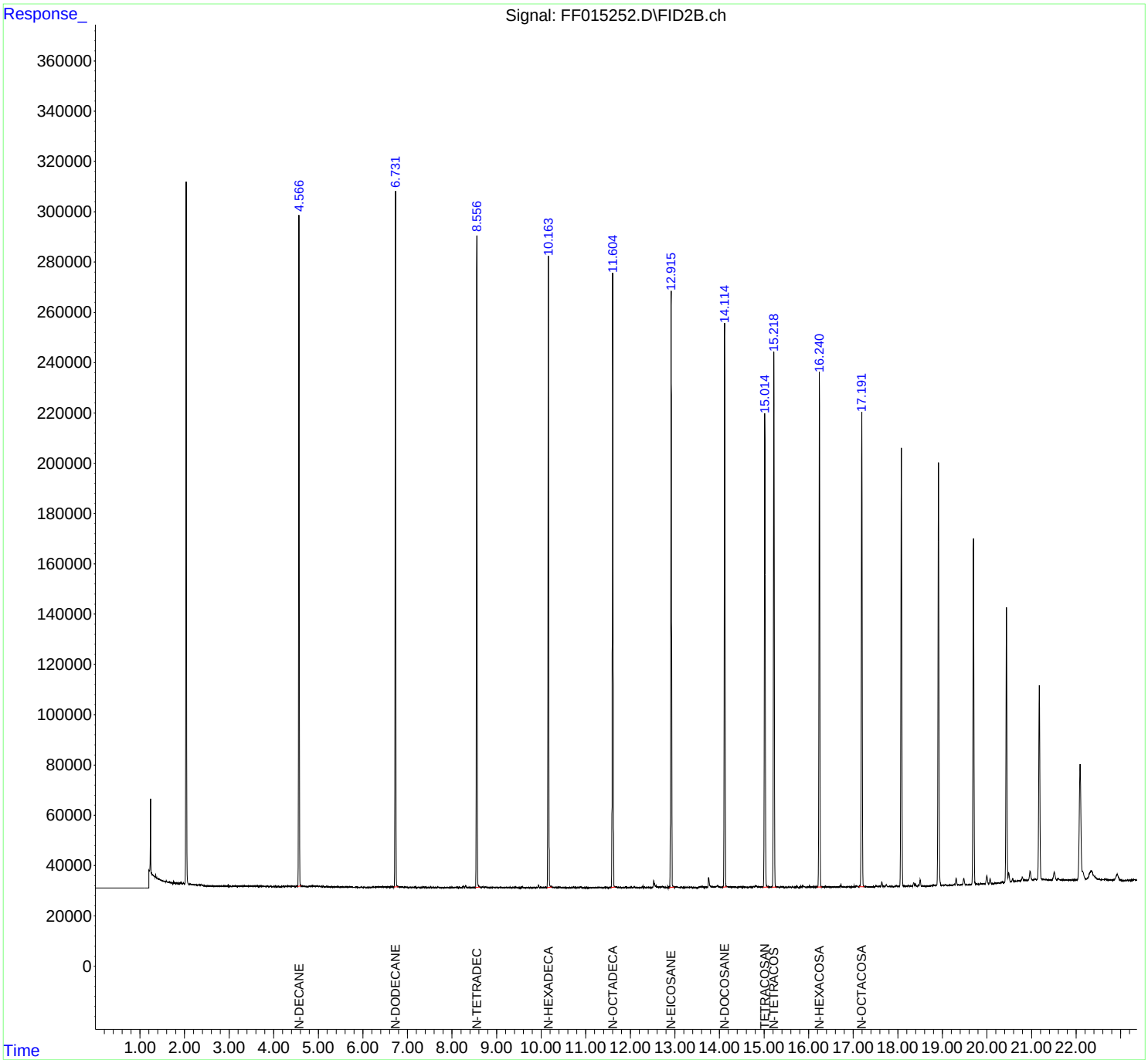
(f)=RT Delta > 1/2 Window (m)=manual int.

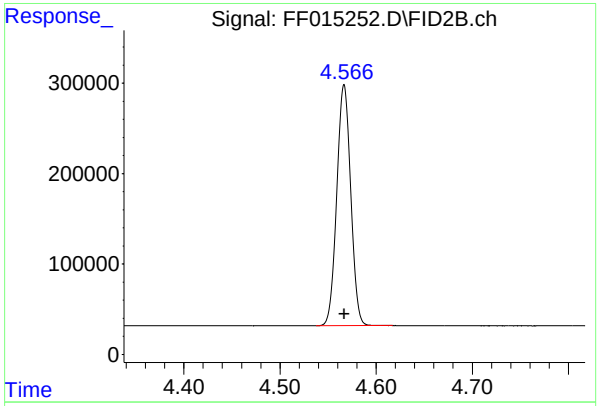
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015252.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:36
Operator : YP\AJ
Sample : PB166100BS
Misc :
ALS Vial : 73 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BS

Integration File: autoint1.e
Quant Time: Jan 17 22:13:10 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

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

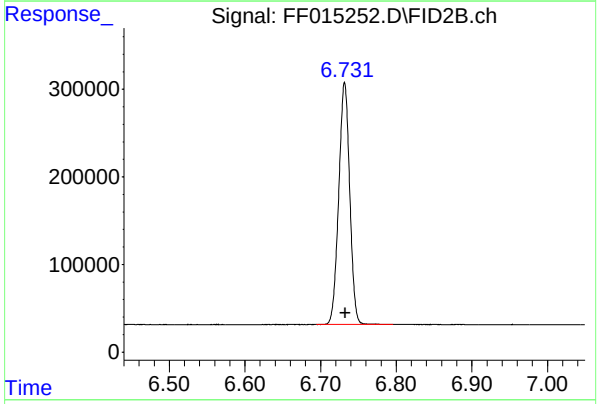




#2 N-DECANE

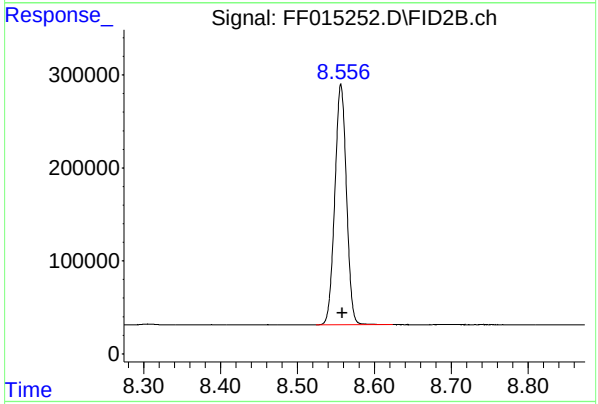
R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 2693348
Conc: 20.21 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BS



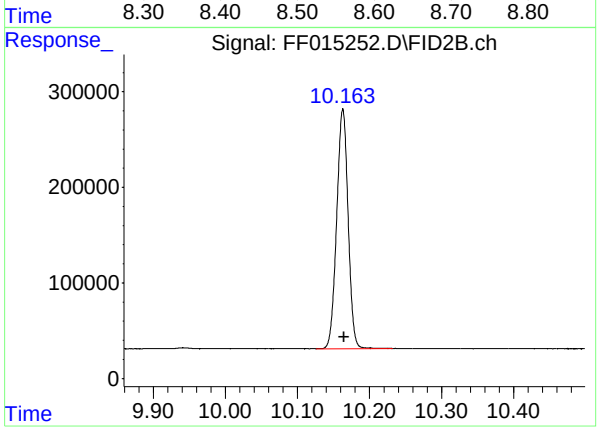
#3 N-DODECANE

R.T.: 6.732 min
Delta R.T.: 0.000 min
Response: 2785978
Conc: 20.37 ug/ml



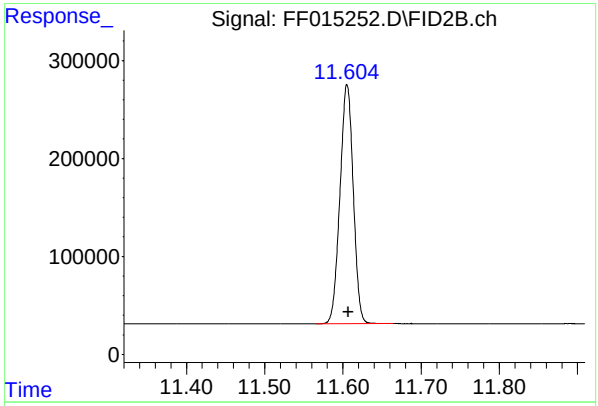
#4 N-TETRADECANE

R.T.: 8.557 min
Delta R.T.: -0.002 min
Response: 2713377
Conc: 20.78 ug/ml



#5 N-HEXADECANE

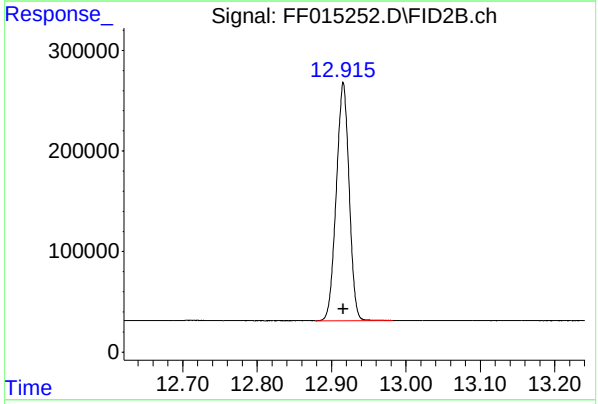
R.T.: 10.163 min
Delta R.T.: -0.001 min
Response: 2762180
Conc: 20.57 ug/ml



#6 N-OCTADECANE

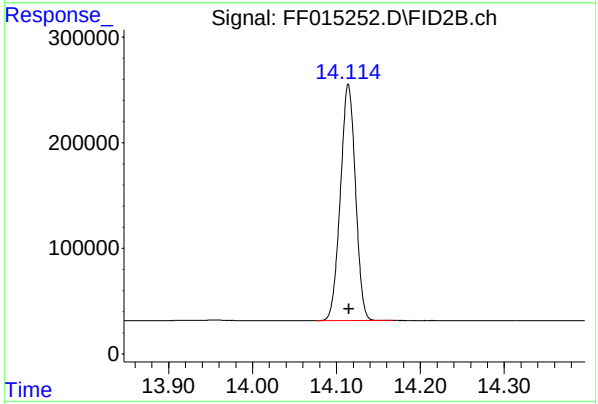
R.T.: 11.605 min
Delta R.T.: -0.002 min
Response: 2887226
Conc: 19.67 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BS



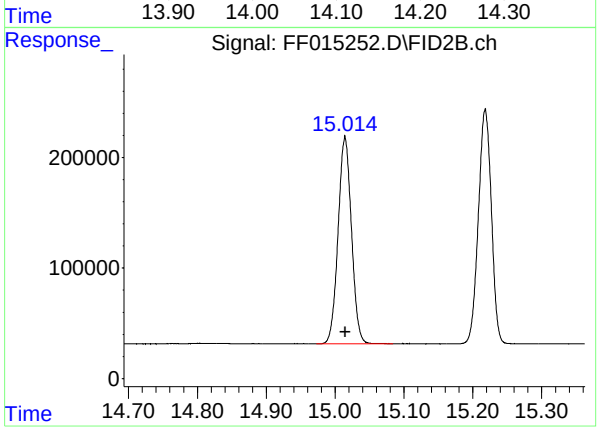
#7 N-EICOSANE

R.T.: 12.916 min
Delta R.T.: 0.000 min
Response: 2843005
Conc: 19.45 ug/ml



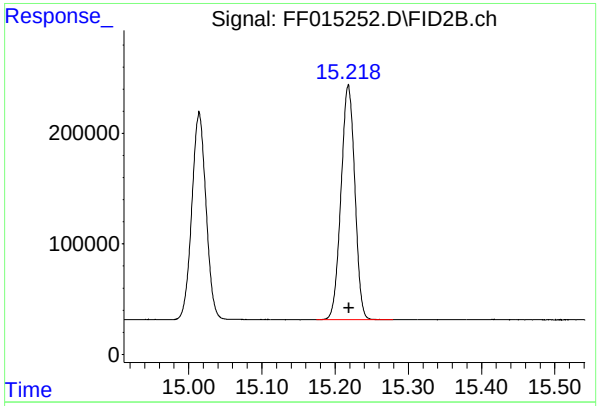
#8 N-DOCOSANE

R.T.: 14.114 min
Delta R.T.: 0.000 min
Response: 2801939
Conc: 19.35 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

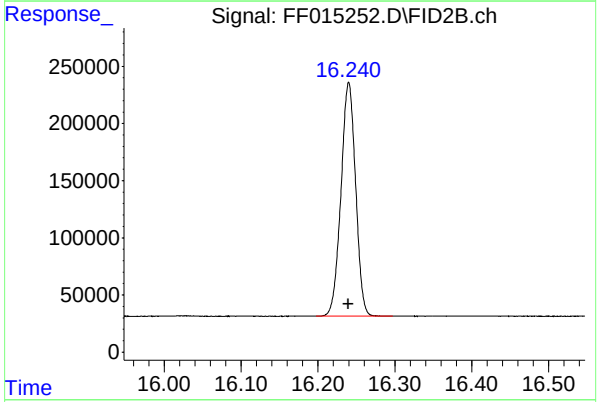
R.T.: 15.014 min
Delta R.T.: 0.000 min
Response: 2529781
Conc: 19.32 ug/ml



#10 N-TETRACOSANE

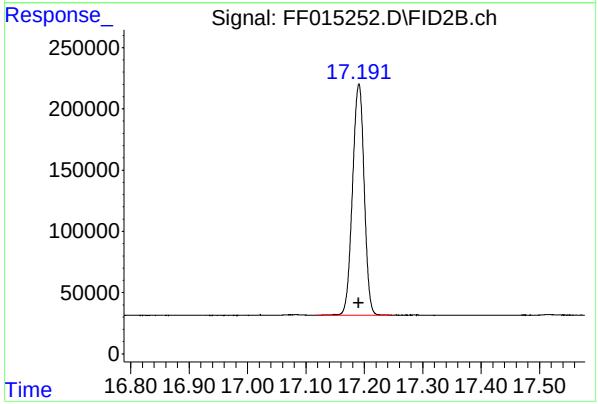
R.T.: 15.218 min
Delta R.T.: 0.000 min
Response: 2782394
Conc: 19.22 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BS



#11 N-HEXACOSANE

R.T.: 16.240 min
Delta R.T.: 0.000 min
Response: 2696066
Conc: 19.13 ug/ml



#12 N-OCTACOSANE

R.T.: 17.191 min
Delta R.T.: 0.000 min
Response: 2622150
Conc: 19.13 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015252.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 14:36
Sample : PB166100BS
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.567	4.537	4.617	BB	266938	2693348	93.28%	8.943%
2	6.732	6.694	6.796	BB	276005	2785978	96.49%	9.250%
3	8.557	8.524	8.624	BB	257860	2713377	93.98%	9.009%
4	10.163	10.126	10.232	BB	250371	2762180	95.67%	9.171%
5	11.605	11.566	11.664	BB	243718	2887226	100.00%	9.587%
6	12.916	12.879	12.982	BB	237030	2843005	98.47%	9.440%
7	14.114	14.076	14.167	BB	224141	2801939	97.05%	9.303%
8	15.014	14.972	15.084	BB	187343	2529781	87.62%	8.400%
9	15.218	15.174	15.279	BB	211895	2782394	96.37%	9.238%
10	16.240	16.197	16.297	BB	204673	2696066	93.38%	8.952%
11	17.191	17.117	17.249	BB	188803	2622150	90.82%	8.706%
			Sum of corrected areas:			30117446		

FF011425.M Fri Jan 17 22:44:14 2025

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

Report of Analysis

Client:	Weston Solutions	Date Collected:	
Project:	Ft Meade Tipton Airfield Parcel RI - PO 0111169	Date Received:	
Client Sample ID:	PB166100BSD	SDG No.:	Q1109
Lab Sample ID:	PB166100BSD	Matrix:	Water
Analytical Method:	8015D DRO	% Solid:	0 Decanted:
Sample Wt/Vol:	1000 Units: mL	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3510		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF015253.D	1	01/17/25 08:15	01/17/25 15:04	PB166100

CAS Number	Parameter	Conc.	Qualifier	MDL	LOD	LOQ / CRQL	Units
TARGETS							
DRO	DRO	197		10.0	25.0	50.0	ug/L
SURROGATES							
16416-32-3	Tetracosane-d50	19.2		29 - 130		96%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015253.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:04
Operator : YP\AJ
Sample : PB166100BSD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BSD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025

