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

DATA PACKAGE

GC SEMI-VOLATILES

PROJECT NAME : NYCDDC SANTWOBR BROOKLYN BRIDGE BBMCR

RU2 ENGINEERING, LLC

2 Melinda Drive

Monroe Township, NJ - 08831

Phone No: 732-261-2236

ORDER ID : Q1206

ATTENTION : Rutu Manani

Laboratory Certification ID # 20012

Table Of Contents for Q1206

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Cover Page

Order ID : Q1206

Project ID : NYCDDC SANTWOBR Brooklyn Bridge BBMCR

Client : RU2 Engineering, LLC

Lab Sample Number	Client Sample Number
Q1206-01	JPP-20.1-012725
Q1206-02	JPP-20.1-012725
Q1206-03	JPP-20.1-012725
Q1206-04	JPP-20.1-012725
Q1206-05	JPP-16.3-012725
Q1206-06	JPP-16.3-012725
Q1206-07	JPP-16.3-012725
Q1206-08	JPP-16.3-012725

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: 2/5/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

RU2 Engineering, LLC
Project Name: NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Project # N/A
Chemtech Project # Q1206
Test Name: Diesel Range Organics

A. Number of Samples and Date of Receipt:
8 Solid samples were received on 01/28/2025.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL and VOCMS Group1. This data package contains results for Diesel Range Organics.

C. Analytical Techniques:
The analysis were performed on instrument FID_E. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 10224.The analysis of Diesel Range Organics was based on method 8015D and extraction was done based on method 3541.

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 Blank Spike 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:

No MS-MSD performed as sample Limited volume..
The soil samples results are based on a dry weight basis.

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F. 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: Q1206 MATRIX: Solid

METHOD: 8015D/3541

		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 .			✓
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:

No MS-MSD performed as Limited volume.

The soil samples results are based on a dry weight basis.

_____ _____

QA REVIEW Date

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1206

	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:** 02/05/2025

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LAB CHRONICLE

OrderID:	Q1206	**OrderDate:**	1/28/2025 11:18:51 AM
Client:	RU2 Engineering, LLC	**Project:**	NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Contact:	Rutu Manani	**Location:**	E11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1206-01	**JPP-20.1-012725**	**SOIL**			**01/27/25**			**01/28/25**
			Diesel Range Organics	8015D		01/29/25	01/30/25	
			Gasoline Range Organics	8015D			01/29/25	
Q1206-03	**JPP-20.1-012725**	**SOIL**			**01/27/25**			**01/28/25**
			PCB	8082A		01/29/25	01/29/25	
Q1206-04	**JPP-20.1-012725**	**TCLP**			**01/27/25**			**01/28/25**
			TCLP Herbicide	8151A		01/29/25	01/30/25	
			TCLP Pesticide	8081B		01/29/25	02/03/25	
Q1206-05	**JPP-16.3-012725**	**SOIL**			**01/27/25**			**01/28/25**
			Diesel Range Organics	8015D		01/29/25	01/30/25	
			Gasoline Range Organics	8015D			01/29/25	
Q1206-07	**JPP-16.3-012725**	**SOIL**			**01/27/25**			**01/28/25**
			PCB	8082A		01/29/25	01/29/25	
Q1206-08	**JPP-16.3-012725**	**TCLP**			**01/27/25**			**01/28/25**
			TCLP Herbicide	8151A		01/29/25	01/30/25	
			TCLP Pesticide	8081B		01/29/25	01/30/25	

QC SUMMARY

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SOIL DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: RU2 Engineering, LLC

Lab Code: CHEM Case No.: Q1206 SAS No.: Q1206 SDG No.: Q1206

EPA SAMPLE NO.	S1 TETRACOSANE-d50	S2	S3	S4	TOT OUT
PIBLK-FE052139.D	91				0
PIBLK-FE052151.D	86				0
PB166348BL	90				0
PB166348BS	91				0
JPP-20.1-012725	87				0
JPP-16.3-012725	71				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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SOIL DIESEL RANGE ORGANICS LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RI

Lab Name: Chemtech **Client:** RU2 Engineering, LLC

Lab Code: CHEM **Cas No:** Q1206 **SAS No :** Q1206 **SDG No:** Q1206

Matrix Spike - EPA Sample No : PB166348BS **Datafile:** FE052143.D

COMPOUND	SPIKE ADDED ug/kg	CONCENTRATION ug/kg	LCS/LCSD CONCENTRATION ug/kg	% REC	QC LIMITS
DRO	6662	0	6174	93	68-131

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4B
METHOD BLANK SUMMARY

EPA SAMPLE NO.
PB166348BL

Lab Name: CHEMTECH Contract: RUTW01

Lab Code: CHEM Case No.: Q1206 SAS No.: Q1206 SDG NO.: Q1206

Lab File ID: FE052142.D Lab Sample ID: PB166348BL

Instrument ID: FE Date Extracted: 01/30/2025

Matrix: (soil/water) Soil Date Analyzed: 01/30/25

Level: (low/med) low Time Analyzed: 4:58

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
PB166348BS	PB166348BS	FE052143.D	01/30/25
JPP-20.1-012725	Q1206-01	FE052144.D	01/30/25
JPP-16.3-012725	Q1206-05	FE052145.D	01/30/25

COMMENTS:

Form IV

SAMPLE DATA

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Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-20.1-012725	SDG No.:	Q1206
Lab Sample ID:	Q1206-01	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.5 Decanted:
Sample Wt/Vol:	18.22 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FE052144.D	1	01/29/25 08:45	01/30/25 5:58	PB166348

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	47400		356	3210	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	17.5		37 - 130	87%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052144.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:58
Operator : YP\AJ
Sample : Q1206-01
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
JPP-20.1-012725

Integration File: autoint1.e
Quant Time: Jan 30 06:59:22 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.247	1740111	17.471 ug/ml
Target Compounds			

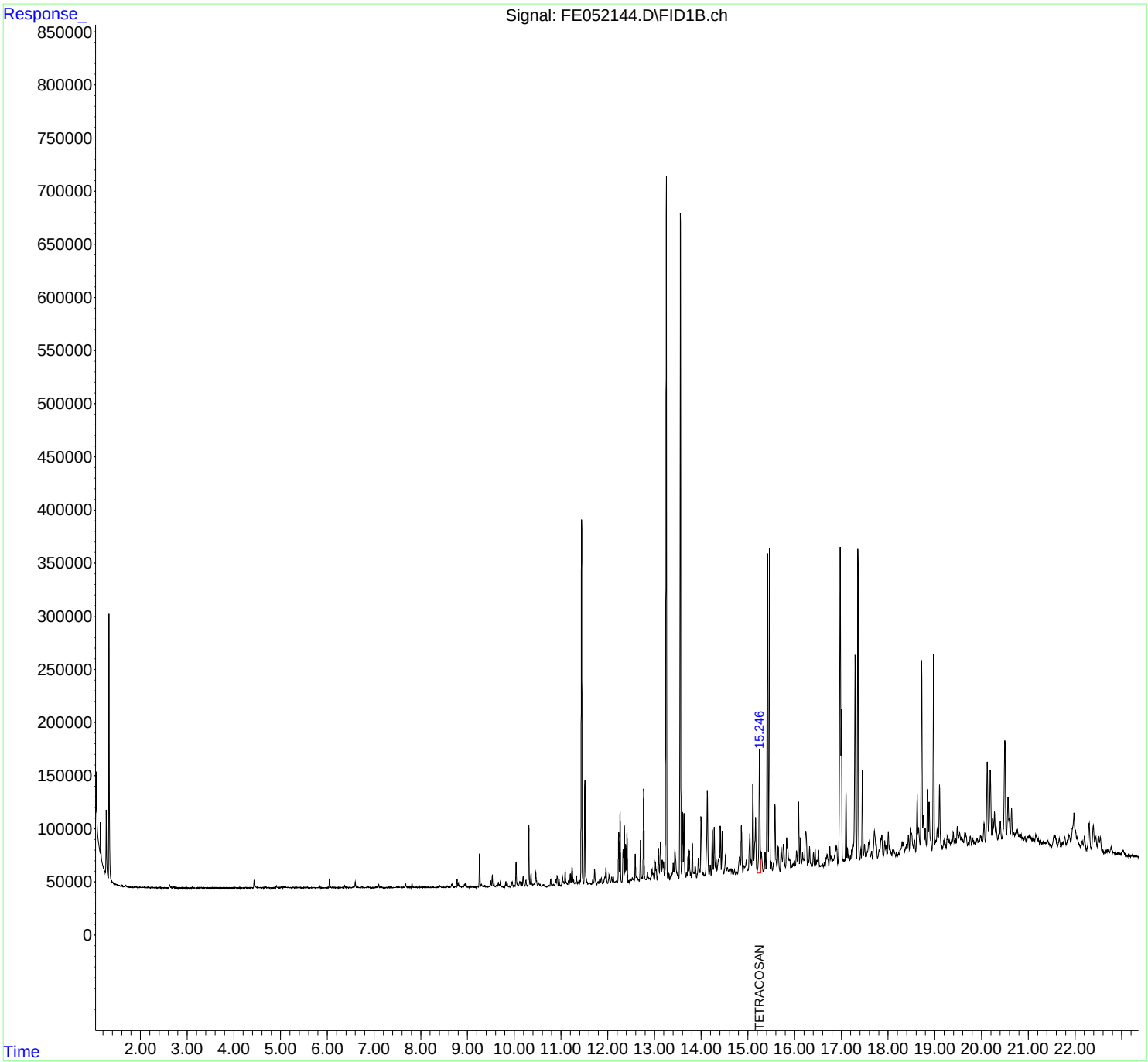
(f)=RT Delta > 1/2 Window (m)=manual int.

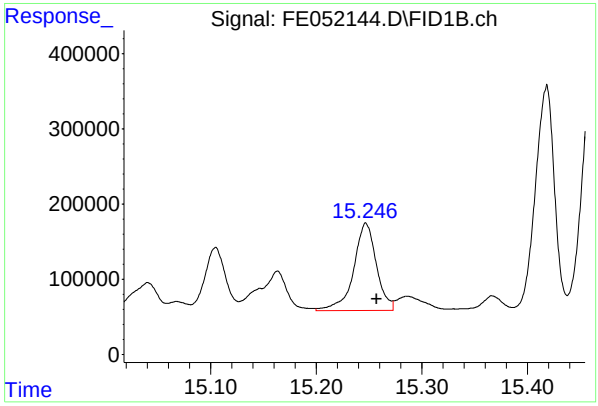
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052144.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:58
Operator : YP\AJ
Sample : Q1206-01
Misc :
ALS Vial : 28 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
JPP-20.1-012725

Integration File: autoint1.e
Quant Time: Jan 30 06:59:22 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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.: 15.247 min
Delta R.T.: -0.010 mi
Response: 1740111
Conc: 17.47 ug/m

Instrument :
FID_E
ClientSampleId :
JPP-20.1-012725

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052144.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:58
Sample : Q1206-01
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.683	4.662	4.720	VV	614	12531	0.17%	0.016%
2	4.750	4.720	4.768	VV	370	7265	0.10%	0.009%
3	4.774	4.768	4.778	VV	268	1168	0.02%	0.001%
4	4.781	4.778	4.799	VV	223	2175	0.03%	0.003%
5	4.823	4.799	4.830	VV	248	3551	0.05%	0.004%
6	4.858	4.830	4.887	VV	360	8951	0.12%	0.011%
7	4.911	4.887	4.938	VV	1388	21550	0.28%	0.027%
8	4.951	4.938	4.969	VV	565	8210	0.11%	0.010%
9	4.976	4.969	4.980	VV	425	2386	0.03%	0.003%
10	4.984	4.980	4.990	VV	399	2225	0.03%	0.003%
11	5.015	4.990	5.032	VV	559	10720	0.14%	0.013%
12	5.066	5.032	5.085	VV	1508	24906	0.33%	0.031%
13	5.091	5.085	5.126	VV	776	14124	0.19%	0.018%
14	5.132	5.126	5.136	VV	453	2239	0.03%	0.003%
15	5.149	5.136	5.196	VV	633	14691	0.19%	0.018%
16	5.220	5.196	5.235	VV	342	4684	0.06%	0.006%
17	5.240	5.235	5.249	VV	222	1281	0.02%	0.002%
18	5.274	5.249	5.306	VV	441	9028	0.12%	0.011%
19	5.312	5.306	5.349	VV	342	5195	0.07%	0.006%
20	5.367	5.349	5.384	VV	284	3337	0.04%	0.004%
21	5.397	5.384	5.405	VV	301	2834	0.04%	0.004%
22	5.409	5.405	5.420	VV	239	1918	0.03%	0.002%
23	5.428	5.420	5.449	VV	242	3483	0.05%	0.004%
24	5.457	5.449	5.474	VV	244	2561	0.03%	0.003%
25	5.493	5.474	5.514	VV	316	5187	0.07%	0.006%
26	5.527	5.514	5.540	VV	372	4297	0.06%	0.005%
27	5.557	5.540	5.609	VV	471	9687	0.13%	0.012%
28	5.611	5.609	5.629	VV	179	1350	0.02%	0.002%
29	5.643	5.629	5.647	VV	153	1321	0.02%	0.002%
30	5.652	5.647	5.670	VV	179	2330	0.03%	0.003%
31	5.678	5.670	5.695	VV	243	2649	0.04%	0.003%
32	5.711	5.695	5.730	VV	374	5195	0.07%	0.006%
33	5.736	5.730	5.751	VV	191	1535	0.02%	0.002%
34	5.758	5.751	5.762	VV	119	546	0.01%	0.001%
35	5.767	5.762	5.774	VV	157	816	0.01%	0.001%
36	5.779	5.774	5.790	VV	151	1111	0.01%	0.001%

rteres

37	5.798	5.790	5.807	VV	200	1129	0.01%	0.001%
38	5.829	5.807	5.859	VV	2222	24343	0.32%	0.030%
39	5.862	5.859	5.887	VV	351	3596	0.05%	0.004%
40	5.896	5.887	5.925	VV	289	4258	0.06%	0.005%
41	5.929	5.925	5.932	VV	71	267	0.00%	0.000%
42	5.944	5.932	5.949	VV	160	812	0.01%	0.001%
43	5.961	5.949	5.965	VV	109	682	0.01%	0.001%
44	5.971	5.965	5.977	VV	131	734	0.01%	0.001%
45	5.984	5.977	6.000	VV	123	821	0.01%	0.001%
46	6.020	6.000	6.030	PV	422	3646	0.05%	0.005%
47	6.047	6.030	6.120	VV	8646	91553	1.21%	0.114%
48	6.136	6.120	6.186	VV	231	5432	0.07%	0.007%
49	6.196	6.186	6.207	VV	221	2306	0.03%	0.003%
50	6.219	6.207	6.223	VV	229	1926	0.03%	0.002%
51	6.228	6.223	6.252	VV	453	4397	0.06%	0.005%
52	6.259	6.252	6.282	VV	196	2832	0.04%	0.004%
53	6.306	6.282	6.311	VV	314	3548	0.05%	0.004%
54	6.317	6.311	6.325	VV	272	2506	0.03%	0.003%
55	6.332	6.325	6.356	VV	437	5279	0.07%	0.007%
56	6.373	6.356	6.424	VV	1579	23597	0.31%	0.029%
57	6.435	6.424	6.455	VV	309	4416	0.06%	0.006%
58	6.468	6.455	6.482	VV	348	4093	0.05%	0.005%
59	6.500	6.482	6.519	VV	302	4464	0.06%	0.006%
60	6.555	6.519	6.574	VV	842	14450	0.19%	0.018%
61	6.599	6.574	6.637	VV	5560	65538	0.87%	0.082%
62	6.644	6.637	6.692	VV	501	10183	0.13%	0.013%
63	6.699	6.692	6.709	VV	255	2157	0.03%	0.003%
64	6.737	6.709	6.767	VV	1382	17856	0.24%	0.022%
65	6.774	6.767	6.807	VV	272	5118	0.07%	0.006%
66	6.816	6.807	6.829	VV	307	2938	0.04%	0.004%
67	6.836	6.829	6.845	VV	267	2105	0.03%	0.003%
68	6.874	6.845	6.917	VV	1345	20768	0.27%	0.026%
69	6.926	6.917	6.947	VV	335	4050	0.05%	0.005%
70	6.958	6.947	6.980	VV	256	2983	0.04%	0.004%
71	6.986	6.980	7.001	VV	140	1070	0.01%	0.001%
72	7.031	7.001	7.047	VV	649	8792	0.12%	0.011%
73	7.052	7.047	7.080	VV	410	5190	0.07%	0.006%
74	7.102	7.080	7.128	VV	2992	30784	0.41%	0.038%
75	7.132	7.128	7.136	VV	303	1275	0.02%	0.002%
76	7.142	7.136	7.152	VV	231	2044	0.03%	0.003%
77	7.179	7.152	7.222	VV	385	8807	0.12%	0.011%
78	7.253	7.222	7.277	VV	281	4602	0.06%	0.006%
79	7.325	7.277	7.350	VV	335	7392	0.10%	0.009%
80	7.375	7.350	7.401	VV	513	6659	0.09%	0.008%
81	7.407	7.401	7.410	VV	144	462	0.01%	0.001%
82	7.449	7.410	7.467	VV	287	5045	0.07%	0.006%
83	7.487	7.467	7.504	VV	1098	12485	0.17%	0.016%
84	7.518	7.504	7.540	VV	572	8664	0.11%	0.011%
85	7.551	7.540	7.562	VV	483	4801	0.06%	0.006%
86	7.568	7.562	7.592	VV	365	5727	0.08%	0.007%
87	7.597	7.592	7.622	VV	342	5271	0.07%	0.007%
88	7.628	7.622	7.654	VV	297	4058	0.05%	0.005%
89	7.677	7.654	7.718	VV	3249	46667	0.62%	0.058%

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90	7.721	7.718	7.727	VV	358	1705	0.02%	0.002%
91	7.745	7.727	7.765	VV	622	9886	0.13%	0.012%
92	7.769	7.765	7.789	VV	226	1874	0.02%	0.002%
93	7.813	7.789	7.852	VV	4072	47171	0.62%	0.059%
94	7.860	7.852	7.887	VV	342	4401	0.06%	0.005%
95	7.897	7.887	7.906	VV	204	1702	0.02%	0.002%
96	7.925	7.906	7.942	VV	238	4071	0.05%	0.005%
97	7.964	7.942	8.002	VV	1085	14108	0.19%	0.018%
98	8.005	8.002	8.010	VV	190	646	0.01%	0.001%
99	8.034	8.010	8.067	VV	410	7645	0.10%	0.010%
100	8.070	8.067	8.079	VV	255	1279	0.02%	0.002%
101	8.090	8.079	8.108	VV	332	3726	0.05%	0.005%
102	8.119	8.108	8.124	VV	266	2097	0.03%	0.003%
103	8.133	8.124	8.194	VV	313	7739	0.10%	0.010%
104	8.197	8.194	8.202	VV	146	464	0.01%	0.001%
105	8.232	8.202	8.239	VV	145	1650	0.02%	0.002%
106	8.257	8.239	8.298	PV	341	5685	0.08%	0.007%
107	8.316	8.298	8.340	PV	306	4097	0.05%	0.005%
108	8.371	8.340	8.384	VV	495	8887	0.12%	0.011%
109	8.404	8.384	8.459	VV	1695	32308	0.43%	0.040%
110	8.465	8.459	8.482	VV	319	3225	0.04%	0.004%
111	8.488	8.482	8.519	VV	351	4592	0.06%	0.006%
112	8.562	8.519	8.599	VV	1573	27259	0.36%	0.034%
113	8.607	8.599	8.625	VV	406	4651	0.06%	0.006%
114	8.631	8.625	8.640	VV	224	1603	0.02%	0.002%
115	8.660	8.640	8.668	VV	2537	25353	0.34%	0.032%
116	8.673	8.668	8.699	VV	2263	21959	0.29%	0.027%
117	8.703	8.699	8.710	VV	271	1466	0.02%	0.002%
118	8.733	8.710	8.754	VV	1091	15498	0.20%	0.019%
119	8.779	8.754	8.794	VV	7354	77937	1.03%	0.097%
120	8.806	8.794	8.822	VV	4190	43587	0.58%	0.054%
121	8.835	8.822	8.876	VV	2122	30828	0.41%	0.038%
122	8.896	8.876	8.911	VV	806	10246	0.14%	0.013%
123	8.940	8.911	8.949	VV	2785	40276	0.53%	0.050%
124	8.966	8.949	9.007	VV	4099	65719	0.87%	0.082%
125	9.015	9.007	9.036	VV	604	7062	0.09%	0.009%
126	9.054	9.036	9.080	VV	1612	18397	0.24%	0.023%
127	9.101	9.080	9.167	VV	786	20422	0.27%	0.025%
128	9.174	9.167	9.188	VV	257	2182	0.03%	0.003%
129	9.209	9.188	9.232	VV	1437	17437	0.23%	0.022%
130	9.260	9.232	9.284	VV	31685	313905	4.15%	0.391%
131	9.300	9.284	9.349	VV	2936	53083	0.70%	0.066%
132	9.370	9.349	9.395	VV	1672	26679	0.35%	0.033%
133	9.414	9.395	9.432	VV	896	15419	0.20%	0.019%
134	9.444	9.432	9.452	VV	537	5332	0.07%	0.007%
135	9.468	9.452	9.475	VV	741	9313	0.12%	0.012%
136	9.499	9.475	9.515	VV	5864	73976	0.98%	0.092%
137	9.531	9.515	9.553	VV	10954	117060	1.55%	0.146%
138	9.568	9.553	9.601	VV	2354	36469	0.48%	0.045%
139	9.619	9.601	9.637	VV	1553	20141	0.27%	0.025%
140	9.662	9.637	9.676	VV	4468	58320	0.77%	0.073%
141	9.684	9.676	9.692	VV	2096	18127	0.24%	0.023%

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142	9.705	9.692	9.754	VV	4906	58180	0.77%	0.073%
143	9.761	9.754	9.785	VV	227	2914	0.04%	0.004%
144	9.821	9.785	9.838	VV	5049	60631	0.80%	0.076%
145	9.852	9.838	9.885	VV	3904	42999	0.57%	0.054%
146	9.905	9.885	9.920	VV	776	9033	0.12%	0.011%
147	9.958	9.920	9.979	VV	5149	78129	1.03%	0.097%
148	9.995	9.979	10.016	VV	1272	20995	0.28%	0.026%
149	10.041	10.016	10.090	VV	23540	276912	3.66%	0.345%
150	10.120	10.090	10.145	VV	5136	90020	1.19%	0.112%
151	10.160	10.145	10.173	VV	4548	47490	0.63%	0.059%
152	10.191	10.173	10.228	VV	9952	147366	1.95%	0.184%
153	10.252	10.228	10.288	VV	6279	96890	1.28%	0.121%
154	10.311	10.288	10.339	VV	57472	603893	7.98%	0.753%
155	10.360	10.339	10.399	VV	12131	188775	2.50%	0.235%
156	10.406	10.399	10.415	VV	2289	21168	0.28%	0.026%
157	10.429	10.415	10.440	VV	3074	39326	0.52%	0.049%
158	10.459	10.440	10.505	VV	13684	222690	2.94%	0.278%
159	10.524	10.505	10.547	VV	3522	59962	0.79%	0.075%
160	10.554	10.547	10.581	VV	2199	25546	0.34%	0.032%
161	10.618	10.581	10.696	VV	1797	53012	0.70%	0.066%
162	10.722	10.696	10.732	PV	747	9645	0.13%	0.012%
163	10.745	10.732	10.757	VV	849	9824	0.13%	0.012%
164	10.781	10.757	10.807	VV	6923	86439	1.14%	0.108%
165	10.835	10.807	10.847	VV	1960	31138	0.41%	0.039%
166	10.856	10.847	10.867	VV	1557	16833	0.22%	0.021%
167	10.887	10.867	10.899	VV	6212	74632	0.99%	0.093%
168	10.917	10.899	10.940	VV	9958	135608	1.79%	0.169%
169	10.958	10.940	10.992	VV	7013	85599	1.13%	0.107%
170	11.033	10.992	11.051	VV	8394	126094	1.67%	0.157%
171	11.057	11.051	11.069	VV	4066	37720	0.50%	0.047%
172	11.088	11.069	11.143	VV	15163	235866	3.12%	0.294%
173	11.165	11.143	11.182	VV	4847	74753	0.99%	0.093%
174	11.202	11.182	11.216	VV	11429	135234	1.79%	0.169%
175	11.236	11.216	11.260	VV	17230	286503	3.79%	0.357%
176	11.268	11.260	11.290	VV	5629	66872	0.88%	0.083%
177	11.307	11.290	11.314	VV	2813	36141	0.48%	0.045%
178	11.333	11.314	11.350	VV	8349	105284	1.39%	0.131%
179	11.362	11.350	11.389	VV	3365	56059	0.74%	0.070%
180	11.406	11.389	11.415	VV	4681	49291	0.65%	0.061%
181	11.441	11.415	11.488	VV	343664	3613005	47.77%	4.506%
182	11.513	11.488	11.576	VV	98579	1098125	14.52%	1.369%
183	11.609	11.576	11.633	VV	2160	55159	0.73%	0.069%
184	11.645	11.633	11.659	VV	1590	18056	0.24%	0.023%
185	11.681	11.659	11.697	VV	4840	61263	0.81%	0.076%
186	11.717	11.697	11.763	VV	14837	205835	2.72%	0.257%
187	11.793	11.763	11.809	PV	3025	47641	0.63%	0.059%
188	11.832	11.809	11.846	VV	5113	72489	0.96%	0.090%
189	11.861	11.846	11.889	VV	5925	80576	1.07%	0.100%
190	11.965	11.889	11.999	VV	16000	352274	4.66%	0.439%
191	12.028	11.999	12.051	VV	8609	120055	1.59%	0.150%
192	12.086	12.051	12.102	VV	6211	100451	1.33%	0.125%
193	12.123	12.102	12.147	VV	5841	86094	1.14%	0.107%
194	12.162	12.147	12.172	VV	1830	21043	0.28%	0.026%

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195	12.184	12.172	12.202	VV	2531	29681	0.39%	0.037%
196	12.235	12.202	12.250	VV	48681	524231	6.93%	0.654%
197	12.266	12.250	12.301	VV	67102	709281	9.38%	0.885%
198	12.331	12.301	12.339	VV	31835	316542	4.19%	0.395%
199	12.352	12.339	12.368	VV	54091	578679	7.65%	0.722%
200	12.383	12.368	12.397	VV	36400	391389	5.17%	0.488%
201	12.414	12.397	12.438	VV	47589	559405	7.40%	0.698%
202	12.450	12.438	12.462	VV	1786	15562	0.21%	0.019%
203	12.484	12.462	12.501	VV	3739	51352	0.68%	0.064%
204	12.525	12.501	12.540	VV	4326	70474	0.93%	0.088%
205	12.548	12.540	12.565	VV	2856	32892	0.43%	0.041%
206	12.589	12.565	12.610	VV	26676	306421	4.05%	0.382%
207	12.621	12.610	12.654	VV	5527	99540	1.32%	0.124%
208	12.658	12.654	12.674	VV	1961	18764	0.25%	0.023%
209	12.699	12.674	12.722	VV	39234	441928	5.84%	0.551%
210	12.733	12.722	12.743	VV	4108	43593	0.58%	0.054%
211	12.770	12.743	12.822	VV	87221	1029890	13.62%	1.284%
212	12.847	12.822	12.889	VV	8391	166143	2.20%	0.207%
213	12.901	12.889	12.916	VV	2733	37287	0.49%	0.047%
214	12.950	12.916	12.963	VV	10581	164278	2.17%	0.205%
215	12.972	12.963	12.997	VV	6883	82137	1.09%	0.102%
216	13.019	12.997	13.059	VV	17233	286024	3.78%	0.357%
217	13.084	13.059	13.109	VV	30295	418904	5.54%	0.522%
218	13.131	13.109	13.149	VV	36438	477906	6.32%	0.596%
219	13.166	13.149	13.182	VV	18949	299898	3.97%	0.374%
220	13.195	13.182	13.213	VV	16830	223298	2.95%	0.278%
221	13.257	13.213	13.294	VV	662771	7563254	100.00%	9.432%
222	13.310	13.294	13.329	VV	5778	57075	0.75%	0.071%
223	13.345	13.329	13.357	VV	3420	41623	0.55%	0.052%
224	13.400	13.357	13.416	VV	15462	270572	3.58%	0.337%
225	13.438	13.416	13.489	VV	26842	594136	7.86%	0.741%
226	13.503	13.489	13.521	VV	4659	59541	0.79%	0.074%
227	13.555	13.521	13.582	VV	624747	6846455	90.52%	8.538%
228	13.602	13.582	13.616	VV	62640	677176	8.95%	0.844%
229	13.630	13.616	13.661	VV	61495	682235	9.02%	0.851%
230	13.682	13.661	13.697	VV	5215	76792	1.02%	0.096%
231	13.716	13.697	13.730	VV	20592	239323	3.16%	0.298%
232	13.746	13.730	13.766	VV	25993	307128	4.06%	0.383%
233	13.773	13.766	13.788	VV	4398	40793	0.54%	0.051%
234	13.809	13.788	13.833	VV	33094	388910	5.14%	0.485%
235	13.844	13.833	13.853	VV	5510	61120	0.81%	0.076%
236	13.873	13.853	13.902	VV	10564	184607	2.44%	0.230%
237	13.938	13.902	13.975	PV	18772	356347	4.71%	0.444%
238	13.996	13.975	14.026	VV	57312	841217	11.12%	1.049%
239	14.039	14.026	14.063	VV	4437	66116	0.87%	0.082%
240	14.130	14.063	14.170	VV	81440	1406603	18.60%	1.754%
241	14.193	14.170	14.211	VV	11192	143188	1.89%	0.179%
242	14.237	14.211	14.259	VV	44416	581086	7.68%	0.725%
243	14.278	14.259	14.299	VV	46573	577304	7.63%	0.720%
244	14.318	14.299	14.336	VV	16466	253900	3.36%	0.317%
245	14.366	14.336	14.374	VV	15502	249358	3.30%	0.311%
246	14.386	14.374	14.392	VV	18954	186614	2.47%	0.233%

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247	14.408	14.392	14.428	VV	46842	579735	7.67%	0.723%
248	14.447	14.428	14.485	VV	42059	551859	7.30%	0.688%
249	14.518	14.485	14.538	VV	18527	291023	3.85%	0.363%
250	14.561	14.538	14.585	VV	7192	155315	2.05%	0.194%
251	14.604	14.585	14.614	VV	6064	83075	1.10%	0.104%
252	14.628	14.614	14.644	VV	5759	82537	1.09%	0.103%
253	14.655	14.644	14.672	VV	5241	59624	0.79%	0.074%
254	14.683	14.672	14.695	VV	2210	21801	0.29%	0.027%
255	14.711	14.695	14.734	VV	4482	55766	0.74%	0.070%
256	14.764	14.734	14.778	VV	2337	35275	0.47%	0.044%
257	14.826	14.778	14.843	VV	16004	390651	5.17%	0.487%
258	14.862	14.843	14.891	VV	46211	585750	7.74%	0.730%
259	14.914	14.891	14.932	VV	8177	147173	1.95%	0.184%
260	14.964	14.932	14.996	VV	12873	290852	3.85%	0.363%
261	15.040	14.996	15.059	VV	37932	668747	8.84%	0.834%
262	15.068	15.059	15.082	VV	12588	146723	1.94%	0.183%
263	15.105	15.082	15.127	VV	84726	1150637	15.21%	1.435%
264	15.163	15.127	15.200	VV	52685	985573	13.03%	1.229%
265	15.247	15.200	15.273	VV	116490	1738844	22.99%	2.168%
266	15.286	15.273	15.325	VV	18807	342985	4.53%	0.428%
267	15.367	15.325	15.386	VV	19032	263650	3.49%	0.329%
268	15.418	15.386	15.438	VV	299786	3724924	49.25%	4.645%
269	15.460	15.438	15.484	VV	298942	3360332	44.43%	4.191%
270	15.499	15.484	15.525	VV	9580	129864	1.72%	0.162%
271	15.546	15.525	15.552	VV	7761	81126	1.07%	0.101%
272	15.578	15.552	15.618	VV	63146	995296	13.16%	1.241%
273	15.648	15.618	15.686	VV	23049	394387	5.21%	0.492%
274	15.710	15.686	15.737	PV	23007	374438	4.95%	0.467%
275	15.757	15.737	15.807	VV	25060	548314	7.25%	0.684%
276	15.828	15.807	15.889	VV	31056	824988	10.91%	1.029%
277	15.893	15.889	15.915	VV	10244	108976	1.44%	0.136%
278	15.930	15.915	15.944	VV	3458	50424	0.67%	0.063%
279	15.963	15.944	15.972	VV	5626	74331	0.98%	0.093%
280	15.990	15.972	16.014	VV	8395	158096	2.09%	0.197%
281	16.040	16.014	16.060	VV	17382	295544	3.91%	0.369%
282	16.082	16.060	16.103	VV	63553	791356	10.46%	0.987%
283	16.120	16.103	16.154	VV	28492	428186	5.66%	0.534%
284	16.168	16.154	16.188	VV	15635	218650	2.89%	0.273%
285	16.192	16.188	16.200	VV	8872	63589	0.84%	0.079%
286	16.239	16.200	16.275	VV	35031	911700	12.05%	1.137%
287	16.319	16.275	16.377	VV	20515	416753	5.51%	0.520%
288	16.401	16.377	16.418	VV	14532	180399	2.39%	0.225%
289	16.437	16.418	16.456	VV	18117	222576	2.94%	0.278%
290	16.471	16.456	16.478	VV	6649	67224	0.89%	0.084%
291	16.508	16.478	16.539	VV	16119	258720	3.42%	0.323%
292	16.543	16.539	16.557	VV	1068	8725	0.12%	0.011%
293	16.582	16.557	16.597	VV	1852	25897	0.34%	0.032%
294	16.606	16.597	16.618	VV	1723	11115	0.15%	0.014%
295	16.634	16.618	16.652	VV	2516	26528	0.35%	0.033%
296	16.697	16.652	16.732	VV	10890	281215	3.72%	0.351%
297	16.753	16.732	16.770	PV	18024	221766	2.93%	0.277%
298	16.781	16.770	16.797	VV	8468	109499	1.45%	0.137%
299	16.807	16.797	16.820	VV	5610	70091	0.93%	0.087%

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300	16.875	16.820	16.887	VV	17470	386206	5.11%	0.482%
301	16.899	16.887	16.923	VV	17022	225465	2.98%	0.281%
302	16.975	16.923	16.992	VV	298451	4469404	59.09%	5.574%
303	17.000	16.992	17.039	VV	146044	1398504	18.49%	1.744%
304	17.043	17.039	17.062	VV	3341	35140	0.46%	0.044%
305	17.099	17.062	17.119	VV	67103	789534	10.44%	0.985%
306	17.132	17.119	17.175	VV	13233	212002	2.80%	0.264%
307	17.190	17.175	17.201	VV	5527	54005	0.71%	0.067%
308	17.219	17.201	17.234	VV	11023	141676	1.87%	0.177%
309	17.294	17.234	17.320	VV	193683	2883655	38.13%	3.596%
310	17.354	17.320	17.392	VV	292535	3503924	46.33%	4.370%
311	17.414	17.392	17.427	PV	8738	88707	1.17%	0.111%

Sum of corrected areas: 80186626

FE012325.M Thu Jan 30 07:42:31 2025

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

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/27/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/28/25
Client Sample ID:	JPP-16.3-012725	SDG No.:	Q1206
Lab Sample ID:	Q1206-05	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	85.9 Decanted:
Sample Wt/Vol:	23.1 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FE052145.D	1	01/29/25 08:45	01/30/25 6:28	PB166348

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	39800		279	2520	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	14.1		37 - 130	71%	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_E\Data\FE012925\
Data File : FE052145.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 06:28
Operator : YP\AJ
Sample : Q1206-05
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
JPP-16.3-012725

Integration File: autoint1.e
Quant Time: Jan 30 06:59:31 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.260	1406969	14.126 ug/ml
Target Compounds			