Integration File: autoint1.e
Quant Time: Jan 17 22:13:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.014	2511262	19.178 ug/ml
	Target Compounds			
2)	N-DECANE	4.567	2703035	20.283 ug/ml
3)	N-DODECANE	6.732	2787764	20.380 ug/ml
4)	N-TETRADECANE	8.557	2712474	20.773 ug/ml
5)	N-HEXADECANE	10.164	2759299	20.552 ug/ml
6)	N-OCTADECANE	11.606	2885459	19.657 ug/ml
7)	N-EICOSANE	12.916	2832290	19.373 ug/ml
8)	N-DOCOSANE	14.115	2787760	19.253 ug/ml
10)	N-TETRACOSANE	15.219	2767388	19.111 ug/ml
11)	N-HEXACOSANE	16.241	2678872	19.012 ug/ml
12)	N-OCTACOSANE	17.191	2606003	19.016 ug/mlm

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015253.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:04
Operator : YP\AJ
Sample : PB166100BSD
Misc :
ALS Vial : 74 Sample Multiplier: 1

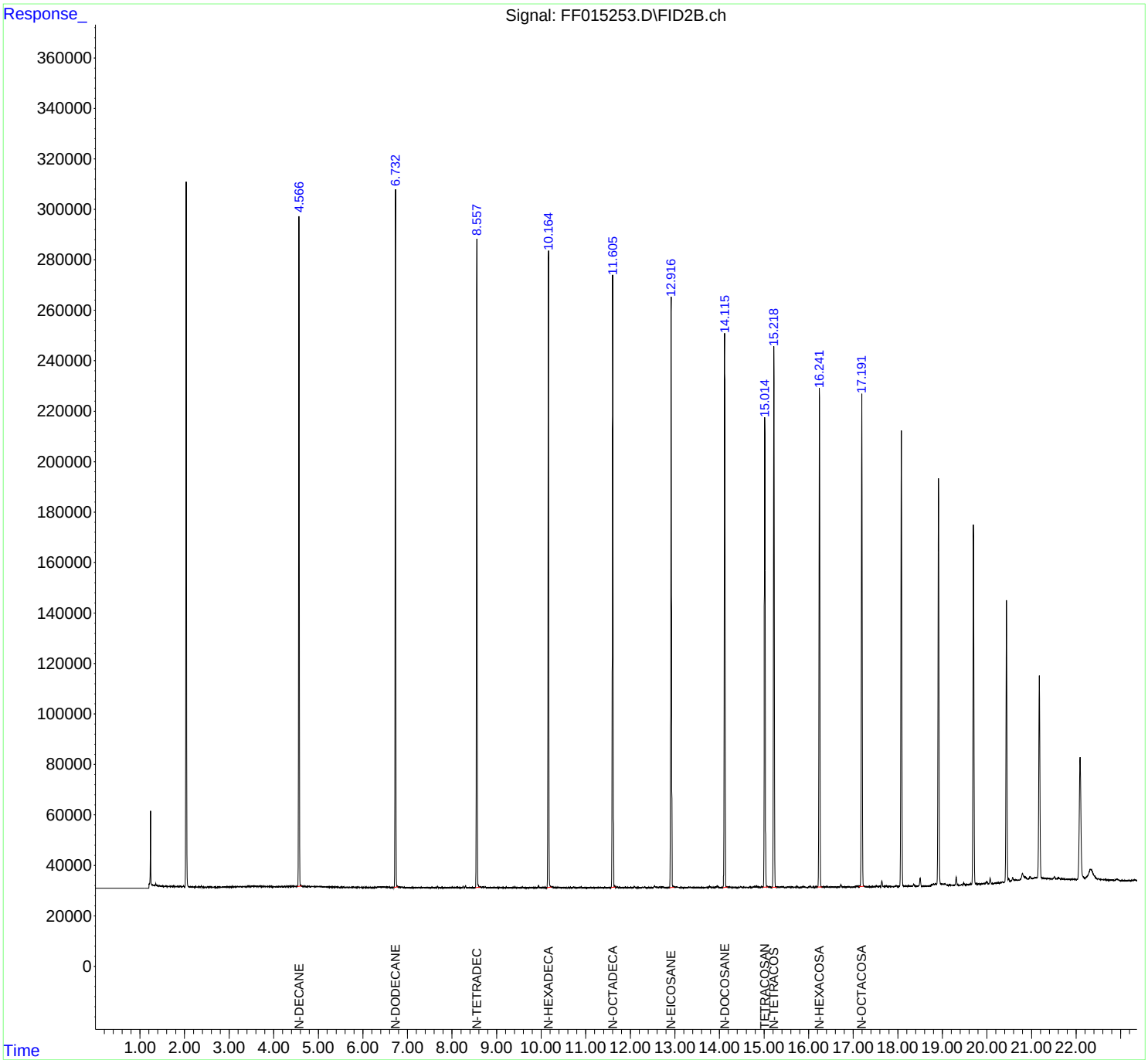
Integration File: autoint1.e
Quant Time: Jan 17 22:13:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
Response via : Initial Calibration
Integrator: ChemStation

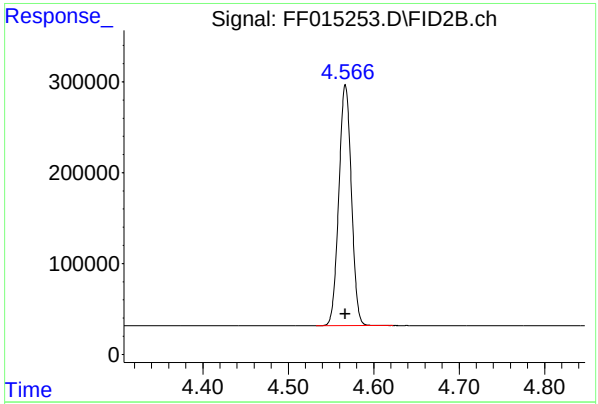
Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Instrument :
FID_F
ClientSampleId :
PB166100BSD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025





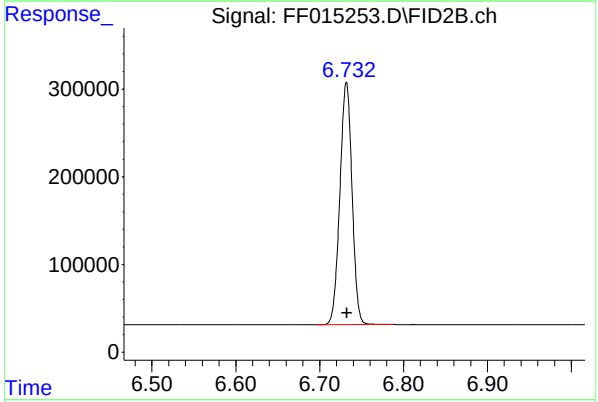
#2 N-DECANE

R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 2703035
Conc: 20.28 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD

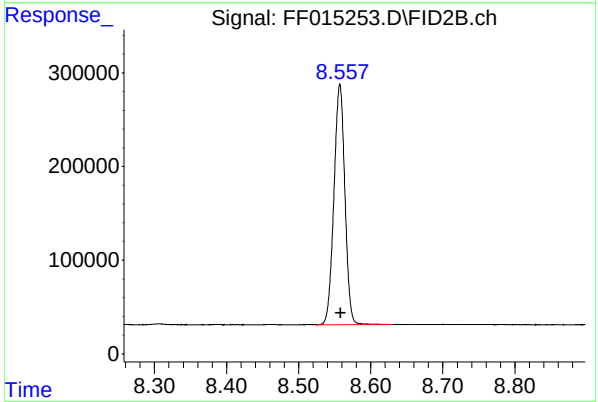
Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025



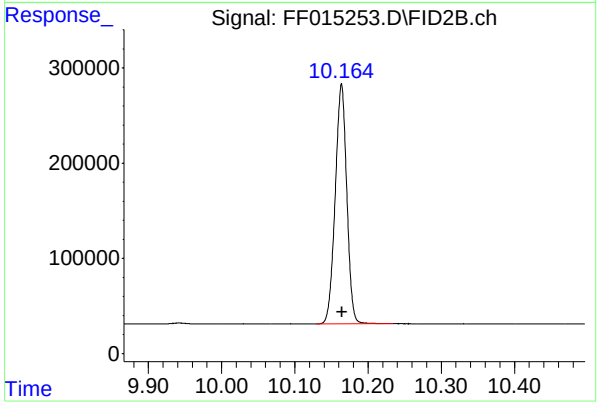
#3 N-DODECANE

R.T.: 6.732 min
Delta R.T.: 0.000 min
Response: 2787764
Conc: 20.38 ug/ml



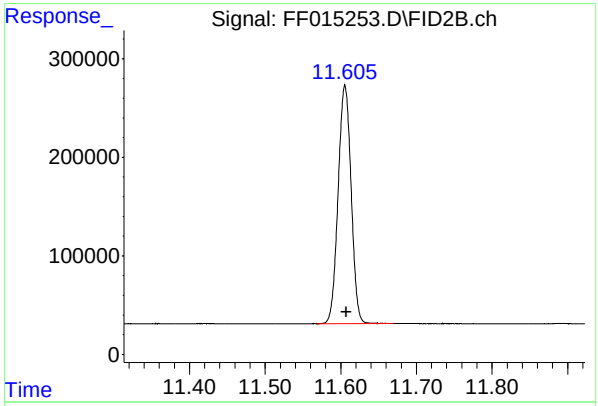
#4 N-TETRADECANE

R.T.: 8.557 min
Delta R.T.: -0.001 min
Response: 2712474
Conc: 20.77 ug/ml



#5 N-HEXADECANE

R.T.: 10.164 min
Delta R.T.: 0.000 min
Response: 2759299
Conc: 20.55 ug/ml



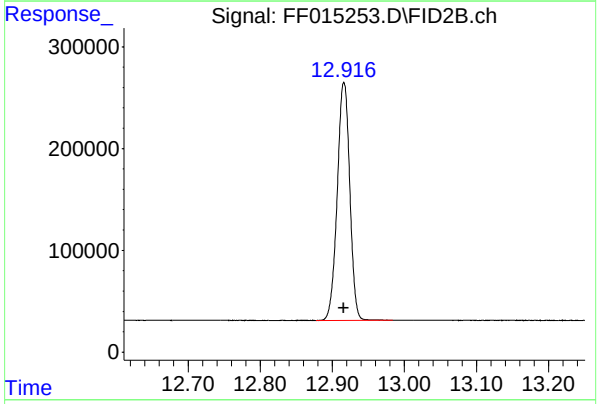
#6 N-OCTADECANE

R.T.: 11.606 min
Delta R.T.: -0.001 min
Response: 2885459
Conc: 19.66 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD

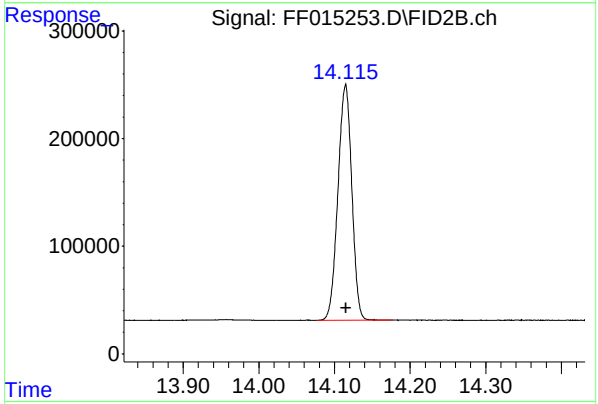
Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025



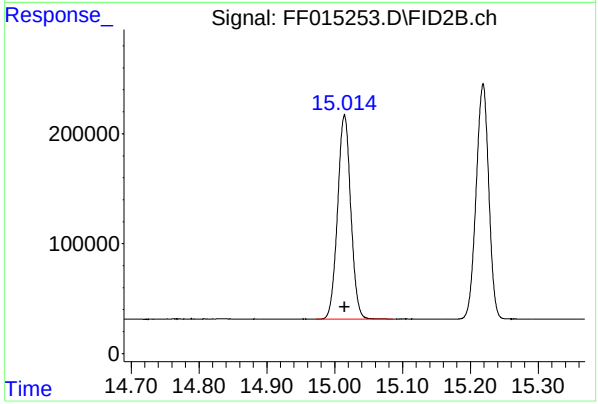
#7 N-EICOSANE

R.T.: 12.916 min
Delta R.T.: 0.000 min
Response: 2832290
Conc: 19.37 ug/ml



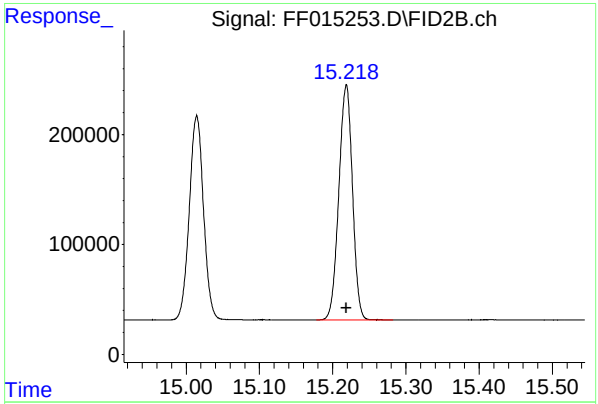
#8 N-DOCOSANE

R.T.: 14.115 min
Delta R.T.: 0.000 min
Response: 2787760
Conc: 19.25 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.014 min
Delta R.T.: 0.000 min
Response: 2511262
Conc: 19.18 ug/ml



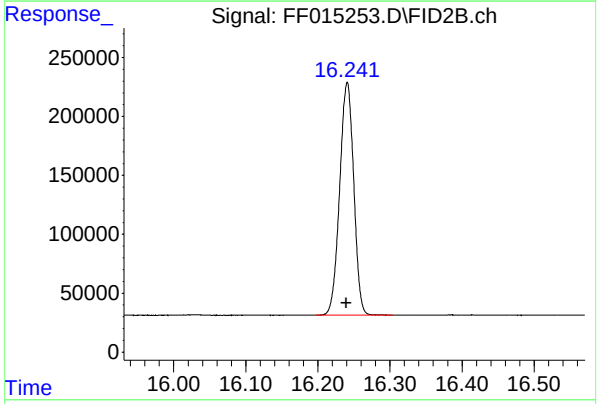
#10 N-TETRACOSANE

R.T.: 15.219 min
Delta R.T.: 0.000 mi
Response: 2767388
Conc: 19.11 ug/m

Instrument :
FID_F
ClientSampleId :
PB166100BSD

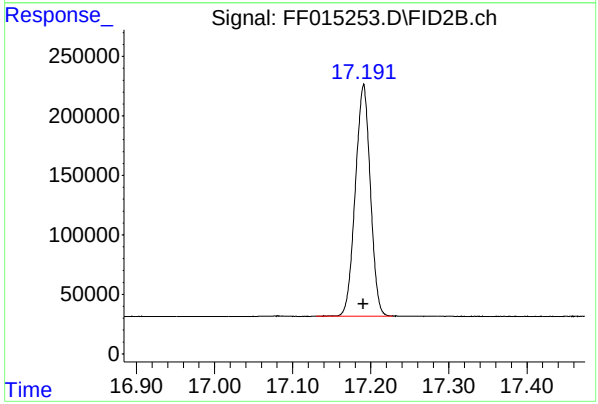
Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025



#11 N-HEXACOSANE

R.T.: 16.241 min
Delta R.T.: 0.001 min
Response: 2678872
Conc: 19.01 ug/ml



#12 N-OCTACOSANE

R.T.: 17.191 min
Delta R.T.: 0.000 min
Response: 2606003
Conc: 19.02 ug/ml m

Instrument :
FID_F
ClientSampleId :
PB166100BSD

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 01/21/2025
Supervised By :Ankita Jodhani 01/21/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF01172
Data File : FF015253.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:04
Sample : PB166100BSD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Title :