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

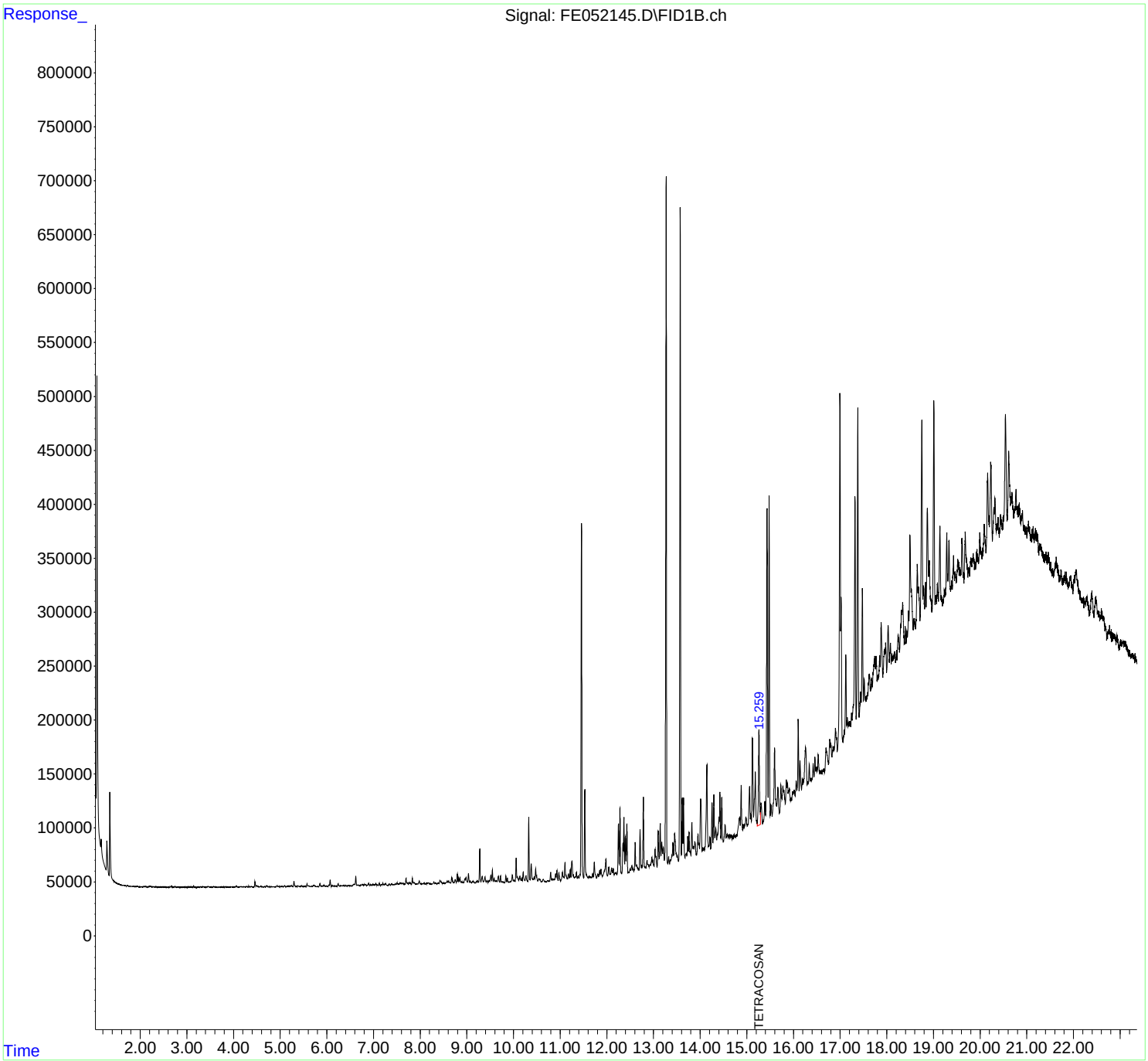
Quantitation Report (QT Reviewed)

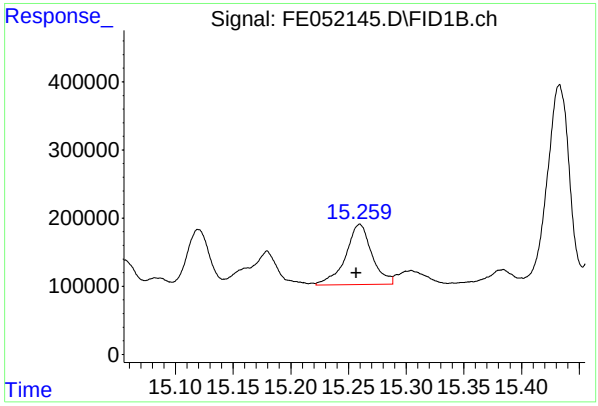
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052145.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 06:28
Operator : YP\AJ
Sample : Q1206-05
Misc :
ALS Vial : 29 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
JPP-16.3-012725

Integration File: autoint1.e
Quant Time: Jan 30 06:59:31 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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.: 15.260 min
Delta R.T.: 0.003 mi
Response: 1406969
Conc: 14.13 ug/m

Instrument :
FID_E
ClientSampleId :
JPP-16.3-012725

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052145.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 06:28
Sample : Q1206-05
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.763	4.748	4.783	VV	485	6803	0.09%	0.008%
2	4.796	4.783	4.816	VV	400	5753	0.08%	0.007%
3	4.839	4.816	4.860	VV	402	5637	0.08%	0.007%
4	4.885	4.860	4.905	VV	372	6333	0.09%	0.007%
5	4.932	4.905	4.955	VV	1334	19422	0.27%	0.023%
6	4.960	4.955	4.965	VV	368	1817	0.02%	0.002%
7	4.978	4.965	4.995	VV	538	6386	0.09%	0.007%
8	5.010	4.995	5.026	VV	599	7491	0.10%	0.009%
9	5.043	5.026	5.069	VV	432	9032	0.12%	0.011%
10	5.091	5.069	5.124	VV	1381	21739	0.30%	0.025%
11	5.150	5.124	5.163	VV	853	12680	0.17%	0.015%
12	5.175	5.163	5.189	VV	852	10740	0.15%	0.013%
13	5.208	5.189	5.223	VV	1019	15152	0.21%	0.018%
14	5.239	5.223	5.256	VV	1045	15138	0.21%	0.018%
15	5.261	5.256	5.275	VV	479	3903	0.05%	0.005%
16	5.295	5.275	5.328	VV	5254	62627	0.86%	0.073%
17	5.333	5.328	5.359	VV	830	10883	0.15%	0.013%
18	5.379	5.359	5.405	VV	975	16283	0.22%	0.019%
19	5.424	5.405	5.436	VV	685	9418	0.13%	0.011%
20	5.451	5.436	5.484	VV	1199	18766	0.26%	0.022%
21	5.526	5.484	5.538	VV	580	14859	0.20%	0.017%
22	5.545	5.538	5.557	VV	638	5089	0.07%	0.006%
23	5.575	5.557	5.601	VV	2849	34993	0.48%	0.041%
24	5.614	5.601	5.653	VV	981	17110	0.23%	0.020%
25	5.683	5.653	5.694	VV	645	10475	0.14%	0.012%
26	5.730	5.694	5.752	VV	1447	30907	0.42%	0.036%
27	5.760	5.752	5.777	VV	543	5014	0.07%	0.006%
28	5.803	5.777	5.817	PV	443	5400	0.07%	0.006%
29	5.851	5.817	5.886	VV	2858	43253	0.59%	0.051%
30	5.892	5.886	5.905	VV	757	7592	0.10%	0.009%
31	5.935	5.905	5.956	VV	1291	26578	0.36%	0.031%
32	5.961	5.956	5.978	VV	583	5979	0.08%	0.007%
33	5.990	5.978	6.019	VV	566	7819	0.11%	0.009%
34	6.040	6.019	6.054	PV	1514	17411	0.24%	0.020%
35	6.070	6.054	6.098	VV	5948	71690	0.98%	0.084%
36	6.115	6.098	6.146	VV	1184	16053	0.22%	0.019%

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37	6.157	6.146	6.174	VV	632	7616	0.10%	0.009%
38	6.184	6.174	6.190	VV	518	4202	0.06%	0.005%
39	6.198	6.190	6.212	VV	528	5028	0.07%	0.006%
40	6.242	6.212	6.278	VV	2809	40649	0.56%	0.048%
41	6.291	6.278	6.305	VV	607	7347	0.10%	0.009%
42	6.329	6.305	6.336	VV	587	10022	0.14%	0.012%
43	6.358	6.336	6.383	VV	1009	17189	0.24%	0.020%
44	6.398	6.383	6.412	VV	923	9709	0.13%	0.011%
45	6.426	6.412	6.439	VV	598	7031	0.10%	0.008%
46	6.470	6.439	6.496	VV	783	18209	0.25%	0.021%
47	6.515	6.496	6.532	VV	833	10993	0.15%	0.013%
48	6.576	6.532	6.588	VV	1639	32455	0.45%	0.038%
49	6.590	6.588	6.602	VV	1618	12454	0.17%	0.015%
50	6.620	6.602	6.648	VV	9316	101216	1.39%	0.119%
51	6.667	6.648	6.682	VV	1202	17478	0.24%	0.020%
52	6.695	6.682	6.708	VV	603	7474	0.10%	0.009%
53	6.727	6.708	6.741	VV	1213	15737	0.22%	0.018%
54	6.757	6.741	6.786	VV	1585	30022	0.41%	0.035%
55	6.798	6.786	6.835	VV	1502	32377	0.44%	0.038%
56	6.840	6.835	6.846	VV	821	4740	0.07%	0.006%
57	6.854	6.846	6.858	VV	709	4740	0.07%	0.006%
58	6.872	6.858	6.880	VV	884	10139	0.14%	0.012%
59	6.894	6.880	6.918	VV	2567	34046	0.47%	0.040%
60	6.939	6.918	6.958	VV	1459	22209	0.30%	0.026%
61	6.987	6.958	7.007	VV	1205	24359	0.33%	0.029%
62	7.050	7.007	7.064	VV	2319	38691	0.53%	0.045%
63	7.069	7.064	7.103	VV	1030	13861	0.19%	0.016%
64	7.122	7.103	7.145	VV	2489	29415	0.40%	0.034%
65	7.164	7.145	7.180	VV	1159	16478	0.23%	0.019%
66	7.201	7.180	7.218	VV	2147	30111	0.41%	0.035%
67	7.256	7.218	7.301	VV	1827	44407	0.61%	0.052%
68	7.336	7.301	7.361	PV	1700	24855	0.34%	0.029%
69	7.386	7.361	7.418	VV	1342	27997	0.38%	0.033%
70	7.439	7.418	7.457	VV	953	16579	0.23%	0.019%
71	7.473	7.457	7.485	VV	1243	15948	0.22%	0.019%
72	7.505	7.485	7.524	VV	2249	33439	0.46%	0.039%
73	7.537	7.524	7.553	VV	1615	22153	0.30%	0.026%
74	7.570	7.553	7.582	VV	2498	30782	0.42%	0.036%
75	7.593	7.582	7.608	VV	1891	24554	0.34%	0.029%
76	7.622	7.608	7.665	VV	1822	42842	0.59%	0.050%
77	7.697	7.665	7.727	VV	6569	94574	1.30%	0.111%
78	7.732	7.727	7.746	VV	1663	15826	0.22%	0.019%
79	7.761	7.746	7.777	VV	2517	31643	0.43%	0.037%
80	7.791	7.777	7.815	VV	2025	31794	0.44%	0.037%
81	7.833	7.815	7.847	VV	6412	66864	0.92%	0.078%
82	7.855	7.847	7.868	VV	2282	24189	0.33%	0.028%
83	7.879	7.868	7.901	VV	2105	28985	0.40%	0.034%
84	7.913	7.901	7.919	VV	1058	10283	0.14%	0.012%
85	7.922	7.919	7.937	VV	909	8568	0.12%	0.010%
86	7.982	7.937	8.004	VV	3795	73604	1.01%	0.086%
87	8.017	8.004	8.029	VV	1120	14214	0.20%	0.017%
88	8.042	8.029	8.062	VV	1078	19011	0.26%	0.022%
89	8.085	8.062	8.102	VV	1515	26386	0.36%	0.031%

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90	8.108	8.102	8.114	VV	822	5770	0.08%	0.007%
91	8.131	8.114	8.145	VV	1505	21508	0.30%	0.025%
92	8.175	8.145	8.204	VV	1697	43808	0.60%	0.051%
93	8.213	8.204	8.247	VV	810	11852	0.16%	0.014%
94	8.294	8.247	8.315	VV	2407	45225	0.62%	0.053%
95	8.328	8.315	8.357	VV	1216	21704	0.30%	0.025%
96	8.376	8.357	8.387	VV	1329	18745	0.26%	0.022%
97	8.388	8.387	8.404	VV	1367	11368	0.16%	0.013%
98	8.424	8.404	8.452	VV	3660	70461	0.97%	0.083%
99	8.460	8.452	8.476	VV	1619	20022	0.27%	0.023%
100	8.481	8.476	8.490	VV	1128	8990	0.12%	0.011%
101	8.506	8.490	8.522	VV	1262	19522	0.27%	0.023%
102	8.552	8.522	8.564	VV	1617	30913	0.42%	0.036%
103	8.581	8.564	8.595	VV	3158	40897	0.56%	0.048%
104	8.611	8.595	8.654	VV	3085	62373	0.86%	0.073%
105	8.676	8.654	8.728	VV	6323	122314	1.68%	0.143%
106	8.749	8.728	8.778	VV	4053	78365	1.08%	0.092%
107	8.797	8.778	8.812	VV	9389	104059	1.43%	0.122%
108	8.824	8.812	8.838	VV	5832	62943	0.86%	0.074%
109	8.853	8.838	8.893	VV	5815	93120	1.28%	0.109%
110	8.913	8.893	8.930	VV	1639	28763	0.39%	0.034%
111	8.958	8.930	8.968	VV	4171	68385	0.94%	0.080%
112	8.984	8.968	9.014	VV	6018	99764	1.37%	0.117%
113	9.036	9.014	9.059	VV	9569	121103	1.66%	0.142%
114	9.072	9.059	9.098	VV	2598	39072	0.54%	0.046%
115	9.121	9.098	9.127	VV	1916	23964	0.33%	0.028%
116	9.133	9.127	9.184	VV	2021	40878	0.56%	0.048%
117	9.224	9.184	9.243	VV	2632	54210	0.74%	0.064%
118	9.278	9.243	9.302	VV	32359	347781	4.77%	0.407%
119	9.330	9.302	9.354	VV	6489	118625	1.63%	0.139%
120	9.389	9.354	9.411	VV	5984	110692	1.52%	0.130%
121	9.431	9.411	9.453	VV	2603	44471	0.61%	0.052%
122	9.479	9.453	9.490	VV	2420	38935	0.53%	0.046%
123	9.516	9.490	9.531	VV	7471	110790	1.52%	0.130%
124	9.548	9.531	9.569	VV	12427	140865	1.93%	0.165%
125	9.586	9.569	9.610	VV	4475	67410	0.92%	0.079%
126	9.615	9.610	9.619	VV	1766	8988	0.12%	0.011%
127	9.635	9.619	9.650	VV	2438	34690	0.48%	0.041%
128	9.677	9.650	9.699	VV	6315	103957	1.43%	0.122%
129	9.722	9.699	9.742	VV	6615	79198	1.09%	0.093%
130	9.756	9.742	9.772	VV	1199	17085	0.23%	0.020%
131	9.780	9.772	9.799	VV	963	8973	0.12%	0.011%
132	9.837	9.799	9.855	VV	6431	77743	1.07%	0.091%
133	9.869	9.855	9.887	VV	4368	46376	0.64%	0.054%
134	9.893	9.887	9.909	VV	683	7760	0.11%	0.009%
135	9.923	9.909	9.935	VV	1062	11538	0.16%	0.014%
136	9.976	9.935	9.996	VV	7381	114296	1.57%	0.134%
137	10.008	9.996	10.027	VV	2299	33915	0.47%	0.040%
138	10.058	10.027	10.075	VV	22959	255755	3.51%	0.300%
139	10.083	10.075	10.110	VV	5435	82531	1.13%	0.097%
140	10.137	10.110	10.161	VV	5907	110873	1.52%	0.130%
141	10.177	10.161	10.190	VV	4265	49521	0.68%	0.058%

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142	10.208	10.190	10.243	VV	9781	147937	2.03%	0.173%
143	10.268	10.243	10.304	VV	6070	108107	1.48%	0.127%
144	10.328	10.304	10.353	VV	60074	618207	8.48%	0.724%
145	10.381	10.353	10.416	VV	17211	279791	3.84%	0.328%
146	10.422	10.416	10.429	VV	2827	20649	0.28%	0.024%
147	10.443	10.429	10.457	VV	5038	64890	0.89%	0.076%
148	10.476	10.457	10.491	VV	12529	152149	2.09%	0.178%
149	10.497	10.491	10.520	VV	5811	57895	0.79%	0.068%
150	10.541	10.520	10.558	VV	3290	51626	0.71%	0.060%
151	10.569	10.558	10.594	VV	2551	33397	0.46%	0.039%
152	10.635	10.594	10.669	VV	2392	53288	0.73%	0.062%
153	10.675	10.669	10.689	VV	501	3468	0.05%	0.004%
154	10.698	10.689	10.708	VV	135	770	0.01%	0.001%
155	10.730	10.708	10.750	PV	1277	18120	0.25%	0.021%
156	10.758	10.750	10.772	VV	835	8550	0.12%	0.010%
157	10.797	10.772	10.818	VV	8534	103347	1.42%	0.121%
158	10.831	10.818	10.842	VV	2404	27762	0.38%	0.033%
159	10.850	10.842	10.862	VV	1900	20110	0.28%	0.024%
160	10.873	10.862	10.885	VV	2161	25158	0.35%	0.029%
161	10.903	10.885	10.915	VV	6948	81608	1.12%	0.096%
162	10.932	10.915	10.955	VV	10006	136001	1.87%	0.159%
163	10.973	10.955	11.009	VV	7593	95059	1.30%	0.111%
164	11.050	11.009	11.066	PV	7914	122281	1.68%	0.143%
165	11.073	11.066	11.084	VV	3756	36381	0.50%	0.043%
166	11.104	11.084	11.123	VV	16690	202817	2.78%	0.238%
167	11.129	11.123	11.158	VV	4759	63420	0.87%	0.074%
168	11.178	11.158	11.197	VV	5847	90247	1.24%	0.106%
169	11.217	11.197	11.231	VV	9898	120222	1.65%	0.141%
170	11.254	11.231	11.275	VV	17522	292687	4.02%	0.343%
171	11.284	11.275	11.301	VV	5042	56489	0.78%	0.066%
172	11.323	11.301	11.330	VV	2765	40020	0.55%	0.047%
173	11.349	11.330	11.366	VV	7050	87562	1.20%	0.103%
174	11.379	11.366	11.405	VV	2898	51891	0.71%	0.061%
175	11.423	11.405	11.429	VV	4665	45836	0.63%	0.054%
176	11.457	11.429	11.505	VV	330031	3464966	47.54%	4.059%
177	11.528	11.505	11.591	VV	83024	964213	13.23%	1.129%
178	11.626	11.591	11.647	VV	2425	52566	0.72%	0.062%
179	11.660	11.647	11.675	VV	1719	20424	0.28%	0.024%
180	11.696	11.675	11.713	VV	4444	56472	0.77%	0.066%
181	11.732	11.713	11.778	VV	15225	215574	2.96%	0.253%
182	11.807	11.778	11.823	PV	3704	56352	0.77%	0.066%
183	11.847	11.823	11.861	VV	6726	92027	1.26%	0.108%
184	11.875	11.861	11.907	VV	7554	106217	1.46%	0.124%
185	11.979	11.907	12.014	VV	16285	364891	5.01%	0.427%
186	12.042	12.014	12.065	VV	8449	112808	1.55%	0.132%
187	12.101	12.065	12.116	VV	6882	106751	1.46%	0.125%
188	12.137	12.116	12.161	VV	6395	93250	1.28%	0.109%
189	12.178	12.161	12.191	VV	2247	28514	0.39%	0.033%
190	12.202	12.191	12.216	VV	2179	20652	0.28%	0.024%
191	12.250	12.216	12.265	VV	47170	501944	6.89%	0.588%
192	12.281	12.265	12.317	VV	61850	668656	9.17%	0.783%
193	12.347	12.317	12.354	VV	28577	275199	3.78%	0.322%
194	12.368	12.354	12.383	VV	52248	557571	7.65%	0.653%

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195	12.398	12.383	12.412	VV	34222	385889	5.29%	0.452%
196	12.429	12.412	12.452	VV	45573	523047	7.18%	0.613%
197	12.464	12.452	12.476	PV	923	7251	0.10%	0.008%
198	12.499	12.476	12.510	VV	3435	38184	0.52%	0.045%
199	12.538	12.510	12.556	VV	6017	104474	1.43%	0.122%
200	12.565	12.556	12.578	VV	2728	28693	0.39%	0.034%
201	12.604	12.578	12.625	VV	27143	314772	4.32%	0.369%
202	12.637	12.625	12.690	VV	5662	117599	1.61%	0.138%
203	12.714	12.690	12.736	VV	37703	413316	5.67%	0.484%
204	12.749	12.736	12.758	VV	4354	45712	0.63%	0.054%
205	12.783	12.758	12.821	VV	67051	768391	10.54%	0.900%
206	12.826	12.821	12.836	VV	1962	14857	0.20%	0.017%
207	12.862	12.836	12.877	VV	7775	110011	1.51%	0.129%
208	12.883	12.877	12.906	VV	4337	54026	0.74%	0.063%
209	12.923	12.906	12.935	VV	3803	50287	0.69%	0.059%
210	12.964	12.935	12.978	VV	10268	160518	2.20%	0.188%
211	12.987	12.978	13.013	VV	7000	85423	1.17%	0.100%
212	13.034	13.013	13.075	VV	16801	286092	3.93%	0.335%
213	13.099	13.075	13.122	PV	33203	424138	5.82%	0.497%
214	13.145	13.122	13.163	VV	39344	518462	7.11%	0.607%
215	13.179	13.163	13.197	VV	21731	323403	4.44%	0.379%
216	13.210	13.197	13.229	VV	16803	226037	3.10%	0.265%
217	13.271	13.229	13.306	VV	638064	7288530	100.00%	8.538%
218	13.325	13.306	13.342	VV	6670	66788	0.92%	0.078%
219	13.358	13.342	13.371	VV	3519	41577	0.57%	0.049%
220	13.414	13.371	13.430	VV	18586	324946	4.46%	0.381%
221	13.452	13.430	13.483	VV	26978	516946	7.09%	0.606%
222	13.489	13.483	13.504	VV	7967	81513	1.12%	0.095%
223	13.513	13.504	13.535	VV	5545	62495	0.86%	0.073%
224	13.571	13.535	13.597	PV	605190	6908092	94.78%	8.092%
225	13.617	13.597	13.632	VV	57650	637529	8.75%	0.747%
226	13.645	13.632	13.676	VV	57410	643635	8.83%	0.754%
227	13.699	13.676	13.712	VV	5058	77568	1.06%	0.091%
228	13.731	13.712	13.746	VV	20302	233298	3.20%	0.273%
229	13.762	13.746	13.781	VV	23795	293350	4.02%	0.344%
230	13.788	13.781	13.802	VV	5170	52303	0.72%	0.061%
231	13.825	13.802	13.845	VV	31995	399455	5.48%	0.468%
232	13.857	13.845	13.867	VV	8997	107592	1.48%	0.126%
233	13.884	13.867	13.918	VV	12959	232657	3.19%	0.273%
234	13.953	13.918	13.967	PV	18763	253388	3.48%	0.297%
235	13.976	13.967	13.990	VV	9833	115638	1.59%	0.135%
236	14.011	13.990	14.041	VV	49833	760285	10.43%	0.891%
237	14.056	14.041	14.080	VV	4519	68079	0.93%	0.080%
238	14.145	14.080	14.176	VV	79491	1353369	18.57%	1.585%
239	14.207	14.176	14.225	VV	11286	168005	2.31%	0.197%
240	14.252	14.225	14.273	VV	42308	529929	7.27%	0.621%
241	14.293	14.273	14.318	VV	48954	610520	8.38%	0.715%
242	14.333	14.318	14.351	VV	17175	242116	3.32%	0.284%
243	14.401	14.351	14.409	VV	26469	514906	7.06%	0.603%
244	14.423	14.409	14.443	VV	49061	617703	8.48%	0.724%
245	14.463	14.443	14.498	VV	43254	537113	7.37%	0.629%
246	14.533	14.498	14.555	VV	16499	290403	3.98%	0.340%

rteres

247	14.576	14.555	14.597	VV	7234	142456	1.95%	0.167%
248	14.616	14.597	14.629	VV	5791	84382	1.16%	0.099%
249	14.647	14.629	14.657	VV	4843	59752	0.82%	0.070%
250	14.670	14.657	14.683	VV	4573	45730	0.63%	0.054%
251	14.699	14.683	14.711	VV	2993	29447	0.40%	0.034%
252	14.728	14.711	14.741	PV	3991	40852	0.56%	0.048%
253	14.756	14.741	14.762	VV	2109	17712	0.24%	0.021%
254	14.782	14.762	14.792	VV	2450	25919	0.36%	0.030%
255	14.845	14.792	14.858	VV	16720	415057	5.69%	0.486%
256	14.877	14.858	14.910	VV	46233	653474	8.97%	0.765%
257	14.928	14.910	14.950	VV	8158	153242	2.10%	0.180%
258	14.979	14.950	15.007	VV	13766	303840	4.17%	0.356%
259	15.018	15.007	15.025	VV	6636	67954	0.93%	0.080%
260	15.056	15.025	15.074	VV	40825	676884	9.29%	0.793%
261	15.083	15.074	15.097	VV	13726	158763	2.18%	0.186%
262	15.120	15.097	15.142	VV	83800	1147197	15.74%	1.344%
263	15.179	15.142	15.222	VV	51317	959587	13.17%	1.124%
264	15.260	15.222	15.288	VV	88694	1405360	19.28%	1.646%
265	15.304	15.288	15.343	VV	19601	319469	4.38%	0.374%
266	15.384	15.343	15.402	PV	18720	270904	3.72%	0.317%
267	15.433	15.402	15.453	VV	289410	3773090	51.77%	4.420%
268	15.476	15.453	15.500	VV	299637	3429823	47.06%	4.018%
269	15.516	15.500	15.541	VV	12032	165530	2.27%	0.194%
270	15.595	15.541	15.640	VV	63063	1238003	16.99%	1.450%
271	15.665	15.640	15.698	VV	24325	399791	5.49%	0.468%
272	15.728	15.698	15.755	PV	24550	410844	5.64%	0.481%
273	15.771	15.755	15.822	VV	21650	570357	7.83%	0.668%
274	15.845	15.822	15.857	VV	24990	338096	4.64%	0.396%
275	15.868	15.857	15.890	VV	20800	321200	4.41%	0.376%
276	15.895	15.890	15.900	VV	13180	73903	1.01%	0.087%
277	15.910	15.900	15.929	VV	14555	181051	2.48%	0.212%
278	15.934	15.929	15.956	VV	3943	45256	0.62%	0.053%
279	15.979	15.956	15.989	VV	8562	109743	1.51%	0.129%
280	16.008	15.989	16.034	VV	9255	189489	2.60%	0.222%
281	16.057	16.034	16.073	VV	15497	230988	3.17%	0.271%
282	16.099	16.073	16.119	VV	71143	856791	11.76%	1.004%
283	16.138	16.119	16.169	VV	31525	479348	6.58%	0.562%
284	16.186	16.169	16.200	VV	13628	167671	2.30%	0.196%
285	16.258	16.200	16.300	VV	39421	1134539	15.57%	1.329%
286	16.306	16.300	16.316	VV	5058	43732	0.60%	0.051%
287	16.336	16.316	16.357	VV	20663	272544	3.74%	0.319%
288	16.363	16.357	16.373	VV	6728	52893	0.73%	0.062%
289	16.378	16.373	16.382	VV	5316	25678	0.35%	0.030%
290	16.418	16.382	16.436	VV	17997	280216	3.84%	0.328%
291	16.458	16.436	16.474	VV	22099	295914	4.06%	0.347%
292	16.480	16.474	16.486	VV	12125	76257	1.05%	0.089%
293	16.488	16.486	16.500	VV	10244	72895	1.00%	0.085%
294	16.528	16.500	16.562	VV	21443	442842	6.08%	0.519%
295	16.568	16.562	16.574	VV	5547	34049	0.47%	0.040%
296	16.581	16.574	16.592	VV	4806	37298	0.51%	0.044%
297	16.604	16.592	16.610	VV	3974	32912	0.45%	0.039%
298	16.632	16.610	16.637	VV	3913	46592	0.64%	0.055%
299	16.647	16.637	16.666	VV	3865	48360	0.66%	0.057%

rteres

300	16.695	16.666	16.701	PV	20895	237146	3.25%	0.278%
301	16.704	16.701	16.747	VV	17588	296386	4.07%	0.347%
302	16.776	16.747	16.788	VV	22938	344848	4.73%	0.404%
303	16.798	16.788	16.825	VV	17561	248613	3.41%	0.291%
304	16.851	16.825	16.871	VV	10014	222460	3.05%	0.261%
305	16.898	16.871	16.917	VV	24797	441598	6.06%	0.517%
306	16.921	16.917	16.938	VV	14425	105329	1.45%	0.123%
307	16.994	16.938	17.010	VV	328466	4881544	66.98%	5.718%
308	17.019	17.010	17.053	VV	137040	1468349	20.15%	1.720%
309	17.055	17.053	17.059	VV	2952	7057	0.10%	0.008%
310	17.088	17.059	17.093	VV	8862	107584	1.48%	0.126%
311	17.119	17.093	17.138	VV	77144	1001082	13.74%	1.173%
312	17.152	17.138	17.169	VV	16728	229092	3.14%	0.268%
313	17.177	17.169	17.180	VV	9794	56082	0.77%	0.066%
314	17.185	17.180	17.197	VV	9223	77455	1.06%	0.091%
315	17.204	17.197	17.228	VV	9387	122802	1.68%	0.144%
316	17.241	17.228	17.255	VV	14220	156278	2.14%	0.183%
317	17.277	17.255	17.282	VV	17565	216716	2.97%	0.254%
318	17.317	17.282	17.341	VV	208981	3009454	41.29%	3.525%
319	17.376	17.341	17.411	VV	288496	3680262	50.49%	4.311%
320	17.437	17.411	17.452	PV	13883	169608	2.33%	0.199%

Sum of corrected areas: 85367112

FE012325.M Thu Jan 30 07:44:53 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: RUTW01

ProjectID: NYCDDC SANTWOBR Brooklyn Bridge BBMCR

Lab Code: CHEM Case No.: Q1206 SAS No.: Q1206 SDG No.: Q1206

Calibration Sequence : FE012325		Test : Diesel Range Organics	
Concentration (PPM)	**Area Count**	**Reference Factor**	**File ID**
1000	100840417	100840	FE052027.D
500	49711032	99422	FE052028.D
200	20907011	104535	FE052029.D
100	11272495	112725	FE052030.D
50	5669298	113386	FE052031.D
AVG RF : 106182	**% RSD : 6.169**		**AVG RT : 15.2554**

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052027.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 22:06
Operator : YP\AJ
Sample : 100 TRPH STD
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
100 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:18 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 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...	15.260	9326838	100.174 ug/ml
	Target Compounds			
1)	N-OCTANE	2.414	8352750	103.369 ug/ml
2)	N-DECANE	4.910	8964173	103.553 ug/ml
3)	N-DODECANE	7.039	9720116	103.116 ug/ml
4)	N-TETRADECANE	8.845	9800969	102.624 ug/ml
5)	N-HEXADECANE	10.439	10191868	102.144 ug/ml
6)	N-OCTADECANE	11.873	10670149	101.681 ug/ml
7)	N-EICOSANE	13.174	10511987	101.149 ug/ml
8)	N-DOCOSANE	14.367	10414135	100.677 ug/ml
10)	N-TETRACOSANE	15.465	10358861	100.274 ug/ml
11)	N-HEXACOSANE	16.482	10187153	100.078 ug/ml
12)	N-OCTACOSANE	17.429	10021006	99.509 ug/ml
13)	N-TRIACONTANE	18.313	9878203	99.283 ug/ml
14)	N-DOTRIACONTANE	19.143	9582276	99.145 ug/ml
15)	N-TETRATRIACONTANE	19.925	8712926	100.310 ug/ml
16)	N-HEXATRIACONTANE	20.662	7584514	101.793 ug/ml
17)	N-OCTATRIACONTANE	21.449	7106830	103.214 ug/ml
18)	N-TETRACONTANE	22.450	7068311	105.034 ug/ml

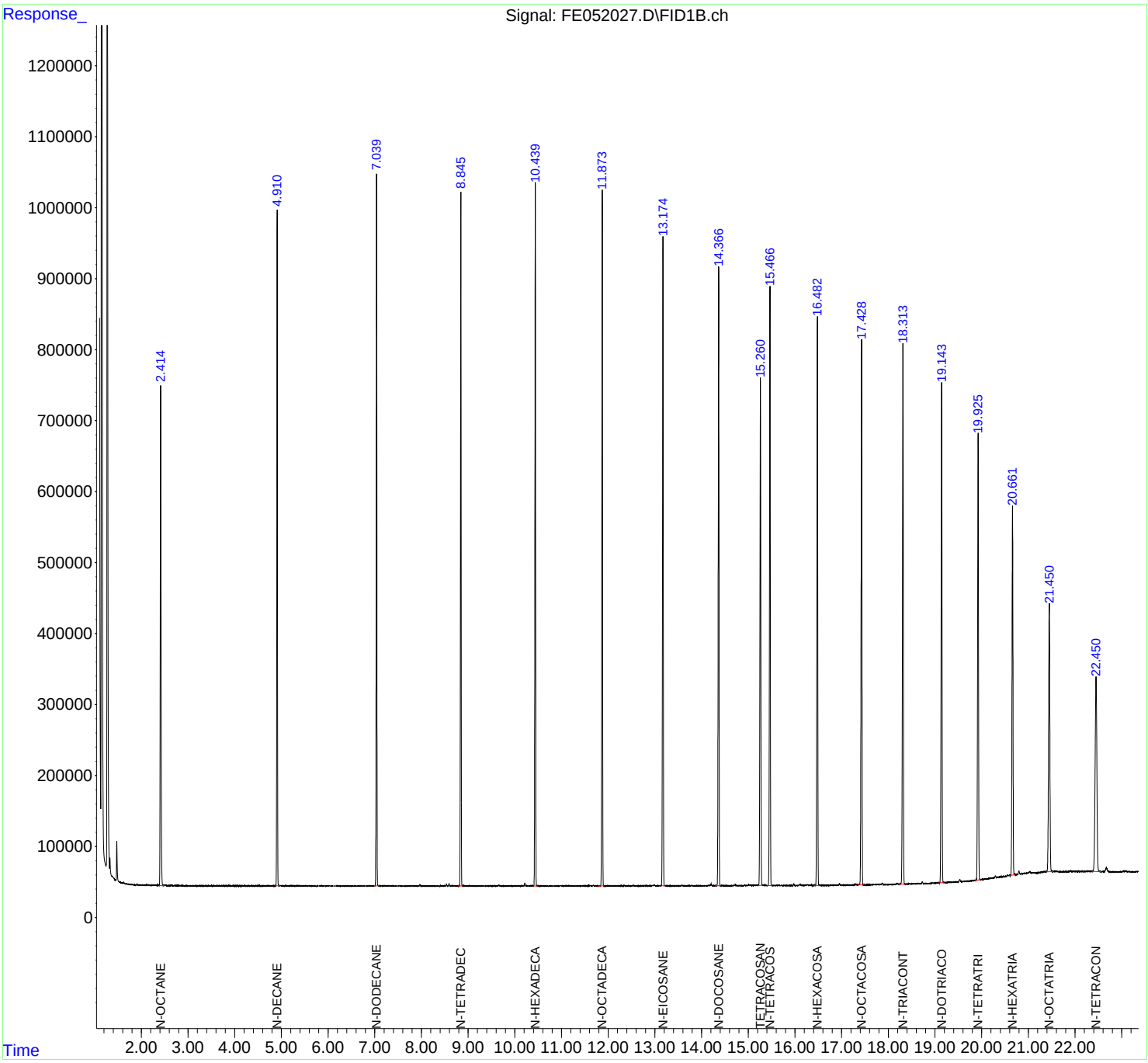
(f)=RT Delta > 1/2 Window (m)=manual int.