Signal : FID2B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.567	4.532	4.622	BB	264888	2703035	93.68%	8.998%
2	6.732	6.696	6.787	BB	276692	2787764	96.61%	9.280%
3	8.557	8.524	8.631	BB	256916	2712474	94.00%	9.030%
4	10.164	10.129	10.234	BB	252377	2759299	95.63%	9.186%
5	11.606	11.567	11.669	BB	242072	2885459	100.00%	9.606%
6	12.916	12.877	12.984	BB	233974	2832290	98.16%	9.429%
7	14.115	14.076	14.177	BB	217999	2787760	96.61%	9.280%
8	15.014	14.972	15.086	BB	185526	2511262	87.03%	8.360%
9	15.219	15.177	15.282	BB	214410	2767388	95.91%	9.213%
10	16.241	16.197	16.304	BB	197627	2678872	92.84%	8.918%
11	17.191	17.052	17.246	BB	194508	2613578	90.58%	8.701%
			Sum of corrected areas:			30039180		

FF011425.M Fri Jan 17 22:44:41 2025

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

Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
PB166100BSD		FF015253.D	FF011725	N-OCTACOSANE	Ankita	1/21/2025 8:17:08 AM	Peak Integrated by Software incorrectly

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

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF011425

Review By	yogesh	Review On	1/14/2025 11:28:10 AM		
Supervise By	Ankita	Supervise On	1/15/2025 7:45:36 AM		
SubDirectory	FF011425	HP Acquire Method		HP Processing Method	FF011425

STD. NAME	STD REF.#
Tune/Reschk	
Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015218.D	14 Jan 2025 08:10	YP\AJ	Ok
2	I.BLK	FF015219.D	14 Jan 2025 08:38	YP\AJ	Ok
3	100 TRPH STD	FF015220.D	14 Jan 2025 09:07	YP\AJ	Ok
4	50 TRPH STD	FF015221.D	14 Jan 2025 09:35	YP\AJ	Ok
5	20 TRPH STD	FF015222.D	14 Jan 2025 10:04	YP\AJ	Ok
6	10 TRPH STD	FF015223.D	14 Jan 2025 10:32	YP\AJ	Ok
7	5 TRPH STD	FF015224.D	14 Jan 2025 11:00	YP\AJ	Ok
8	FF011425ICV	FF015225.D	14 Jan 2025 11:29	YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF011725

Review By	yogesh	Review On	1/17/2025 10:11:23 AM		
Supervise By	Ankita	Supervise On	1/21/2025 8:17:13 AM		
SubDirectory	FF011725	HP Acquire Method		HP Processing Method	FF011425

STD. NAME	STD REF.#
Tune/Reschk	
Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	MECL2	FF015246.D	17 Jan 2025 10:48	YP\AJ	Ok
2	I.BLK	FF015247.D	17 Jan 2025 11:17	YP\AJ	Ok
3	50 PPM TRPH STD	FF015248.D	17 Jan 2025 11:45	YP\AJ	Ok
4	RT MARKER	FF015249.D	17 Jan 2025 12:14	YP\AJ	Ok
5	Q1109-02	FF015250.D	17 Jan 2025 13:39	YP\AJ	Ok
6	PB166100BL	FF015251.D	17 Jan 2025 14:07	YP\AJ	Ok
7	PB166100BS	FF015252.D	17 Jan 2025 14:36	YP\AJ	Ok
8	PB166100BSD	FF015253.D	17 Jan 2025 15:04	YP\AJ	Ok,M
9	I.BLK	FF015254.D	17 Jan 2025 15:32	YP\AJ	Ok
10	50 PPM TRPH STD	FF015255.D	17 Jan 2025 16:01	YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF011425

Review By	yogesh	Review On	1/14/2025 11:28:10 AM		
Supervise By	Ankita	Supervise On	1/15/2025 7:45:36 AM		
SubDirectory	FF011425	HP Acquire Method		HP Processing Method	FF011425

STD. NAME	STD REF.#
Tune/Reschk	
Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015218.D	14 Jan 2025 08:10		YP\AJ	Ok
2	I.BLK		FF015219.D	14 Jan 2025 08:38		YP\AJ	Ok
3	100 TRPH STD		FF015220.D	14 Jan 2025 09:07		YP\AJ	Ok
4	50 TRPH STD		FF015221.D	14 Jan 2025 09:35		YP\AJ	Ok
5	20 TRPH STD		FF015222.D	14 Jan 2025 10:04		YP\AJ	Ok
6	10 TRPH STD		FF015223.D	14 Jan 2025 10:32		YP\AJ	Ok
7	5 TRPH STD		FF015224.D	14 Jan 2025 11:00		YP\AJ	Ok
8	FF011425ICV		FF015225.D	14 Jan 2025 11:29		YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_F

Daily Analysis Runlog For Sequence/QCBatch ID # FF011725

Review By	yogesh	Review On	1/17/2025 10:11:23 AM		
Supervise By	Ankita	Supervise On	1/21/2025 8:17:13 AM		
SubDirectory	FF011725	HP Acquire Method		HP Processing Method	FF011425

STD. NAME	STD REF.#
Tune/Reschk	
Initial Calibration Stds	PP23961,PP23963,PP23964,PP23965,PP23966
CCC	PP23963
Internal Standard/PEM	
ICV/I.BLK	PP23962,PP23967
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	MECL2		FF015246.D	17 Jan 2025 10:48		YP\AJ	Ok
2	I.BLK		FF015247.D	17 Jan 2025 11:17		YP\AJ	Ok
3	50 PPM TRPH STD		FF015248.D	17 Jan 2025 11:45		YP\AJ	Ok
4	RT MARKER		FF015249.D	17 Jan 2025 12:14		YP\AJ	Ok
5	Q1109-02		FF015250.D	17 Jan 2025 13:39		YP\AJ	Ok
6	PB166100BL		FF015251.D	17 Jan 2025 14:07		YP\AJ	Ok
7	PB166100BS		FF015252.D	17 Jan 2025 14:36		YP\AJ	Ok
8	PB166100BSD		FF015253.D	17 Jan 2025 15:04		YP\AJ	Ok,M
9	I.BLK		FF015254.D	17 Jan 2025 15:32		YP\AJ	Ok
10	50 PPM TRPH STD		FF015255.D	17 Jan 2025 16:01		YP\AJ	Ok

M : Manual Integration

Alliance TECHNICAL GROUP

EXTRACTION LOGPAGE

PB166100

SOP ID:	M3510C,3580A-Extraction DRO-12				
Clean Up SOP #:	N/A			**Extraction Start Date :**	01/17/2025
Matrix :	Water			**Extraction Start Time :**	08:15
Weigh By:	N/A	**Extraction By:**	RS	**Extraction End Date :**	01/17/2025
Balance check:	N/A	**Filter By:**	RS	**Extraction End Time :**	13:15
Balance ID:	N/A	**pH Meter ID:**	N/A	**Concentration By:**	EH
pH Strip Lot#:	E3574	**Hood ID:**	4,6,7	**Supervisor By :**	rajesh

Extraction Method: [√] Seperatory Funnel [ ] Continious Liquid/Liquid [ ] Sonication [ ] Waste Dilution [ ] Soxhlet

Standared Name	MLS USED	Concentration ug/mL	STD REF. # FROM LOG
Spike Sol 1	1.0ML	20 PPM	PP23913
Surrogate	1.0ML	20 PPM	PP23935
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
Methylene Chloride	N/A	E3871
Baked Na2SO4	N/A	EP2577
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
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:	Water bath -01	**Envap ID:**	NEVAP-02
KD Bath Temperature:	60 °C	**Envap Temperature:**	40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/17/25	RP (Lot Lab)	Y-P Pest1P43
13:20	**Preparation Group**	**Analysis Group**

Alliance TECHNICAL GROUP

EXTRACTION LOGPAGE

PrepBatch ID : PB166100

Analytical Method: M3510C,3580A-Extraction DRO-12 **Concentration Date:** 01/17/2025

Sample ID	Client Sample ID	Test	g / mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB166100BL	PB166100BL	Diesel Range Organics	1000	6	RUPESH	ritesh	1			SEP-13
PB166100BS	PB166100BS	Diesel Range Organics	1000	6	RUPESH	ritesh	1			14
PB166100BSD	PB166100BSD	Diesel Range Organics	1000	6	RUPESH	ritesh	1			15
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Diesel Range Organics	980	6	RUPESH	ritesh	1	M		16

1/17/25

*** Extracts relinquished on the same date as received.**

166100 DRO 8:35

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1109 **WorkList ID :** 186980 **Department :** Extraction **Date :** 01-17-2025 08:09:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Water	Diesel Range Organics	Cool 4 deg C	WEST04	M11	01/15/2025	8015D
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Water	PESTICIDE Group1	Cool 4 deg C	WEST04	M11	01/15/2025	8081B

Date/Time 01/17/25 8:12
Raw Sample Received by: RJ (Sol Lab)
Raw Sample Relinquished by: CNP

Date/Time 01/17/25 8:30
Raw Sample Received by:
Raw Sample Relinquished by: RJ (Sol Lab)

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

Prep Standard - Chemical Standard Summary

Order ID : Q1109

Test : Diesel Range Organics

Prepbatch ID : PB166100,

Sequence ID/Qc Batch ID: FF011725,

Standard ID :
EP2577,PP23913,PP23935,PP23961,PP23962,PP23963,PP23964,PP23965,PP23966,PP23967,

Chemical ID :
E3551,E3822,E3828,E3871,P11958,P11959,P13104,P13109,P13213,P13218,P13219,P13492,P13493,P13494,P13495
,

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

Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2577	01/06/2025	07/01/2025	Rajesh Parikh	Extraction_SCALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 01/06/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3609	20 PPM DRO SPIKE SOLUTION (RESTEK)	PP23913	10/25/2024	04/23/2025	Yogesh Patel	None	None	Ankita Jodhani 10/25/2024

FROM 1.00000ml of P13104 + 1.00000ml of P13109 + 48.00000ml of E3822 = Final Quantity: 50.000 ml

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Fax : 908 789 8922

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
147	20 PPM DRO Surrogate Spike Solution	PP23935	11/01/2024	04/23/2025	Yogesh Patel	None	None	Ankita Jodhani 11/04/2024

FROM 1.00000ml of P13492 + 1.00000ml of P13493 + 1.00000ml of P13494 + 1.00000ml of P13495 + 196.00000ml of E3822 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
433	100/100 PPM DRO (Restek)	PP23961	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 1.00000ml of P11958 + 1.00000ml of P11959 + 1.00000ml of P13213 + 7.00000ml of E3828 = Final Quantity: 10.000 ml

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

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3796	100/100 PPM DRO STD (CPI)	PP23962	11/13/2024	02/14/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 1.00000ml of P13213 + 1.00000ml of P13218 + 1.00000ml of P13219 + 7.00000ml of E3828 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
435	50 PPM ICC DRO STD (Restek)	PP23963	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 0.50000ml of E3828 + 0.50000ml of PP23961 = Final Quantity: 1.000 ml

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

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
437	20 PPM ICC DRO STD (Restek)	PP23964	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 0.80000ml of E3828 + 0.20000ml of PP23961 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
438	10 PPM ICC DRO STD (Restek)	PP23965	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23961 = Final Quantity: 1.000 ml

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

Pest/Pcb STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
439	5 PPM ICC DRO STD (Restek)	PP23966	11/13/2024	05/09/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 0.90000ml of E3828 + 0.10000ml of PP23963 = Final Quantity: 1.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3797	50 PPM DRO ICV STD (CPI)	PP23967	11/13/2024	02/14/2025	Yogesh Patel	None	None	Ankita Jodhani 11/13/2024

FROM 0.80000ml of E3828 + 0.50000ml of PP23962 = Final Quantity: 1.000 ml

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	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)	24I2662006	04/23/2025	10/24/2024 / Rajesh	10/24/2024 / Rajesh	E3822

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)	24G0862003	05/09/2025	11/09/2024 / Rajesh	11/04/2024 / Rajesh	E3828

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)	24K1762005	07/14/2025	01/14/2025 / Rajesh	12/27/2024 / Rajesh	E3871

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	05/13/2025	11/13/2024 / yogesh	07/11/2022 / Yogesh	P11958

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0186840	05/13/2025	11/13/2024 / yogesh	07/11/2022 / Yogesh	P11959

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	04/25/2025	10/25/2024 / yogesh	01/12/2024 / Yogesh	P13104

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	31266 / Florida TRPH Standard	A0204859	04/25/2025	10/25/2024 / yogesh	01/12/2024 / Yogesh	P13109

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	05/13/2025	11/13/2024 / yogesh	01/17/2024 / Ankita	P13213

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	02/14/2025	08/14/2024 / yogesh	01/31/2024 / Ankita	P13218

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
CPI International	Z-110400-05-01 / TRPH Standard (C8-C40), 500 mg/L, 1 ml	514983	05/13/2025	11/13/2024 / yogesh	01/31/2024 / Ankita	P13219

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	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13492

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

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	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13493

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	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13494

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	05/01/2025	11/01/2024 / yogesh	07/24/2024 / yogesh	P13495

PRODUCTOS QUIMICOS 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_2SO_4
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na_2SO_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 foreing 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.

RG-02-01, Ed. 3

Recd. by RP on 7/24/23 E3551

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

avantor™ | J.T.Baker

Material No.: 9266-A4
Batch No.: 24I2662006
Manufactured Date: 2024-08-29
Expiration Date:2025-11-28
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	3
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	99.9 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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 3822

JCroak
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

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

avantor™ | J.T.Baker

Material No.: 9266-A4
Batch No.: 24J0862003
Manufactured Date: 2024-09-12
Expiration Date:2025-12-12
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	2
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	<= 0.3	<0.1
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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 3828

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

12/9-1/24

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

avantor | J.T.Baker

Material No.: 9266-A4
Batch No.: 24K1762005
Manufactured Date: 2024-10-08
Expiration Date:2026-01-07
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	2
Assay (CH_2Cl_2) (by GC, exclusive of preservative, corrected for water)	>= 99.8 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.5 ppm
Titrable Acid (µeq/g)	<= 0.3	0.0
Chloride (Cl)	<= 10 ppm	<5 ppm
Water (by KF, coulometric)	<= 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 3871

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

Page 1 of 1

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.

P11948 & P11962 } 7.6 07/...

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 (Lot SHBN3807) **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 (Lot SHBN8619) **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 (Lot SHBN7174) **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 (Lot STBK2282) **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 (Lot SHBM4146) **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 (Lot VZKOJ) **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 (Lot MKCF7888) **Purity** 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

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)

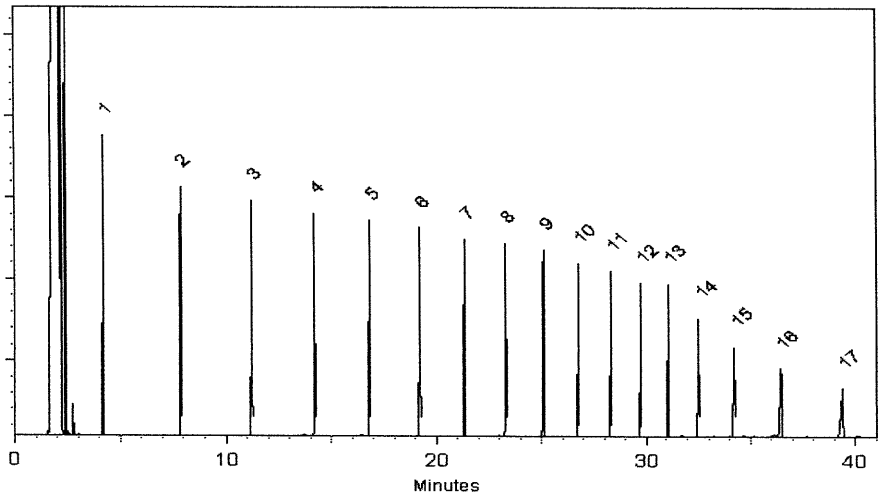
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - Operations Tech I

Date Mixed: 29-Jun-2022 **Balance:** 1128360905

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:

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

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.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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.

P11948 & P11962 } 7.6 07/...