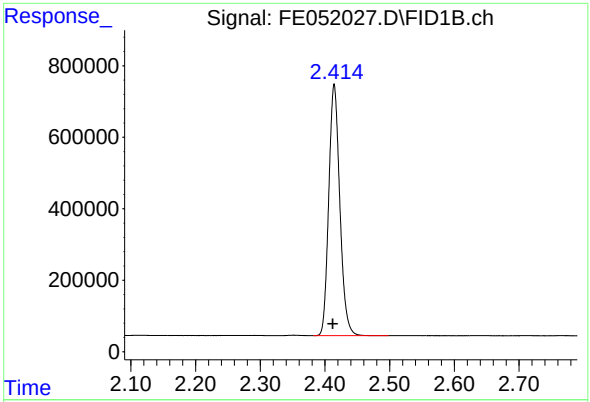
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052027.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 22:06
Operator : YP\AJ
Sample : 100 TRPH STD
Misc :
ALS Vial : 22 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
100 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:18 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 2025
Response via : Initial Calibration
Integrator: ChemStation

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

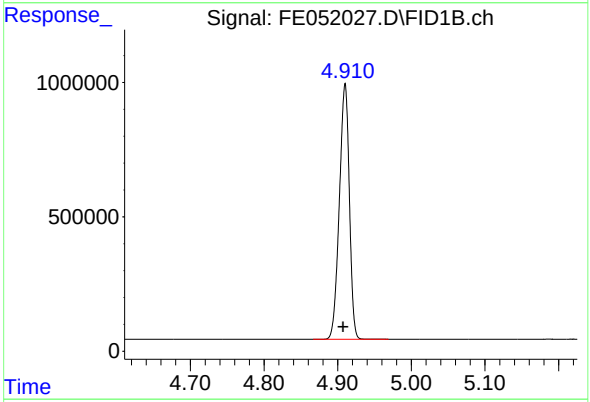




#1 N-OCTANE

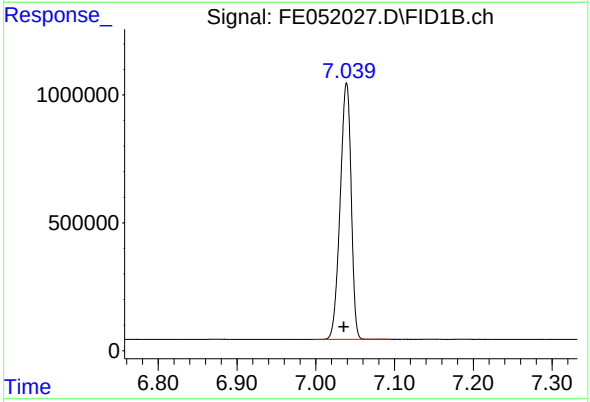
R.T.: 2.414 min
Delta R.T.: 0.002 min
Response: 8352750
Conc: 103.37 ug/ml

Instrument :
FID_E
ClientSampleId :
100 TRPH STD



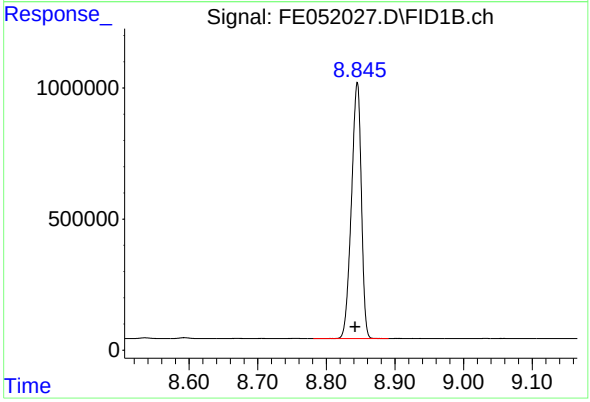
#2 N-DECANE

R.T.: 4.910 min
Delta R.T.: 0.003 min
Response: 8964173
Conc: 103.55 ug/ml



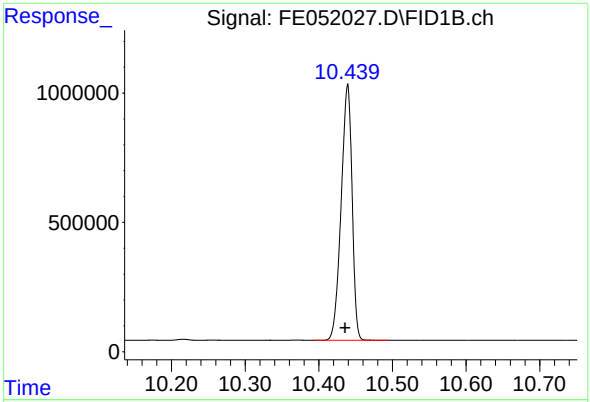
#3 N-DODECANE

R.T.: 7.039 min
Delta R.T.: 0.003 min
Response: 9720116
Conc: 103.12 ug/ml



#4 N-TETRADECANE

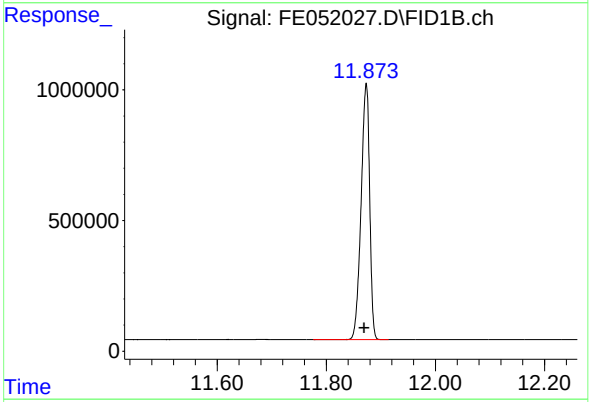
R.T.: 8.845 min
Delta R.T.: 0.003 min
Response: 9800969
Conc: 102.62 ug/ml



#5 N-HEXADECANE

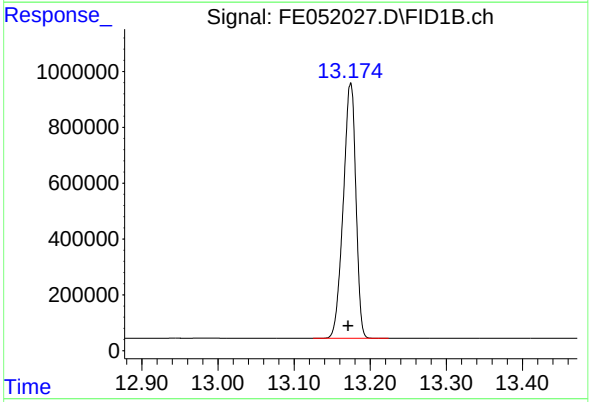
R.T.: 10.439 min
Delta R.T.: 0.004 min
Response: 10191868
Conc: 102.14 ug/ml

Instrument :
FID_E
ClientSampleId :
100 TRPH STD



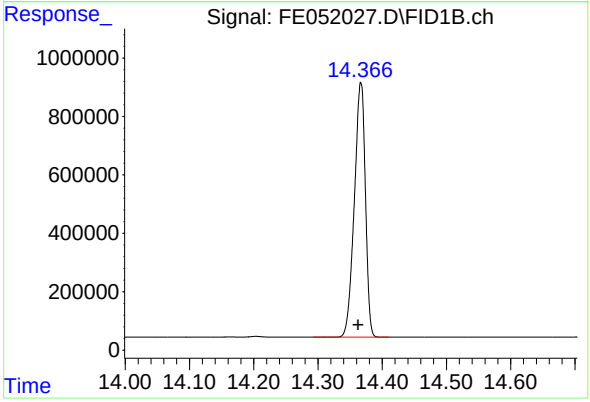
#6 N-OCTADECANE

R.T.: 11.873 min
Delta R.T.: 0.004 min
Response: 10670149
Conc: 101.68 ug/ml



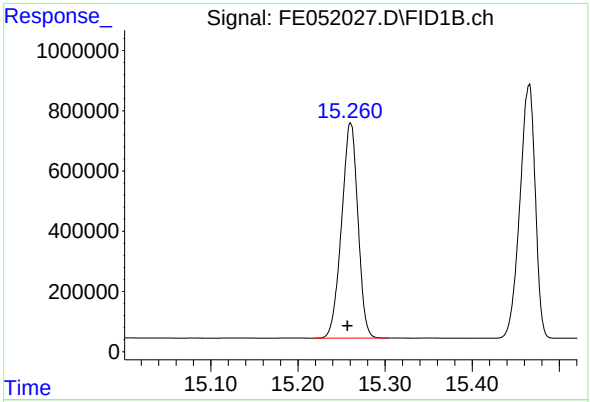
#7 N-EICOSANE

R.T.: 13.174 min
Delta R.T.: 0.003 min
Response: 10511987
Conc: 101.15 ug/ml



#8 N-DOCOSANE

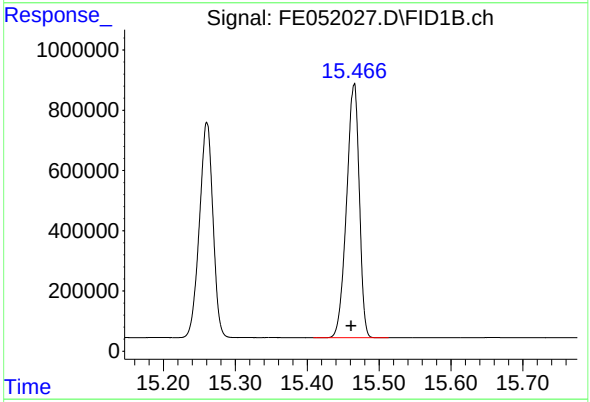
R.T.: 14.367 min
Delta R.T.: 0.004 min
Response: 10414135
Conc: 100.68 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

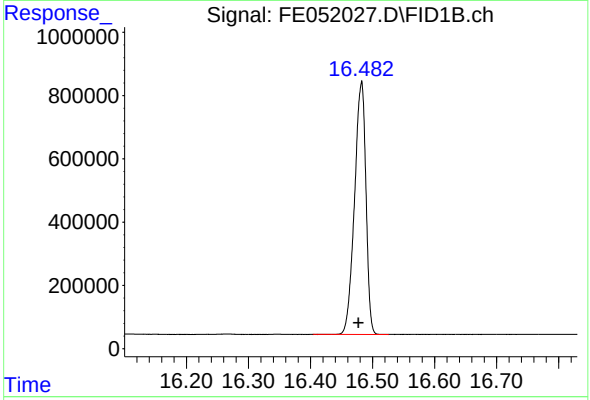
R.T.: 15.260 min
Delta R.T.: 0.003 min
Response: 9326838
Conc: 100.17 ug/ml

Instrument :
FID_E
ClientSampleId :
100 TRPH STD



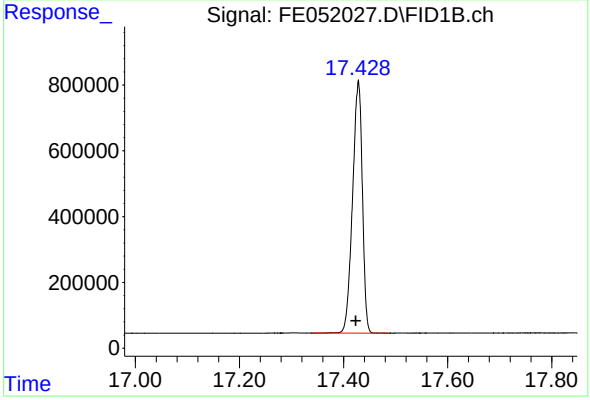
#10 N-TETRACOSANE

R.T.: 15.465 min
Delta R.T.: 0.004 min
Response: 10358861
Conc: 100.27 ug/ml



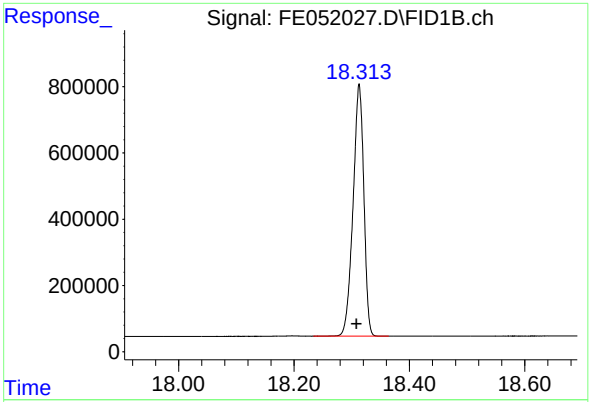
#11 N-HEXACOSANE

R.T.: 16.482 min
Delta R.T.: 0.005 min
Response: 10187153
Conc: 100.08 ug/ml



#12 N-OCTACOSANE

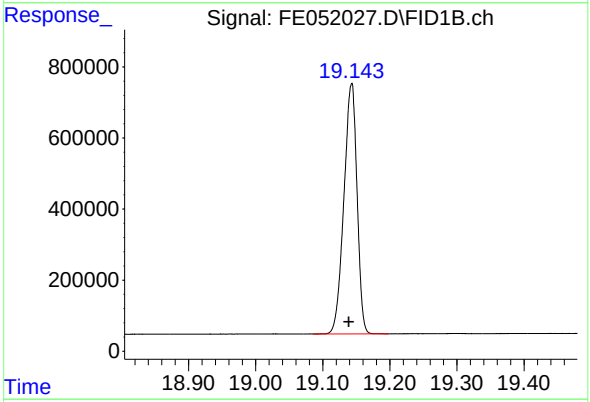
R.T.: 17.429 min
Delta R.T.: 0.005 min
Response: 10021006
Conc: 99.51 ug/ml



#13 N-TRIACONTANE

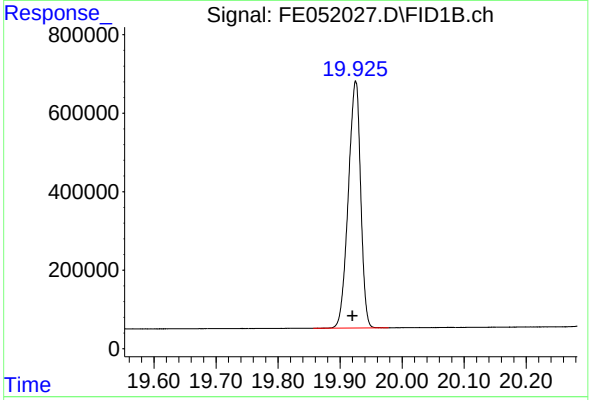
R.T.: 18.313 min
Delta R.T.: 0.005 min
Response: 9878203
Conc: 99.28 ug/ml

Instrument :
FID_E
ClientSampleId :
100 TRPH STD



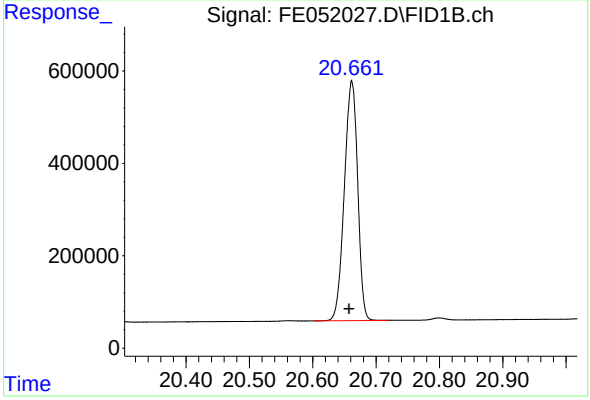
#14 N-DOTRIACONTANE

R.T.: 19.143 min
Delta R.T.: 0.004 min
Response: 9582276
Conc: 99.15 ug/ml



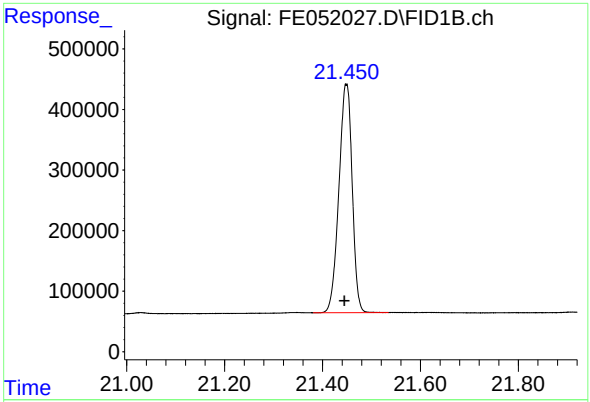
#15 N-TETRATRIACONTANE

R.T.: 19.925 min
Delta R.T.: 0.005 min
Response: 8712926
Conc: 100.31 ug/ml



#16 N-HEXATRIACONTANE

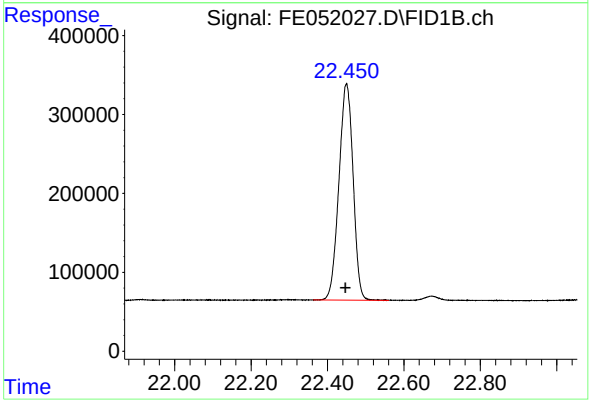
R.T.: 20.662 min
Delta R.T.: 0.004 min
Response: 7584514
Conc: 101.79 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.449 min
Delta R.T.: 0.004 min
Response: 7106830
Conc: 103.21 ug/ml

Instrument :
FID_E
ClientSampleId :
100 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.450 min
Delta R.T.: 0.002 min
Response: 7068311
Conc: 105.03 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052027.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 22:06
Sample : 100 TRPH STD
Misc :
ALS Vial : 22 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.414	2.382	2.498	PB	704049	8352750	78.28%	4.959%
2	4.910	4.867	4.969	BB	951340	8964173	84.01%	5.321%
3	7.039	6.997	7.092	BB	1002810	9720116	91.10%	5.770%
4	8.845	8.781	8.891	BV	977530	9800969	91.85%	5.818%
5	10.439	10.392	10.495	BB	989021	10191868	95.52%	6.050%
6	11.873	11.776	11.914	BB	979790	10670149	100.00%	6.334%
7	13.174	13.125	13.224	BB	912737	10511987	98.52%	6.240%
8	14.367	14.292	14.410	BB	871499	10414135	97.60%	6.182%
9	15.260	15.217	15.304	PV	713126	9326838	87.41%	5.537%
10	15.465	15.408	15.513	BB	842402	10358861	97.08%	6.149%
11	16.482	16.404	16.526	BB	799959	10187153	95.47%	6.047%
12	17.429	17.342	17.487	BB	765387	10021006	93.92%	5.949%
13	18.313	18.233	18.364	BB	762184	9878203	92.58%	5.864%
14	19.143	19.086	19.198	BB	704937	9582276	89.80%	5.688%
15	19.925	19.857	19.978	BV	629323	8712926	81.66%	5.172%
16	20.662	20.601	20.720	BB	519502	7584514	71.08%	4.502%
17	21.449	21.381	21.535	BB	375187	7106830	66.60%	4.219%
18	22.450	22.362	22.560	BB	274238	7068311	66.24%	4.196%

Sum of corrected areas: 168453064

FE012325.M Fri Jan 24 03:17:50 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052028.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:06
Operator : YP\AJ
Sample : 50 TRPH STD
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
50 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 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...	15.257	4655317	50.000 ug/ml
	Target Compounds			
1)	N-OCTANE	2.412	4040248	50.000 ug/ml
2)	N-DECANE	4.907	4328284	50.000 ug/ml
3)	N-DODECANE	7.036	4713212	50.000 ug/ml
4)	N-TETRADECANE	8.842	4775185	50.000 ug/ml
5)	N-HEXADECANE	10.436	4988963	50.000 ug/ml
6)	N-OCTADECANE	11.869	5246868	50.000 ug/ml
7)	N-EICOSANE	13.171	5196311	50.000 ug/ml
8)	N-DOCOSANE	14.362	5172075	50.000 ug/ml
10)	N-TETRACOSANE	15.461	5165286	50.000 ug/ml
11)	N-HEXACOSANE	16.477	5089619	50.000 ug/ml
12)	N-OCTACOSANE	17.424	5035229	50.000 ug/ml
13)	N-TRIACONTANE	18.308	4974786	50.000 ug/ml
14)	N-DOTRIACONTANE	19.139	4832453	50.000 ug/ml
15)	N-TETRATRIACONTANE	19.920	4342985	50.000 ug/ml
16)	N-HEXATRIACONTANE	20.657	3725450	50.000 ug/ml
17)	N-OCTATRIACONTANE	21.445	3442776	50.000 ug/ml
18)	N-TETRACONTANE	22.447	3364772	50.000 ug/ml

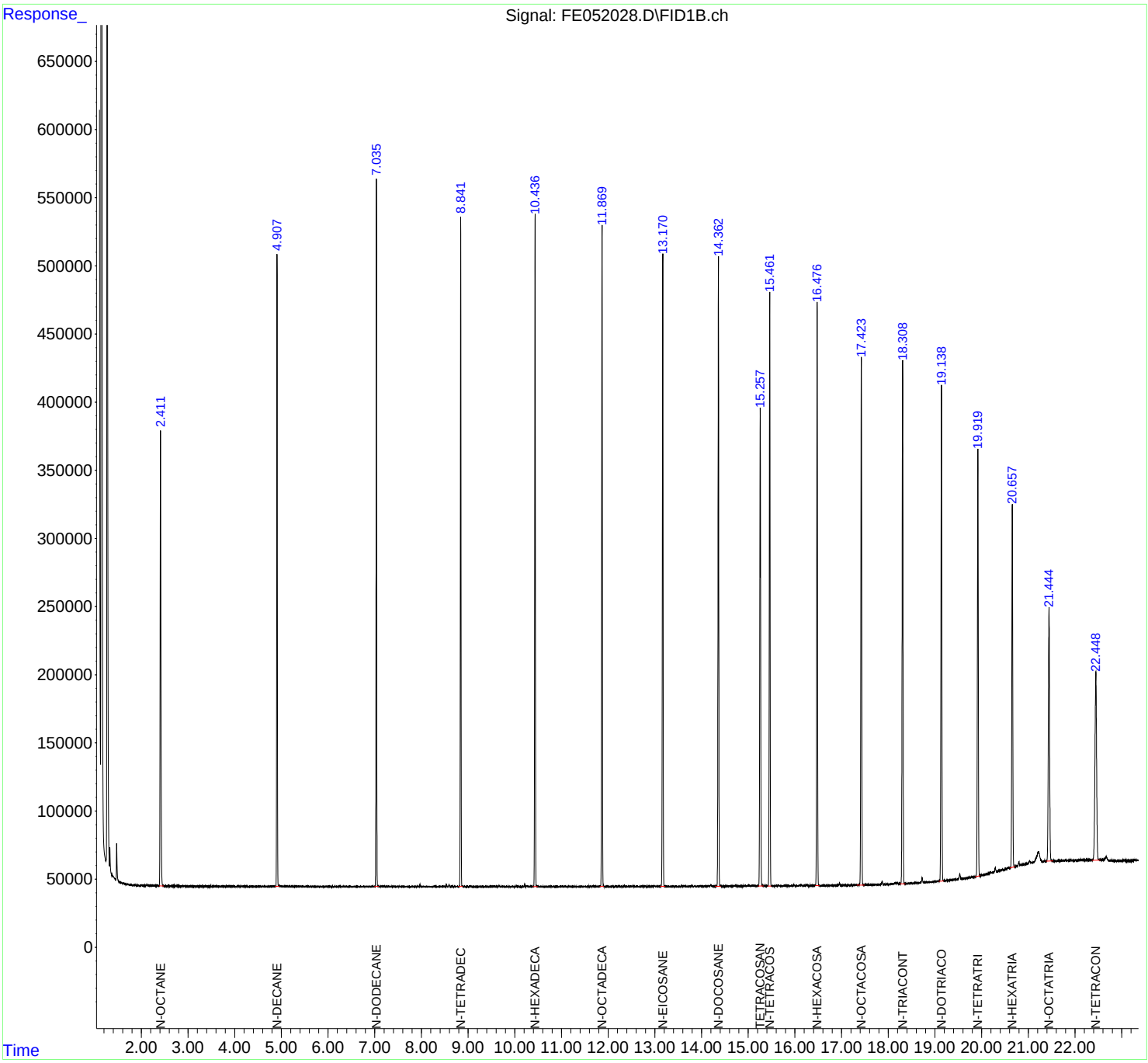
(f)=RT Delta > 1/2 Window (m)=manual int.

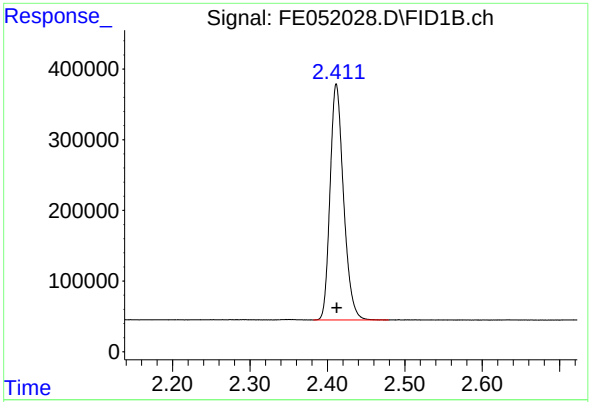
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052028.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:06
Operator : YP\AJ
Sample : 50 TRPH STD
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
50 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:38 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 2025
Response via : Initial Calibration
Integrator: ChemStation

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

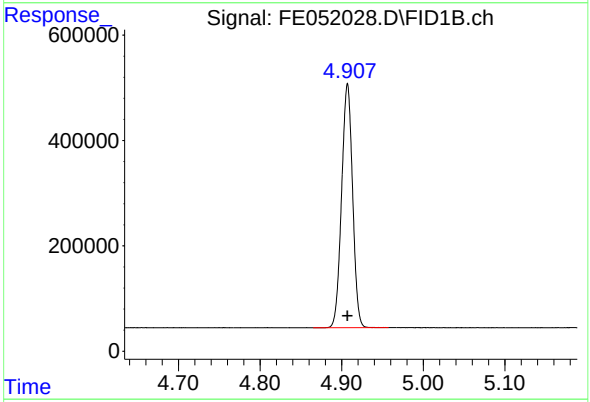




#1 N-OCTANE

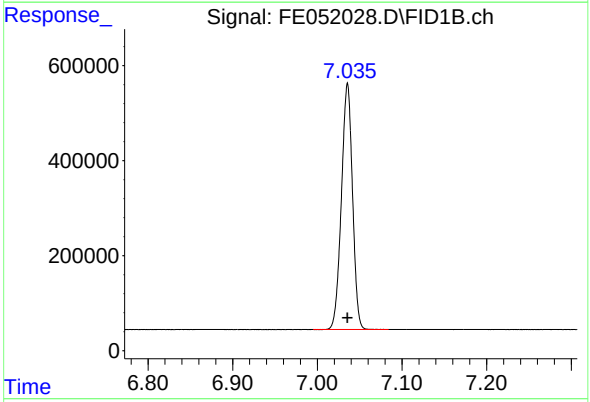
R.T.: 2.412 min
Delta R.T.: 0.000 min
Response: 4040248
Conc: 50.00 ug/ml

Instrument :
FID_E
ClientSampleId :
50 TRPH STD



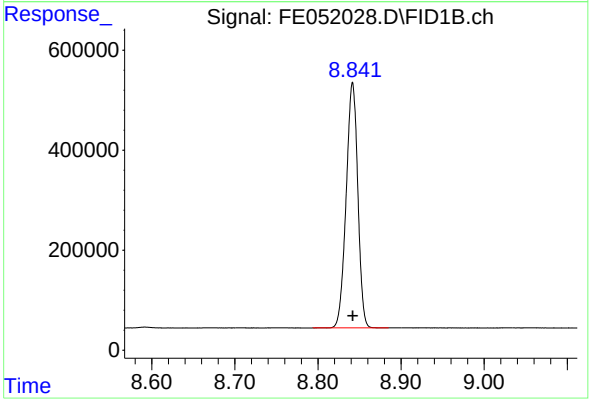
#2 N-DECANE

R.T.: 4.907 min
Delta R.T.: 0.000 min
Response: 4328284
Conc: 50.00 ug/ml



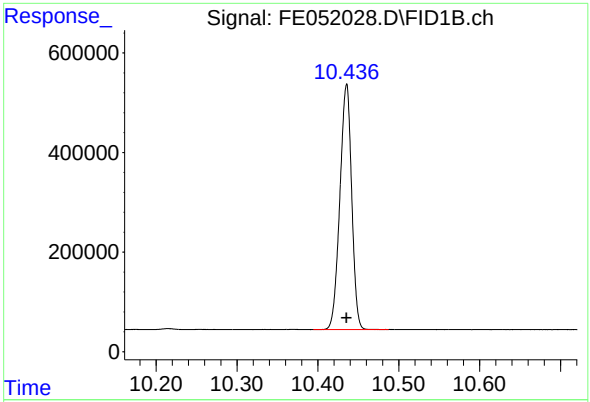
#3 N-DODECANE

R.T.: 7.036 min
Delta R.T.: 0.000 min
Response: 4713212
Conc: 50.00 ug/ml



#4 N-TETRADECANE

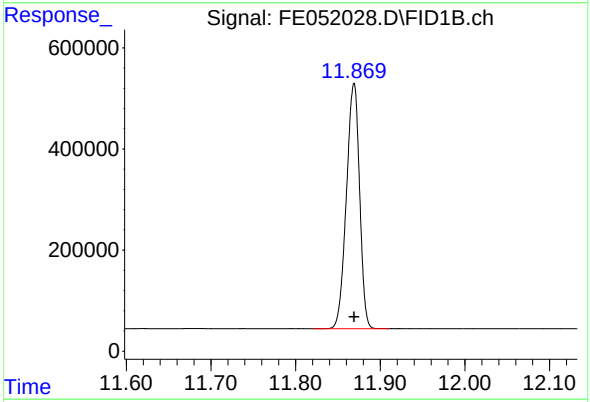
R.T.: 8.842 min
Delta R.T.: 0.000 min
Response: 4775185
Conc: 50.00 ug/ml



#5 N-HEXADECANE

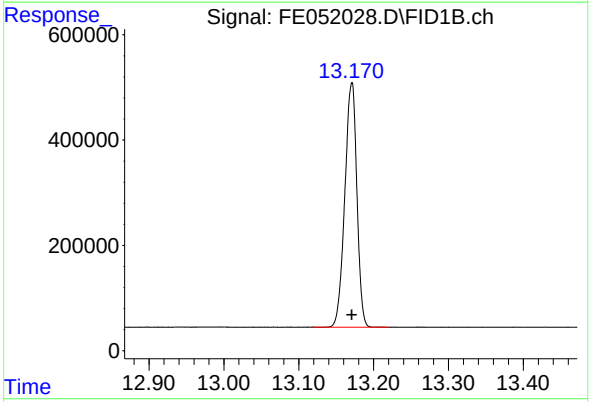
R.T.: 10.436 min
Delta R.T.: 0.000 min
Response: 4988963
Conc: 50.00 ug/ml

Instrument :
FID_E
ClientSampleId :
50 TRPH STD



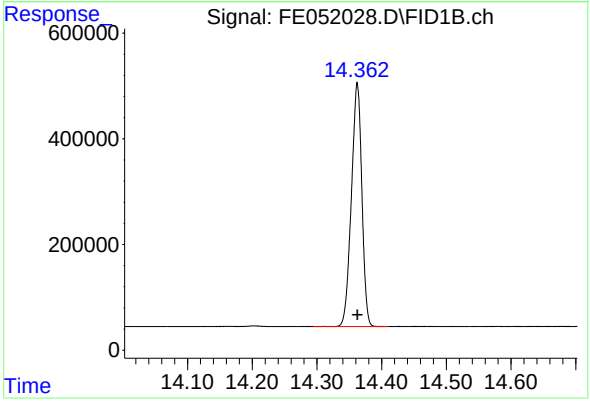
#6 N-OCTADECANE

R.T.: 11.869 min
Delta R.T.: 0.000 min
Response: 5246868
Conc: 50.00 ug/ml



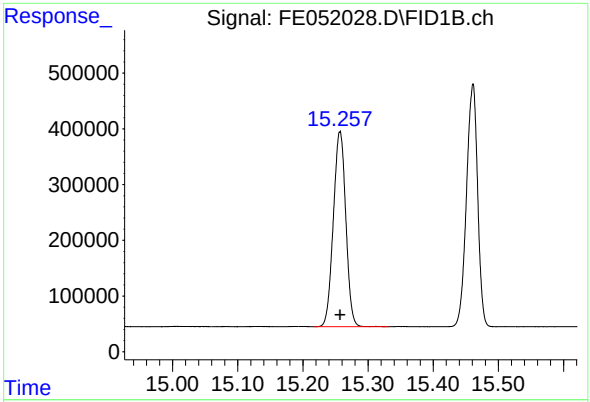
#7 N-EICOSANE

R.T.: 13.171 min
Delta R.T.: 0.000 min
Response: 5196311
Conc: 50.00 ug/ml



#8 N-DOCOSANE

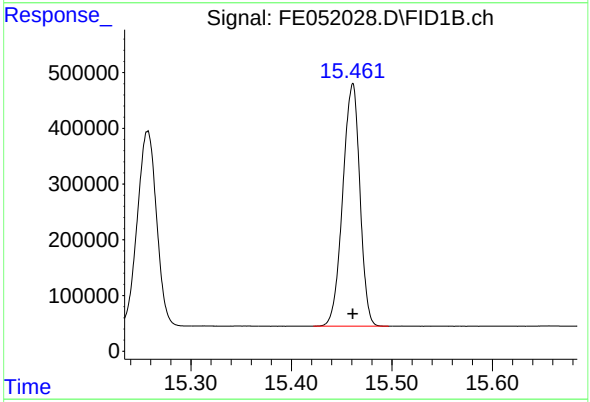
R.T.: 14.362 min
Delta R.T.: 0.000 min
Response: 5172075
Conc: 50.00 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

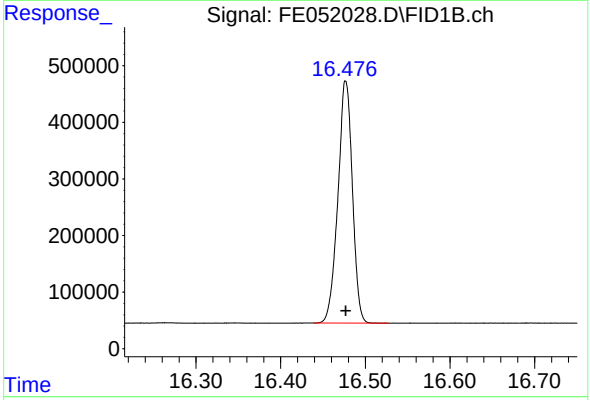
R.T.: 15.257 min
Delta R.T.: 0.000 min
Response: 4655317
Conc: 50.00 ug/ml

Instrument :
FID_E
ClientSampleId :
50 TRPH STD



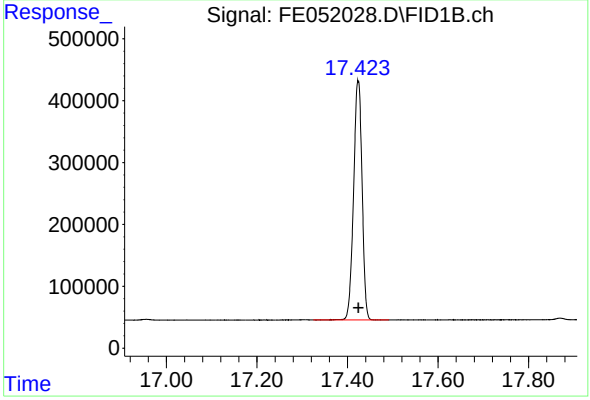
#10 N-TETRACOSANE

R.T.: 15.461 min
Delta R.T.: 0.000 min
Response: 5165286
Conc: 50.00 ug/ml



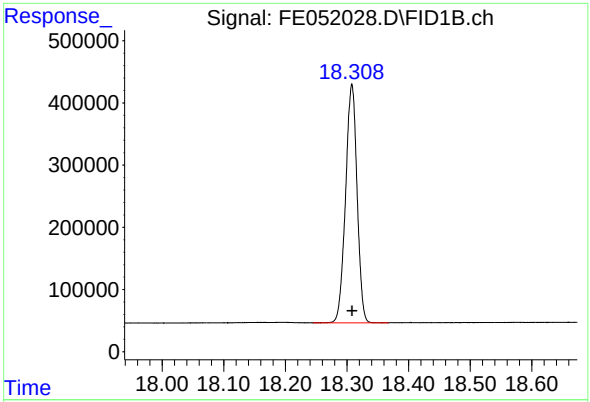
#11 N-HEXACOSANE

R.T.: 16.477 min
Delta R.T.: 0.000 min
Response: 5089619
Conc: 50.00 ug/ml



#12 N-OCTACOSANE

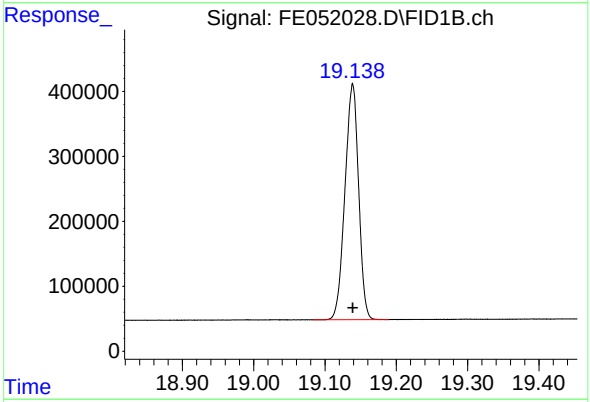
R.T.: 17.424 min
Delta R.T.: 0.000 min
Response: 5035229
Conc: 50.00 ug/ml



#13 N-TRIACONTANE

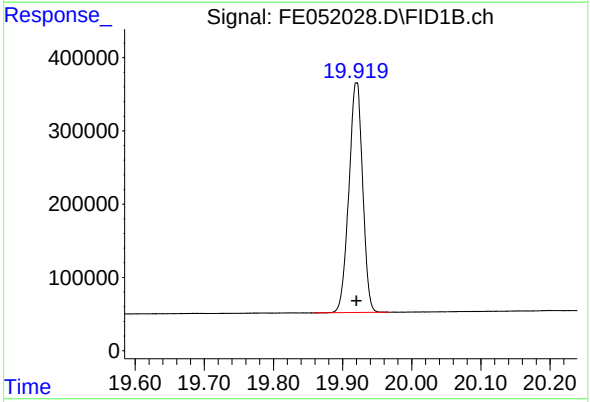
R.T.: 18.308 min
Delta R.T.: 0.000 min
Response: 4974786
Conc: 50.00 ug/ml

Instrument :
FID_E
ClientSampleId :
50 TRPH STD



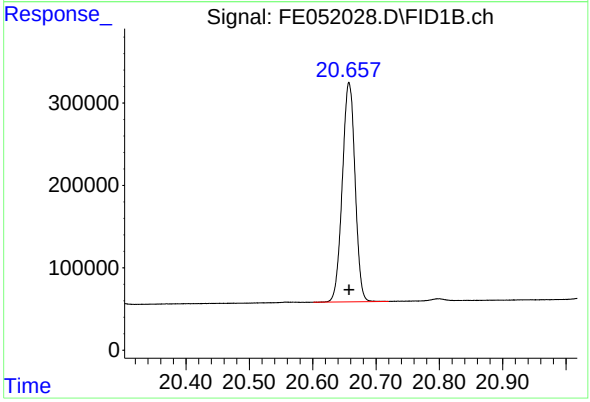
#14 N-DOTRIACONTANE

R.T.: 19.139 min
Delta R.T.: 0.000 min
Response: 4832453
Conc: 50.00 ug/ml



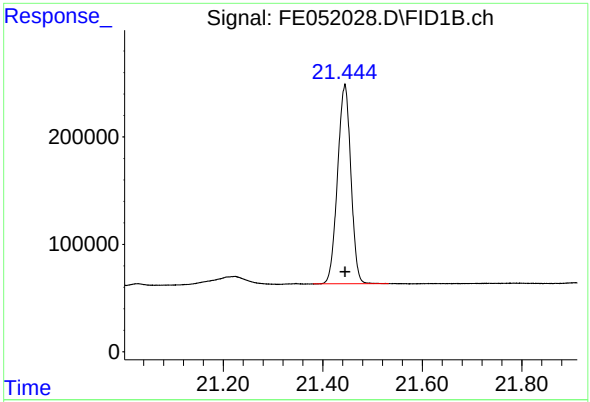
#15 N-TETRATRIACONTANE

R.T.: 19.920 min
Delta R.T.: 0.000 min
Response: 4342985
Conc: 50.00 ug/ml



#16 N-HEXATRIACONTANE

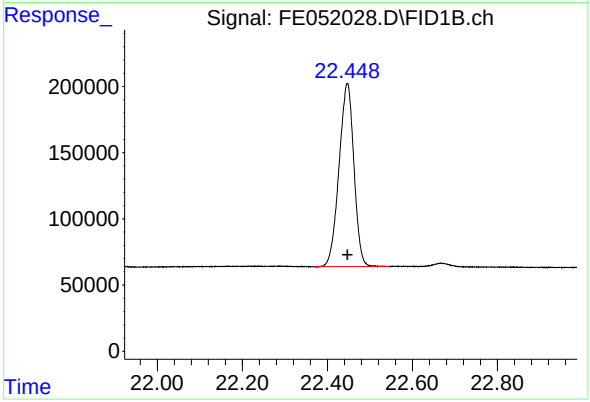
R.T.: 20.657 min
Delta R.T.: 0.000 min
Response: 3725450
Conc: 50.00 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.445 min
Delta R.T.: 0.000 min
Response: 3442776
Conc: 50.00 ug/ml

Instrument :
FID_E
ClientSampleId :
50 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.447 min
Delta R.T.: 0.000 min
Response: 3364772
Conc: 50.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052028.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:06
Sample : 50 TRPH STD
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.412	2.382	2.479	BB	334007	4040248	77.00%	4.863%
2	4.907	4.865	4.957	BB	463698	4328284	82.49%	5.209%
3	7.036	6.995	7.084	BB	518684	4713212	89.83%	5.672%
4	8.842	8.794	8.885	BB	491118	4775185	91.01%	5.747%
5	10.436	10.394	10.487	BB	493549	4988963	95.08%	6.004%
6	11.869	11.821	11.910	BB	485508	5246868	100.00%	6.315%
7	13.171	13.119	13.220	BB	464348	5196311	99.04%	6.254%
8	14.362	14.294	14.411	BB	460694	5172075	98.57%	6.225%
9	15.257	15.216	15.332	BV	349212	4655317	88.73%	5.603%
10	15.461	15.422	15.497	BB	435610	5165286	98.45%	6.217%
11	16.477	16.438	16.527	BB	427488	5089619	97.00%	6.125%
12	17.424	17.324	17.491	BB	386262	5035229	95.97%	6.060%
13	18.308	18.245	18.367	BB	384042	4974786	94.81%	5.987%
14	19.139	19.083	19.189	BB	362886	4832453	92.10%	5.816%
15	19.920	19.857	19.967	BB	313315	4342985	82.77%	5.227%
16	20.657	20.601	20.720	BV	266273	3725450	71.00%	4.484%
17	21.445	21.381	21.532	BB	186220	3442776	65.62%	4.143%
18	22.447	22.367	22.544	BB	138429	3364772	64.13%	4.050%
			Sum of corrected areas:			83089819		

FE012325.M Fri Jan 24 03:18:33 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052029.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:36
Operator : YP\AJ
Sample : 20 TRPH STD
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
20 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 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...	15.254	1967122	21.128 ug/ml
	Target Compounds			
1)	N-OCTANE	2.412	1671507	20.686 ug/ml
2)	N-DECANE	4.906	1790386	20.682 ug/ml
3)	N-DODECANE	7.034	1959669	20.789 ug/ml
4)	N-TETRADECANE	8.840	1996208	20.902 ug/ml
5)	N-HEXADECANE	10.433	2090226	20.949 ug/ml
6)	N-OCTADECANE	11.866	2202071	20.985 ug/ml
7)	N-EICOSANE	13.168	2188908	21.062 ug/ml
8)	N-DOCOSANE	14.360	2186141	21.134 ug/ml
10)	N-TETRACOSANE	15.457	2185765	21.158 ug/ml
11)	N-HEXACOSANE	16.475	2160412	21.224 ug/ml
12)	N-OCTACOSANE	17.421	2147225	21.322 ug/ml
13)	N-TRIACONTANE	18.305	2136983	21.478 ug/ml
14)	N-DOTRIACONTANE	19.136	2078753	21.508 ug/ml
15)	N-TETRATRIACONTANE	19.918	1833911	21.113 ug/ml
16)	N-HEXATRIACONTANE	20.657	1534108	20.590 ug/ml
17)	N-OCTATRIACONTANE	21.439	1367415	19.859 ug/ml
18)	N-TETRACONTANE	22.440	1309204	19.455 ug/ml

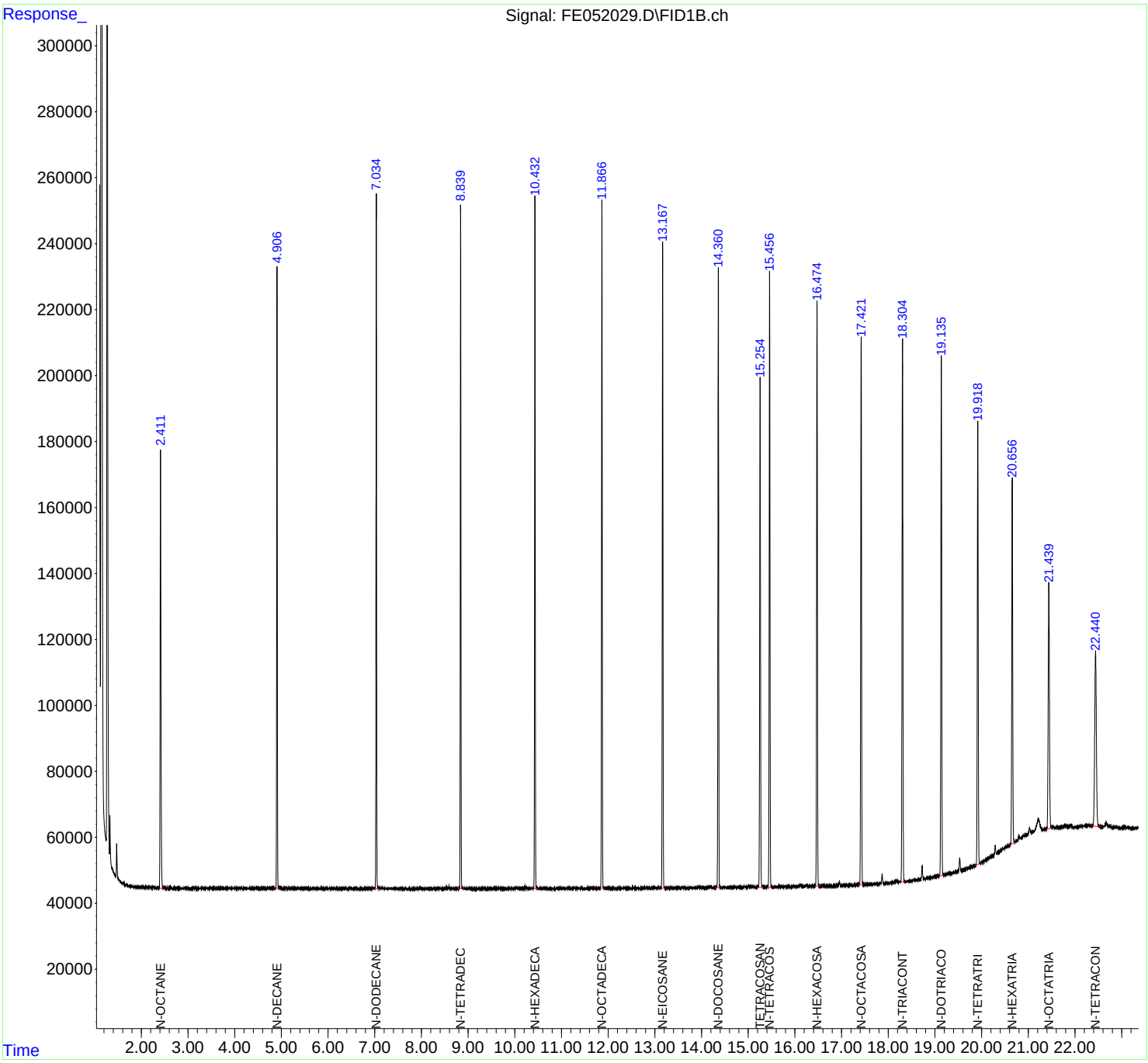
(f)=RT Delta > 1/2 Window (m)=manual int.

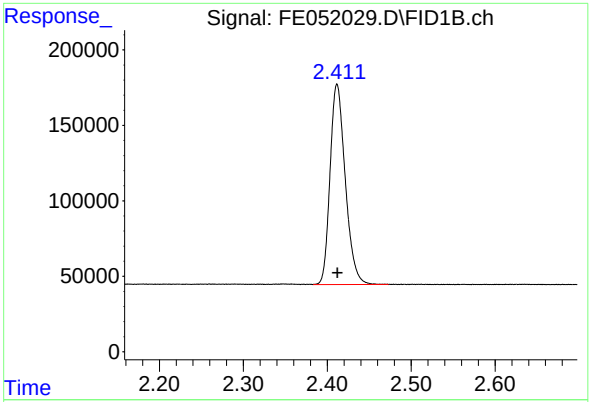
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052029.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:36
Operator : YP\AJ
Sample : 20 TRPH STD
Misc :
ALS Vial : 24 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
20 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:01:57 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 2025
Response via : Initial Calibration
Integrator: ChemStation

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

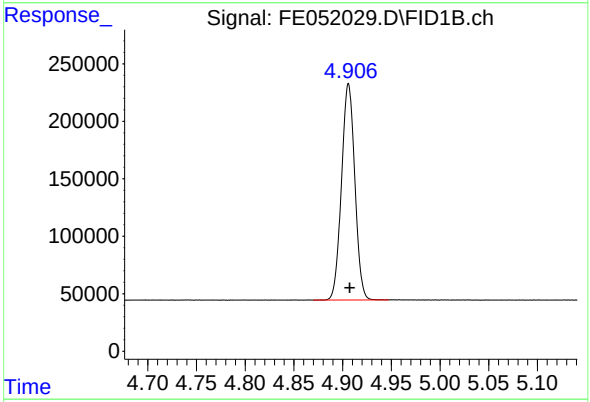




#1 N-OCTANE

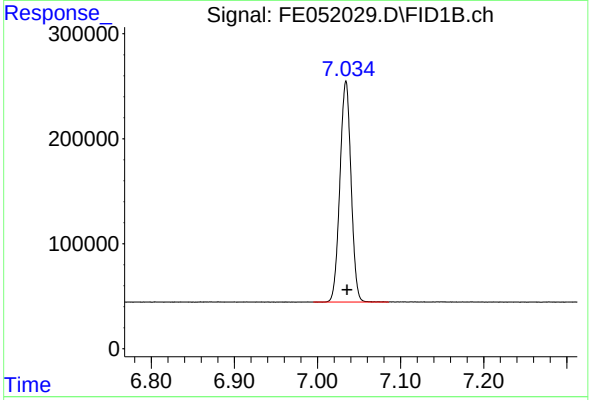
R.T.: 2.412 min
Delta R.T.: 0.000 min
Response: 1671507
Conc: 20.69 ug/ml

Instrument :
FID_E
ClientSampleId :
20 TRPH STD



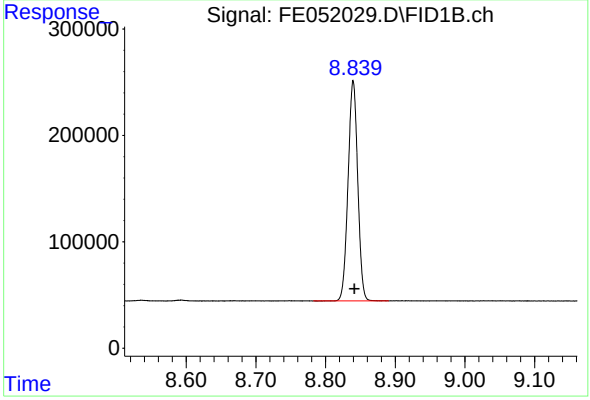
#2 N-DECANE

R.T.: 4.906 min
Delta R.T.: -0.001 min
Response: 1790386
Conc: 20.68 ug/ml



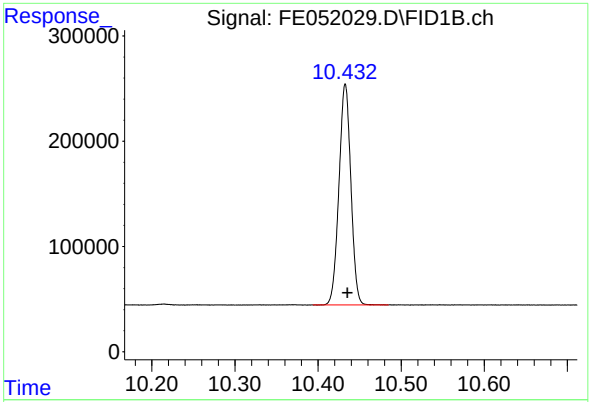
#3 N-DODECANE

R.T.: 7.034 min
Delta R.T.: -0.001 min
Response: 1959669
Conc: 20.79 ug/ml



#4 N-TETRADECANE

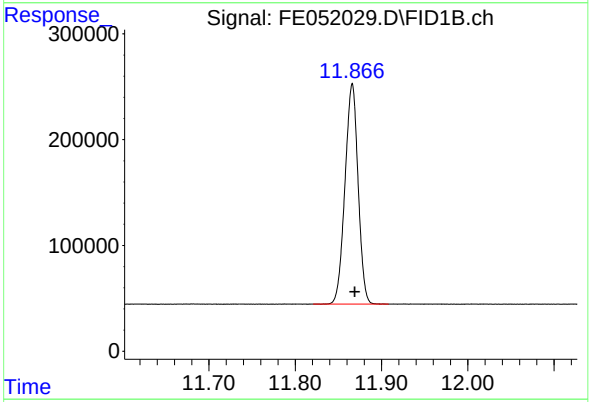
R.T.: 8.840 min
Delta R.T.: -0.002 min
Response: 1996208
Conc: 20.90 ug/ml



#5 N-HEXADECANE

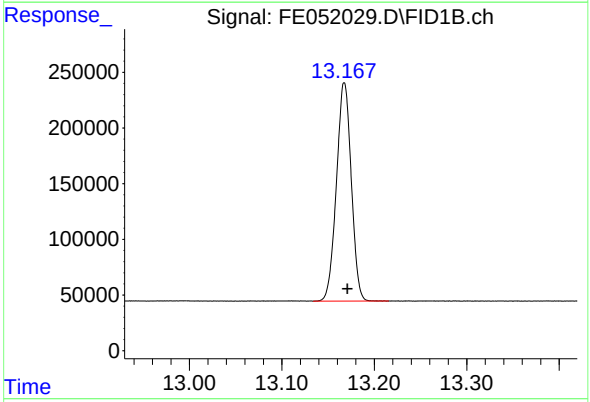
R.T.: 10.433 min
Delta R.T.: -0.003 min
Response: 2090226
Conc: 20.95 ug/ml

Instrument :
FID_E
ClientSampleId :
20 TRPH STD



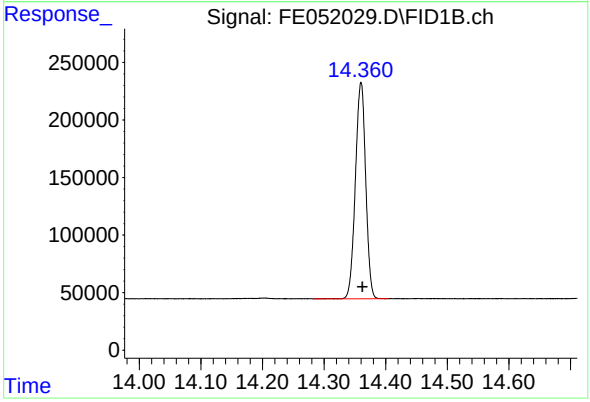
#6 N-OCTADECANE

R.T.: 11.866 min
Delta R.T.: -0.003 min
Response: 2202071
Conc: 20.98 ug/ml



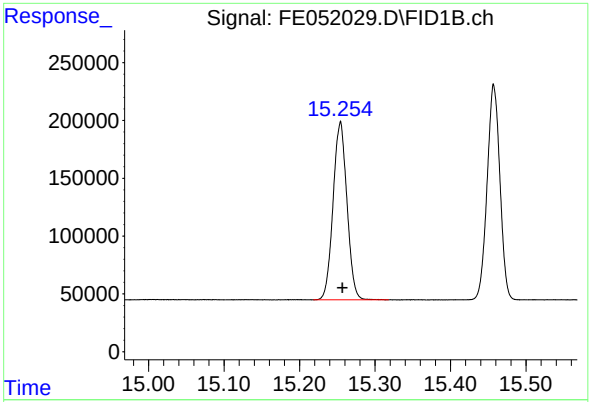
#7 N-EICOSANE

R.T.: 13.168 min
Delta R.T.: -0.003 min
Response: 2188908
Conc: 21.06 ug/ml



#8 N-DOCOSANE

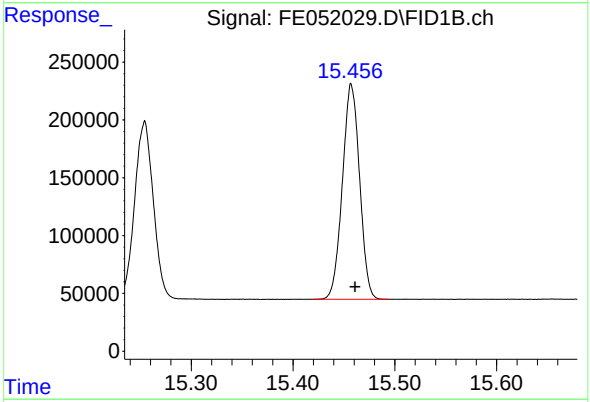
R.T.: 14.360 min
Delta R.T.: -0.002 min
Response: 2186141
Conc: 21.13 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

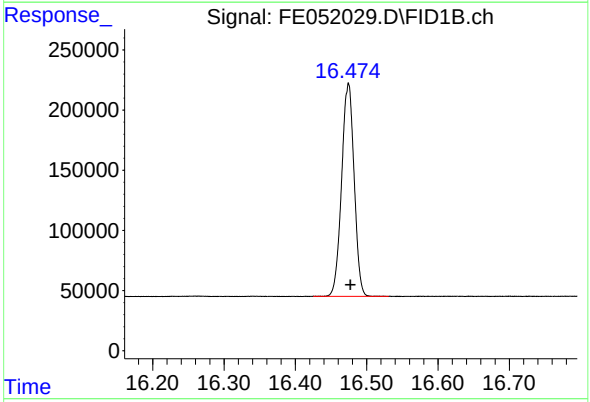
R.T.: 15.254 min
Delta R.T.: -0.003 min
Response: 1967122
Conc: 21.13 ug/ml

Instrument :
FID_E
ClientSampleId :
20 TRPH STD



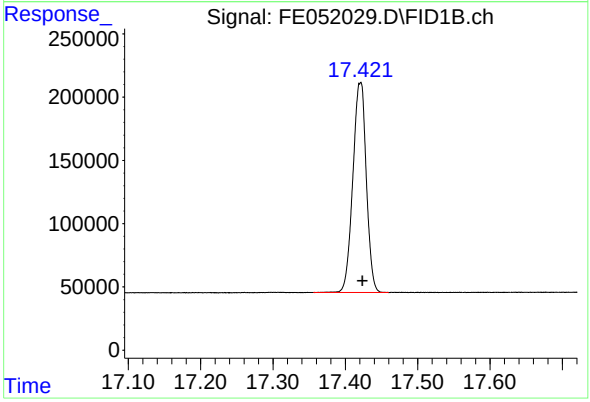
#10 N-TETRACOSANE

R.T.: 15.457 min
Delta R.T.: -0.004 min
Response: 2185765
Conc: 21.16 ug/ml



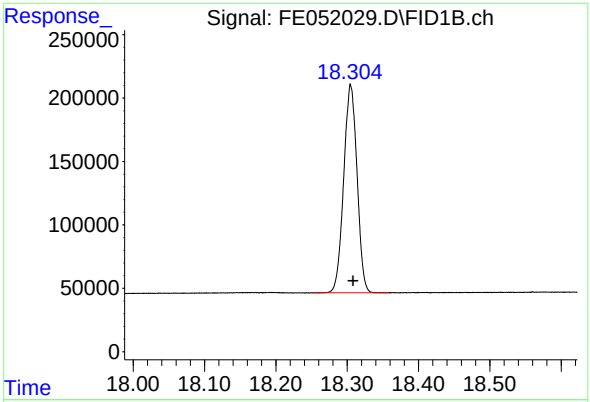
#11 N-HEXACOSANE

R.T.: 16.475 min
Delta R.T.: -0.002 min
Response: 2160412
Conc: 21.22 ug/ml



#12 N-OCTACOSANE

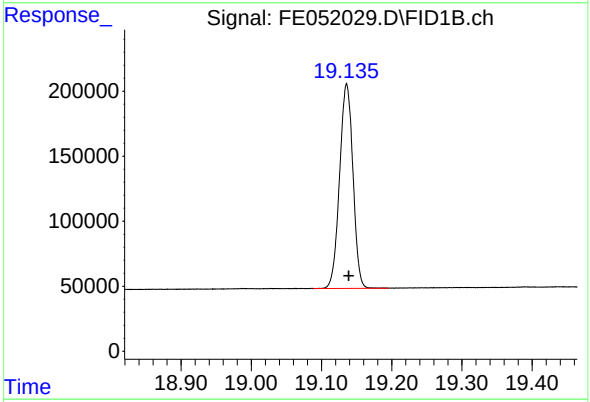
R.T.: 17.421 min
Delta R.T.: -0.003 min
Response: 2147225
Conc: 21.32 ug/ml



#13 N-TRIACONTANE

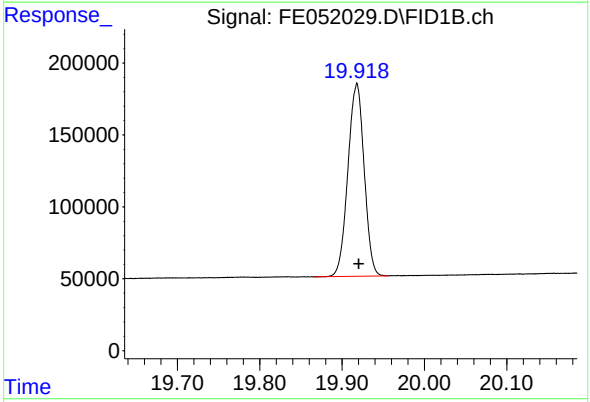
R.T.: 18.305 min
Delta R.T.: -0.003 min
Response: 2136983
Conc: 21.48 ug/ml

Instrument :
FID_E
ClientSampleId :
20 TRPH STD



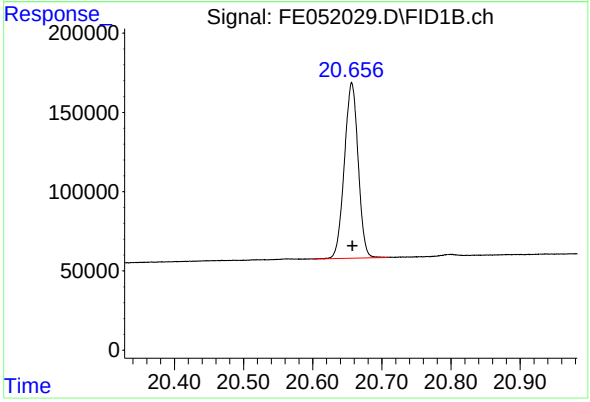
#14 N-DOTRIACONTANE

R.T.: 19.136 min
Delta R.T.: -0.003 min
Response: 2078753
Conc: 21.51 ug/ml



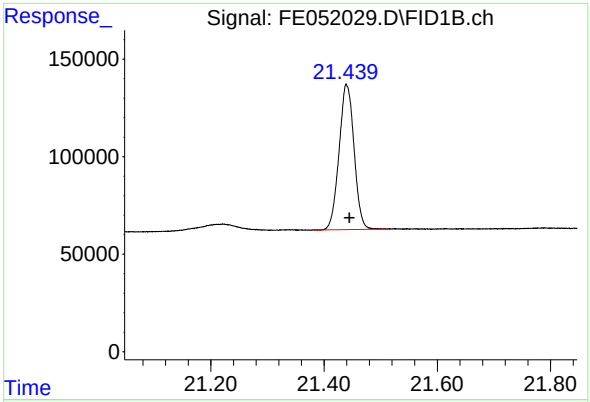
#15 N-TETRATRIACONTANE

R.T.: 19.918 min
Delta R.T.: -0.002 min
Response: 1833911
Conc: 21.11 ug/ml



#16 N-HEXATRIACONTANE

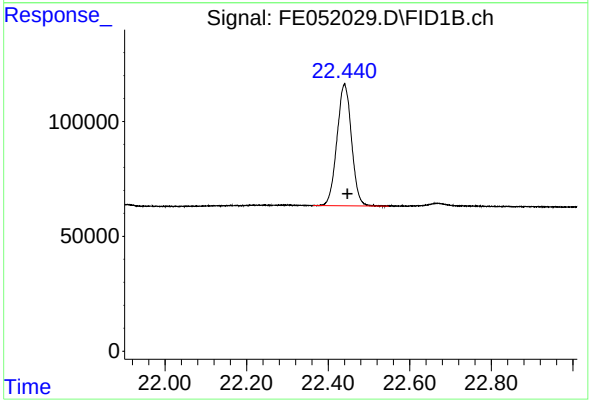
R.T.: 20.657 min
Delta R.T.: 0.000 min
Response: 1534108
Conc: 20.59 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.439 min
Delta R.T.: -0.005 min
Response: 1367415
Conc: 19.86 ug/ml

Instrument :
FID_E
ClientSampleId :
20 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.440 min
Delta R.T.: -0.007 min
Response: 1309204
Conc: 19.45 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052029.D
Signal(s) : FID1B.ch
Acq On : 23 Jan 2025 23:36
Sample : 20 TRPH STD
Misc :
ALS Vial : 24 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.412	2.383	2.473	BB	132906	1671507	75.91%	4.802%
2	4.906	4.870	4.947	BB	188470	1790386	81.30%	5.144%
3	7.034	6.995	7.086	BB	210395	1959669	88.99%	5.630%
4	8.840	8.782	8.891	BB	206958	1996208	90.65%	5.735%
5	10.433	10.394	10.485	BB	210083	2090226	94.92%	6.005%
6	11.866	11.821	11.908	BB	209078	2202071	100.00%	6.327%
7	13.168	13.134	13.216	BB	196057	2188908	99.40%	6.289%
8	14.360	14.282	14.405	BB	188088	2186141	99.28%	6.281%
9	15.254	15.218	15.318	BB	154122	1967122	89.33%	5.652%
10	15.457	15.420	15.494	BB	185791	2185765	99.26%	6.280%
11	16.475	16.425	16.531	BB	177131	2160412	98.11%	6.207%
12	17.421	17.356	17.460	BB	165726	2147225	97.51%	6.169%
13	18.305	18.252	18.358	BB	163835	2136983	97.04%	6.140%
14	19.136	19.088	19.196	BB	157435	2078753	94.40%	5.972%
15	19.918	19.865	19.957	BB	134470	1833911	83.28%	5.269%
16	20.657	20.601	20.710	BB	110823	1534108	69.67%	4.408%
17	21.439	21.381	21.514	BB	74580	1367415	62.10%	3.929%
18	22.440	22.363	22.548	BB	53116	1309204	59.45%	3.761%
			Sum of corrected areas:			34806015		

FE012325.M Fri Jan 24 03:19:04 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052030.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:06
Operator : YP\AJ
Sample : 10 TRPH STD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
10 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:02:11 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 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...	15.253	1061033	11.396 ug/ml
	Target Compounds			
1)	N-OCTANE	2.412	889828	11.012 ug/ml
2)	N-DECANE	4.906	959030	11.079 ug/ml
3)	N-DODECANE	7.033	1052037	11.161 ug/ml
4)	N-TETRADECANE	8.839	1077547	11.283 ug/ml
5)	N-HEXADECANE	10.432	1131977	11.345 ug/ml
6)	N-OCTADECANE	11.865	1193205	11.371 ug/ml
7)	N-EICOSANE	13.167	1184917	11.402 ug/ml
8)	N-DOCOSANE	14.358	1182709	11.434 ug/ml
10)	N-TETRACOSANE	15.456	1180708	11.429 ug/ml
11)	N-HEXACOSANE	16.473	1163260	11.428 ug/ml
12)	N-OCTACOSANE	17.419	1147105	11.391 ug/ml
13)	N-TRIACONTANE	18.304	1137270	11.430 ug/ml
14)	N-DOTRIACONTANE	19.134	1110748	11.493 ug/ml
15)	N-TETRATRIACONTANE	19.915	1019077	11.732 ug/ml
16)	N-HEXATRIACONTANE	20.653	911856	12.238 ug/ml
17)	N-OCTATRIACONTANE	21.439	859350	12.480 ug/ml
18)	N-TETRACONTANE	22.441	882539	13.114 ug/ml

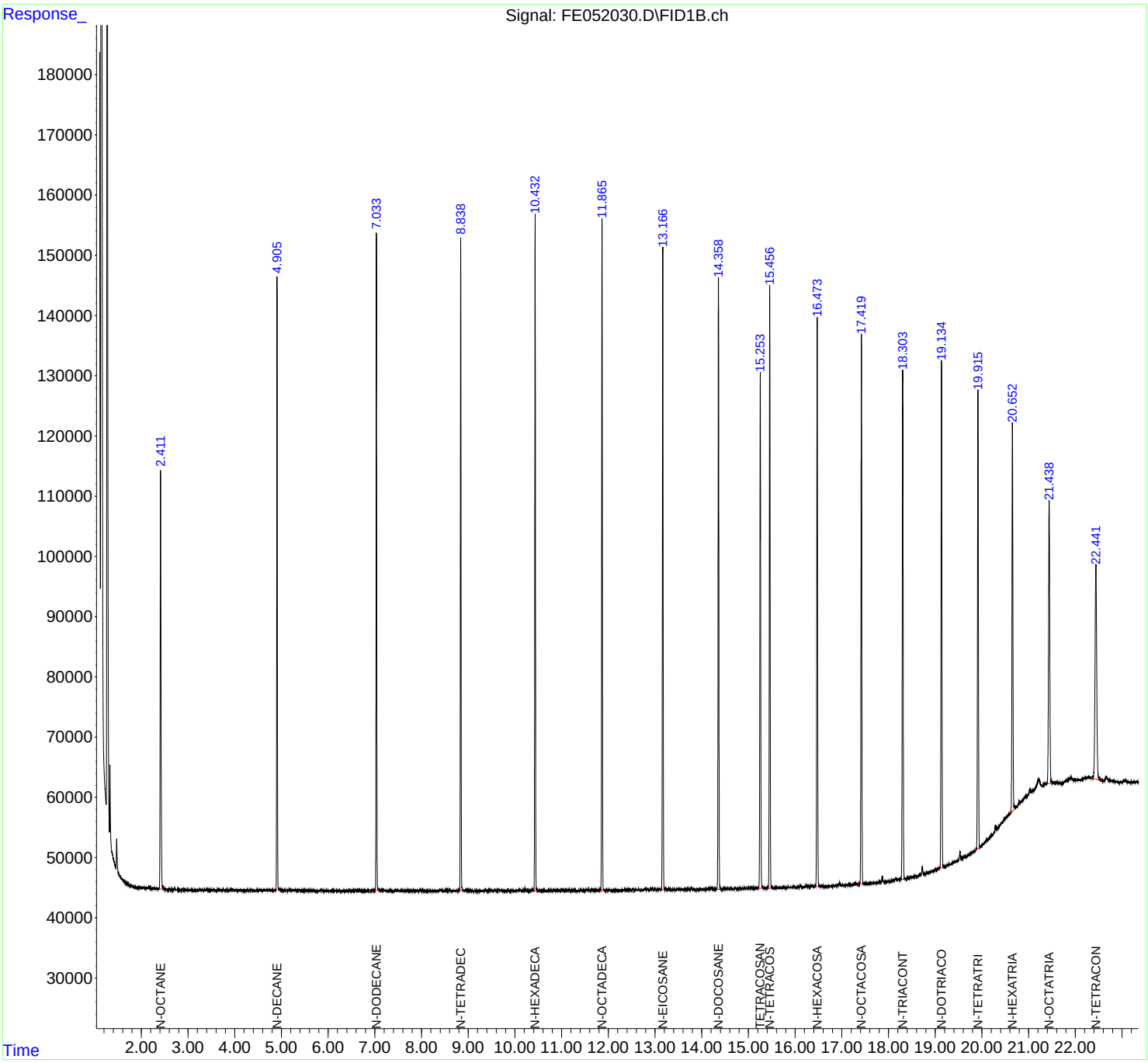
(f)=RT Delta > 1/2 Window (m)=manual int.