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 (Lot SHBN3807) **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 (Lot SHBN8619) **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 (Lot SHBN7174) **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 (Lot STBK2282) **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 (Lot SHBM4146) **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 (Lot VZKOJ) **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 (Lot MKCF7888) **Purity** 99%	503.5 µg/mL	+/- 2.9906 µg/mL +/- 12.5092 µg/mL +/- 14.9944 µg/mL	Gravimetric Unstressed Stressed

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)

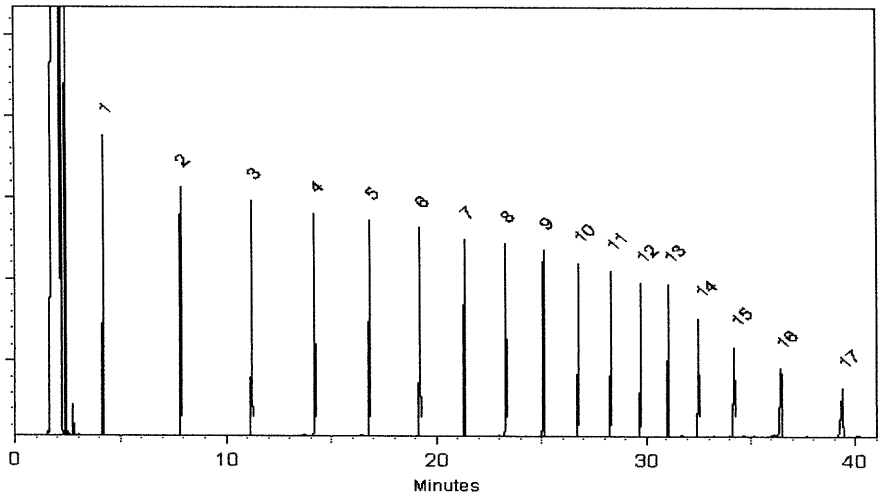
Carrier Gas:
hydrogen-constant pressure 10 psi.

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 - Operations Tech I

Date Mixed: 29-Jun-2022 **Balance:** 1128360905

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:

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

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.

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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.

P13103 → P13112 Y.P. 01/12/2024

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

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

* Expanded Uncertainty displayed in same units as Grav. Conc.

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.)

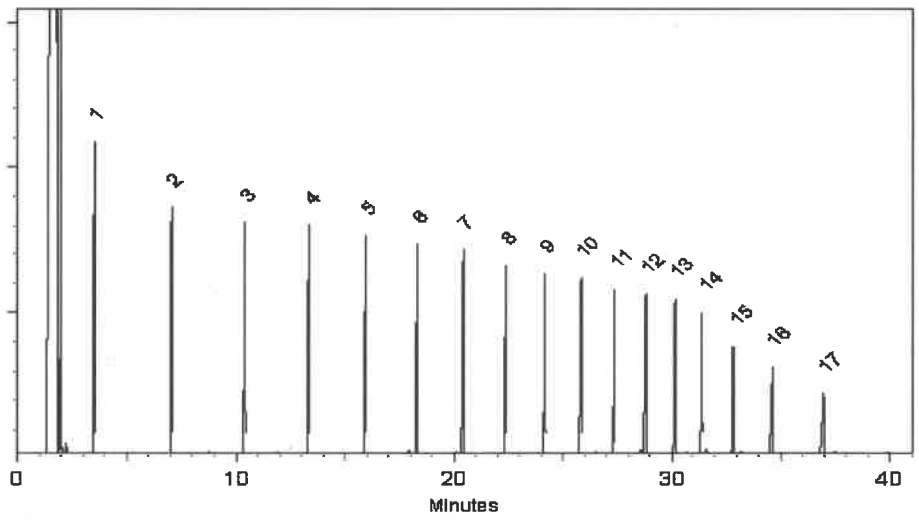
Inj. Temp:
250°C

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:

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

  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.

RESTEK
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Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

ilac-MRA A2LA ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ilac-MRA A2LA ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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 → P13112 Y.P. 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

* Expanded Uncertainty displayed in same units as Grav. Conc.

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.)

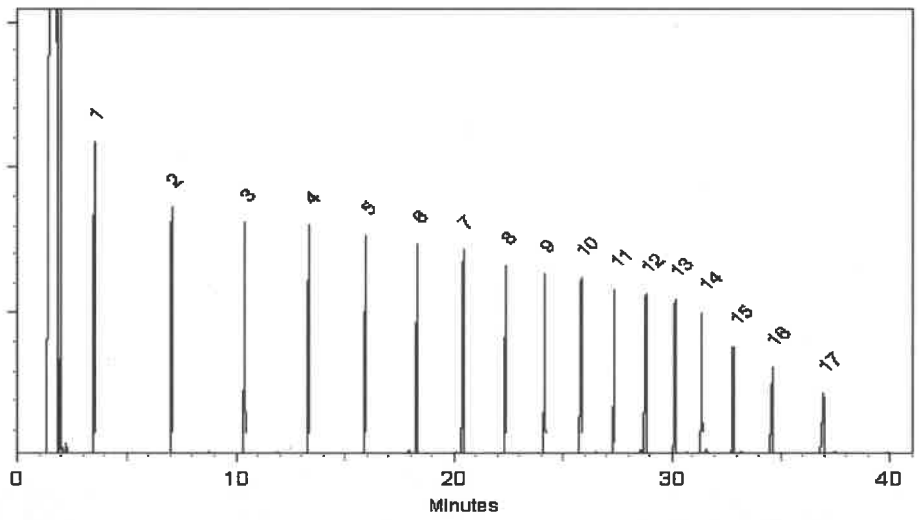
Inj. Temp:
250°C

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:

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

  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.

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#: 6UTB

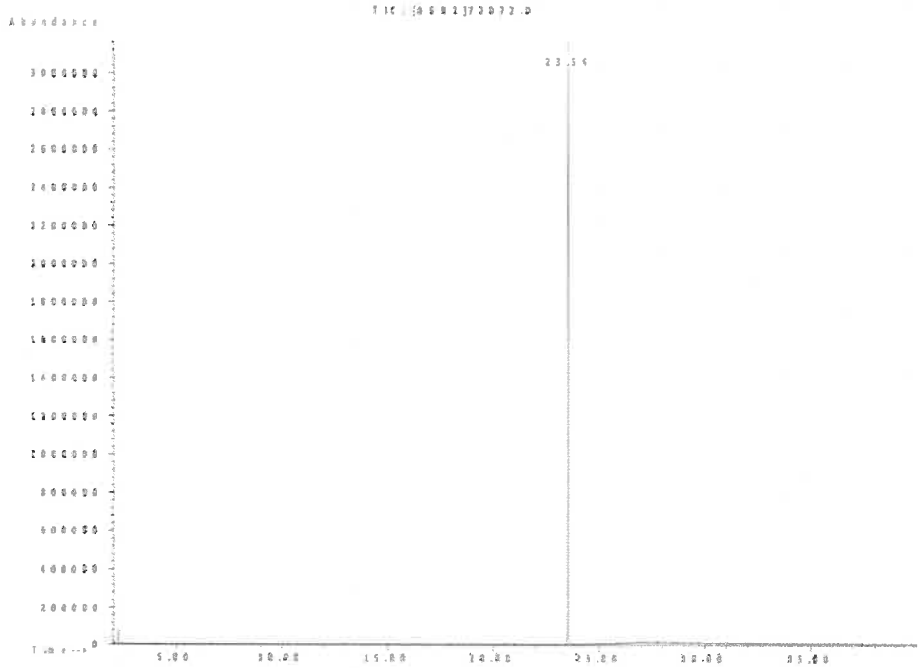
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

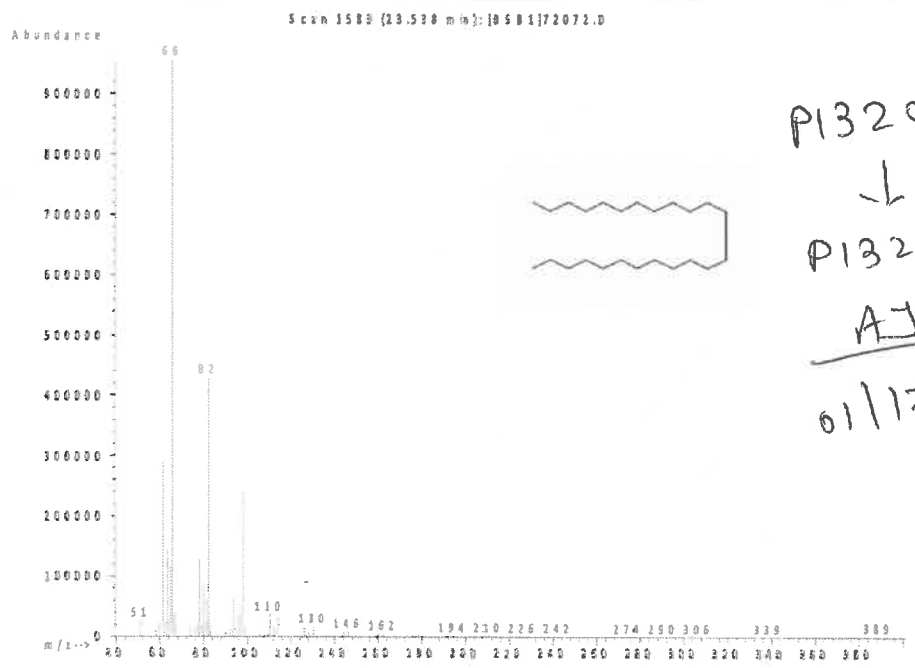
Weight(s) shown below were combined and diluted to (mL): 200.0

Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	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.) CAS#	OSHA PEL (TWA)	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	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.





P13205
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P13214
AJ
01/17/24

- 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 Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-110400-05 -01	514983	≤ -10 Degrees C	Hexane	11/20/2028	TRPH Standard (C8-C40), 500 mg/L, 1 ml

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 ± 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 ± 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 ± 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 ± 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 ± 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 ± 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 ± 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 ± 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 ± 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 ± 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 ± 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 ± 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 ± 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 ± 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 ± 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 ± 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 ± 6.94

P 13215
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P 13224

AJ
01/31/24

*Not a certified value

Let the standard warm to room temperature and sonicate before opening.

Certified By: Andrea Schaible

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

CPI INTERNATIONAL

5580 Skylane Blvd
Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
(707)545-7901 Fax

Manufacturer's Quality System
Audited & Registered
by TUV USA to ISO 9001:2015

Date Received:_____

Certificate of Analysis

Rev 0

Catalog No.:	Lot No.:	Storage:	Solvent:	Exp. Date:	Description:
Z-110400-05 -01	514983	≤ -10 Degrees C	Hexane	11/20/2028	TRPH Standard (C8-C40), 500 mg/L, 1 ml

Compound	CAS No.	Purity (%)	Compound Lot No.	Concentration, mg/L
decane (C10)	124-18-5	99.7	415.7.2P	498.5 ± 6.92
docosane (C22)	629-97-0	98.8	420.9.1P	499.4 ± 6.93
dodecane (C12)	112-40-3	99.7	416.9.3P	502 ± 6.97
dotriacontane (C32)	544-85-4	97	425.9.2.2P	499.6 ± 8.53
eicosane (C20)	112-95-8	99.8	419.7.1P	501 ± 6.95
hexacosane (C26)	630-01-3	99.3	422.7.2.1P	501 ± 6.95
hexatriacontane (C36)	630-06-8	98	427.29.1.1P	499.3 ± 8.53
n-hexadecane (C16)	544-76-3	99.45	368.271.1P	498.7 ± 6.91
octacosane (C28)	630-02-4	99.1	423.24.1P	500.5 ± 6.95
n-octadecane (C18)	593-45-3	99.5	418.29.1P	499.5 ± 6.92
octane (C8)	111-65-9	99.4	385.7.2.1P	498.5 ± 6.92
octatriacontane (C38)	7194-85-6	95	428.1.2P	500.2 ± 6.94
tetracontane (C40)	4181-95-7	97	429.7.2P	499.6 ± 6.93
n-tetracosane (C24)	646-31-1	99.5	421.7.1P	499.5 ± 6.93
n-tetradecane (C14)	629-59-4	99.3	417.9.1P	500 ± 6.94
tetratriacontane (C34)	14167-59-0	96.1	426.7.2.2P	499.7 ± 8.53
triacontane (C30)	638-68-6	99.5	424.7.1.1P	500 ± 6.94

P 13215
↓
P 13224

AJ
01/31/24

*Not a certified value

Let the standard warm to room temperature and sonicate before opening.

Certified By: Andrea Schaible

Andrea Schaible
Chemist

All weights are traceable through N. I. S. T. Test No. 822/264157-00.
Concentration (correct for purity) and uncertainty (95% confidence) values listed are determined gravimetricly.

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 +/- 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 +/-5% unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within +/-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: U_{CRM} is the expanded uncertainty which utilizes a K = 2 (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

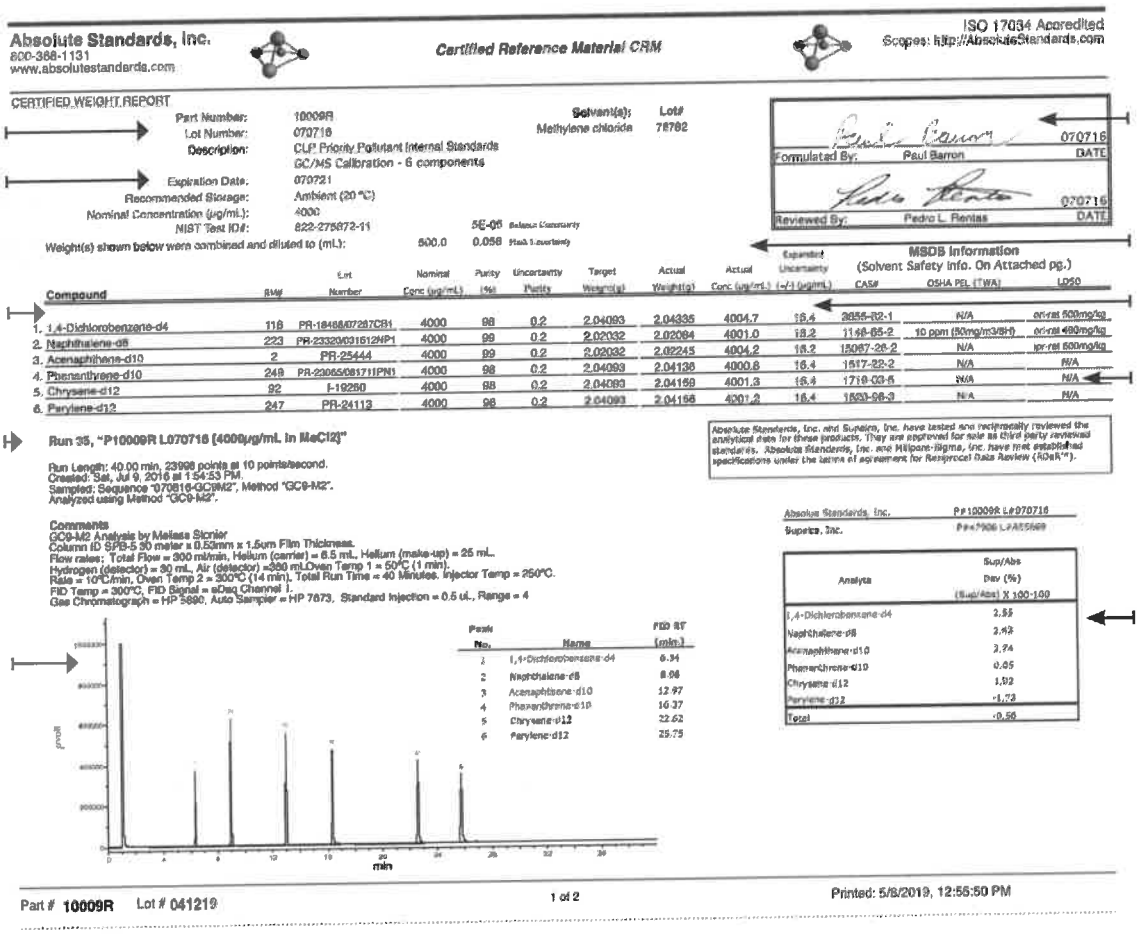
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards GC/MS Calibration - 6 components

Solvent(s): Methylene chloride
Lot# 78782

Expiration Date: 070721
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11

Formulated By: Paul Barron DATE 070716
Reviewed By: Pedro L. Reinas DATE 070716

Weight(s) shown below were combined and diluted to (mL): 500.0 0.058

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-18488/07267CB1	4000	98	0.2	2.04093	2.04335	4004.7	16.4	3855-82-1	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-233230/31612NP1	4000	99	0.2	2.02032	2.02064	4001.0	16.2	1146-65-2	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	16.2	15067-26-2	N/A	ipr-rat 500mg/kg
4. Phenanthrene-d10	248	PR-230650/51711PN1	4000	98	0.2	2.04093	2.04136	4000.8	16.4	1517-22-2	N/A	N/A
5. Chrysene-d12	92	I-19250	4000	98	0.2	2.04093	2.04159	4001.3	16.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	96	0.2	2.04093	2.04156	4001.2	16.4	1520-96-3	N/A	N/A

Absolute Standards, Inc. and Supelco, Inc. have tested and reciprocally reviewed the analytical data for these products. They are approved for sale as third party reviewed standards. Absolute Standards, Inc. and Millipore-Sigma, Inc. have met established specifications under the terms of agreement for Reciprocal Data Review (RDaR™).