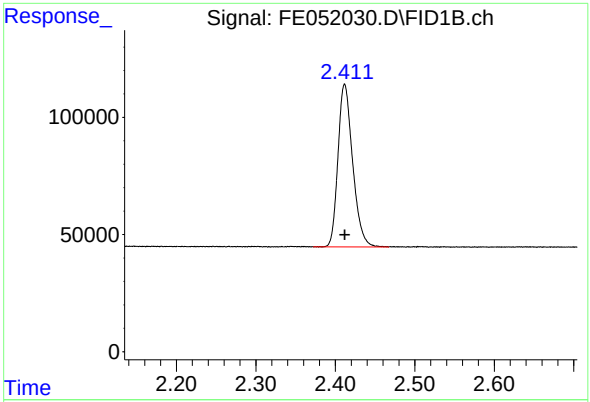
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052030.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:06
Operator : YP\AJ
Sample : 10 TRPH STD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
10 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:02:11 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 2025
Response via : Initial Calibration
Integrator: ChemStation

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

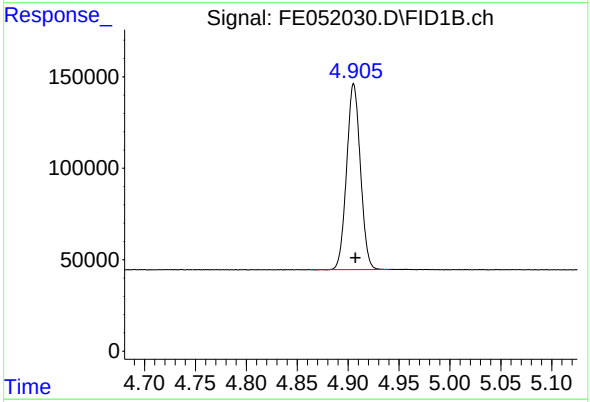




#1 N-OCTANE

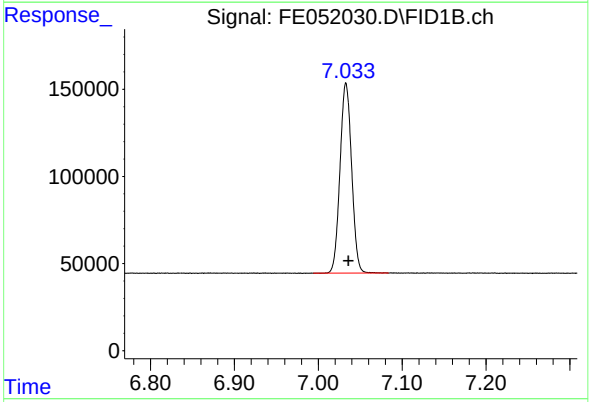
R.T.: 2.412 min
Delta R.T.: 0.000 min
Response: 889828
Conc: 11.01 ug/ml

Instrument :
FID_E
ClientSampleId :
10 TRPH STD



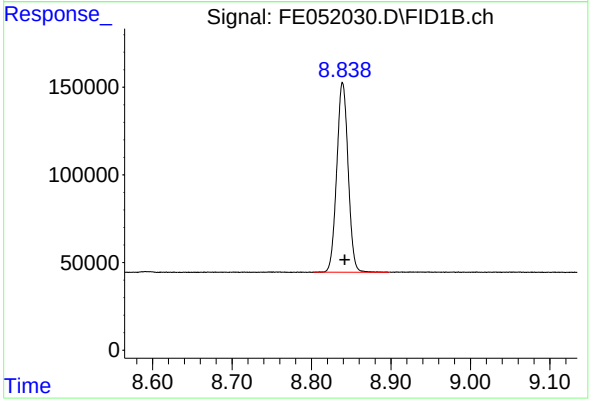
#2 N-DECANE

R.T.: 4.906 min
Delta R.T.: -0.002 min
Response: 959030
Conc: 11.08 ug/ml



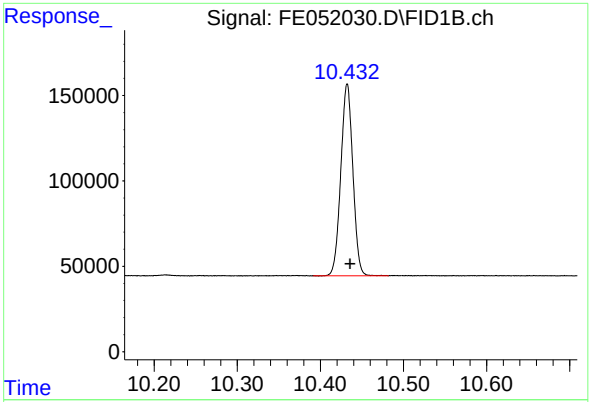
#3 N-DODECANE

R.T.: 7.033 min
Delta R.T.: -0.003 min
Response: 1052037
Conc: 11.16 ug/ml



#4 N-TETRADECANE

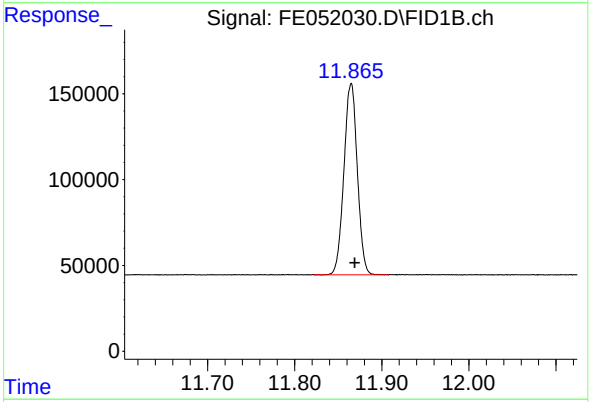
R.T.: 8.839 min
Delta R.T.: -0.003 min
Response: 1077547
Conc: 11.28 ug/ml



#5 N-HEXADECANE

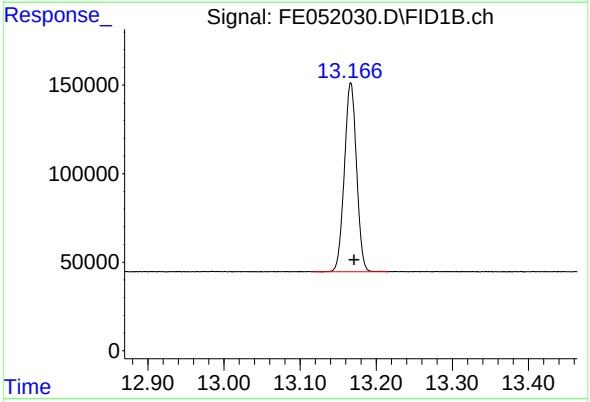
R.T.: 10.432 min
Delta R.T.: -0.003 min
Response: 1131977
Conc: 11.34 ug/ml

Instrument :
FID_E
ClientSampleId :
10 TRPH STD



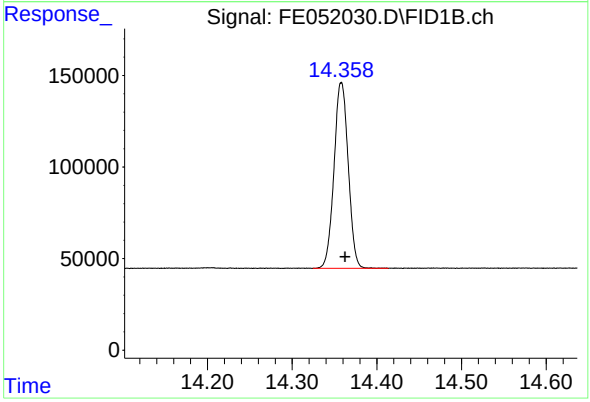
#6 N-OCTADECANE

R.T.: 11.865 min
Delta R.T.: -0.004 min
Response: 1193205
Conc: 11.37 ug/ml



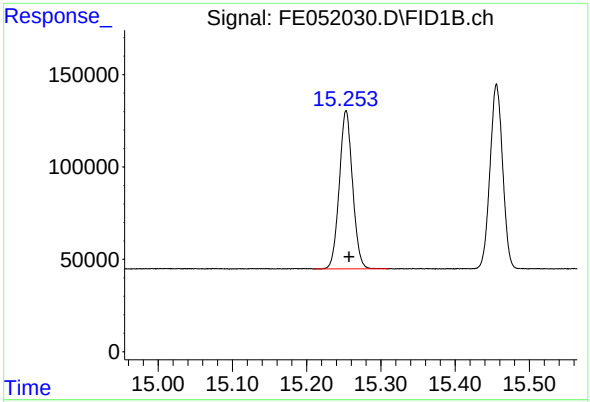
#7 N-EICOSANE

R.T.: 13.167 min
Delta R.T.: -0.004 min
Response: 1184917
Conc: 11.40 ug/ml



#8 N-DOCOSANE

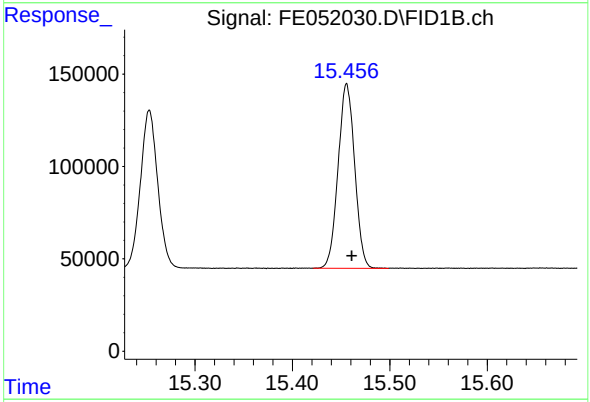
R.T.: 14.358 min
Delta R.T.: -0.004 min
Response: 1182709
Conc: 11.43 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

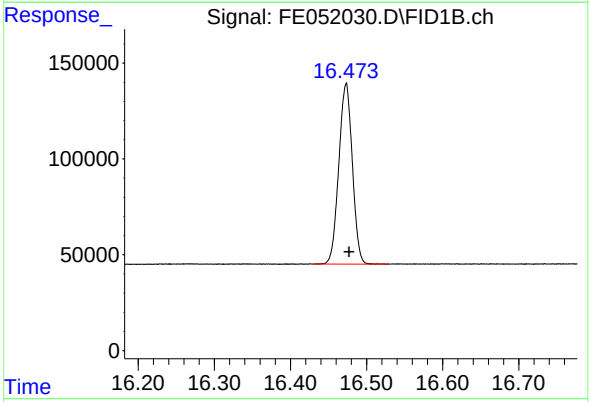
R.T.: 15.253 min
Delta R.T.: -0.004 min
Response: 1061033
Conc: 11.40 ug/ml

Instrument :
FID_E
ClientSampleId :
10 TRPH STD



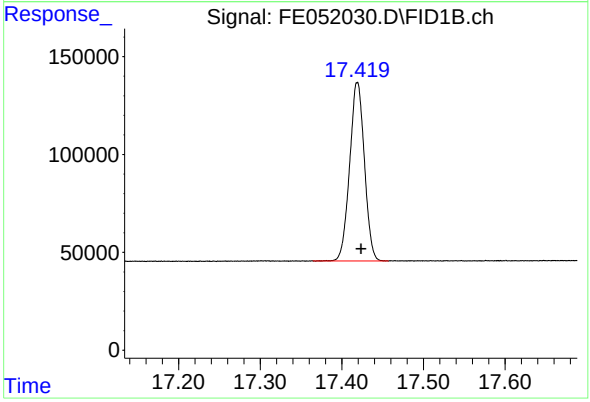
#10 N-TETRACOSANE

R.T.: 15.456 min
Delta R.T.: -0.005 min
Response: 1180708
Conc: 11.43 ug/ml



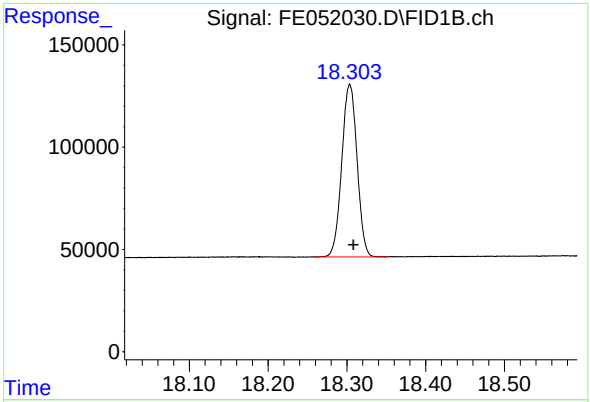
#11 N-HEXACOSANE

R.T.: 16.473 min
Delta R.T.: -0.004 min
Response: 1163260
Conc: 11.43 ug/ml



#12 N-OCTACOSANE

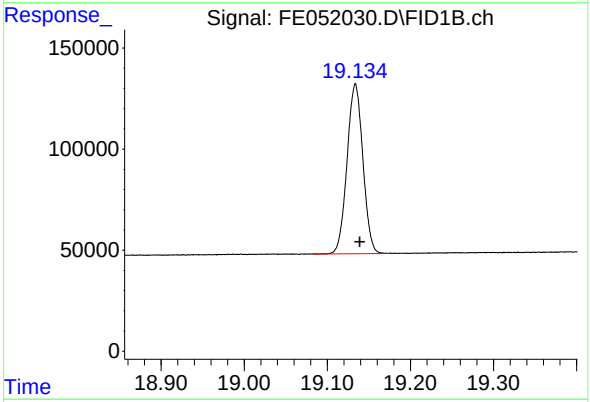
R.T.: 17.419 min
Delta R.T.: -0.005 min
Response: 1147105
Conc: 11.39 ug/ml



#13 N-TRIACONTANE

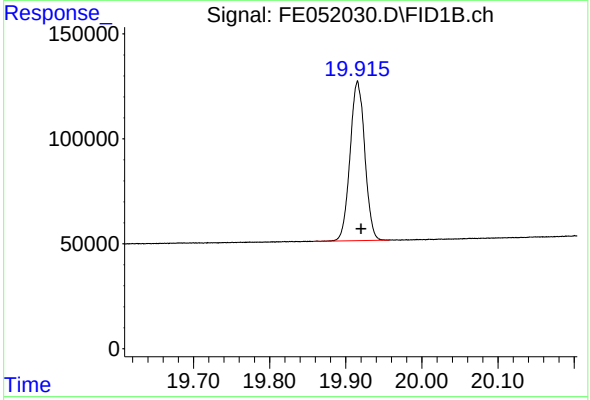
R.T.: 18.304 min
Delta R.T.: -0.004 min
Response: 1137270
Conc: 11.43 ug/ml

Instrument :
FID_E
ClientSampleId :
10 TRPH STD



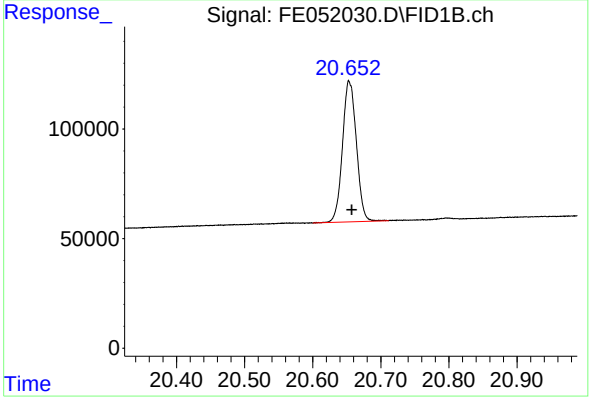
#14 N-DOTRIACONTANE

R.T.: 19.134 min
Delta R.T.: -0.005 min
Response: 1110748
Conc: 11.49 ug/ml



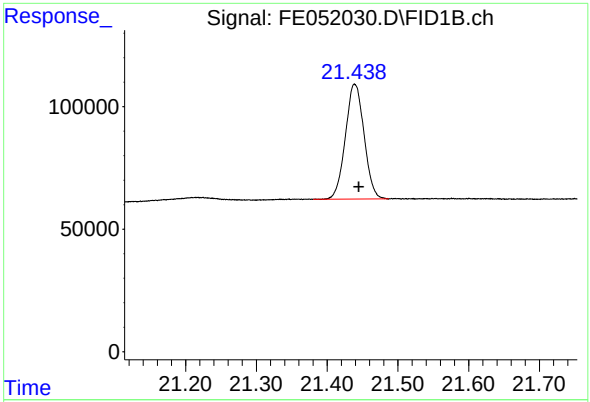
#15 N-TETRATRIACONTANE

R.T.: 19.915 min
Delta R.T.: -0.005 min
Response: 1019077
Conc: 11.73 ug/ml



#16 N-HEXATRIACONTANE

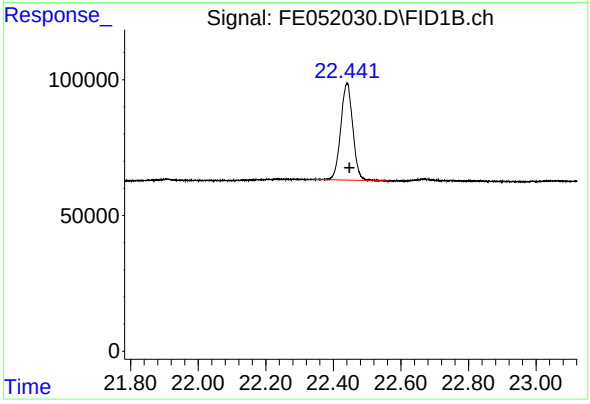
R.T.: 20.653 min
Delta R.T.: -0.004 min
Response: 911856
Conc: 12.24 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.439 min
Delta R.T.: -0.006 min
Response: 859350
Conc: 12.48 ug/ml

Instrument :
FID_E
ClientSampleId :
10 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.441 min
Delta R.T.: -0.006 min
Response: 882539
Conc: 13.11 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052030.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:06
Sample : 10 TRPH STD
Misc :
ALS Vial : 25 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.412	2.372	2.467	BB	69493	889828	74.57%	4.648%
2	4.906	4.866	4.940	BB	101609	959030	80.37%	5.010%
3	7.033	6.994	7.084	BB	109120	1052037	88.17%	5.495%
4	8.839	8.802	8.897	BB	108235	1077547	90.31%	5.629%
5	10.432	10.391	10.482	BB	112372	1131977	94.87%	5.913%
6	11.865	11.821	11.908	BB	111538	1193205	100.00%	6.233%
7	13.167	13.117	13.216	BB	106724	1184917	99.31%	6.189%
8	14.358	14.325	14.414	BB	101224	1182709	99.12%	6.178%
9	15.253	15.209	15.311	BB	85655	1061033	88.92%	5.542%
10	15.456	15.421	15.499	BB	100063	1180708	98.95%	6.167%
11	16.473	16.430	16.529	BB	94113	1163260	97.49%	6.076%
12	17.419	17.365	17.457	BB	91106	1147105	96.14%	5.992%
13	18.304	18.257	18.353	BB	84490	1137270	95.31%	5.941%
14	19.134	19.083	19.174	BB	84307	1110748	93.09%	5.802%
15	19.915	19.857	19.956	BB	76197	1019077	85.41%	5.323%
16	20.653	20.601	20.711	BB	64297	911856	76.42%	4.763%
17	21.439	21.380	21.487	BV	46908	859350	72.02%	4.489%
18	22.441	22.340	22.563	BV	35571	882539	73.96%	4.610%
			Sum of corrected areas:			19144194		

FE012325.M Fri Jan 24 03:19:32 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052031.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:36
Operator : YP\AJ
Sample : 5 TRPH STD
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
5 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:02:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 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...	15.253	535796	5.755 ug/ml
	Target Compounds			
1)	N-OCTANE	2.412	447517	5.538 ug/ml
2)	N-DECANE	4.906	479458	5.539 ug/ml
3)	N-DODECANE	7.033	524622	5.565 ug/ml
4)	N-TETRADECANE	8.839	538294	5.636 ug/ml
5)	N-HEXADECANE	10.432	566935	5.682 ug/ml
6)	N-OCTADECANE	11.864	597723	5.696 ug/ml
7)	N-EICOSANE	13.166	599565	5.769 ug/ml
8)	N-DOCOSANE	14.358	599958	5.800 ug/ml
10)	N-TETRACOSANE	15.456	594003	5.750 ug/ml
11)	N-HEXACOSANE	16.473	585191	5.749 ug/ml
12)	N-OCTACOSANE	17.418	583549	5.795 ug/ml
13)	N-TRIACONTANE	18.303	588228	5.912 ug/ml
14)	N-DOTRIACONTANE	19.133	573000	5.929 ug/ml
15)	N-TETRATRIACONTANE	19.915	509659	5.868 ug/ml
16)	N-HEXATRIACONTANE	20.654	427588	5.739 ug/ml
17)	N-OCTATRIACONTANE	21.439	394101	5.724 ug/ml
18)	N-TETRACONTANE	22.438	382667	5.686 ug/ml

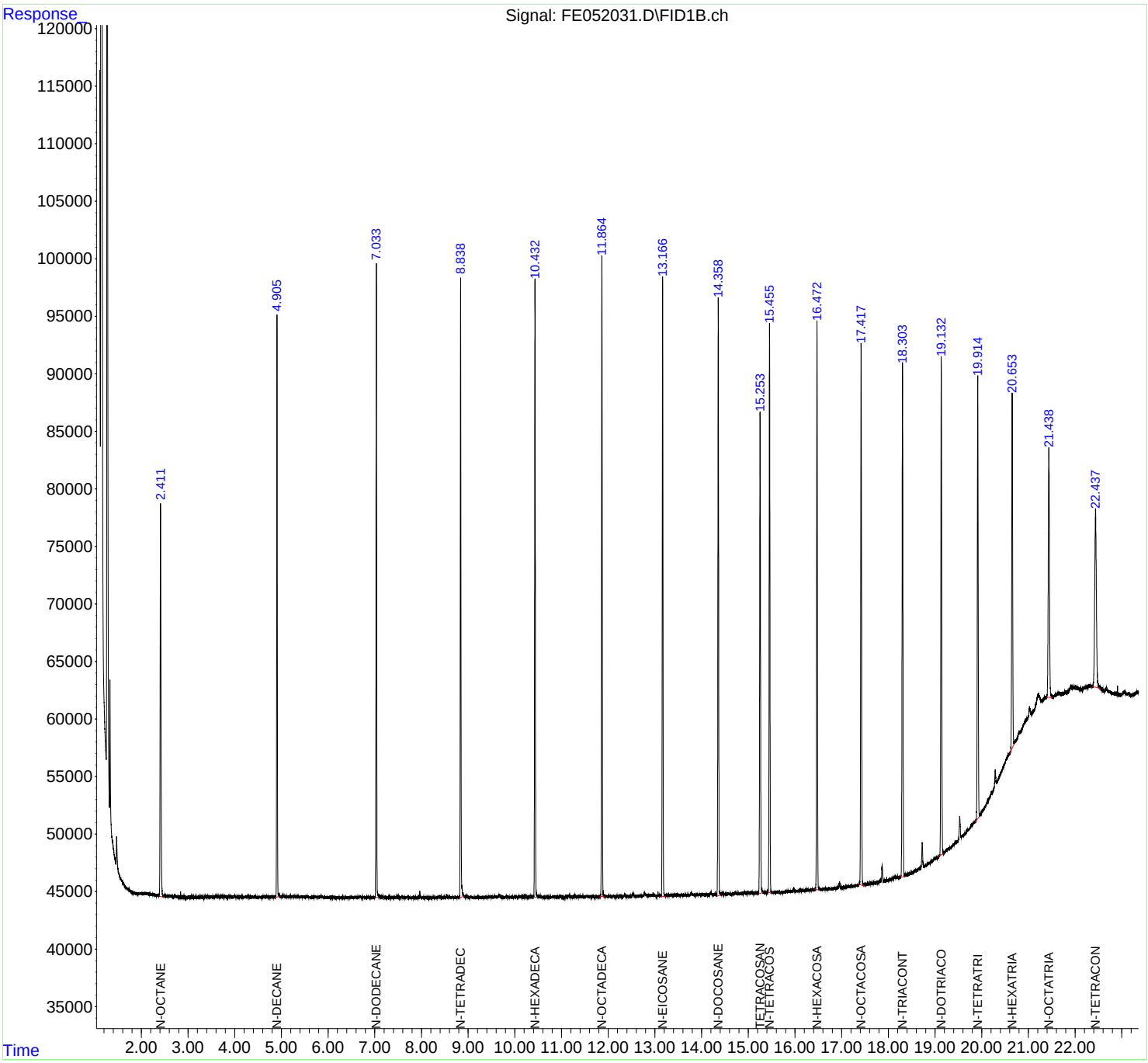
(f)=RT Delta > 1/2 Window (m)=manual int.

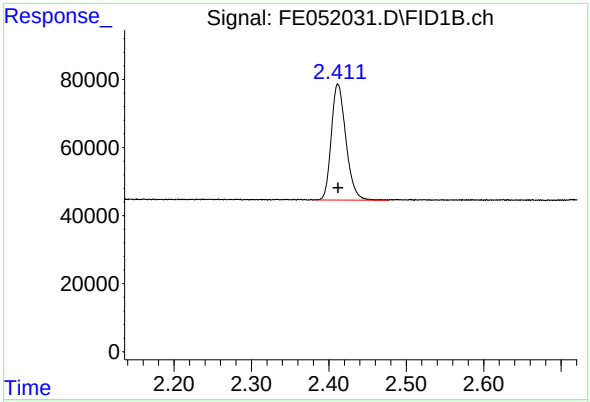
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052031.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:36
Operator : YP\AJ
Sample : 5 TRPH STD
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
5 TRPH STD

Integration File: autoint1.e
Quant Time: Jan 24 03:02:23 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:00:39 2025
Response via : Initial Calibration
Integrator: ChemStation

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

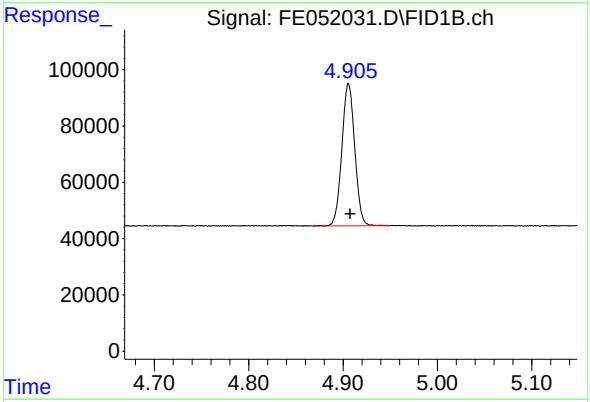




#1 N-OCTANE

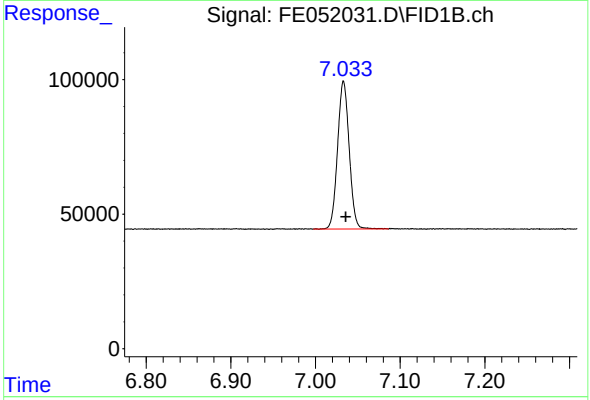
R.T.: 2.412 min
Delta R.T.: 0.000 min
Response: 447517
Conc: 5.54 ug/ml

Instrument :
FID_E
ClientSampleId :
5 TRPH STD



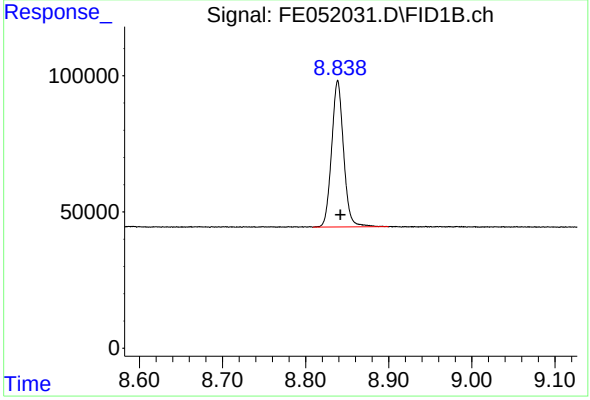
#2 N-DECANE

R.T.: 4.906 min
Delta R.T.: -0.001 min
Response: 479458
Conc: 5.54 ug/ml



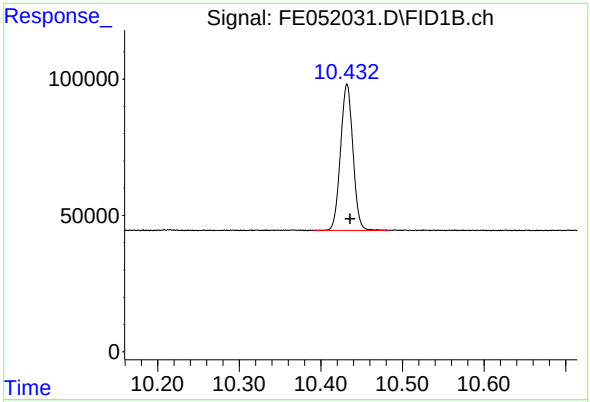
#3 N-DODECANE

R.T.: 7.033 min
Delta R.T.: -0.003 min
Response: 524622
Conc: 5.57 ug/ml



#4 N-TETRADECANE

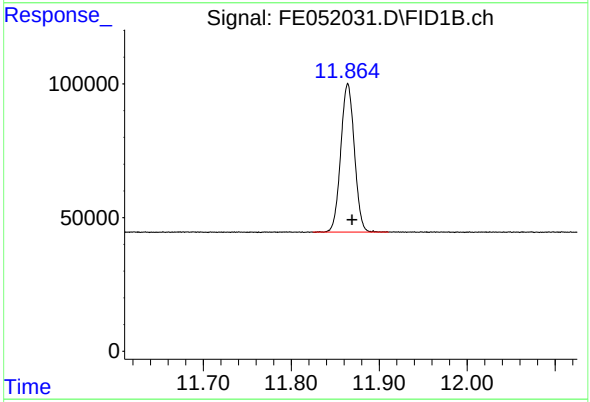
R.T.: 8.839 min
Delta R.T.: -0.003 min
Response: 538294
Conc: 5.64 ug/ml



#5 N-HEXADECANE

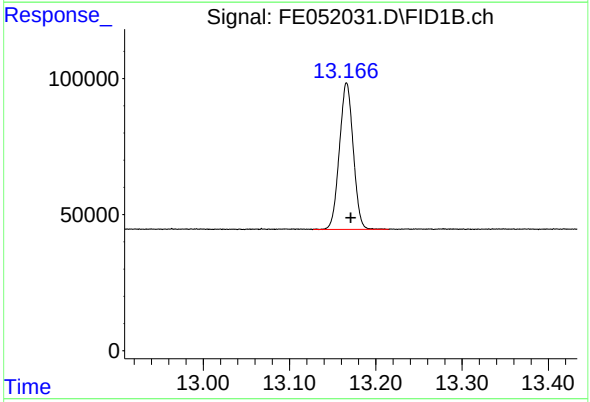
R.T.: 10.432 min
Delta R.T.: -0.003 min
Response: 566935
Conc: 5.68 ug/ml

Instrument :
FID_E
ClientSampleId :
5 TRPH STD



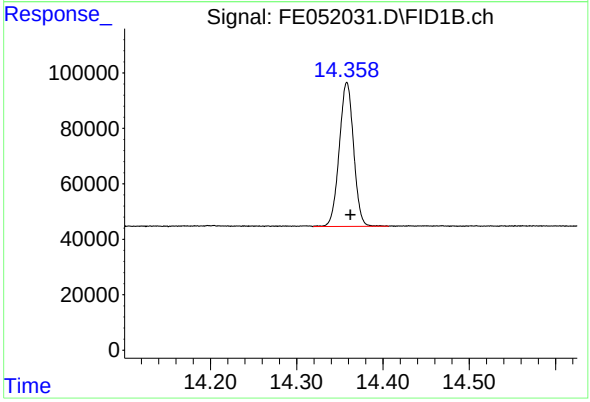
#6 N-OCTADECANE

R.T.: 11.864 min
Delta R.T.: -0.005 min
Response: 597723
Conc: 5.70 ug/ml



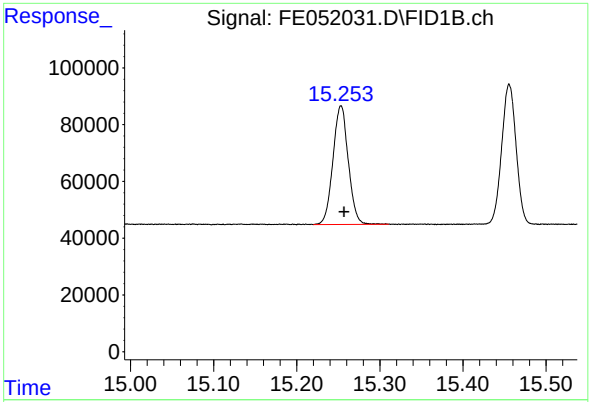
#7 N-EICOSANE

R.T.: 13.166 min
Delta R.T.: -0.005 min
Response: 599565
Conc: 5.77 ug/ml



#8 N-DOCOSANE

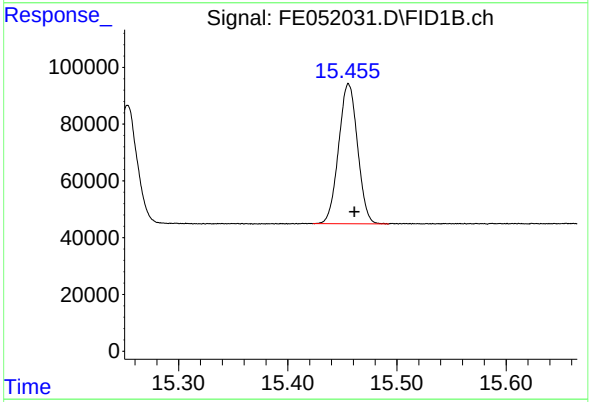
R.T.: 14.358 min
Delta R.T.: -0.004 min
Response: 599958
Conc: 5.80 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

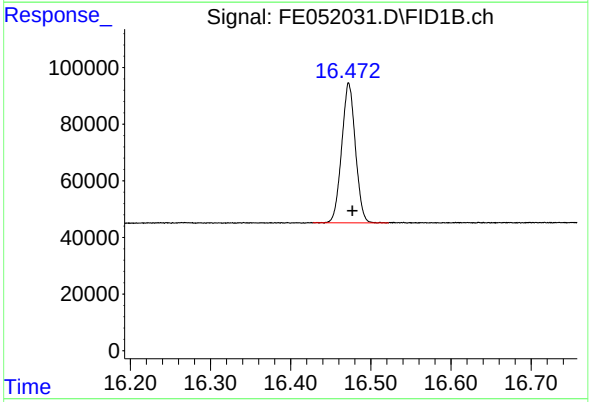
R.T.: 15.253 min
Delta R.T.: -0.004 min
Response: 535796
Conc: 5.75 ug/ml

Instrument :
FID_E
ClientSampleId :
5 TRPH STD



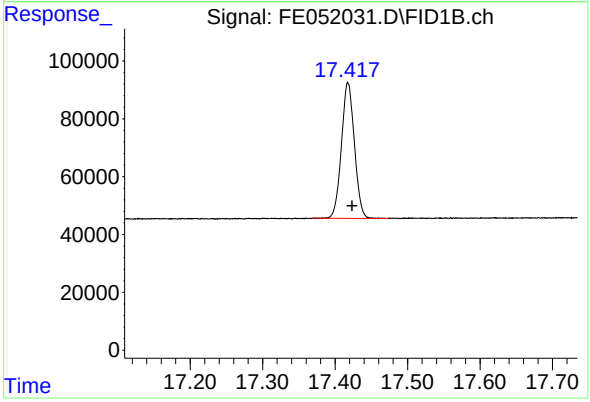
#10 N-TETRACOSANE

R.T.: 15.456 min
Delta R.T.: -0.005 min
Response: 594003
Conc: 5.75 ug/ml



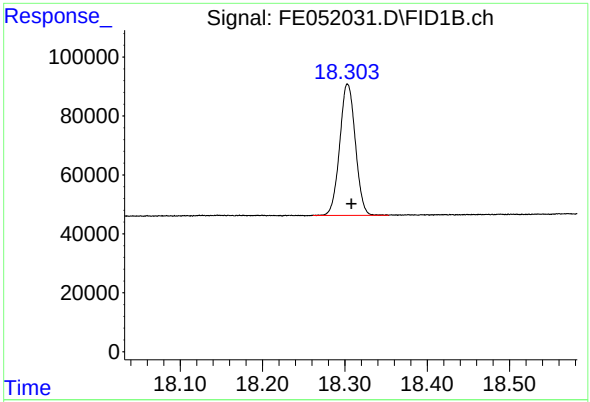
#11 N-HEXACOSANE

R.T.: 16.473 min
Delta R.T.: -0.004 min
Response: 585191
Conc: 5.75 ug/ml



#12 N-OCTACOSANE

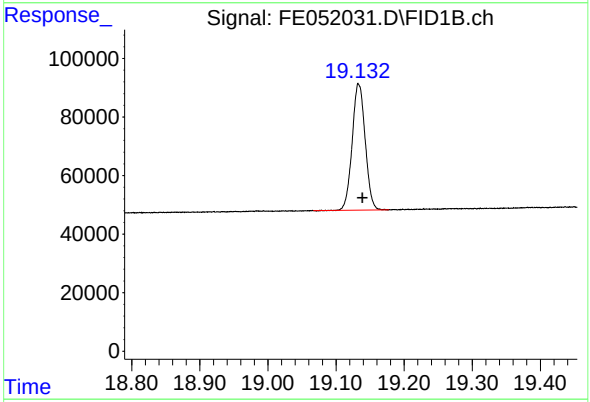
R.T.: 17.418 min
Delta R.T.: -0.006 min
Response: 583549
Conc: 5.79 ug/ml



#13 N-TRIACONTANE

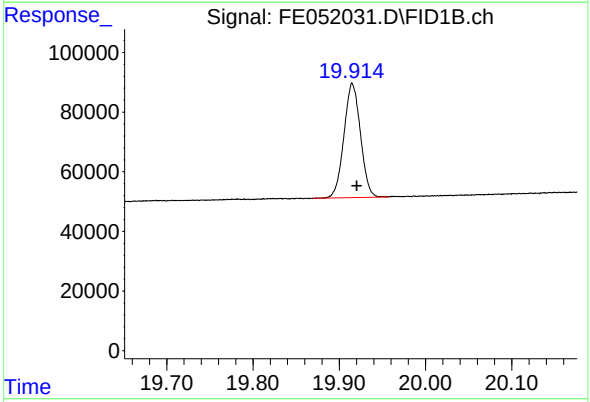
R.T.: 18.303 min
Delta R.T.: -0.005 min
Response: 588228
Conc: 5.91 ug/ml

Instrument :
FID_E
ClientSampleId :
5 TRPH STD



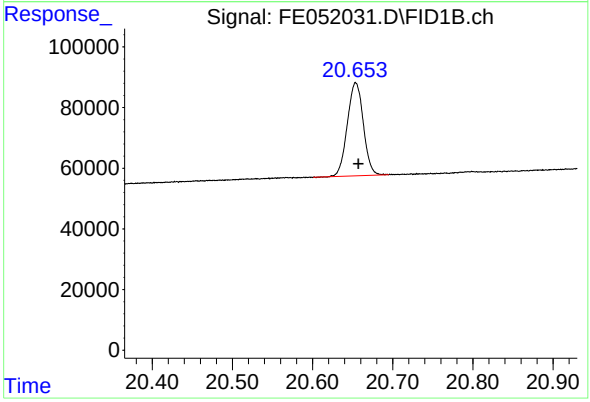
#14 N-DOTRIACONTANE

R.T.: 19.133 min
Delta R.T.: -0.006 min
Response: 573000
Conc: 5.93 ug/ml



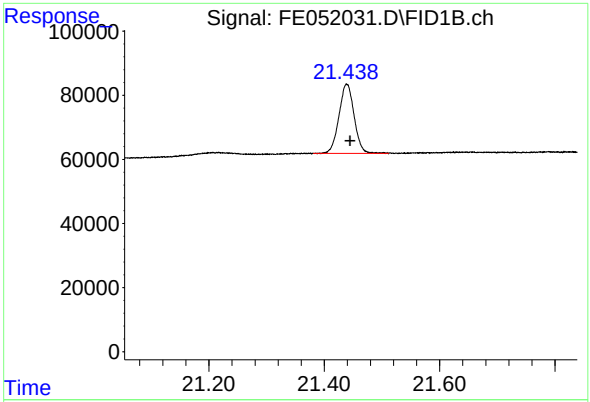
#15 N-TETRATRIACONTANE

R.T.: 19.915 min
Delta R.T.: -0.005 min
Response: 509659
Conc: 5.87 ug/ml



#16 N-HEXATRIACONTANE

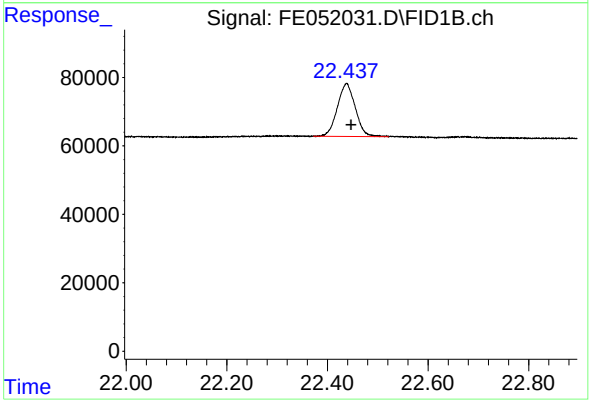
R.T.: 20.654 min
Delta R.T.: -0.004 min
Response: 427588
Conc: 5.74 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.439 min
Delta R.T.: -0.006 min
Response: 394101
Conc: 5.72 ug/ml

Instrument :
FID_E
ClientSampleId :
5 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.438 min
Delta R.T.: -0.009 min
Response: 382667
Conc: 5.69 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052031.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 00:36
Sample : 5 TRPH STD
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.412	2.380	2.477	BB	34060	447517	74.59%	4.697%
2	4.906	4.868	4.948	BB	50588	479458	79.92%	5.032%
3	7.033	6.997	7.086	BB	55038	524622	87.44%	5.506%
4	8.839	8.809	8.900	BB	53958	538294	89.72%	5.650%
5	10.432	10.391	10.483	BB	53629	566935	94.50%	5.950%
6	11.864	11.825	11.911	BB	55566	597723	99.63%	6.273%
7	13.166	13.127	13.215	BB	53796	599565	99.93%	6.293%
8	14.358	14.319	14.406	BB	51982	599958	100.00%	6.297%
9	15.253	15.220	15.311	BB	41765	535796	89.31%	5.623%
10	15.456	15.423	15.492	BB	49424	594003	99.01%	6.234%
11	16.473	16.428	16.522	BB	49428	585191	97.54%	6.142%
12	17.418	17.370	17.474	BB	46813	583549	97.26%	6.125%
13	18.303	18.261	18.353	BB	44585	588228	98.04%	6.174%
14	19.133	19.066	19.177	BB	42966	573000	95.51%	6.014%
15	19.915	19.870	19.957	BB	38416	509659	84.95%	5.349%
16	20.654	20.601	20.695	BB	30739	427588	71.27%	4.488%
17	21.439	21.381	21.511	BB	21574	394101	65.69%	4.136%
18	22.438	22.371	22.521	BB	15521	382667	63.78%	4.016%
			Sum of corrected areas:			9527854		

FE012325.M Fri Jan 24 03:20:00 2025

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052032.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 01:06
Operator : YP\AJ
Sample : FE012325ICV
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
FE012325ICV

Integration File: autoint1.e
Quant Time: Jan 24 03:09:02 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.256	4666211	46.850 ug/ml
	Target Compounds			
1)	N-OCTANE	2.412	3991003	46.799 ug/ml
2)	N-DECANE	4.906	4296957	46.959 ug/ml
3)	N-DODECANE	7.035	4687706	46.917 ug/ml
4)	N-TETRADECANE	8.841	4758083	46.764 ug/ml
5)	N-HEXADECANE	10.434	4984676	46.779 ug/ml
6)	N-OCTADECANE	11.868	5255597	46.874 ug/ml
7)	N-EICOSANE	13.169	5213798	46.811 ug/ml
8)	N-DOCOSANE	14.361	5190938	46.752 ug/ml
10)	N-TETRACOSANE	15.459	5183378	46.861 ug/ml
11)	N-HEXACOSANE	16.476	5097911	46.766 ug/ml
12)	N-OCTACOSANE	17.423	5031236	46.612 ug/ml
13)	N-TRIACONTANE	18.307	4962414	46.248 ug/ml
14)	N-DOTRIACONTANE	19.138	4809025	46.056 ug/ml
15)	N-TETRATRIACONTANE	19.918	4322160	46.027 ug/ml
16)	N-HEXATRIACONTANE	20.656	3695277	45.760 ug/ml
17)	N-OCTATRIACONTANE	21.442	3418238	45.815 ug/ml
18)	N-TETRACONTANE	22.445	3353522	45.536 ug/ml

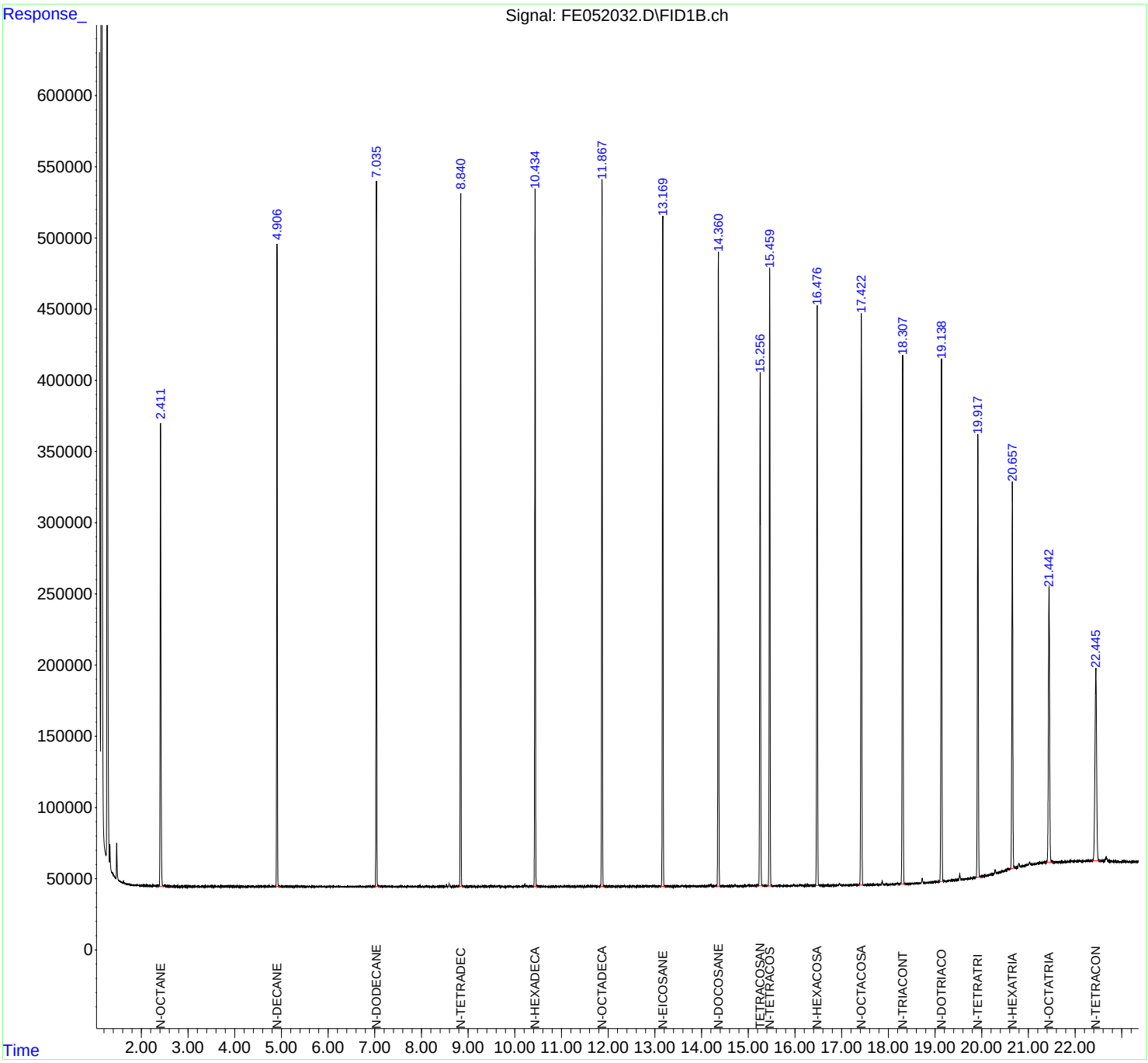
(f)=RT Delta > 1/2 Window (m)=manual int.

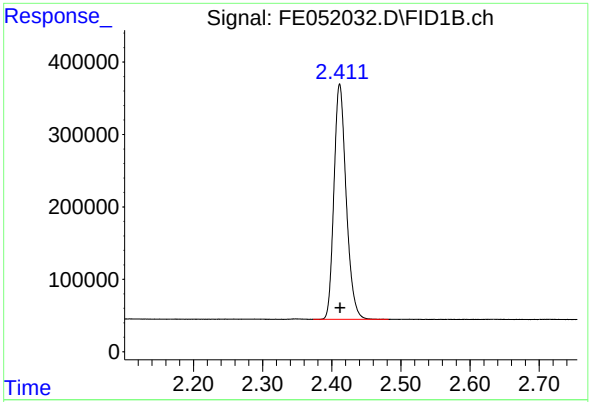
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052032.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 01:06
Operator : YP\AJ
Sample : FE012325ICV
Misc :
ALS Vial : 23 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
FE012325ICV

Integration File: autoint1.e
Quant Time: Jan 24 03:09:02 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

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

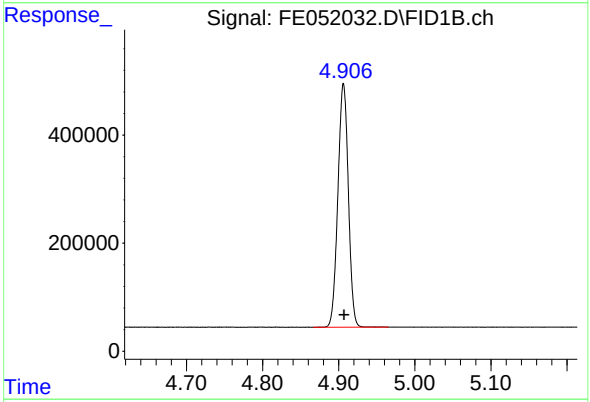




#1 N-OCTANE

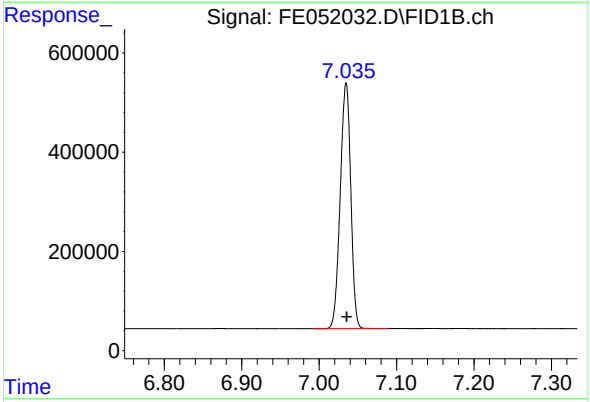
R.T.: 2.412 min
Delta R.T.: 0.000 min
Response: 3991003
Conc: 46.80 ug/ml

Instrument :
FID_E
ClientSampleId :
FE012325ICV



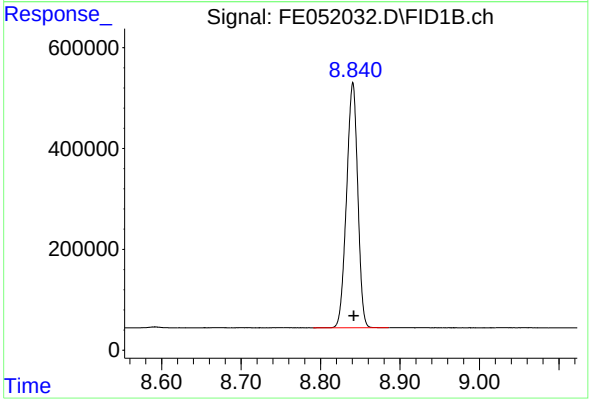
#2 N-DECANE

R.T.: 4.906 min
Delta R.T.: 0.000 min
Response: 4296957
Conc: 46.96 ug/ml



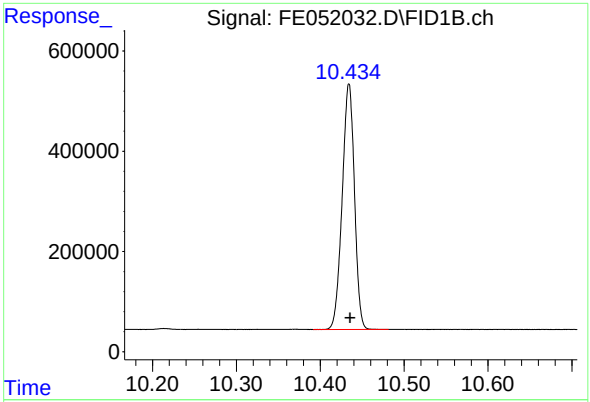
#3 N-DODECANE

R.T.: 7.035 min
Delta R.T.: 0.000 min
Response: 4687706
Conc: 46.92 ug/ml



#4 N-TETRADECANE

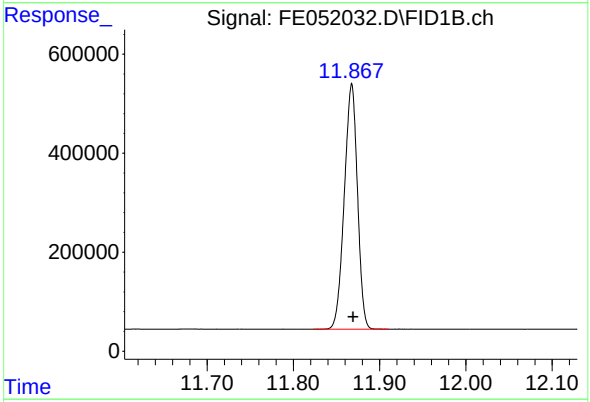
R.T.: 8.841 min
Delta R.T.: -0.001 min
Response: 4758083
Conc: 46.76 ug/ml



#5 N-HEXADECANE

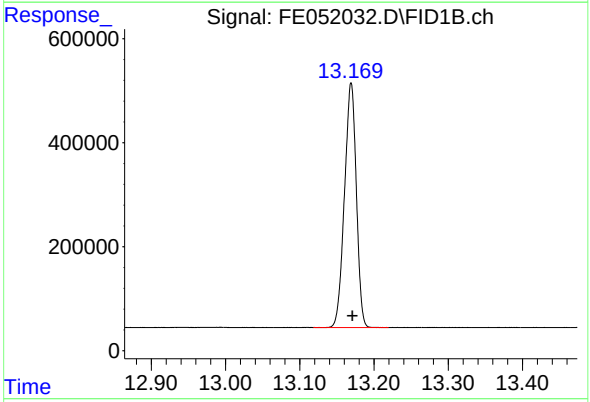
R.T.: 10.434 min
Delta R.T.: -0.001 min
Response: 4984676
Conc: 46.78 ug/ml

Instrument :
FID_E
ClientSampleId :
FE012325ICV



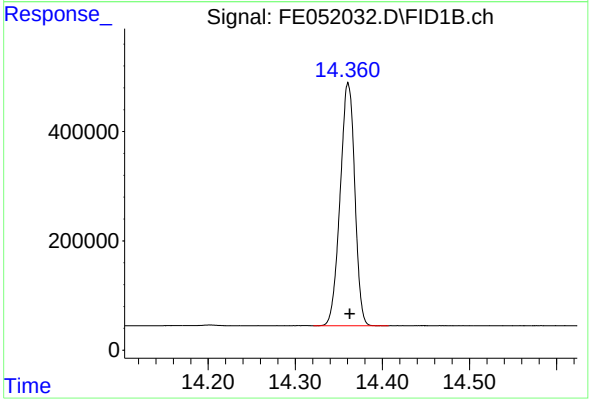
#6 N-OCTADECANE

R.T.: 11.868 min
Delta R.T.: -0.001 min
Response: 5255597
Conc: 46.87 ug/ml



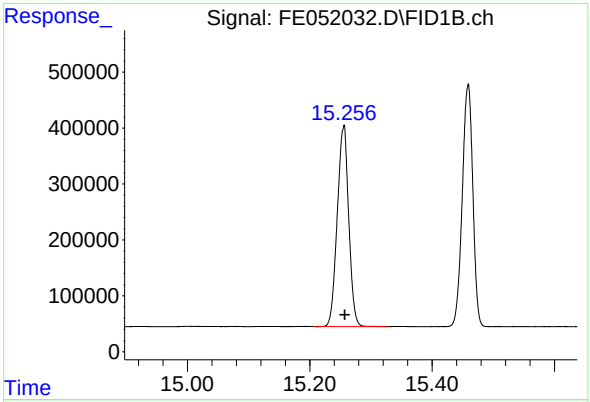
#7 N-EICOSANE

R.T.: 13.169 min
Delta R.T.: -0.002 min
Response: 5213798
Conc: 46.81 ug/ml



#8 N-DOCOSANE

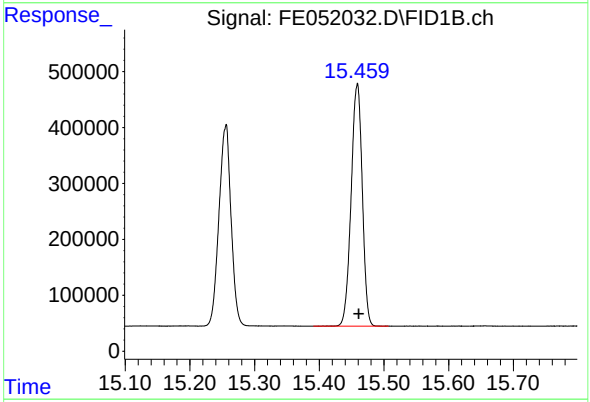
R.T.: 14.361 min
Delta R.T.: -0.002 min
Response: 5190938
Conc: 46.75 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

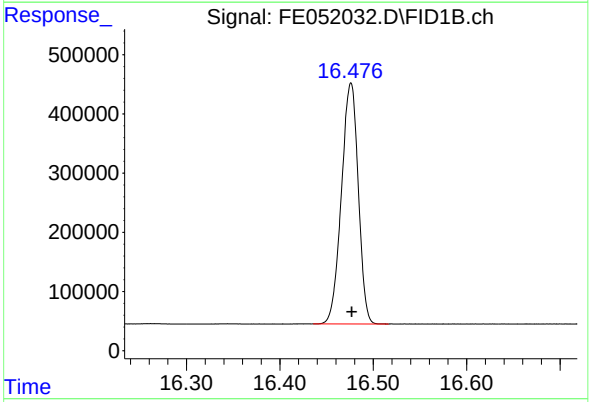
R.T.: 15.256 min
Delta R.T.: -0.001 min
Response: 4666211
Conc: 46.85 ug/ml

Instrument :
FID_E
ClientSampleId :
FE012325ICV



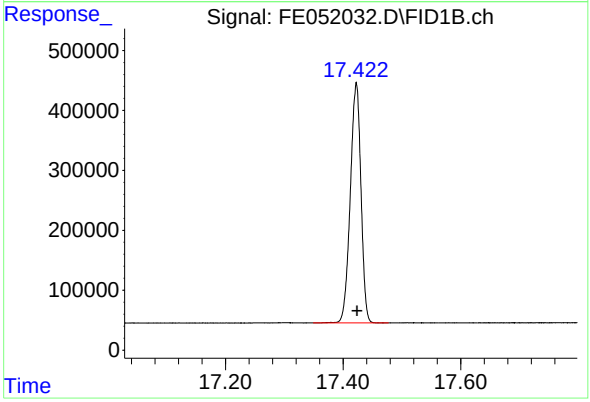
#10 N-TETRACOSANE

R.T.: 15.459 min
Delta R.T.: -0.002 min
Response: 5183378
Conc: 46.86 ug/ml



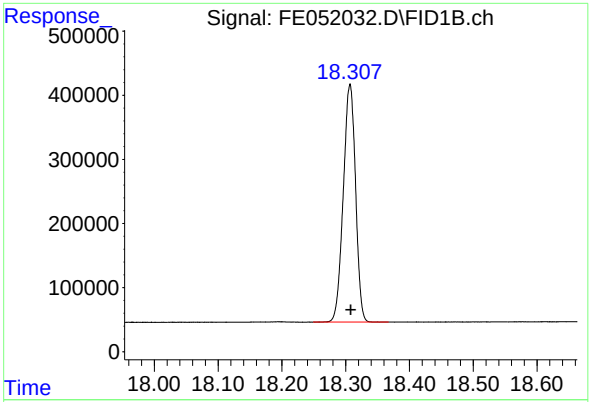
#11 N-HEXACOSANE

R.T.: 16.476 min
Delta R.T.: 0.000 min
Response: 5097911
Conc: 46.77 ug/ml



#12 N-OCTACOSANE

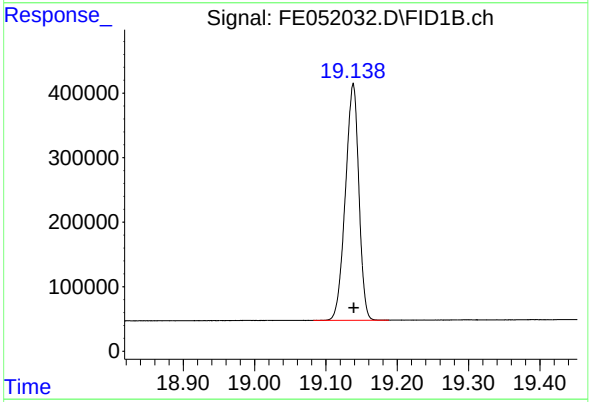
R.T.: 17.423 min
Delta R.T.: -0.001 min
Response: 5031236
Conc: 46.61 ug/ml



#13 N-TRIACONTANE

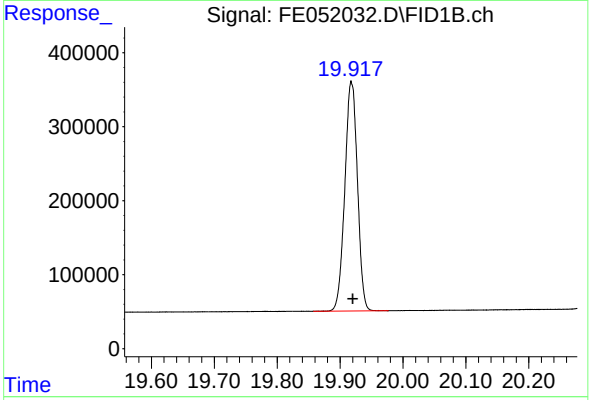
R.T.: 18.307 min
Delta R.T.: -0.001 min
Response: 4962414
Conc: 46.25 ug/ml

Instrument :
FID_E
ClientSampleId :
FE012325ICV



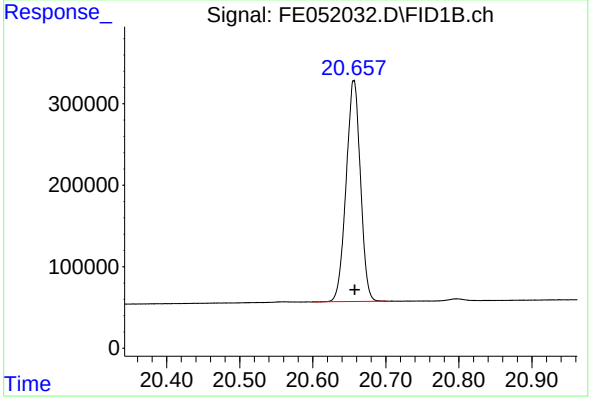
#14 N-DOTRIACONTANE

R.T.: 19.138 min
Delta R.T.: 0.000 min
Response: 4809025
Conc: 46.06 ug/ml



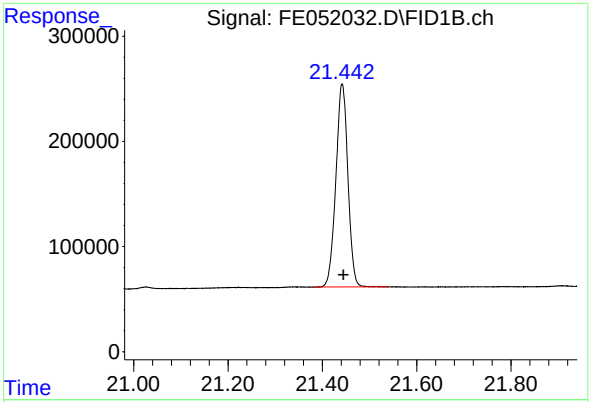
#15 N-TETRATRIACONTANE

R.T.: 19.918 min
Delta R.T.: -0.002 min
Response: 4322160
Conc: 46.03 ug/ml



#16 N-HEXATRIACONTANE

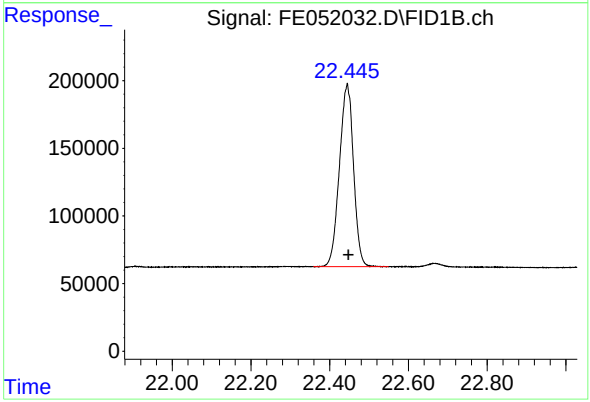
R.T.: 20.656 min
Delta R.T.: -0.001 min
Response: 3695277
Conc: 45.76 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.442 min
Delta R.T.: -0.003 min
Response: 3418238
Conc: 45.81 ug/ml

Instrument :
FID_E
ClientSampleId :
FE012325ICV



#18 N-TETRACONTANE

R.T.: 22.445 min
Delta R.T.: -0.003 min
Response: 3353522
Conc: 45.54 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012325\
Data File : FE052032.D
Signal(s) : FID1B.ch
Acq On : 24 Jan 2025 01:06
Sample : FE012325ICV
Misc :
ALS Vial : 23 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	2.412	2.373	2.482	BB	325149	3991003	75.94%	4.813%
2	4.906	4.866	4.966	BB	450862	4296957	81.76%	5.182%
3	7.035	6.992	7.090	BB	495564	4687706	89.19%	5.653%
4	8.841	8.791	8.886	BB	486321	4758083	90.53%	5.738%
5	10.434	10.391	10.481	BB	490371	4984676	94.85%	6.012%
6	11.868	11.823	11.911	BB	496666	5255597	100.00%	6.338%
7	13.169	13.118	13.220	BB	470899	5213798	99.20%	6.288%
8	14.361	14.321	14.407	BB	444530	5190938	98.77%	6.260%
9	15.256	15.206	15.329	BB	358694	4666211	88.79%	5.627%
10	15.459	15.391	15.507	BB	433536	5183378	98.63%	6.251%
11	16.476	16.436	16.516	BB	407354	5097911	97.00%	6.148%
12	17.423	17.349	17.477	BB	400863	5031236	95.73%	6.068%
13	18.307	18.249	18.367	BB	371955	4962414	94.42%	5.985%
14	19.138	19.082	19.188	BB	366172	4809025	91.50%	5.800%
15	19.918	19.857	19.977	BB	309597	4322160	82.24%	5.213%
16	20.656	20.601	20.704	BB	270798	3695277	70.31%	4.457%
17	21.442	21.381	21.541	BB	193087	3418238	65.04%	4.122%
18	22.445	22.358	22.550	BB	135556	3353522	63.81%	4.044%
			Sum of corrected areas:			82918129		

FE012325.M Fri Jan 24 03:20:42 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: RUTW01

ProjectID: NYCDDC SANTWOBR Brooklyn Bridge BBMCR

Lab Code: CHEM Case No.: Q1206 SAS No.: Q1206 SDG No.: Q1206

DataFile: FE052140.D Analyst Name: YP\AJ Analyst Date: 01-30-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	50016905	100034	106182	5.79

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052140.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:58
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jan 30 06:58:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025

	Compound	R.T.	Response	Conc Units
	System Monitoring Compounds			
9)	S TETRACOSANE-d50 (SURR...	15.245	4680249	46.991 ug/mlm
	Target Compounds			
2)	N-DECANE	4.901	4328980	47.309 ug/ml
3)	N-DODECANE	7.029	4727051	47.311 ug/ml
4)	N-TETRADECANE	8.835	4812264	47.296 ug/ml
5)	N-HEXADECANE	10.428	5045030	47.345 ug/ml
6)	N-OCTADECANE	11.860	5310251	47.362 ug/ml
7)	N-EICOSANE	13.162	5256437	47.194 ug/ml
8)	N-DOCOSANE	14.353	5215823	46.976 ug/ml
10)	N-TETRACOSANE	15.451	5191439	46.934 ug/ml
11)	N-HEXACOSANE	16.466	5102096	46.804 ug/ml
12)	N-OCTACOSANE	17.412	5027534	46.577 ug/ml

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052140.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:58
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

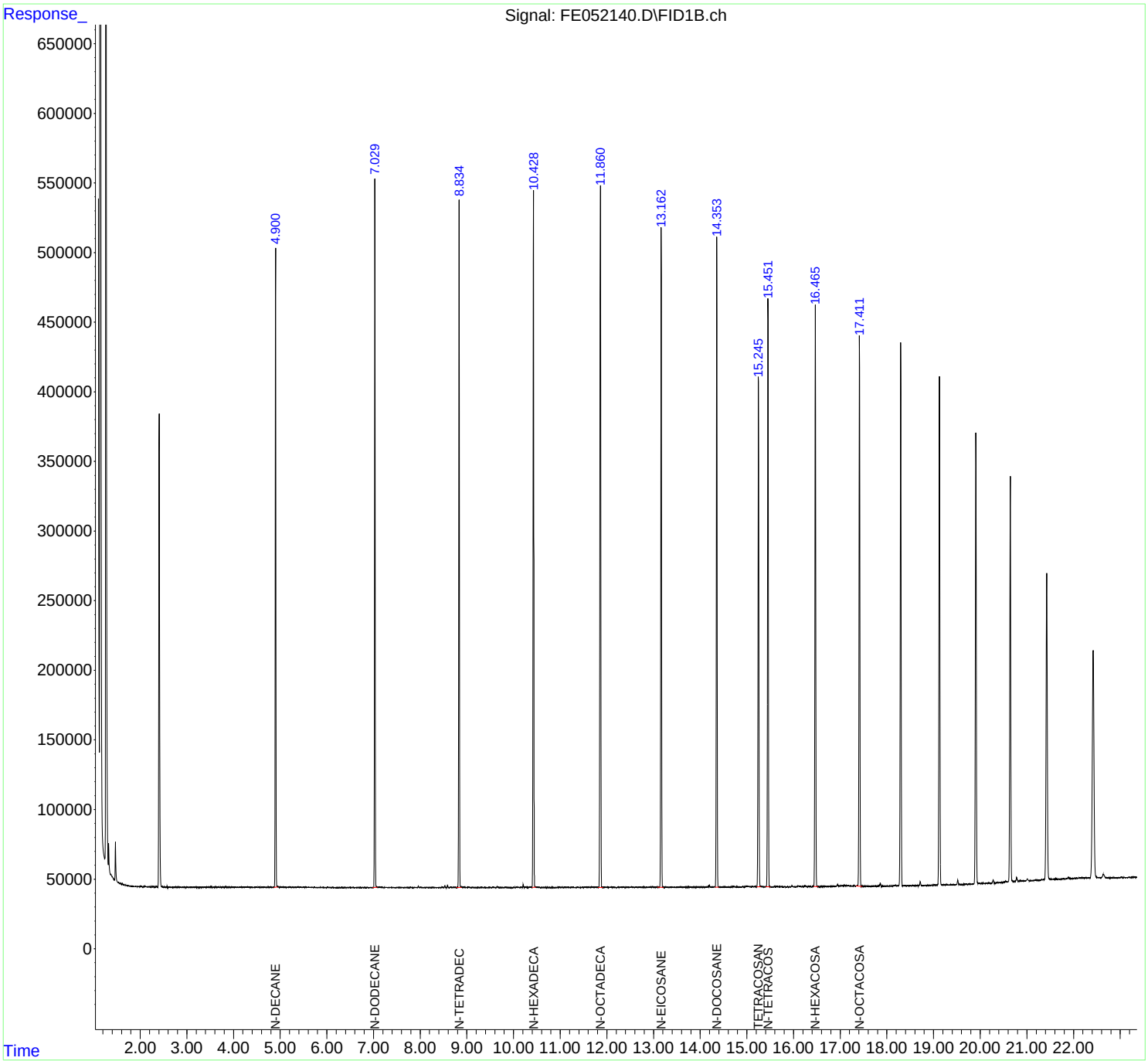
Integration File: autoint1.e
Quant Time: Jan 30 06:58:47 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

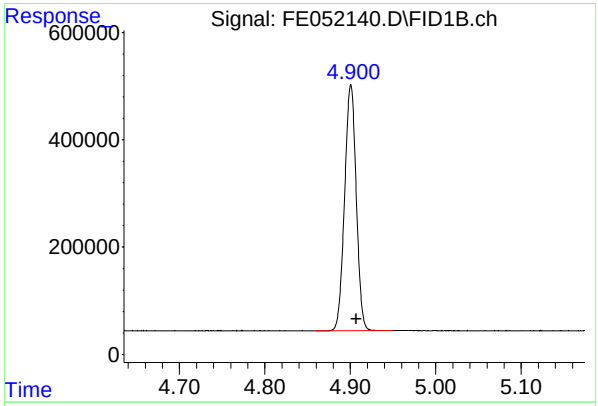
Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025





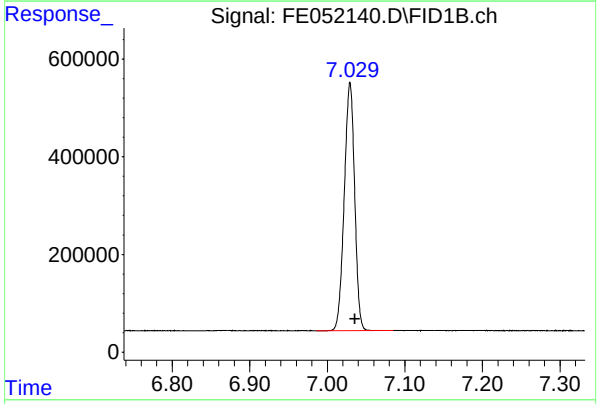
#2 N-DECANE

R.T.: 4.901 min
Delta R.T.: -0.007 min
Response: 4328980
Conc: 47.31 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