Run 35, "P10009R L070716 (4000µg/mL in MeCl2)"

Run Length: 40.00 min, 23998 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070816-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9-M2 Analysis by Melissa Sicnier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =300 mL.Oven Temp 1 = 50°C (1 min).
Rate = 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 uL, Range = 4

Peak No.	Name	FID RT (min.)
1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.06
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Absolute Standards, Inc. P# 10009R L# 070716
Supelco, Inc. P# [illegible] L# [illegible]

Analyte	Sup/Abs Dev (%) (Sup/Abs) X 100-100
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	3.74
Phenanthrene-d10	0.05
Chrysene-d12	1.02
Perylene-d12	-1.73
Total	-0.56

Part # 10009R Lot # 041219 1 of 2 Printed: 5/8/2019, 12:55:50 PM

Part # / Lot # / Shelf Life

Target Compounds

Method of Analysis

Qualitative Quantitative

Formulator Reviewer

Actual Concentration

Uncertainty Values

Health & Safety

3rd Party Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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

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

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

Expiration Date: 101132
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s):	Lot#
Methylene chloride	105345

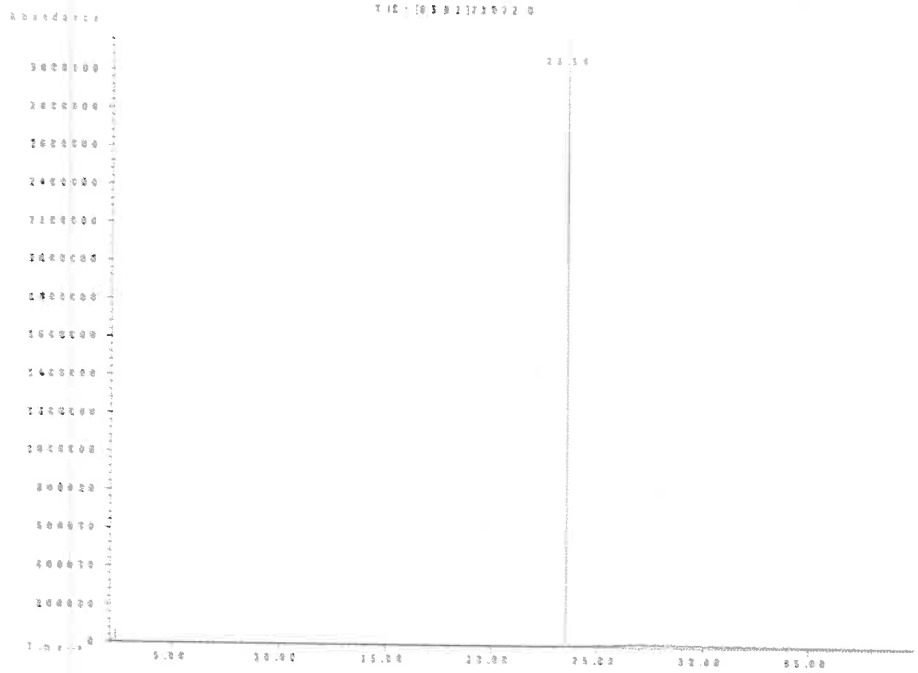
P13477 → P13496 } X.P. 07/24/24

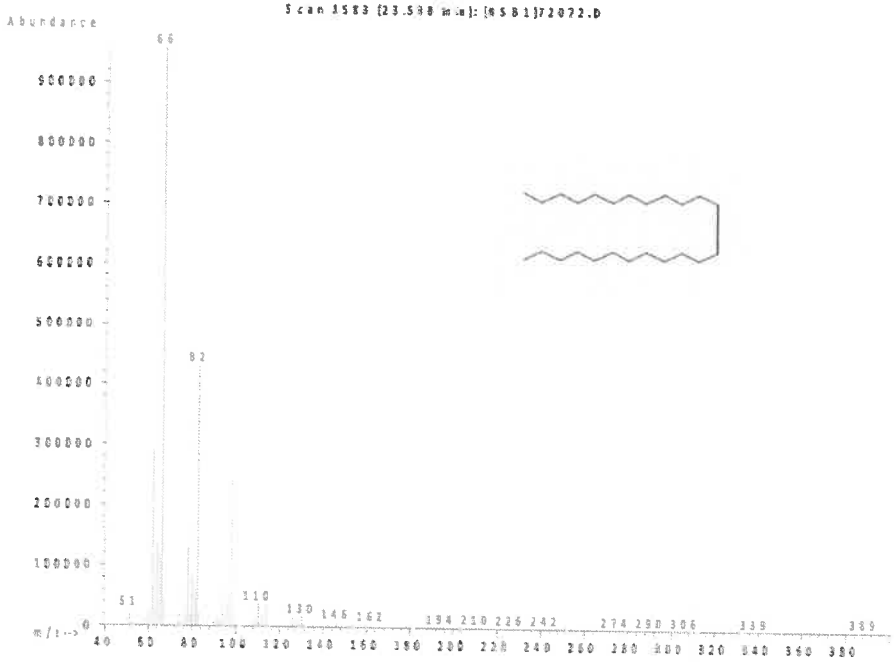
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 200.0 0.058 Flask Uncertainty

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.) CAS#	OSHA PEL (TWA)	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	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 Result," 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 +/- 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 +/-5% unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within +/-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: U_{CRM} is the expanded uncertainty which utilizes a K = 2 (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
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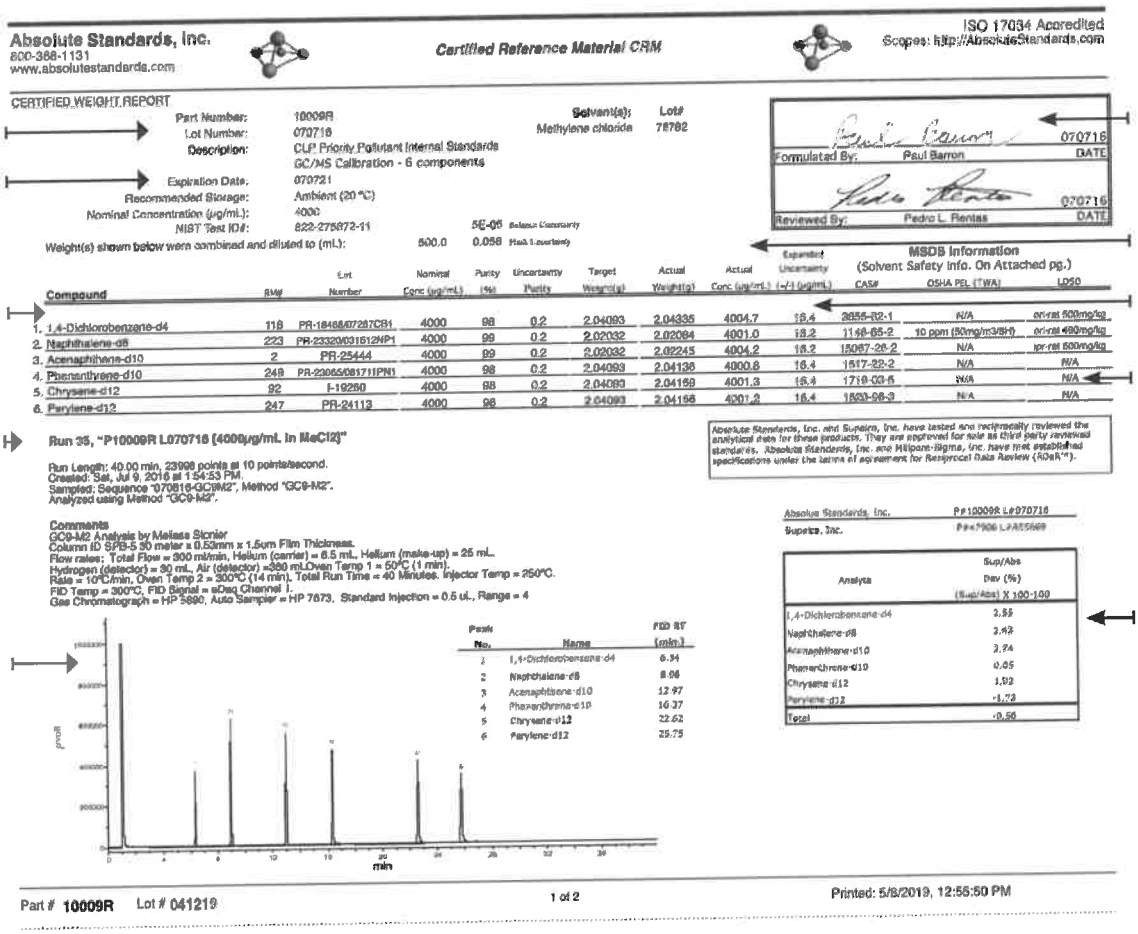
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

ABSOLUTE STANDARDS, INC.

ISO - 17034

Understanding the Certified Weight Report

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



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Certified Reference Material CRM

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

CERTIFIED WEIGHT REPORT

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards GC/MS Calibration - 6 components

Solvent(s): Methylene chloride
Lot# 78782

Expiration Date: 070721
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11

Formulated By: Paul Barron DATE 070716
Reviewed By: Pedro L. Reinas DATE 070716

Weight(s) shown below were combined and diluted to (mL): 500.0 0.058

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-18488/07267CB1	4000	98	0.2	2.04093	2.04335	4004.7	16.4	3855-82-1	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-233230/31612NP1	4000	99	0.2	2.02032	2.02064	4001.0	16.2	1146-65-2	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	16.2	15067-26-2	N/A	ipr-rat 500mg/kg
4. Phenanthrene-d10	248	PR-230650/31711PN1	4000	98	0.2	2.04093	2.04136	4000.8	16.4	1517-22-2	N/A	N/A
5. Chrysene-d12	92	I-19250	4000	98	0.2	2.04093	2.04159	4001.3	16.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	96	0.2	2.04093	2.04156	4001.2	16.4	1520-96-3	N/A	N/A

Run 35, "P10009R L070716 (4000µg/mL in MeCl2)"

Run Length: 40.00 min, 23998 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070816-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9-M2 Analysis by Melissa Sicnier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =300 mL.Oven Temp 1 = 50°C (1 min).
Rate = 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 uL, Range = 4

Peak No.	Name	FID RT (min.)
1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.06
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Absolute Standards, Inc. P# 10009R L# 070716
Supelco, Inc. P# [illegible] L# [illegible]

Analyte	Sup/Abs Dev (%) (Sup/Abs) X 100-100
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	3.74
Phenanthrene-d10	0.05
Chrysene-d12	1.02
Perylene-d12	-1.73
Total	-0.56

Absolute Standards, Inc. and Supelco, Inc. have tested and reciprocally reviewed the analytical data for these products. They are approved for sale as third party reviewed standards. Absolute Standards, Inc. and Millipore-Sigma, Inc. have met established specifications under the terms of agreement for Reciprocal Data Review (RDaR™).

Part # 10009R Lot # 041219 1 of 2 Printed: 5/8/2019, 12:55:50 PM

Part # / Lot # / Shelf Life

Target Compounds

Method of Analysis

Qualitative Quantitative

Formulator Reviewer

Actual Concentration

Uncertainty Values

Health & Safety

3rd Party Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

Expiration Date: 101132
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s):	Lot#
Methylene chloride	105345

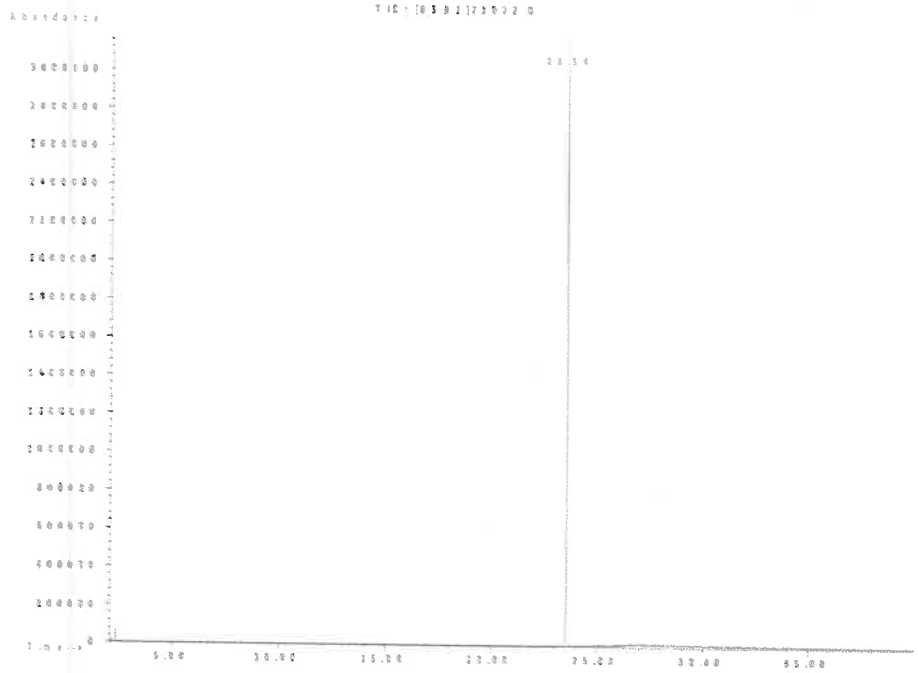
P13477 → P13496 } X.P. 07/24/24

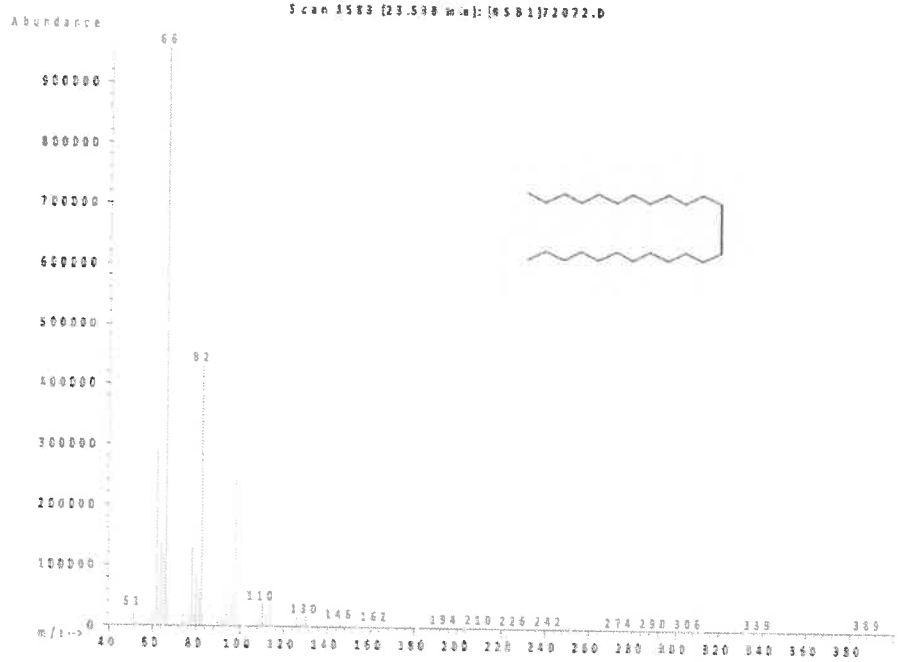
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 200.0 0.058 Flask Uncertainty

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.) CAS#	OSHA PEL (TWA)	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	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 Result," 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 +/- 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 +/-5% unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within +/-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: U_{CRM} is the expanded uncertainty which utilizes a K = 2 (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