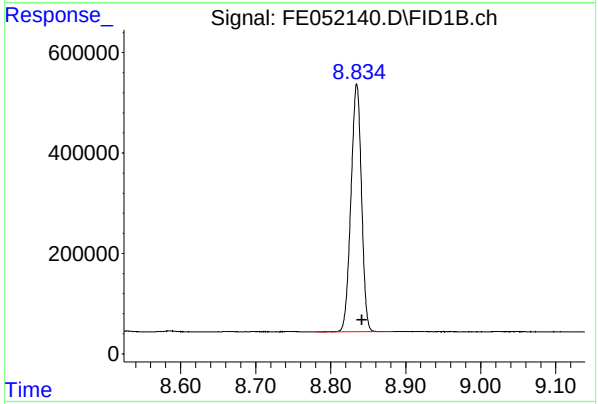
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025



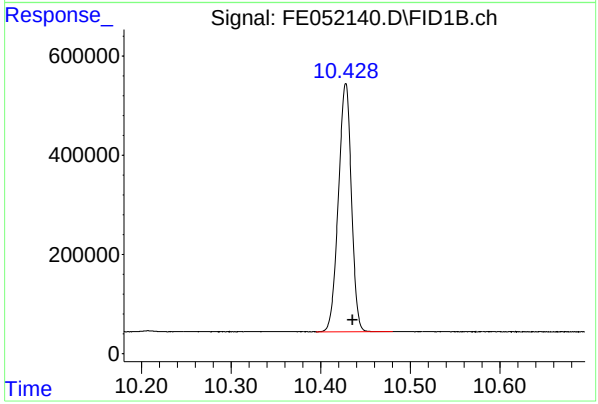
#3 N-DODECANE

R.T.: 7.029 min
Delta R.T.: -0.006 min
Response: 4727051
Conc: 47.31 ug/ml



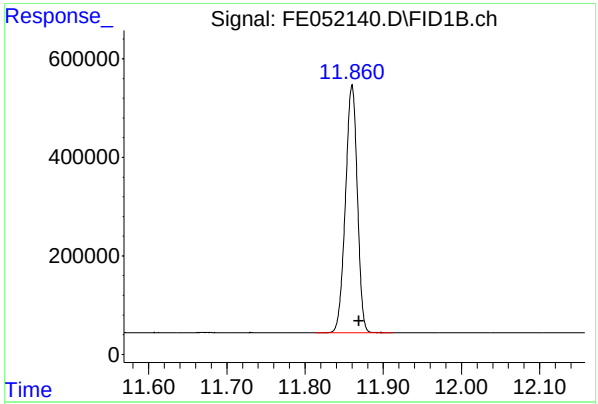
#4 N-TETRADECANE

R.T.: 8.835 min
Delta R.T.: -0.007 min
Response: 4812264
Conc: 47.30 ug/ml



#5 N-HEXADECANE

R.T.: 10.428 min
Delta R.T.: -0.008 min
Response: 5045030
Conc: 47.35 ug/ml



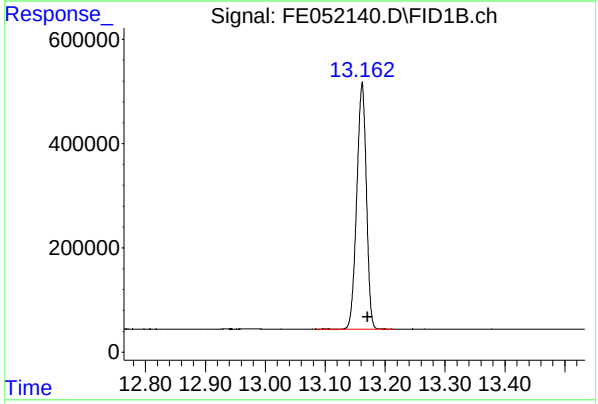
#6 N-OCTADECANE

R.T.: 11.860 min
Delta R.T.: -0.009 min
Response: 5310251
Conc: 47.36 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

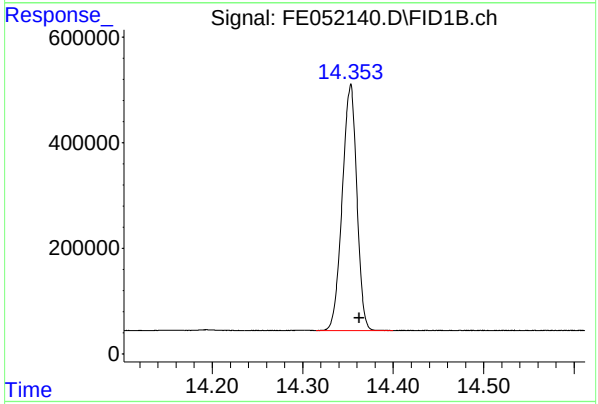
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025



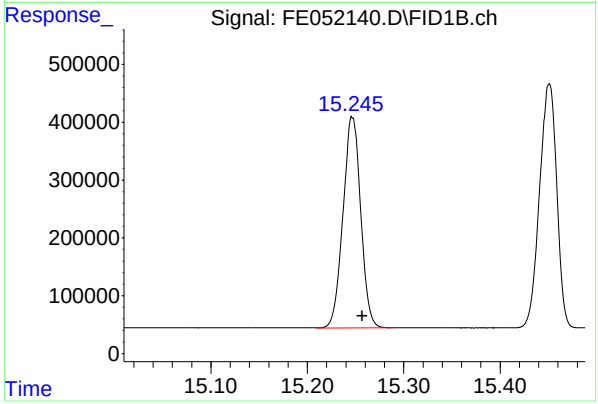
#7 N-EICOSANE

R.T.: 13.162 min
Delta R.T.: -0.009 min
Response: 5256437
Conc: 47.19 ug/ml



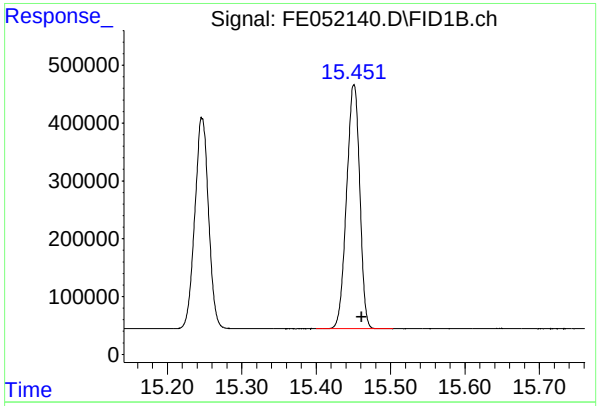
#8 N-DOCOSANE

R.T.: 14.353 min
Delta R.T.: -0.009 min
Response: 5215823
Conc: 46.98 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.245 min
Delta R.T.: -0.012 min
Response: 4680249
Conc: 46.99 ug/ml m



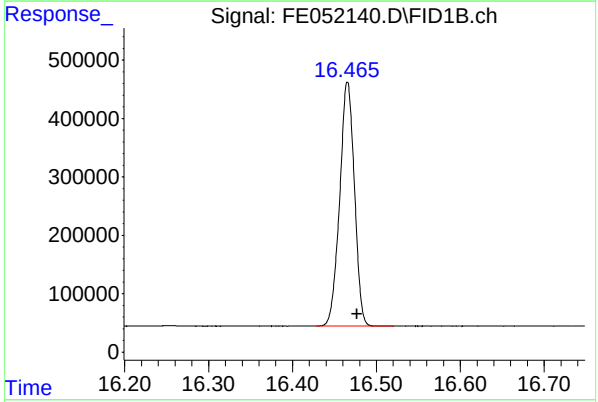
#10 N-TETRACOSANE

R.T.: 15.451 min
Delta R.T.: -0.010 min
Response: 5191439
Conc: 46.93 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

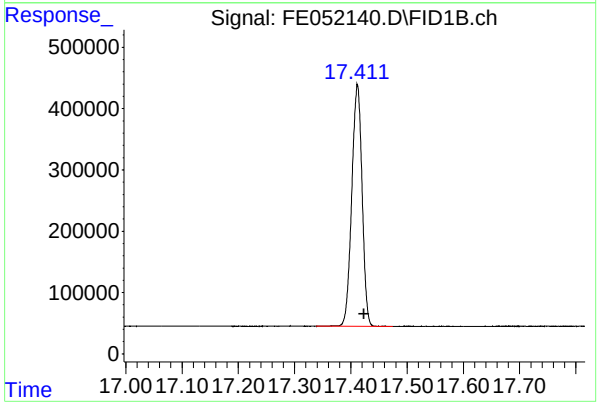
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025



#11 N-HEXACOSANE

R.T.: 16.466 min
Delta R.T.: -0.011 min
Response: 5102096
Conc: 46.80 ug/ml



#12 N-OCTACOSANE

R.T.: 17.412 min
Delta R.T.: -0.012 min
Response: 5027534
Conc: 46.58 ug/ml

Instrument :
FID_E
LabSampleId :
50 PPM TRPH STD

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 01/30/2025
Supervised By :Ankita Jodhani 01/30/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE01292
Data File : FE052140.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:58
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.901	4.860	4.950	BB	458783	4328980	81.52%	7.913%
2	7.029	6.986	7.085	BB	508462	4727051	89.02%	8.641%
3	8.835	8.781	8.883	BV	493393	4812264	90.62%	8.796%
4	10.428	10.395	10.481	BB	500757	5045030	95.01%	9.222%
5	11.860	11.814	11.912	BB	504208	5310251	100.00%	9.707%
6	13.162	13.085	13.213	BB	470908	5256437	98.99%	9.608%
7	14.353	14.315	14.400	BB	466391	5215823	98.22%	9.534%
8	15.247	15.157	15.316	BB	363741	4689733	88.31%	8.573%
9	15.451	15.400	15.503	BB	421750	5191439	97.76%	9.490%
10	16.466	16.428	16.520	BB	417247	5102096	96.08%	9.326%
11	17.412	17.338	17.475	BB	392553	5027534	94.68%	9.190%
			Sum of corrected areas:			54706636		

FE012325.M Thu Jan 30 07:25:52 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: RUTW01

ProjectID: NYCDDC SANTWOBR Brooklyn Bridge BBMCR

Lab Code: CHEM Case No.: Q1206 SAS No.: Q1206 SDG No.: Q1206

DataFile: FE052152.D Analyst Name: YP\AJ Analyst Date: 01-30-2025

Conc. (PPM)	Area Count	RF	Average RF	%D
500	47032768	94066	106182	11.411

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052152.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 11:00
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Jan 31 02:00:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

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

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
9)	S TETRACOSANE-d50 (SURR...	15.273	4388967	44.067	ug/ml
	Target Compounds				
2)	N-DECANE	4.936	4154331	45.400	ug/ml
3)	N-DODECANE	7.063	4475840	44.796	ug/ml
4)	N-TETRADECANE	8.866	4514219	44.367	ug/ml
5)	N-HEXADECANE	10.458	4719750	44.292	ug/ml
6)	N-OCTADECANE	11.890	4959940	44.237	ug/ml
7)	N-EICOSANE	13.190	4907257	44.059	ug/ml
8)	N-DOCOSANE	14.380	4873758	43.896	ug/ml
10)	N-TETRACOSANE	15.478	4871879	44.045	ug/ml
11)	N-HEXACOSANE	16.493	4804084	44.070	ug/ml
12)	N-OCTACOSANE	17.438	4751710	44.022	ug/mlm

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052152.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 11:00
Operator : YP\AJ
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

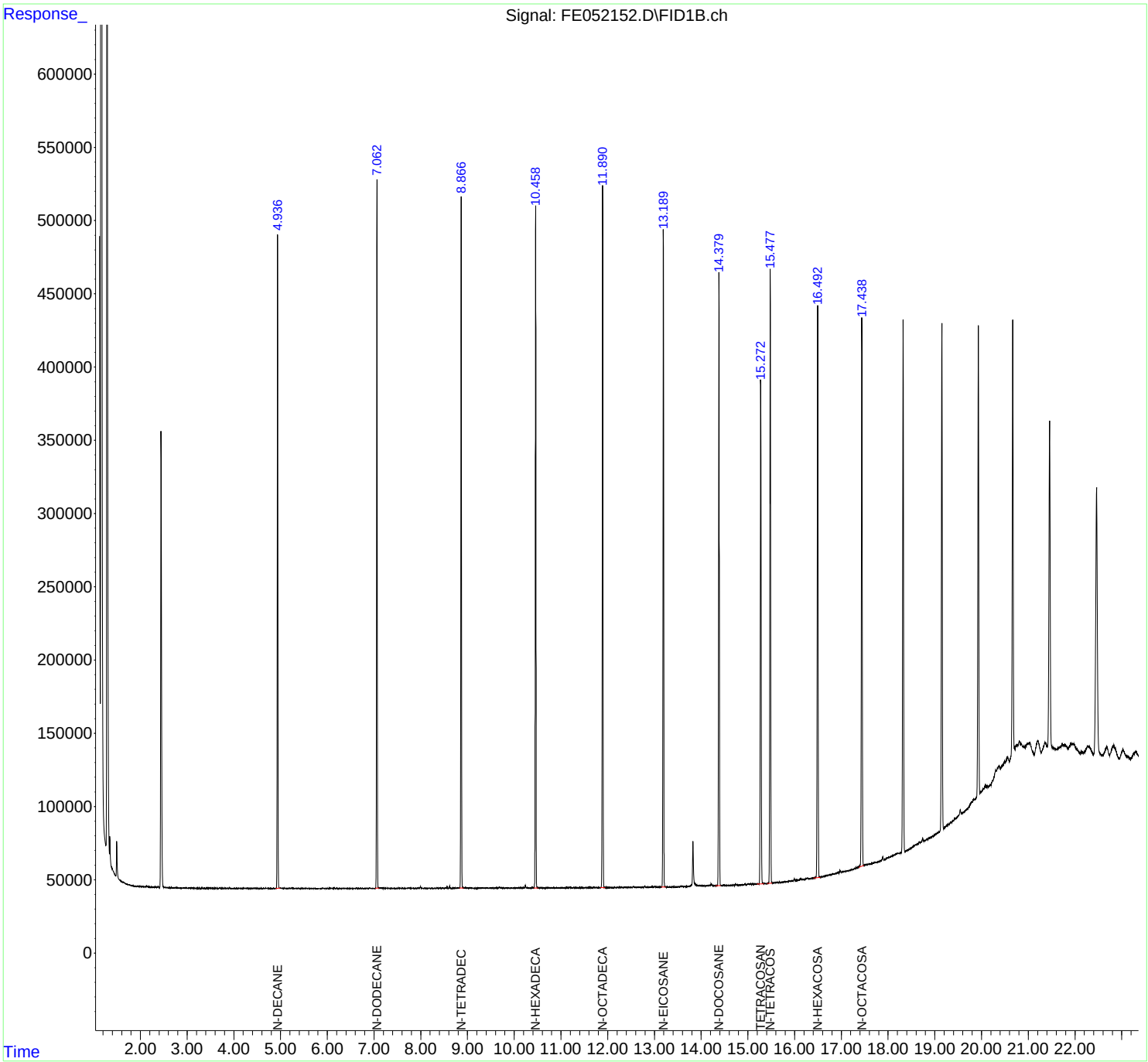
Integration File: autoint1.e
Quant Time: Jan 31 02:00:49 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

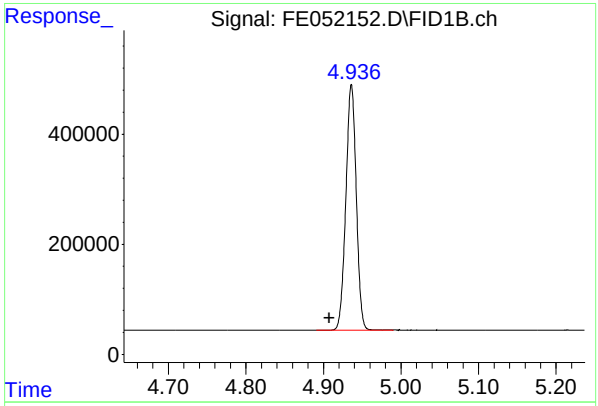
Volume Inj. : 1uL
Signal Phase : Rxi-1ms
Signal Info : 20mx0.18mmx0.18um

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

Manual Integrations APPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025





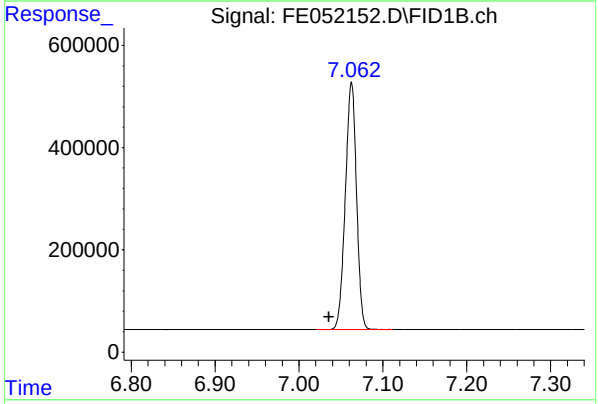
#2 N-DECANE

R.T.: 4.936 min
Delta R.T.: 0.029 min
Response: 4154331
Conc: 45.40 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

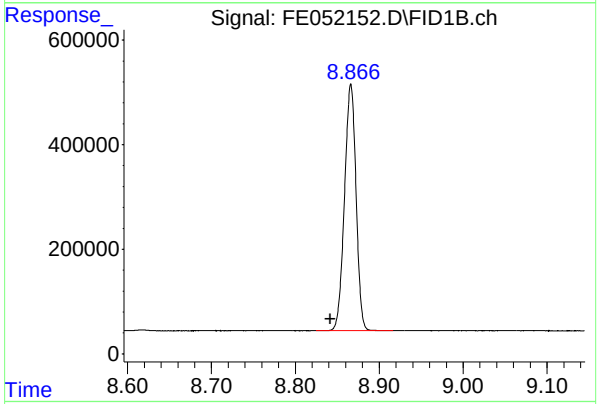
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025



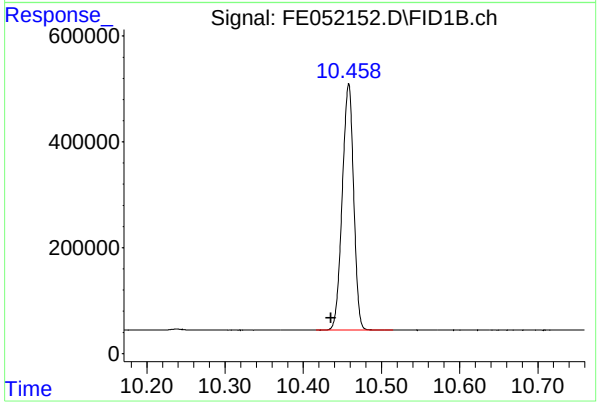
#3 N-DODECANE

R.T.: 7.063 min
Delta R.T.: 0.027 min
Response: 4475840
Conc: 44.80 ug/ml



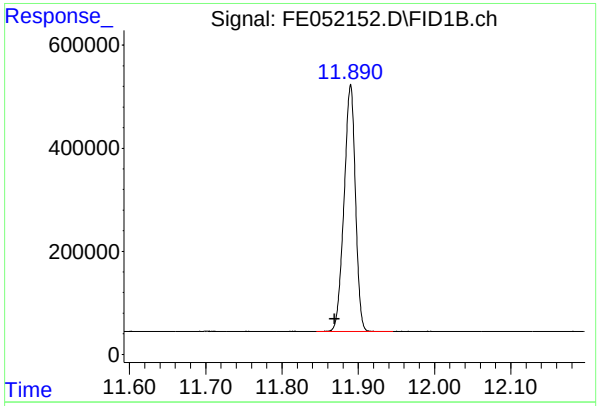
#4 N-TETRADECANE

R.T.: 8.866 min
Delta R.T.: 0.025 min
Response: 4514219
Conc: 44.37 ug/ml



#5 N-HEXADECANE

R.T.: 10.458 min
Delta R.T.: 0.023 min
Response: 4719750
Conc: 44.29 ug/ml



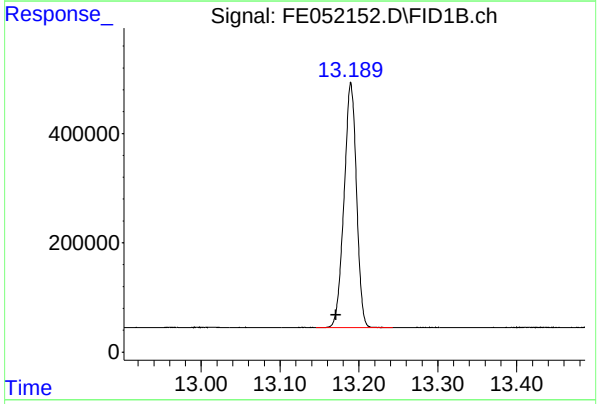
#6 N-OCTADECANE

R.T.: 11.890 min
Delta R.T.: 0.021 min
Response: 4959940
Conc: 44.24 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

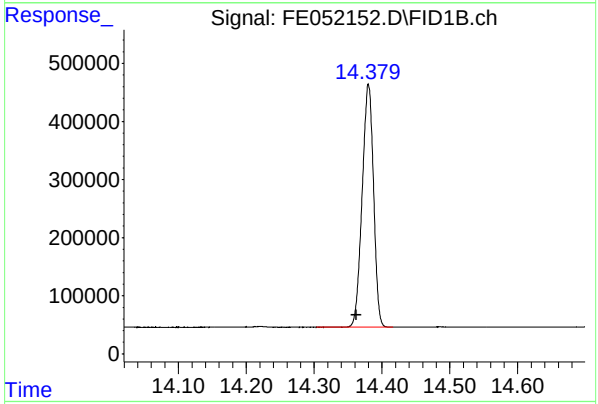
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025



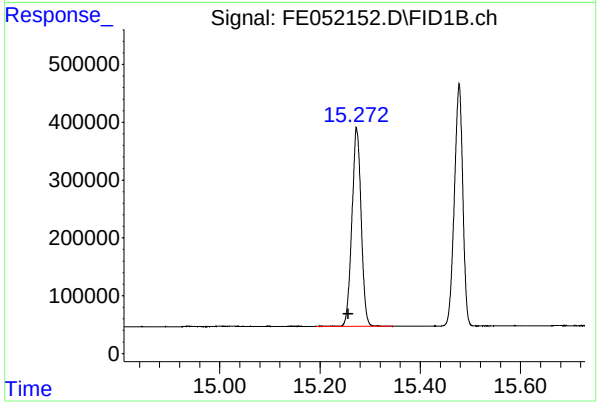
#7 N-EICOSANE

R.T.: 13.190 min
Delta R.T.: 0.019 min
Response: 4907257
Conc: 44.06 ug/ml



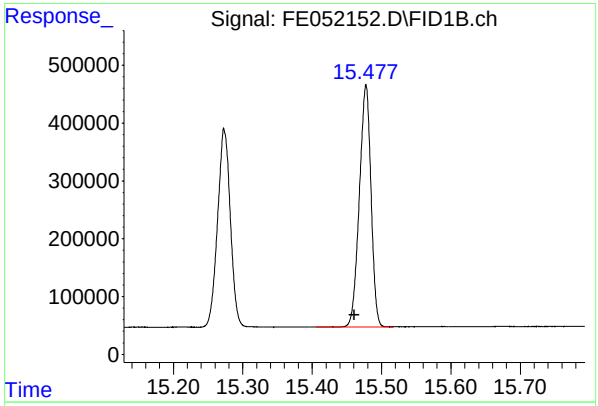
#8 N-DOCOSANE

R.T.: 14.380 min
Delta R.T.: 0.018 min
Response: 4873758
Conc: 43.90 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.273 min
Delta R.T.: 0.016 min
Response: 4388967
Conc: 44.07 ug/ml



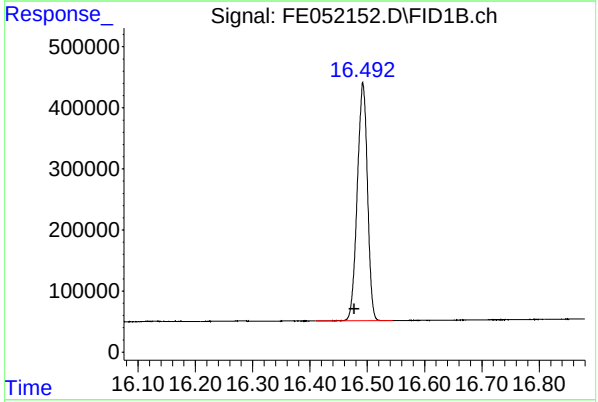
#10 N-TETRACOSANE

R.T.: 15.478 min
Delta R.T.: 0.017 min
Response: 4871879
Conc: 44.05 ug/ml

Instrument :
FID_E
ClientSampleId :
50 PPM TRPH STD

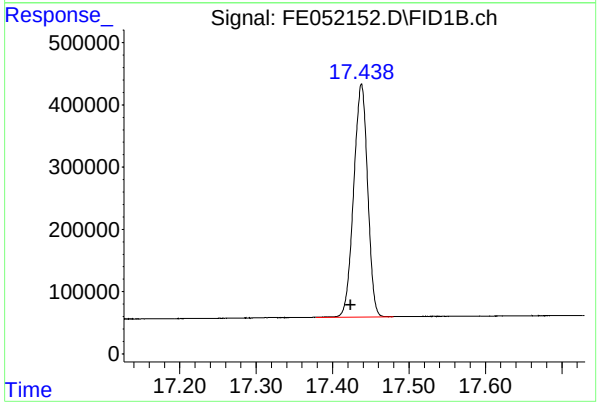
Manual Integrations
APPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025



#11 N-HEXACOSANE

R.T.: 16.493 min
Delta R.T.: 0.016 min
Response: 4804084
Conc: 44.07 ug/ml



#12 N-OCTACOSANE

R.T.: 17.438 min
Delta R.T.: 0.014 min
Response: 4751710
Conc: 44.02 ug/ml m

Instrument :
FID_E
LabSampleId :
50 PPM TRPH STD

rteres

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Yogesh Patel 01/31/2025
Supervised By :Ankita Jodhani 01/31/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE01292
Data File : FE052152.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 11:00
Sample : 50 PPM TRPH STD
Misc :
ALS Vial : 99 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.936	4.891	4.990	BB	446393	4154331	83.76%	8.089%
2	7.063	7.021	7.112	BB	482909	4475840	90.24%	8.715%
3	8.866	8.825	8.916	BB	471864	4514219	91.01%	8.790%
4	10.458	10.416	10.515	BB	465533	4719750	95.16%	9.190%
5	11.890	11.845	11.946	BB	478551	4959940	100.00%	9.657%
6	13.190	13.146	13.243	BB	448553	4907257	98.94%	9.555%
7	14.380	14.303	14.416	BB	416287	4873758	98.26%	9.490%
8	15.273	15.192	15.346	BB	342145	4388967	88.49%	8.546%
9	15.478	15.406	15.516	BB	418791	4871879	98.22%	9.486%
10	16.493	16.411	16.545	BB	389582	4804084	96.86%	9.354%
11	17.438	17.011	17.478	BB	374331	4688759	94.53%	9.129%
			Sum of corrected areas:			51358783		

FE012325.M Fri Jan 31 02:29:20 2025

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

Analytical Sequence

Client: RU2 Engineering, LLC **SDG No.:** Q1206

Project: NYCDDC SANTWOBR Brooklyn Bridge BBMCR **Instrument ID:** FID_E

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 **15.2554**

EPA SAMPLE NO.	LAB SAMPLE ID	DATE AND TIME ANALYZED	DATAFILE	RT	#
PIBLK01	I.BLK01	30 Jan 2025 03:28	FE052139.D	15.244	
50 PPM TRPH STD	50 PPM TRPH STD	30 Jan 2025 03:58	FE052140.D	15.247	
PB166348BL	PB166348BL	30 Jan 2025 04:58	FE052142.D	15.244	
PB166348BS	PB166348BS	30 Jan 2025 05:28	FE052143.D	15.243	
JPP-20.1-012725	Q1206-01	30 Jan 2025 05:58	FE052144.D	15.247	
JPP-16.3-012725	Q1206-05	30 Jan 2025 06:28	FE052145.D	15.260	
PIBLK02	I.BLK02	30 Jan 2025 10:30	FE052151.D	15.274	
50 PPM TRPH STD	50 PPM TRPH STD	30 Jan 2025 11:00	FE052152.D	15.273	

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

QC Limits	Lower Limit	Upper Limits
(± 0.10 minutes)	15.1554	15.3554

QC SAMPLE DATA

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

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166348BL	SDG No.:	Q1206
Lab Sample ID:	PB166348BL	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100 Decanted:
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FE052142.D	1	01/29/25 08:45	01/30/25 4:58	PB166348

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	1670	U	185	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	18.0		37 - 130	90%	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_E\Data\FE012925\
Data File : FE052142.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 04:58
Operator : YP\AJ
Sample : PB166348BL
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
PB166348BL

Integration File: autoint1.e
Quant Time: Jan 30 06:59:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.244	1793825	18.011 ug/ml
	Target Compounds			

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

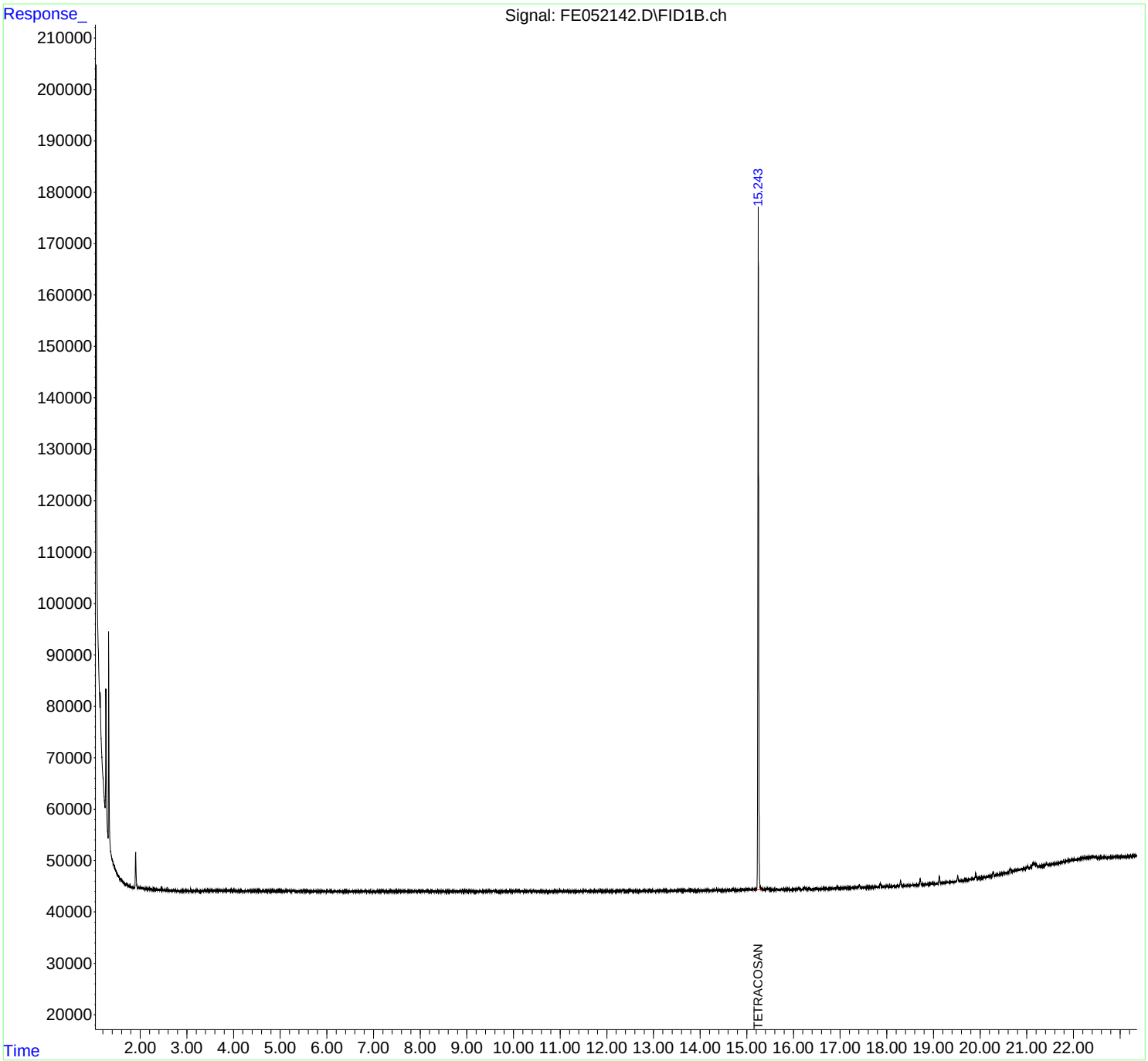
Quantitation Report (QT Reviewed)

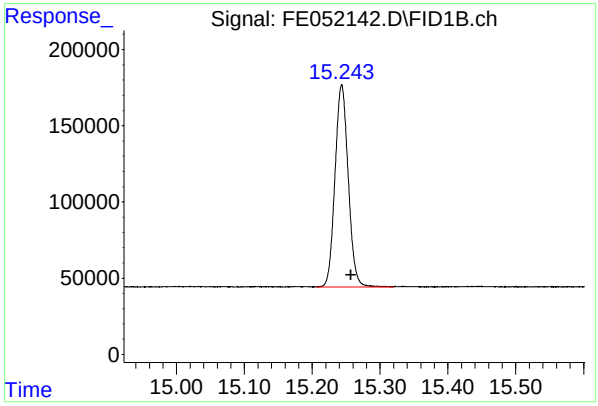
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052142.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 04:58
Operator : YP\AJ
Sample : PB166348BL
Misc :
ALS Vial : 26 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
PB166348BL

Integration File: autoint1.e
Quant Time: Jan 30 06:59:05 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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.: 15.244 min
Delta R.T.: -0.013 mi
Response: 1793825
Conc: 18.01 ug/m

Instrument :
FID_E
ClientSampleId :
PB166348BL

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052142.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 04:58
Sample : PB166348BL
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.244	15.206	15.319	BB	132579	1793825	100.00%	100.000%
			Sum of corrected areas:			1793825		

FE012325.M Thu Jan 30 07:26:21 2025

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

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	PIBLK-FE052139.D	SDG No.:	Q1206
Lab Sample ID:	I.BLK-FE052139.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
FE052139.D	1		01/30/25	FE012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	50.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	18.3		29 - 130	91%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052139.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:28
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 30 06:58:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.244	1820133	18.275 ug/ml
Target Compounds			

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

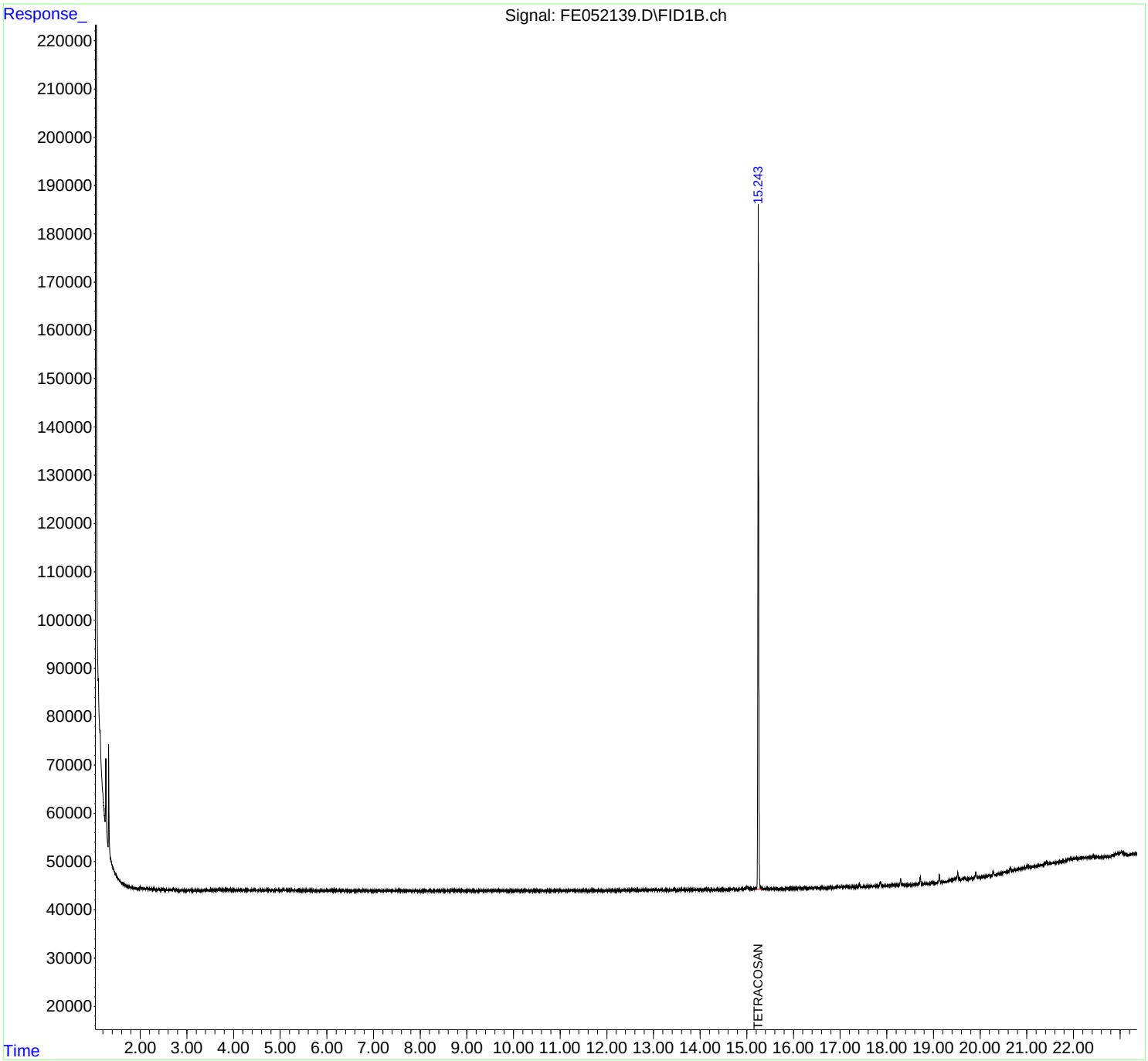
Quantitation Report (QT Reviewed)