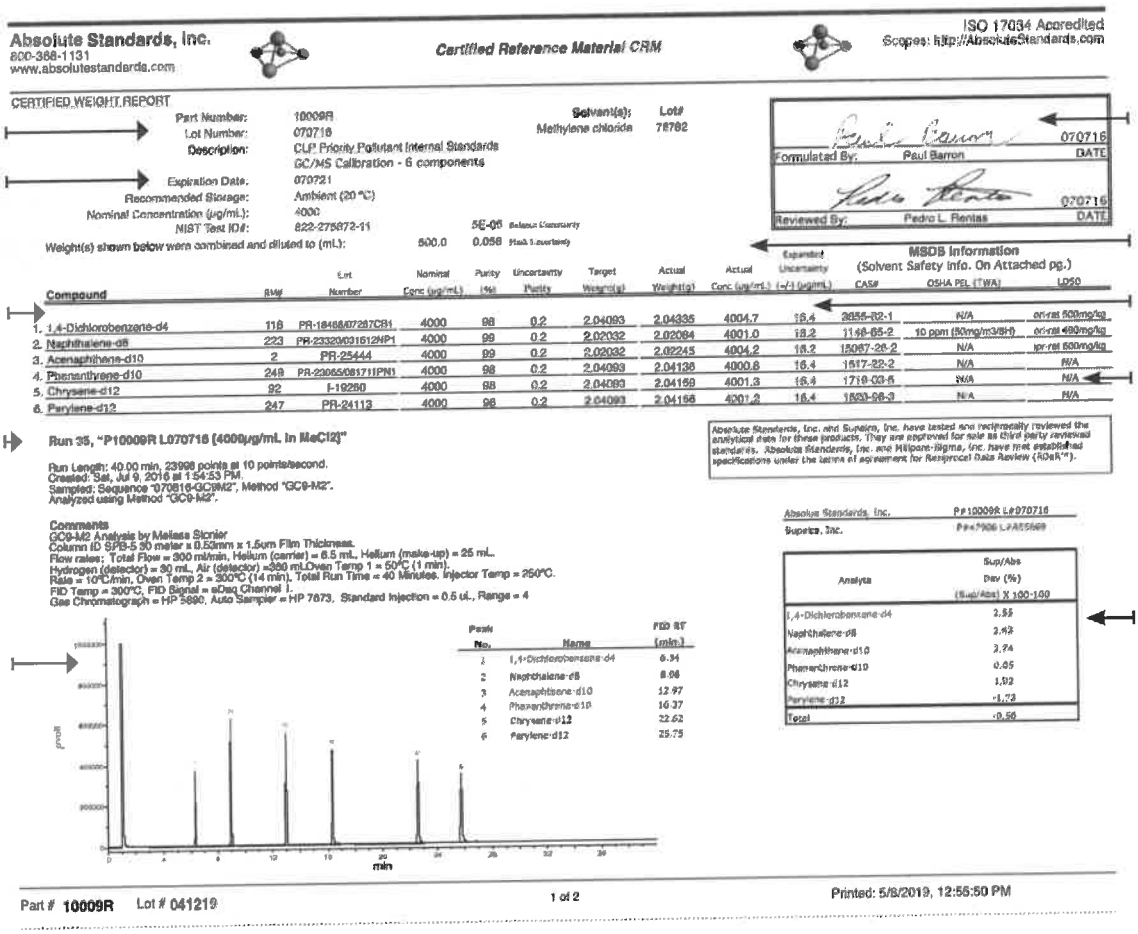
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards GC/MS Calibration - 6 components

Solvent(s): Methylene chloride
Lot#: 78782

Expiration Date: 070721
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11

Formulated By: Paul Barron DATE 070716
Reviewed By: Pedro L. Reinas DATE 070716

Weight(s) shown below were combined and diluted to (mL): 500.0 0.058

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	MSDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-18488/07267CB1	4000	98	0.2	2.04093	2.04335	4004.7	16.4	3855-82-1	N/A	or-rat 500mg/kg
2. Naphthalene-d8	223	PR-233230/31612NP1	4000	99	0.2	2.02032	2.02064	4001.0	16.2	1146-65-2	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	16.2	15067-26-2	N/A	ipr-rat 500mg/kg
4. Phenanthrene-d10	248	PR-230650/31711PN1	4000	98	0.2	2.04093	2.04136	4000.8	16.4	1517-22-2	N/A	N/A
5. Chrysene-d12	92	I-19250	4000	98	0.2	2.04093	2.04159	4001.3	16.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	96	0.2	2.04093	2.04156	4001.2	16.4	1520-96-3	N/A	N/A

Absolute Standards, Inc. and Supelco, Inc. have tested and reciprocally reviewed the analytical data for these products. They are approved for sale as third party reviewed standards. Absolute Standards, Inc. and Millipore-Sigma, Inc. have met established specifications under the terms of agreement for Reciprocal Data Review (RDaR™).

Run 35, "P10009R L070716 (4000µg/mL in MeCl2)"

Run Length: 40.00 min, 23998 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070819-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9-M2 Analysis by Melissa Sicnier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =300 mL.Oven Temp 1 = 50°C (1 min).
Rate = 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 uL, Range = 4

Peak No.	Name	FID RT (min.)
1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.06
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Absolute Standards, Inc. P# 10009R L# 070716
Supelco, Inc. P# [illegible] L# [illegible]

Analyte	Sup/Abs Dev (%) (Sup/Abs) X 100-100
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	3.74
Phenanthrene-d10	0.05
Chrysene-d12	1.02
Perylene-d12	-1.73
Total	-0.56

Part # 10009R Lot # 041219 1 of 2 Printed: 5/8/2019, 12:55:50 PM

Part # / Lot # / Shelf Life

Target Compounds

Method of Analysis

Qualitative Quantitative

Formulator Reviewer

Actual Concentration

Uncertainty Values

Health & Safety

3rd Party Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

Expiration Date: 101132
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s):	Lot#
Methylene chloride	105345

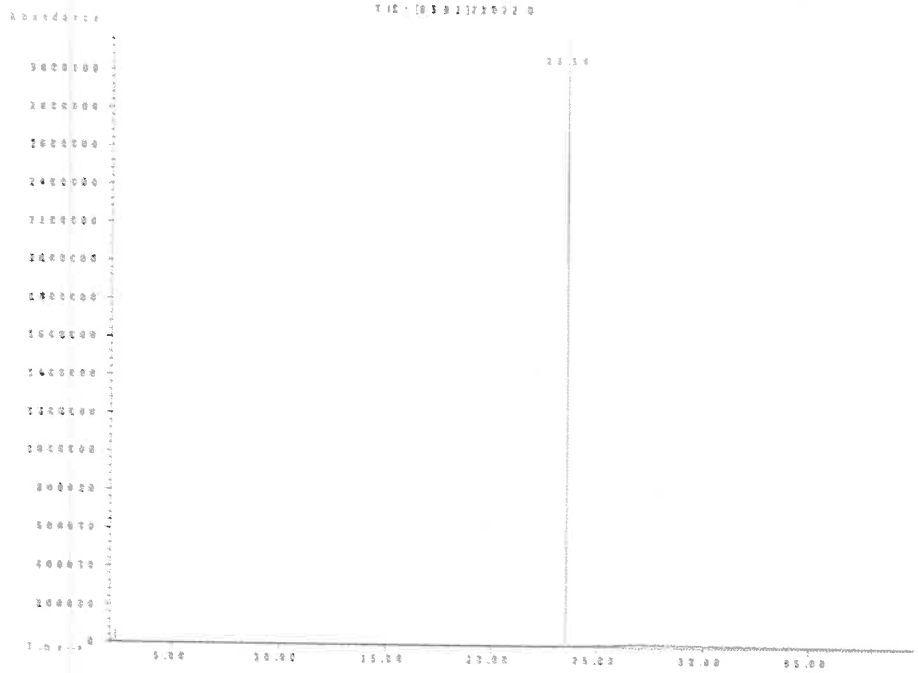
P13477 → P13496 } X.P. 07/24/24

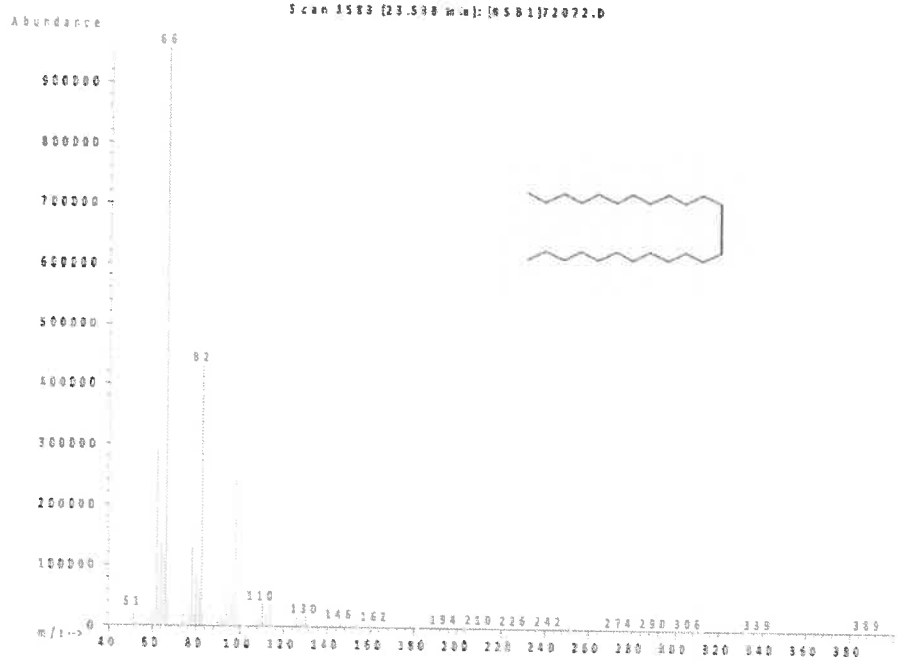
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 200.0 0.058 Flask Uncertainty

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.) CAS#	OSHA PEL (TWA)	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	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 Result," 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 +/- 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 +/-5% unless specifically stated on the Certified Wt. Report.

Verification: Uncertainties that are due to the analytical procedure(s) are within +/-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: U_{CRM} is the expanded uncertainty which utilizes a K = 2 (coverage factor of 2), in accordance with ISO 17034 as listed above (Characterization, Homogeneity, Verification, and Stability).

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

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

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

Minimum Sample Size: 0.5 uL for analytical applications.

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

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

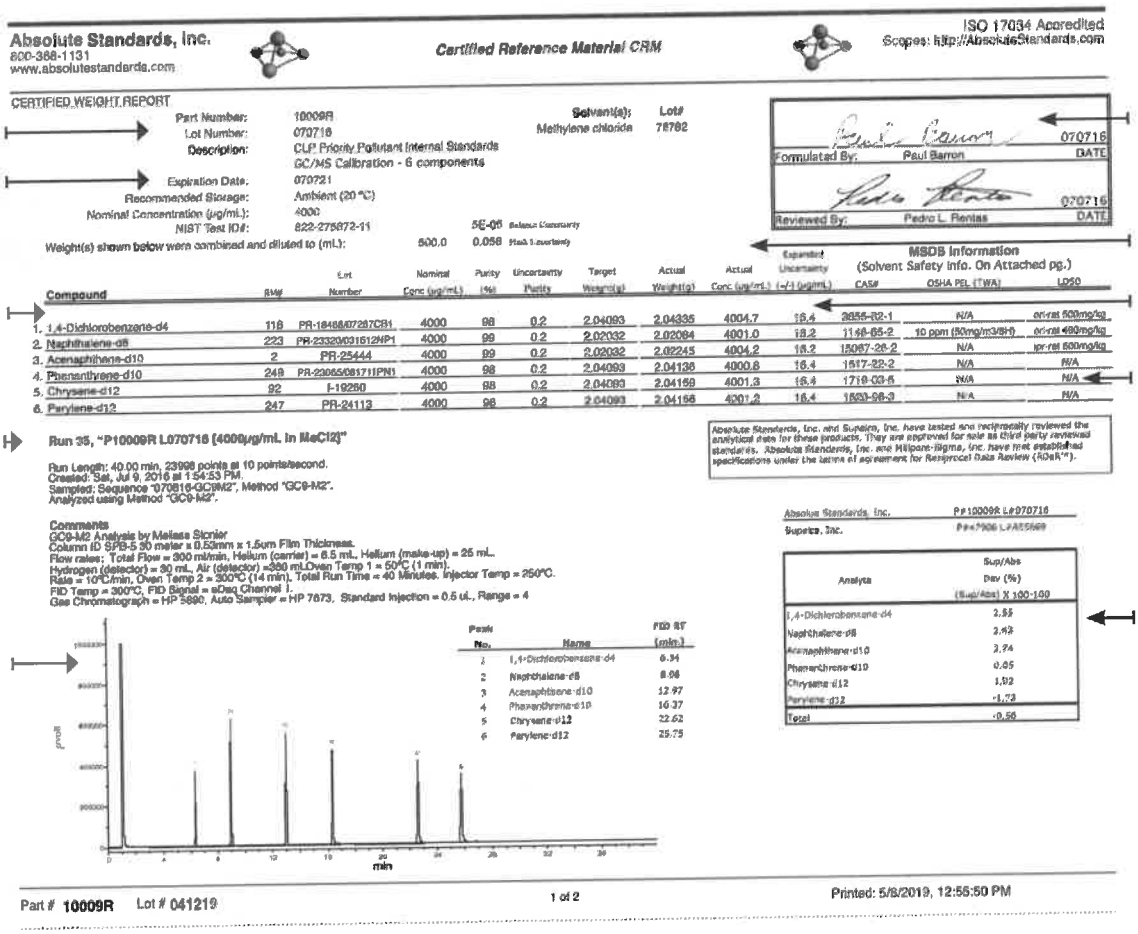
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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
Scopes: http://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT

Part Number: 10009R
Lot Number: 070716
Description: CLP Priority Pollutant Internal Standards GC/MS Calibration - 6 components

Solvent(s): Methylene chloride
Lot#: 78782

Expiration Date: 070721
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 4000
NIST Test ID#: 822-275872-11

Formulated By: Paul Barron DATE 070716
Reviewed By: Pedro L. Reinas DATE 070716

Weight(s) shown below were combined and diluted to (mL): 500.0 | 5E-05 Balance Uncertainty | 0.058 Flask Uncertainty

MSDS Information (Solvent Safety Info. On Attached pg.)

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
1. 1,4-Dichlorobenzene-d4	118	PR-18488/07267CB1	4000	98	0.2	2.04093	2.04335	4004.7	16.4	3855-82-1	N/A	orl-rat 500mg/kg
2. Naphthalene-d8	223	PR-233203031612NP1	4000	99	0.2	2.02032	2.02064	4001.0	16.2	1146-65-2	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
3. Acenaphthene-d10	2	PR-25444	4000	99	0.2	2.02032	2.02245	4004.2	16.2	15067-26-2	N/A	ipr-rat 500mg/kg
4. Phenanthrene-d10	248	PR-230605081711PN1	4000	98	0.2	2.04093	2.04136	4000.8	16.4	1517-22-2	N/A	N/A
5. Chrysene-d12	92	I-19250	4000	98	0.2	2.04093	2.04159	4001.3	16.4	1719-03-5	N/A	N/A
6. Perylene-d12	247	PR-24113	4000	96	0.2	2.04093	2.04156	4001.2	16.4	1520-96-3	N/A	N/A

Run 35, "P10009R L070716 (4000µg/mL in MeCl2)"

Run Length: 40.00 min, 23998 points at 10 points/second.
Created: Sat, Jul 9, 2016 at 1:54:53 PM.
Sampled: Sequence "070816-GC9M2", Method "GC9-M2".
Analyzed using Method "GC9-M2".

Comments
GC9-M2 Analysis by Melissa Sicnier
Column ID SPB-5 30 meter x 0.53mm x 1.5um Film Thickness.
Flow rates: Total Flow = 300 ml/min, Helium (carrier) = 6.5 mL, Helium (make-up) = 25 mL.
Hydrogen (detector) = 30 mL, Air (detector) =300 mL.Oven Temp 1 = 50°C (1 min).
Rate = 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 uL, Range = 4

Peak No.	Name	FID RT (min.)
1	1,4-Dichlorobenzene-d4	6.34
2	Naphthalene-d8	8.06
3	Acenaphthene-d10	12.97
4	Phenanthrene-d10	16.37
5	Chrysene-d12	22.62
6	Perylene-d12	25.75

Absolute Standards, Inc. and Supelco, Inc. have tested and reciprocally reviewed the analytical data for these products. They are approved for sale as third party reviewed standards. Absolute Standards, Inc. and Millipore-Sigma, Inc. have met established specifications under the terms of agreement for Reciprocal Data Review (RDaR™).

Absolute Standards, Inc. P# 10009R L# 070716
Supelco, Inc. P# [illegible] L# [illegible]

Analyte	Sup/Abs Dev (%) (Sup/Abs) X 100-100
1,4-Dichlorobenzene-d4	2.55
Naphthalene-d8	2.43
Acenaphthene-d10	3.74
Phenanthrene-d10	0.05
Chrysene-d12	1.02
Perylene-d12	-1.73
Total	-0.56

Part # 10009R Lot # 041219 1 of 2 Printed: 5/8/2019, 12:55:50 PM

Part # / Lot # / Shelf Life

Target Compounds

Method of Analysis

Qualitative Quantitative

Formulator Reviewer

Actual Concentration

Uncertainty Values

Health & Safety

3rd Party Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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

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www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

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

Expiration Date: 101132
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

Solvent(s):	Lot#
Methylene chloride	105345

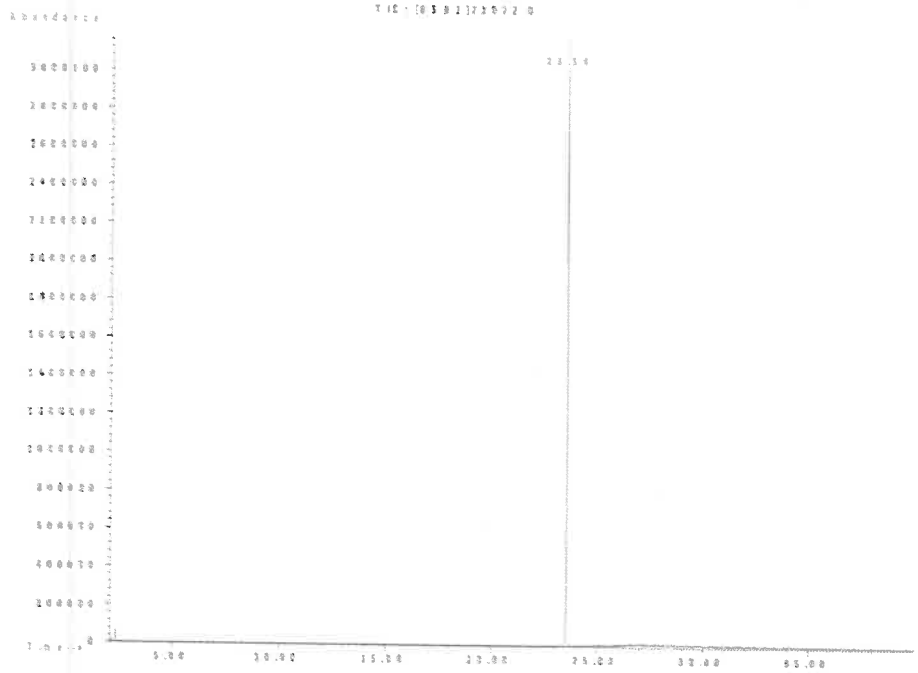
P13477 → P13496 } X.P. 07/24/24

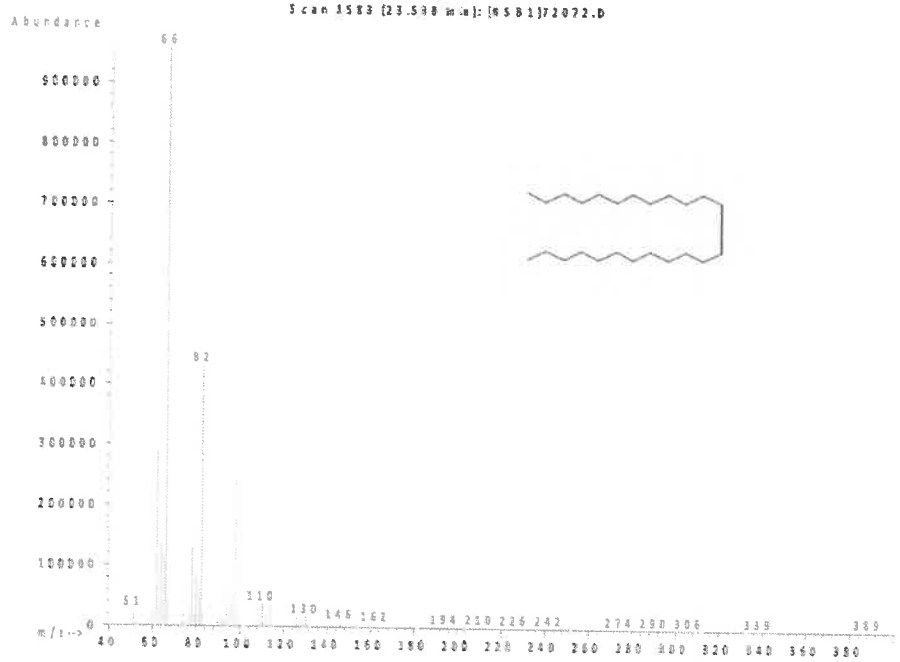
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 200.0 0.058 Flask Uncertainty

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.) CAS#	OSHA PEL (TWA)	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	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 Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

SHIPPING DOCUMENTS

Q1109

Weston COC ID
Weston_20250115_1527

Chain of Custody Record/Lab Work Request

Page 1 of 1

Client:	Weston Solutions, Inc.		
Project Manager:	David Sembrot		
Street Address:	1400 Weston Way	City:	West Chester
Phone:	610-314-5456	ST, ZIP:	PA, 19038
e-mail:	david.sembrot@westonsolutions.com		
Sampled By:	Cheyenne Harrington		

Project Name:	Fort Meade RI	Project POC:	Nathan Fretz
PO Number	0111169	Phone:	484-524-5665
W.O. #:		POC e-mail:	nathan.fretz@westonsolutions.com
Lab:	CHEMTECH	Lab POC:	Jordan Hedvat
TAT (days):	21	Lab Phone:	908-728-3144
Lab Address:	284 Sheffield Street Mountainside, NJ 07092		

Matrix Codes	
SS -	Soil
SE -	Sediment
SO -	Solid
SL -	Sludge
GW -	Groundwater
W -	Water
SB -	Soil Boring
A -	Air
DS -	Drum Solids
DL -	Drum Liquids
L -	EP/TCLP Leachate
WI -	Wipe
X -	Other
F -	Fish

Lab Use Only		
Temperature of cooler when received (°C)		
COC Tape was present and unbroken on outer package?	Y	N
Samples received in good condition?	Y	N
Labels indicate properly preserved?	Y	N
Received within holding times?	Y	N
Discrepancies between sample labels and COC record?	Y	N

#	Sample ID	G/C	Matrix	# Cont	MS/MSD	Date Collected	Time Collected	TPH-DRO by EPA 8015D	Pesticides by EPA 8081B	SVOCs by EPA 8270E	Oil & Grease by EPA 1664A	Hardness by Calc by EPA 200.7	Anions by EPA 9056A	TOC by EPA 9060A/Lloyd Kahn	TPH-GRO by EPA 8015D	VOCs by EPA 8260D	Hex Chromium by EPA 7196A	Ammonia by SM4500-NH3 B&G	TAL Metals w Hg by 6020B/7470A	Special Instructions/Comments
Container Type:								Amber	Amber	Amber	Glass	Plastic	Plastic	Vial	Vial	Vial	Plastic	Plastic	Plastic	
Container Size:								1 L	1 L	1 L	1 L	1 L	1 L	40 mL	40 mL	40 mL	500 mL	500 mL	500 mL	
Preservative:								Ice to 0-6 deg C	Ice to 0-6 deg C	Ice to 0-6 deg C	H2SO4	HNO3	Ice to 0-6 deg C	H2SO4	HCL	HCL	Ammonium Sulfate	H2SO4	HNO3	
1	TAPIAL1-MW04I-011525-00-T3	g	GW	4	no	1/15/2025	12:20					X		X					X	
2	TAPIAL1-MW04S-011525-00-T2	g	GW	19	no	1/15/2025	12:20	X	X	X	X	X	X	X	X	X	X	X	X	
3	TAP-TB-01-011525	g	W	2	no	1/15/2025	15:35									X				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Shipping Airbill Number: 771460519011, 771460519022

Temp 2.2°C

Cooler Number: 1 + 2 of 2

	Relinquished By	Date	Time	Received By	Date	Time
1.)	Clyn Hyt	1/15/25	1700		1-16-25	0932
2.)						
3.)						

Additional Comments

QSM 6.0 Compliant

Deliverable Requirements: DoD Level IV report, EnviroData EDD, and ERIS-compatible EDD

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

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1109 WEST04
Client Name : Weston Solutions
Client Contact : Nathan Fretz
Invoice Name : Weston Solutions
Invoice Contact : Nathan Fretz

Order Date : 1/16/2025 11:32:00 AM
Project Name : Ft Meade Tipton Airfield Pa
Receive DateTime : 1/16/2025 9:32:00 AM
Purchase Order :

Project Mgr :
Report Type : Level 4
EDD Type : SEDD 2A
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Water	01/15/2025	12:20					
					Gasoline Range Organics		8015D		10 Bus. Days

Relinguished By : [signature]
Date / Time : 1-16-25 1315

Received By : [signature]
Date / Time : 1-16-25 2:10 PM

Storage Area : VOA Refridgerator Room

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1109 WEST04
Client Name : Weston Solutions
Client Contact : Nathan Fretz
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Report Type : Level 4
EDD Type : SEDD 2A
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1109-02	TAPIAL1-MW04S-011525-00-T2	Water	01/15/2025	12:20					
					VOC-TCLVOA-10		8260D		10 Bus. Days
Q1109-04	TAP-TB-01-011525	Water	01/15/2025	15:35					
					VOC-TCLVOA-10		8260D		10 Bus. Days

stored in VOA ref #05

Relinquished By :
Date / Time : 12-16-25 1315

Received By :
Date / Time : 01/16/25 2:00 pm

Storage Area : VOA Refridgerator Room

Quantitation Report (Not Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015253.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:04
Operator : YP\AJ
Sample : PB166100BSD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BSD

Integration File: autoint1.e
Quant Time: Jan 17 22:13:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_F\Method\FF011425.M
Quant Title :
QLast Update : Tue Jan 14 11:12:55 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...	15.014	2511262	19.178 ug/ml
	Target Compounds			
1)	N-OCTANE	2.036	2686456	20.180 ug/ml
2)	N-DECANE	4.567	2703035	20.283 ug/ml
3)	N-DODECANE	6.732	2787764	20.380 ug/ml
4)	N-TETRADECANE	8.557	2712474	20.773 ug/ml
5)	N-HEXADECANE	10.164	2759299	20.552 ug/ml
6)	N-OCTADECANE	11.606	2885459	19.657 ug/ml
7)	N-EICOSANE	12.916	2832290	19.373 ug/ml
8)	N-DOCOSANE	14.115	2787760	19.253 ug/ml
10)	N-TETRACOSANE	15.219	2767388	19.111 ug/ml
11)	N-HEXACOSANE	16.241	2678872	19.012 ug/ml
12)	N-OCTACOSANE	17.191	2613578	19.071 ug/ml
13)	N-TRIACONTANE	18.078	2537794	19.080 ug/ml
14)	N-DOTRIACONTANE	18.912	2399902	18.892 ug/ml
15)	N-TETRATRIACONTANE	19.696	2055390	18.549 ug/ml
16)	N-HEXATRIACONTANE	20.437	1624976	17.976 ug/ml
17)	N-OCTATRIACONTANE	21.174	1397267	17.290 ug/ml
18)	N-TETRACONTANE	22.088	1230695	16.224 ug/ml

(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_F\Data\FF011725\
Data File : FF015253.D
Signal(s) : FID2B.ch
Acq On : 17 Jan 2025 15:04
Operator : YP\AJ
Sample : PB166100BSD
Misc :
ALS Vial : 74 Sample Multiplier: 1

Instrument :
FID_F
ClientSampleId :
PB166100BSD

Integration File: autoint1.e
Quant Time: Jan 17 22:13:39 2025
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Quant Title :
QLast Update : Tue Jan 14 11:12:55 2025
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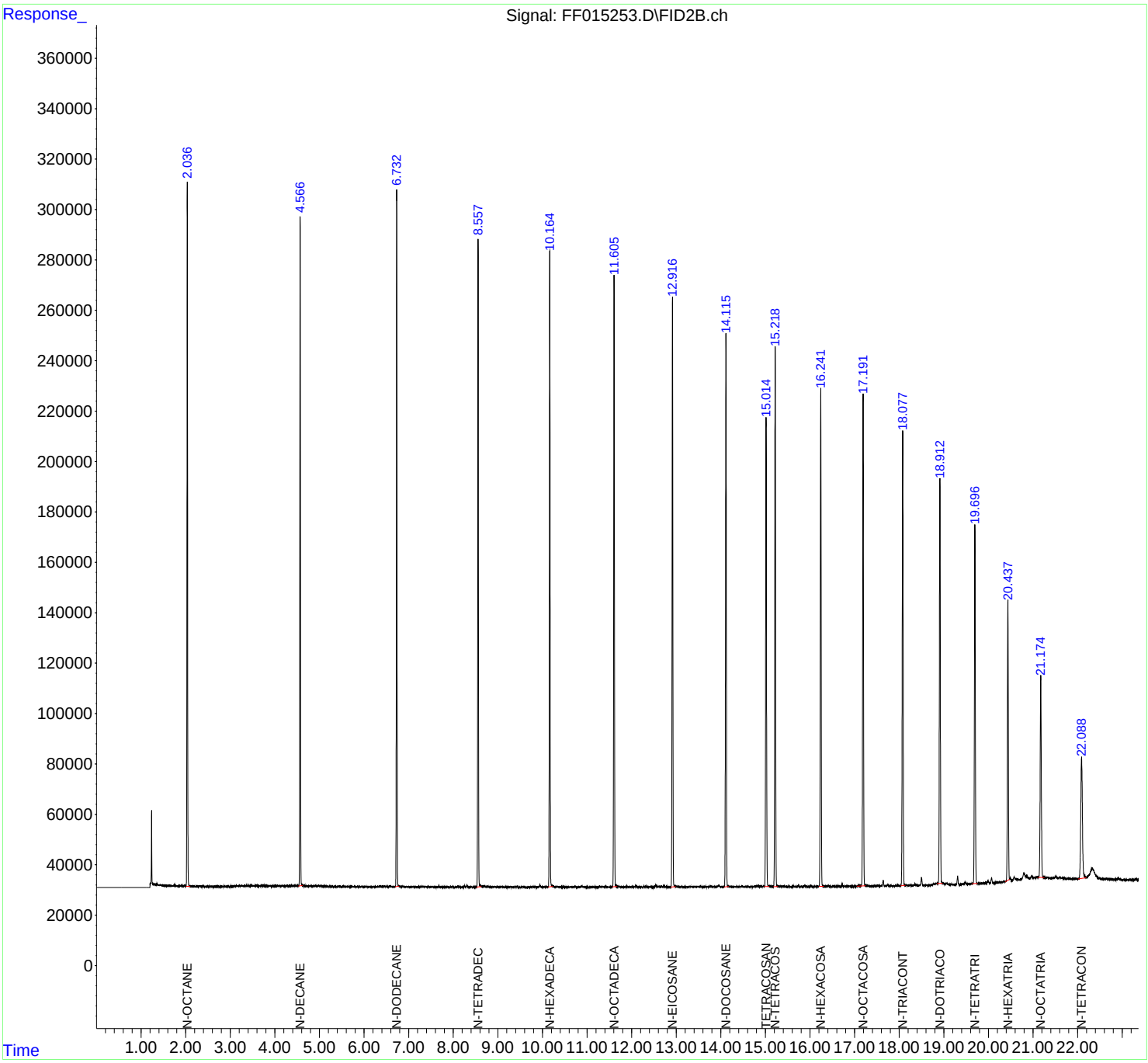
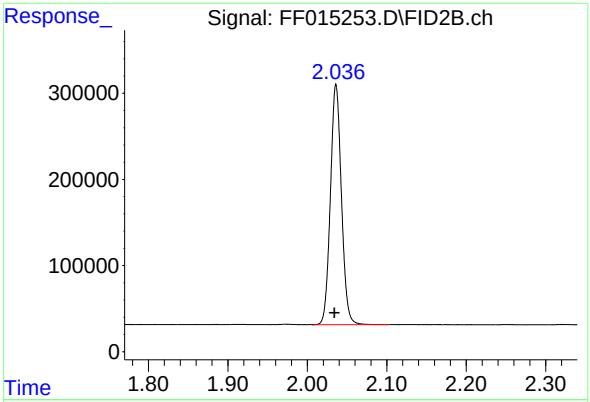
Integrator: ChemStation

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

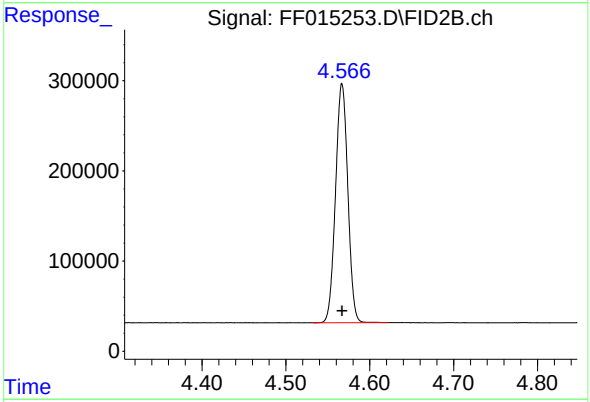




#1 N-OCTANE

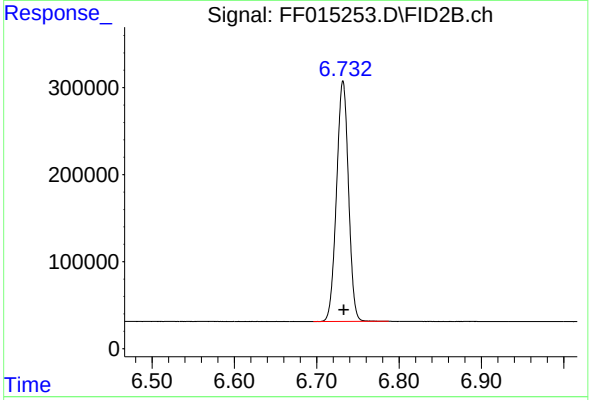
R.T.: 2.036 min
Delta R.T.: 0.002 min
Response: 2686456
Conc: 20.18 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD



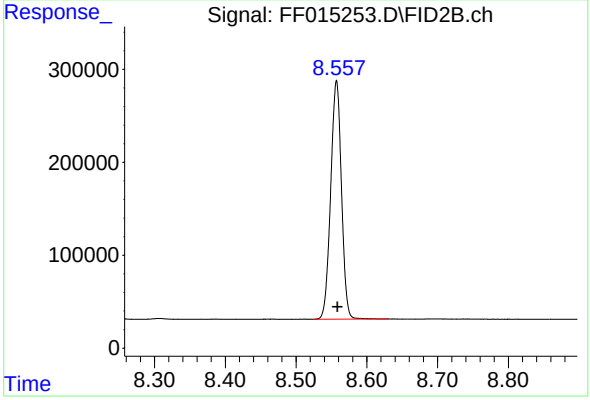
#2 N-DECANE

R.T.: 4.567 min
Delta R.T.: 0.000 min
Response: 2703035
Conc: 20.28 ug/ml



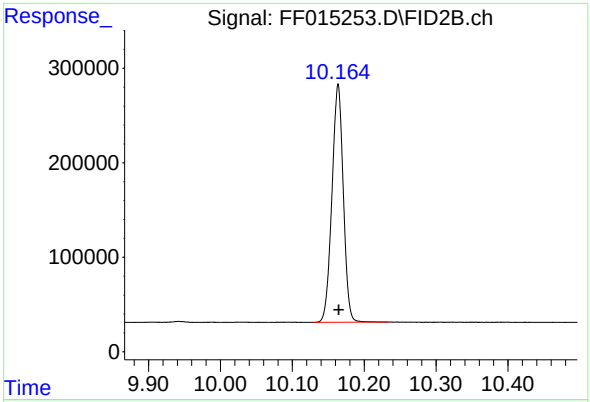
#3 N-DODECANE

R.T.: 6.732 min
Delta R.T.: 0.000 min
Response: 2787764
Conc: 20.38 ug/ml



#4 N-TETRADECANE

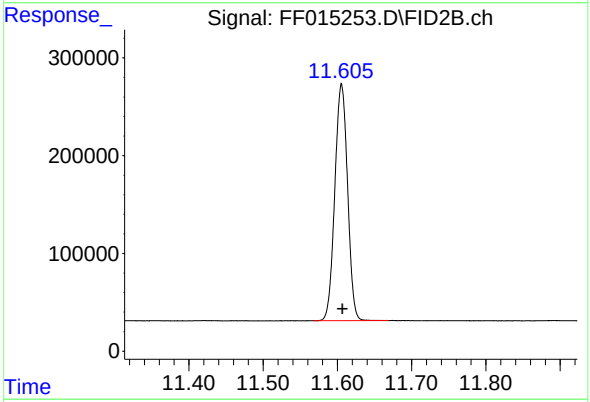
R.T.: 8.557 min
Delta R.T.: -0.001 min
Response: 2712474
Conc: 20.77 ug/ml



#5 N-HEXADECANE

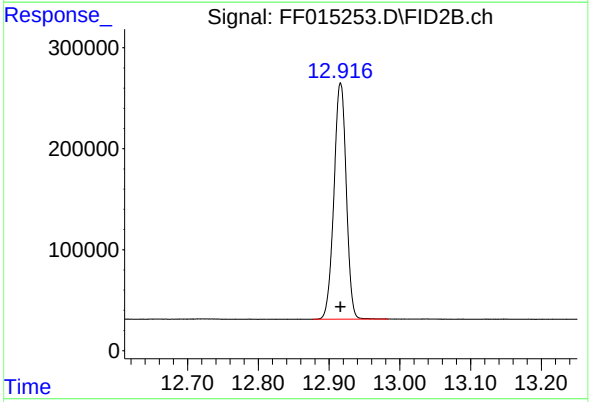
R.T.: 10.164 min
Delta R.T.: 0.000 min
Response: 2759299
Conc: 20.55 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD



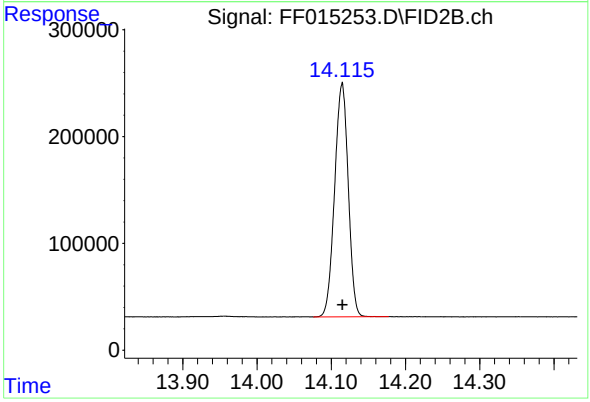
#6 N-OCTADECANE

R.T.: 11.606 min
Delta R.T.: -0.001 min
Response: 2885459
Conc: 19.66 ug/ml



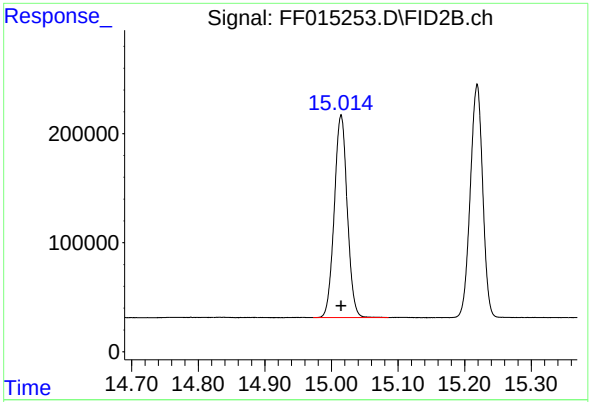
#7 N-EICOSANE

R.T.: 12.916 min
Delta R.T.: 0.000 min
Response: 2832290
Conc: 19.37 ug/ml



#8 N-DOCOSANE

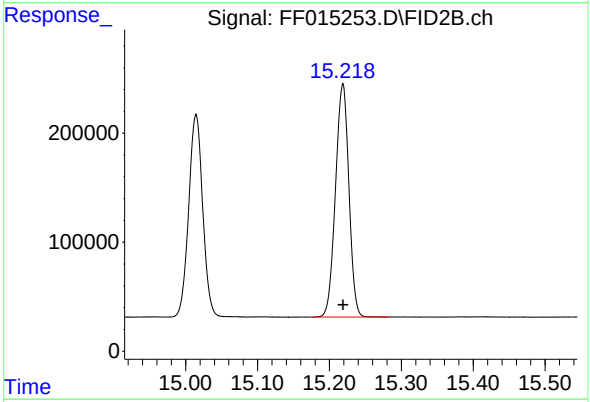
R.T.: 14.115 min
Delta R.T.: 0.000 min
Response: 2787760
Conc: 19.25 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

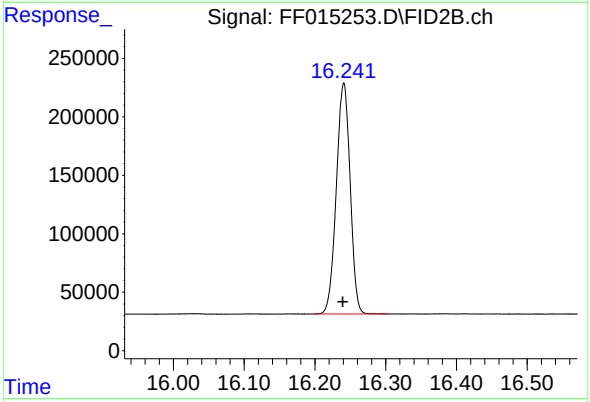
R.T.: 15.014 min
Delta R.T.: 0.000 min
Response: 2511262
Conc: 19.18 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD



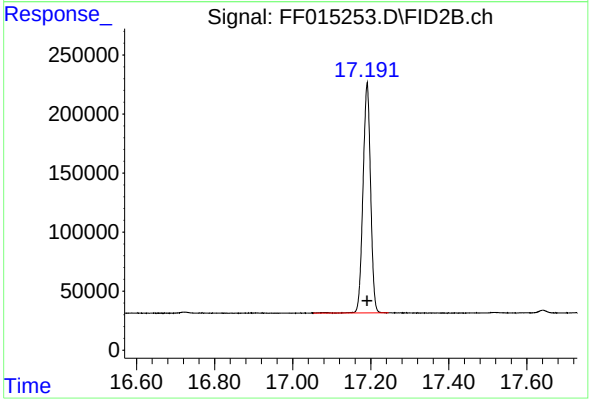
#10 N-TETRACOSANE

R.T.: 15.219 min
Delta R.T.: 0.000 min
Response: 2767388
Conc: 19.11 ug/ml



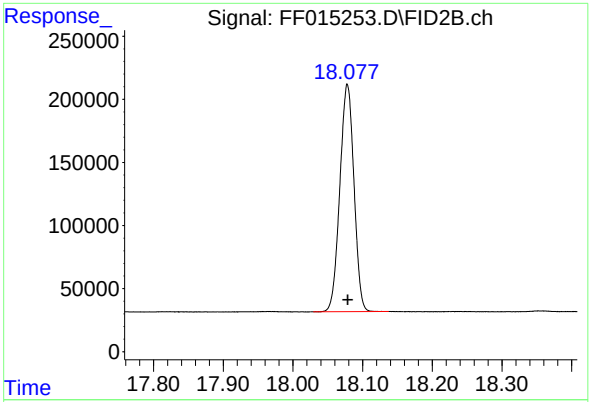
#11 N-HEXACOSANE

R.T.: 16.241 min
Delta R.T.: 0.001 min
Response: 2678872
Conc: 19.01 ug/ml



#12 N-OCTACOSANE

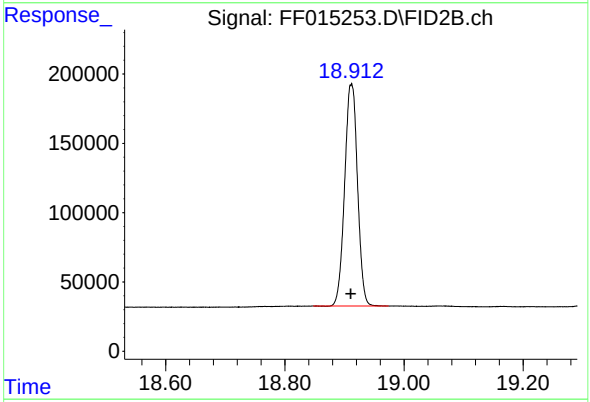
R.T.: 17.191 min
Delta R.T.: 0.000 min
Response: 2613578
Conc: 19.07 ug/ml



#13 N-TRIACONTANE

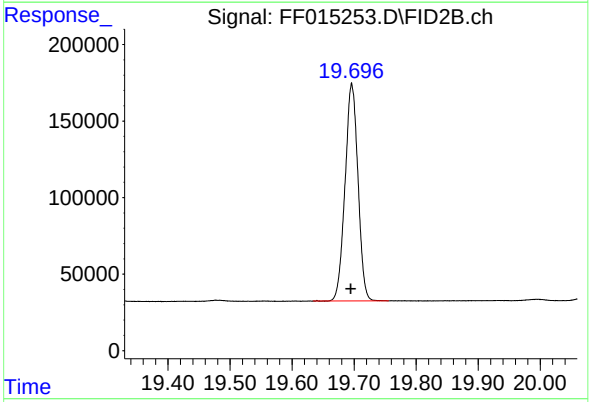
R.T.: 18.078 min
Delta R.T.: 0.000 min
Response: 2537794
Conc: 19.08 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD



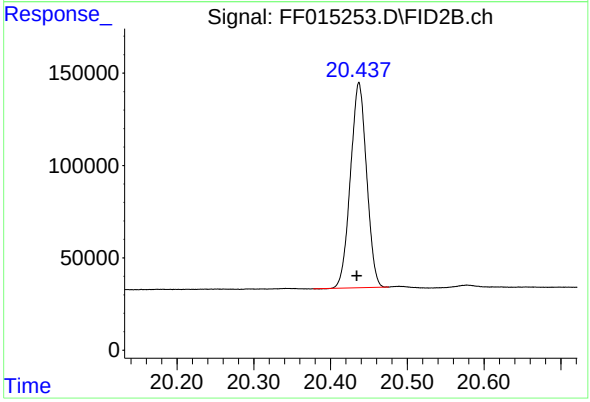
#14 N-DOTRIACONTANE

R.T.: 18.912 min
Delta R.T.: 0.000 min
Response: 2399902
Conc: 18.89 ug/ml



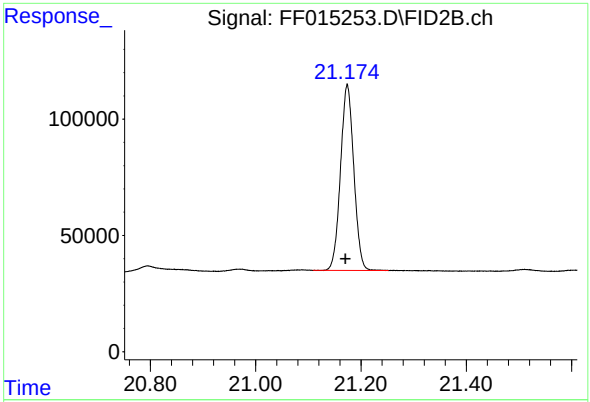
#15 N-TETRATRIACONTANE

R.T.: 19.696 min
Delta R.T.: 0.002 min
Response: 2055390
Conc: 18.55 ug/ml



#16 N-HEXATRIACONTANE

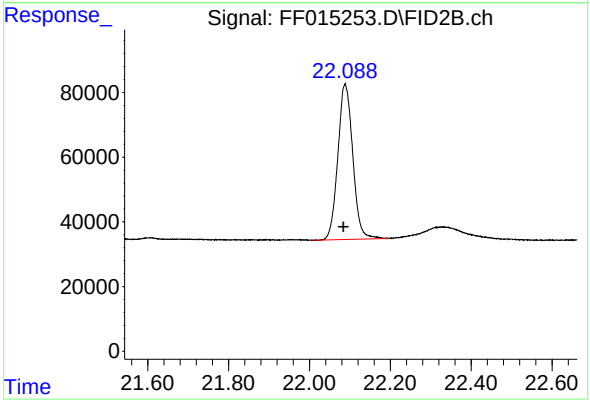
R.T.: 20.437 min
Delta R.T.: 0.003 min
Response: 1624976
Conc: 17.98 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.174 min
Delta R.T.: 0.004 min
Response: 1397267
Conc: 17.29 ug/ml

Instrument :
FID_F
ClientSampleId :
PB166100BSD



#18 N-TETRACONTANE

R.T.: 22.088 min
Delta R.T.: 0.004 min
Response: 1230695
Conc: 16.22 ug/ml