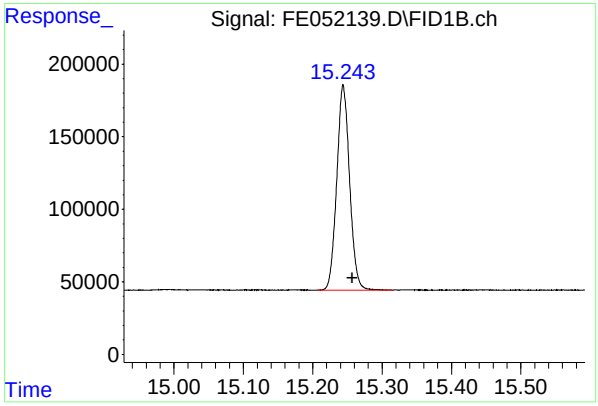
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052139.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:28
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 30 06:58:39 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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.: 15.244 min
Delta R.T.: -0.013 mi
Response: 1820133
Conc: 18.27 ug/m

Instrument :
FID_E
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052139.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 03:28
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.244	15.205	15.316	BB	141679	1820133	100.00%	100.000%
			Sum of corrected areas:			1820133		

FE012325.M Thu Jan 30 07:24:57 2025

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

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/30/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	PIBLK-FE052151.D	SDG No.:	Q1206
Lab Sample ID:	I.BLK-FE052151.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
FE052151.D	1		01/30/25	FE012925

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
DRO	DRO	50.0	U	10.0	50.0	ug/L
SURROGATES						
16416-32-3	Tetracosane-d50	17.1		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_E\Data\FE012925\
Data File : FE052151.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 10:30
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 31 02:00:31 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.274	1706234	17.131 ug/ml
Target Compounds			

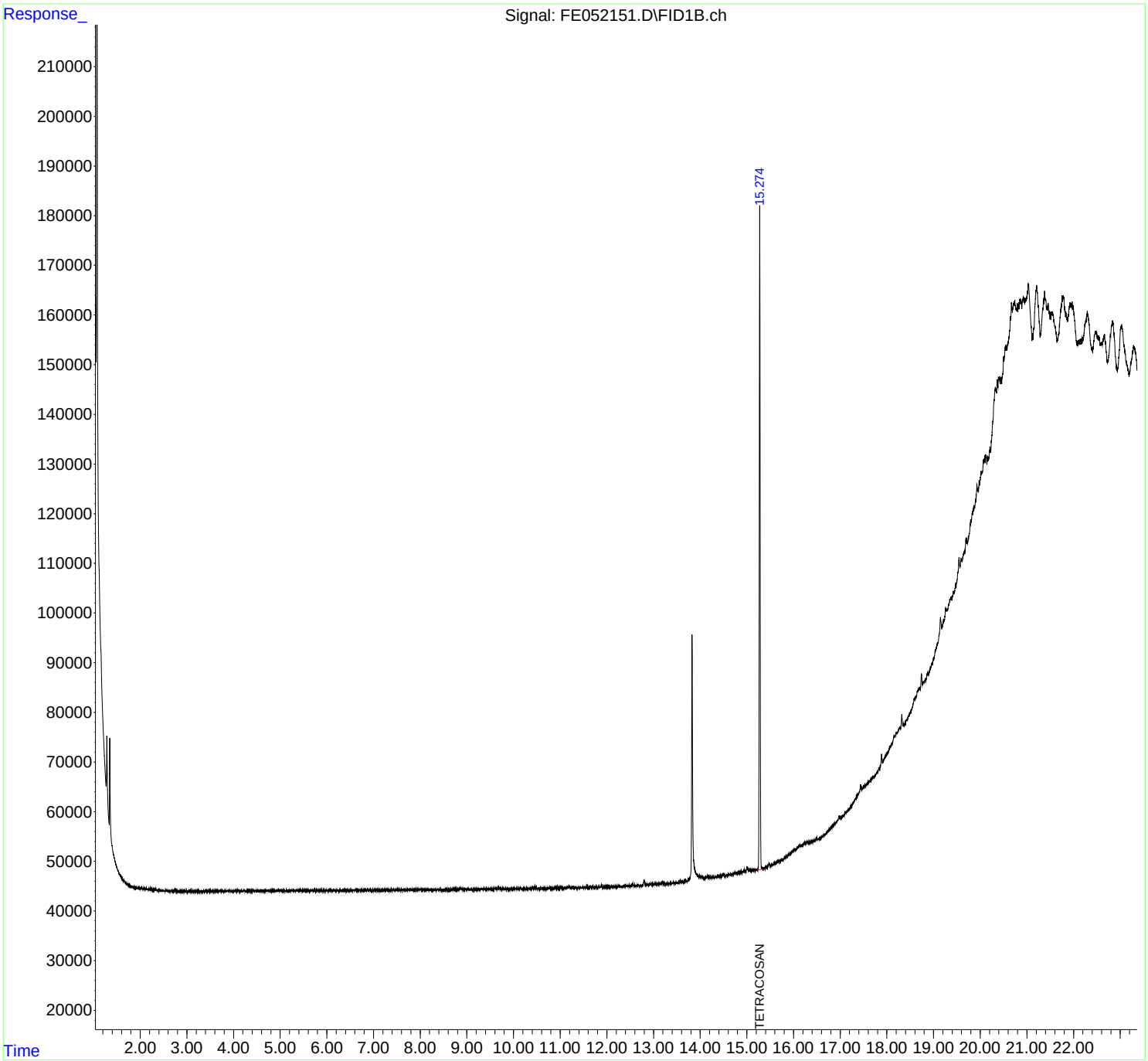
(f)=RT Delta > 1/2 Window (m)=manual int.

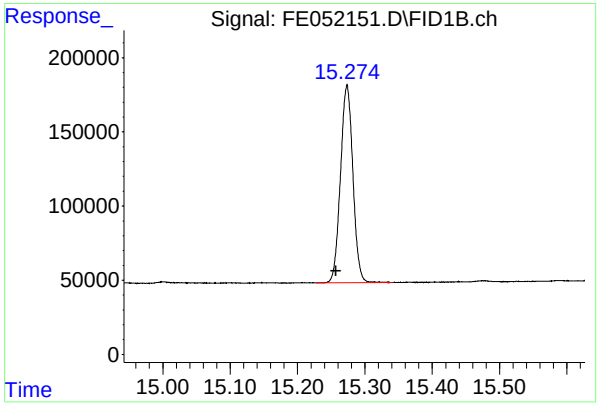
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052151.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 10:30
Operator : YP\AJ
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
I.BLK

Integration File: autoint1.e
Quant Time: Jan 31 02:00:31 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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.: 15.274 min
Delta R.T.: 0.017 mir
Response: 1706234
Conc: 17.13 ug/m

Instrument :
FID_E
ClientSampleId :
I.BLK

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052151.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 10:30
Sample : I.BLK
Misc :
ALS Vial : 98 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	15.274	15.227	15.342	BB	133319	1706234	100.00%	100.000%
			Sum of corrected areas:			1706234		

FE012325.M Fri Jan 31 02:28:46 2025

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

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	
Client Sample ID:	PB166348BS	SDG No.:	Q1206
Lab Sample ID:	PB166348BS	Matrix:	SOIL
Analytical Method:	8015D DRO	% Solid:	100 Decanted:
Sample Wt/Vol:	30.02 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	Diesel Range Organics
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FE052143.D	1	01/29/25 08:45	01/30/25 5:28	PB166348

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
DRO	DRO	6170		185	1670	ug/kg
SURROGATES						
16416-32-3	Tetracosane-d50	18.2		37 - 130	91%	SPK: 20

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052143.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:28
Operator : YP\AJ
Sample : PB166348BS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
PB166348BS

Integration File: autoint1.e
Quant Time: Jan 30 06:59:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 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...	15.243	1815534	18.229 ug/ml
	Target Compounds			
2)	N-DECANE	4.900	1641374	17.938 ug/ml
3)	N-DODECANE	7.027	1818135	18.197 ug/ml
4)	N-TETRADECANE	8.833	1917247	18.843 ug/ml
5)	N-HEXADECANE	10.426	1980727	18.588 ug/ml
6)	N-OCTADECANE	11.857	2058975	18.364 ug/ml
7)	N-EICOSANE	13.159	2109453	18.939 ug/ml
8)	N-DOCOSANE	14.350	2060538	18.558 ug/ml
10)	N-TETRACOSANE	15.446	2059502	18.619 ug/ml
11)	N-HEXACOSANE	16.463	2031706	18.638 ug/ml
12)	N-OCTACOSANE	17.409	2003907	18.565 ug/ml

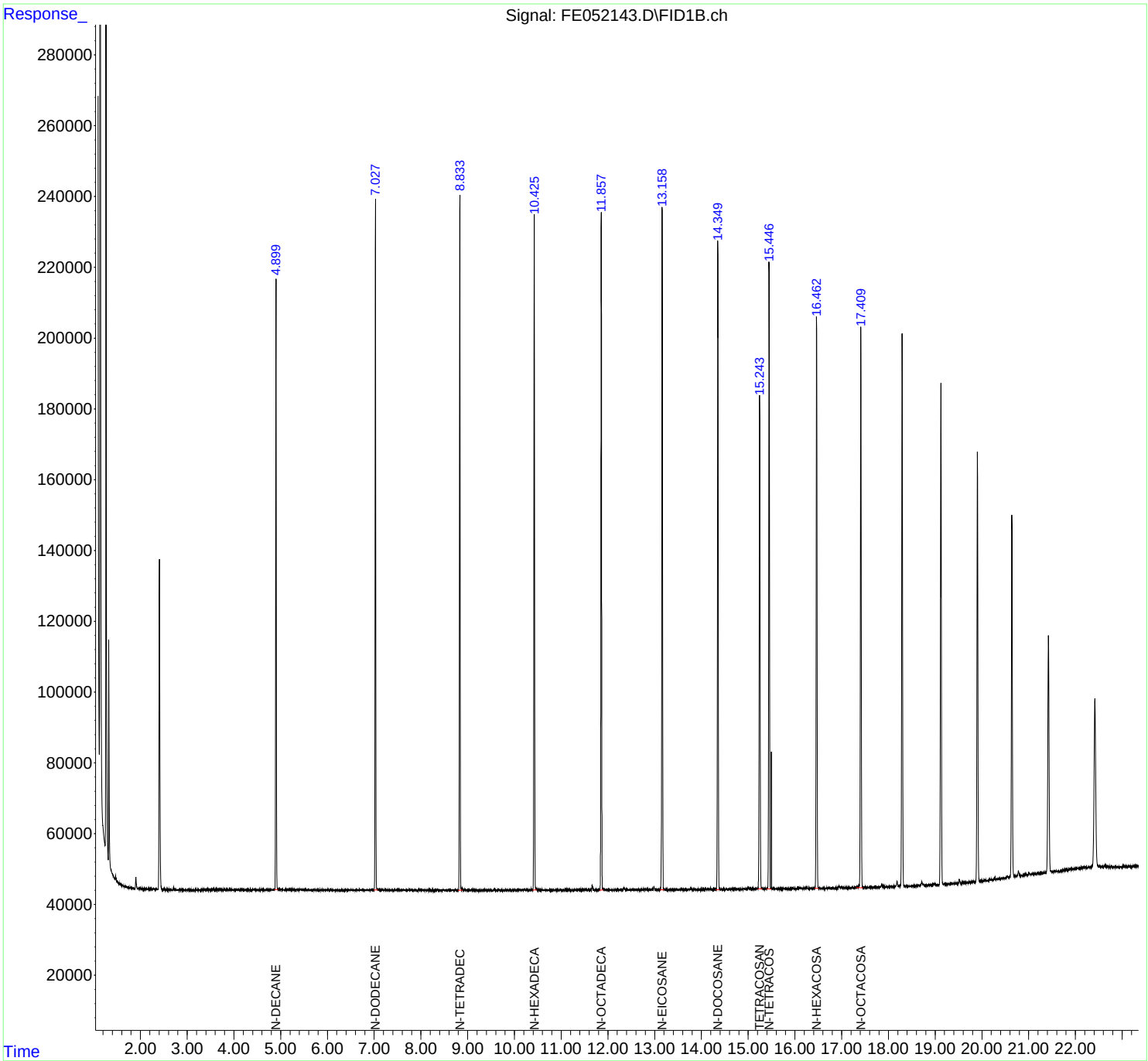
(f)=RT Delta > 1/2 Window (m)=manual int.

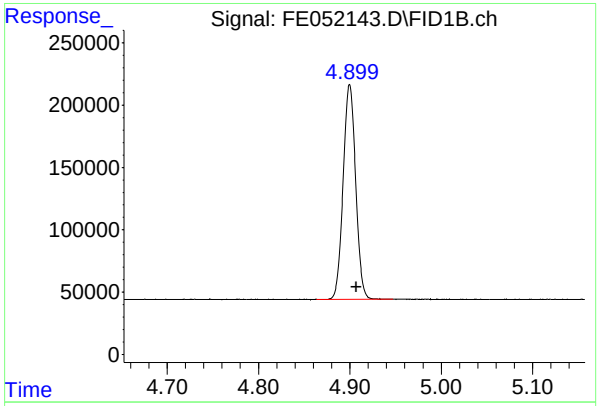
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052143.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:28
Operator : YP\AJ
Sample : PB166348BS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Instrument :
FID_E
ClientSampleId :
PB166348BS

Integration File: autoint1.e
Quant Time: Jan 30 06:59:12 2025
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Quant Title :
QLast Update : Fri Jan 24 03:06:38 2025
Response via : Initial Calibration
Integrator: ChemStation

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

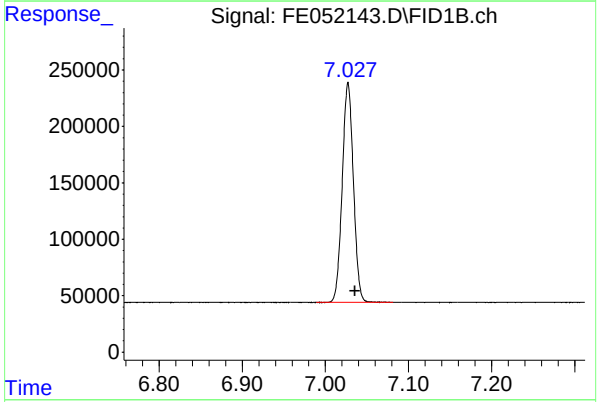




#2 N-DECANE

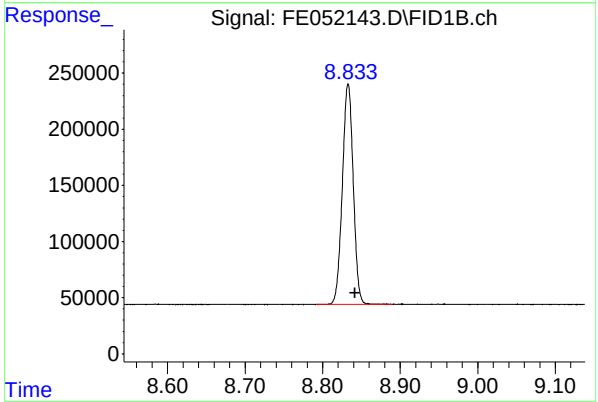
R.T.: 4.900 min
Delta R.T.: -0.007 min
Response: 1641374
Conc: 17.94 ug/ml

Instrument :
FID_E
ClientSampleId :
PB166348BS



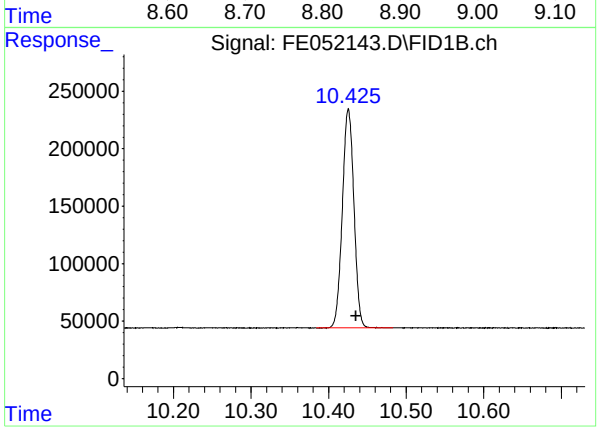
#3 N-DODECANE

R.T.: 7.027 min
Delta R.T.: -0.008 min
Response: 1818135
Conc: 18.20 ug/ml



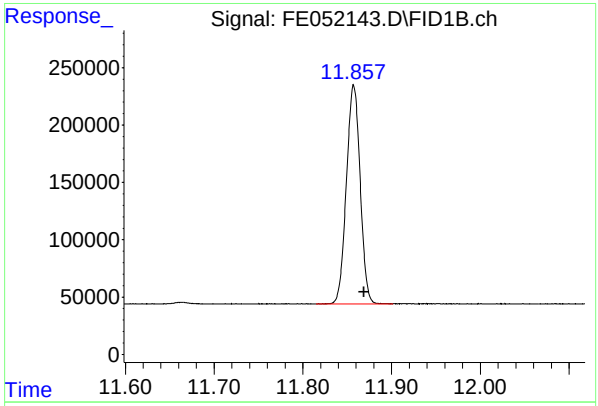
#4 N-TETRADECANE

R.T.: 8.833 min
Delta R.T.: -0.009 min
Response: 1917247
Conc: 18.84 ug/ml



#5 N-HEXADECANE

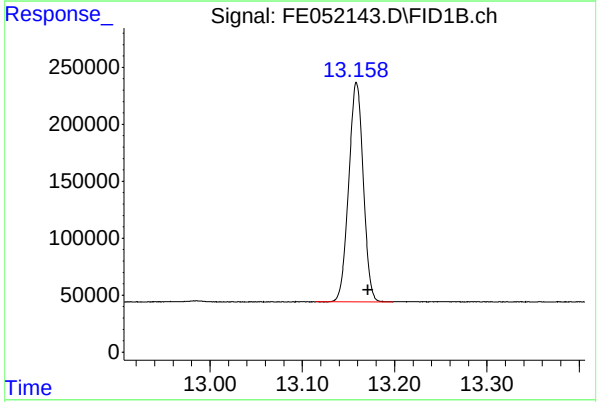
R.T.: 10.426 min
Delta R.T.: -0.010 min
Response: 1980727
Conc: 18.59 ug/ml



#6 N-OCTADECANE

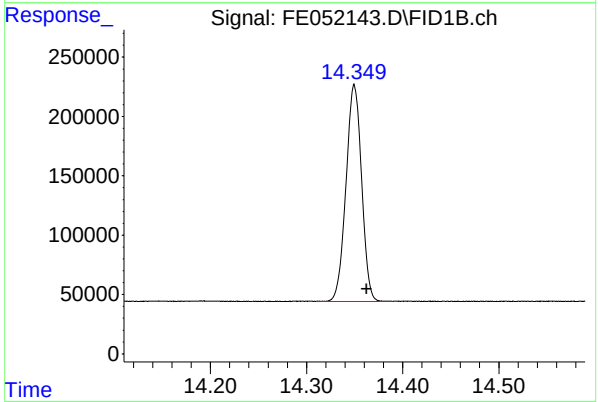
R.T.: 11.857 min
Delta R.T.: -0.012 min
Response: 2058975
Conc: 18.36 ug/ml

Instrument :
FID_E
ClientSampleId :
PB166348BS



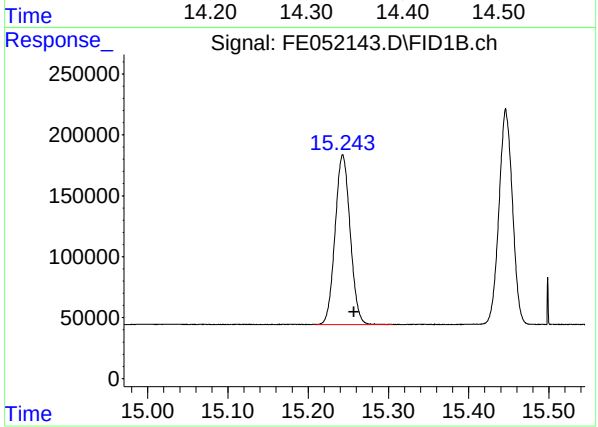
#7 N-EICOSANE

R.T.: 13.159 min
Delta R.T.: -0.012 min
Response: 2109453
Conc: 18.94 ug/ml



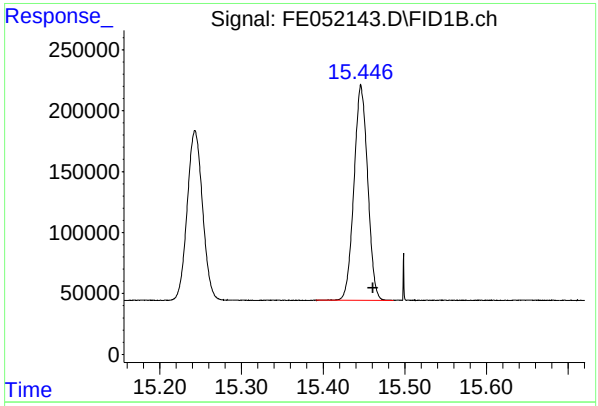
#8 N-DOCOSANE

R.T.: 14.350 min
Delta R.T.: -0.013 min
Response: 2060538
Conc: 18.56 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

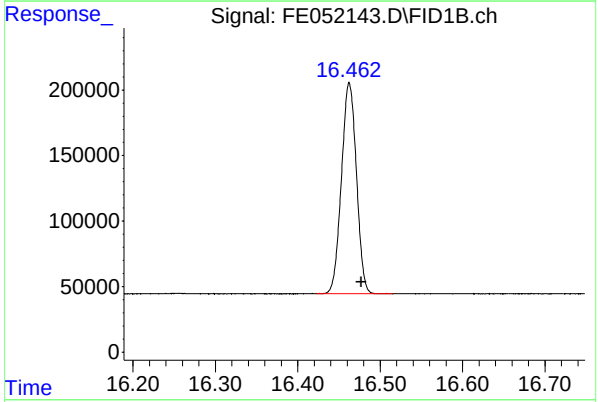
R.T.: 15.243 min
Delta R.T.: -0.014 min
Response: 1815534
Conc: 18.23 ug/ml



#10 N-TETRACOSANE

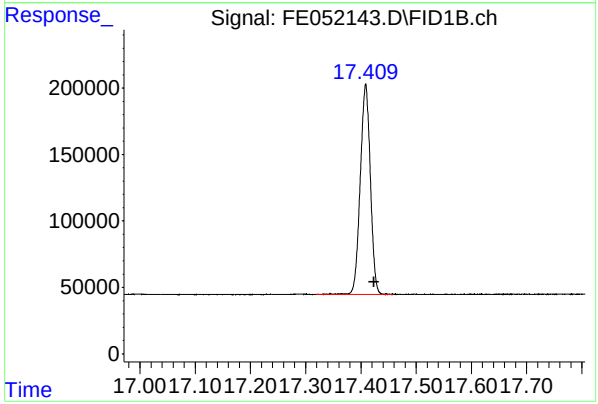
R.T.: 15.446 min
Delta R.T.: -0.015 min
Response: 2059502
Conc: 18.62 ug/ml

Instrument :
FID_E
ClientSampleId :
PB166348BS



#11 N-HEXACOSANE

R.T.: 16.463 min
Delta R.T.: -0.014 min
Response: 2031706
Conc: 18.64 ug/ml



#12 N-OCTACOSANE

R.T.: 17.409 min
Delta R.T.: -0.015 min
Response: 2003907
Conc: 18.57 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_E\Data\FE012925\
Data File : FE052143.D
Signal(s) : FID1B.ch
Acq On : 30 Jan 2025 05:28
Sample : PB166348BS
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_E\methods\FE012325.M
Title :

Signal : FID1B.ch

peak #	R.T. min	Start min	End min	PK TY	peak height	peak area	peak % max.	% of total
1	4.900	4.863	4.947	BB	172445	1641374	77.81%	7.635%
2	7.027	6.989	7.081	BB	195030	1818135	86.19%	8.458%
3	8.833	8.791	8.891	BB	196348	1917247	90.89%	8.919%
4	10.426	10.384	10.483	BB	190707	1980727	93.90%	9.214%
5	11.857	11.815	11.901	BB	190850	2058975	97.61%	9.578%
6	13.159	13.115	13.198	BB	192231	2109453	100.00%	9.813%
7	14.350	14.310	14.390	BB	182941	2060538	97.68%	9.585%
8	15.243	15.210	15.306	BB	139470	1815534	86.07%	8.445%
9	15.446	15.391	15.486	BV	176804	2059502	97.63%	9.580%
10	16.463	16.422	16.516	BB	161064	2031706	96.31%	9.451%
11	17.409	17.319	17.458	BB	158512	2003907	95.00%	9.322%
			Sum of corrected areas:			21497097		

FE012325.M Thu Jan 30 07:27:07 2025

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Manual Integration Report

Sample ID	ClientId ID	File ID	Sequence ID	Parameter	Supervised By	Supervised On	Reason
50 PPM TRPH STD		FE052140.D	FE012925	TETRACOSANE-d50 (SURROGA	Ankita	1/30/2025 9:29:46 AM	Peak Integrated by Software incorrectly
Q1207-09		FE052149.D	FE012925	TETRACOSANE-d50 (SURROGA	Ankita	1/31/2025 1:17:52 PM	Peak Integrated by Software incorrectly
50 PPM TRPH STD		FE052152.D	FE012925	N-OCTACOSANE	Ankita	1/31/2025 1:17:53 PM	Peak Integrated by Software incorrectly
Q1207-13		FE052153.D	FE012925	TETRACOSANE-d50 (SURROGA	Ankita	1/31/2025 1:17:54 PM	Peak Integrated by Software incorrectly
Q1207-09		FE052154.D	FE012925	TETRACOSANE-d50 (SURROGA	Ankita	1/31/2025 1:17:56 PM	Peak Integrated by Software incorrectly
PB166364BSD		FE052161.D	FE012925	N-OCTACOSANE	Ankita	1/31/2025 1:17:57 PM	Peak Integrated by Software incorrectly

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012325

Review By	yogesh	Review On	1/23/2025 3:09:47 PM		
Supervise By	sohil	Supervise On	1/24/2025 2:02:13 PM		
SubDirectory	FE012325	HP Acquire Method		HP Processing Method	FE012325

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	FE052025.D	23 Jan 2025 21:06	YP\AJ	Ok
2	I.BLK	FE052026.D	23 Jan 2025 21:35	YP\AJ	Ok
3	100 TRPH STD	FE052027.D	23 Jan 2025 22:06	YP\AJ	Ok
4	50 TRPH STD	FE052028.D	23 Jan 2025 23:06	YP\AJ	Ok
5	20 TRPH STD	FE052029.D	23 Jan 2025 23:36	YP\AJ	Ok
6	10 TRPH STD	FE052030.D	24 Jan 2025 00:06	YP\AJ	Ok
7	5 TRPH STD	FE052031.D	24 Jan 2025 00:36	YP\AJ	Ok
8	FE012325ICV	FE052032.D	24 Jan 2025 01:06	YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012925

Review By	yogesh	Review On	1/29/2025 3:46:27 PM		
Supervise By	Ankita	Supervise On	1/30/2025 9:29:51 AM		
SubDirectory	FE012925	HP Acquire Method		HP Processing Method	FE012325

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	FE052138.D	30 Jan 2025 02:58	YP\AJ	Ok
2	I.BLK	FE052139.D	30 Jan 2025 03:28	YP\AJ	Ok
3	50 PPM TRPH STD	FE052140.D	30 Jan 2025 03:58	YP\AJ	Ok,M
4	RT MARKER	FE052141.D	30 Jan 2025 04:28	YP\AJ	Ok
5	PB166348BL	FE052142.D	30 Jan 2025 04:58	YP\AJ	Ok
6	PB166348BS	FE052143.D	30 Jan 2025 05:28	YP\AJ	Ok
7	Q1206-01	FE052144.D	30 Jan 2025 05:58	YP\AJ	Ok
8	Q1206-05	FE052145.D	30 Jan 2025 06:28	YP\AJ	Ok
9	Q1207-01	FE052146.D	30 Jan 2025 06:59	YP\AJ	Ok
10	Q1207-05	FE052147.D	30 Jan 2025 07:29	YP\AJ	Ok
11	Q1207-13	FE052148.D	30 Jan 2025 08:29	YP\AJ	Ok
12	Q1207-09	FE052149.D	30 Jan 2025 09:00	YP\AJ	Dilution
13	Q1207-17	FE052150.D	30 Jan 2025 09:29	YP\AJ	Ok
14	I.BLK	FE052151.D	30 Jan 2025 10:30	YP\AJ	Ok
15	50 PPM TRPH STD	FE052152.D	30 Jan 2025 11:00	YP\AJ	Ok,M
16	Q1207-13	FE052153.D	30 Jan 2025 11:30	YP\AJ	Not Ok
17	Q1207-09	FE052154.D	30 Jan 2025 11:59	YP\AJ	Ok,M
18	Q1207-09RE	FE052155.D	30 Jan 2025 12:30	YP\AJ	Not Ok
19	Q1207-17	FE052156.D	30 Jan 2025 13:06	YP\AJ	Not Ok
20	I.BLK	FE052157.D	30 Jan 2025 13:36	YP\AJ	Ok
21	50 PPM TRPH STD	FE052158.D	30 Jan 2025 14:06	YP\AJ	Ok

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012925

Review By	yogesh	Review On	1/29/2025 3:46:27 PM		
Supervise By	Ankita	Supervise On	1/30/2025 9:29:51 AM		
SubDirectory	FE012925	HP Acquire Method		HP Processing Method	FE012325

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	

22	PB166364BL	FE052159.D	30 Jan 2025 14:37	YP\AJ	Ok
23	PB166364BS	FE052160.D	30 Jan 2025 15:07	YP\AJ	Ok
24	PB166364BSD	FE052161.D	30 Jan 2025 15:37	YP\AJ	Ok,M
25	Q1211-01	FE052162.D	30 Jan 2025 16:07	YP\AJ	Ok
26	Q1211-02	FE052163.D	30 Jan 2025 16:37	YP\AJ	Ok
27	I.BLK	FE052164.D	30 Jan 2025 17:08	YP\AJ	Ok
28	50 PPM TRPH STD	FE052165.D	30 Jan 2025 17:37	YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012325

Review By	yogesh	Review On	1/23/2025 3:09:47 PM		
Supervise By	sohil	Supervise On	1/24/2025 2:02:13 PM		
SubDirectory	FE012325	HP Acquire Method		HP Processing Method	FE012325

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		FE052025.D	23 Jan 2025 21:06		YP\AJ	Ok
2	I.BLK		FE052026.D	23 Jan 2025 21:35		YP\AJ	Ok
3	100 TRPH STD		FE052027.D	23 Jan 2025 22:06		YP\AJ	Ok
4	50 TRPH STD		FE052028.D	23 Jan 2025 23:06		YP\AJ	Ok
5	20 TRPH STD		FE052029.D	23 Jan 2025 23:36		YP\AJ	Ok
6	10 TRPH STD		FE052030.D	24 Jan 2025 00:06		YP\AJ	Ok
7	5 TRPH STD		FE052031.D	24 Jan 2025 00:36		YP\AJ	Ok
8	FE012325ICV		FE052032.D	24 Jan 2025 01:06		YP\AJ	Ok

M : Manual Integration

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012925

Review By	yogesh	Review On	1/29/2025 3:46:27 PM		
Supervise By	Ankita	Supervise On	1/30/2025 9:29:51 AM		
SubDirectory	FE012925	HP Acquire Method		HP Processing Method	FE012325

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		FE052138.D	30 Jan 2025 02:58		YP\AJ	Ok
2	I.BLK		FE052139.D	30 Jan 2025 03:28		YP\AJ	Ok
3	50 PPM TRPH STD		FE052140.D	30 Jan 2025 03:58		YP\AJ	Ok,M
4	RT MARKER		FE052141.D	30 Jan 2025 04:28		YP\AJ	Ok
5	PB166348BL		FE052142.D	30 Jan 2025 04:58		YP\AJ	Ok
6	PB166348BS		FE052143.D	30 Jan 2025 05:28		YP\AJ	Ok
7	Q1206-01		FE052144.D	30 Jan 2025 05:58		YP\AJ	Ok
8	Q1206-05		FE052145.D	30 Jan 2025 06:28		YP\AJ	Ok
9	Q1207-01		FE052146.D	30 Jan 2025 06:59		YP\AJ	Ok
10	Q1207-05		FE052147.D	30 Jan 2025 07:29		YP\AJ	Ok
11	Q1207-13		FE052148.D	30 Jan 2025 08:29		YP\AJ	Ok
12	Q1207-09		FE052149.D	30 Jan 2025 09:00	need 10x dilution	YP\AJ	Dilution
13	Q1207-17		FE052150.D	30 Jan 2025 09:29		YP\AJ	Ok
14	I.BLK		FE052151.D	30 Jan 2025 10:30		YP\AJ	Ok
15	50 PPM TRPH STD		FE052152.D	30 Jan 2025 11:00		YP\AJ	Ok,M
16	Q1207-13		FE052153.D	30 Jan 2025 11:30	Not required	YP\AJ	Not Ok
17	Q1207-09		FE052154.D	30 Jan 2025 11:59		YP\AJ	Ok,M
18	Q1207-09RE		FE052155.D	30 Jan 2025 12:30	Not required	YP\AJ	Not Ok

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

Instrument ID: FID_E

Daily Analysis Runlog For Sequence/QCBatch ID # FE012925

Review By	yogesh	Review On	1/29/2025 3:46:27 PM		
Supervise By	Ankita	Supervise On	1/30/2025 9:29:51 AM		
SubDirectory	FE012925	HP Acquire Method		HP Processing Method	FE012325

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	

19	Q1207-17		FE052156.D	30 Jan 2025 13:06	Not required	YP\AJ	Not Ok
20	I.BLK		FE052157.D	30 Jan 2025 13:36		YP\AJ	Ok
21	50 PPM TRPH STD		FE052158.D	30 Jan 2025 14:06		YP\AJ	Ok
22	PB166364BL		FE052159.D	30 Jan 2025 14:37		YP\AJ	Ok
23	PB166364BS		FE052160.D	30 Jan 2025 15:07		YP\AJ	Ok
24	PB166364BSD		FE052161.D	30 Jan 2025 15:37		YP\AJ	Ok,M
25	Q1211-01		FE052162.D	30 Jan 2025 16:07		YP\AJ	Ok
26	Q1211-02		FE052163.D	30 Jan 2025 16:37		YP\AJ	Ok
27	I.BLK		FE052164.D	30 Jan 2025 17:08		YP\AJ	Ok
28	50 PPM TRPH STD		FE052165.D	30 Jan 2025 17:37		YP\AJ	Ok

M : Manual Integration

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/29/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 16:40
In Date: 01/28/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:10
Out Date: 01/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134456

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1191-03	A44Y0	1	1.00	1.00	2.00	2.00	100.0	FB solids
Q1191-04	A44Y1	2	1.00	1.00	2.00	2.00	100.0	FB solids
Q1191-09	VHBLK002	3	1.00	1.00	2.00	2.00	100.0	vhblk
Q1205-01	VNJ-236	4	1.15	8.64	9.79	8.68	87.2	
Q1206-01	JPP-20.1-012725	5	1.18	8.42	9.6	8.38	85.5	
Q1206-03	JPP-20.1-012725	6	1.19	8.50	9.69	8.46	85.5	
Q1206-05	JPP-16.3-012725	7	1.16	8.80	9.96	8.72	85.9	
Q1206-07	JPP-16.3-012725	8	1.19	8.51	9.7	8.38	84.5	
Q1207-01	JPP-2.1-012725	9	1.15	8.51	9.66	8.54	86.8	
Q1207-04	JPP-2.1-012725	10	1.16	8.61	9.77	8.7	87.6	
Q1207-05	JPP-5.1-012725	11	1.15	8.59	9.74	8.98	91.2	
Q1207-07	JPP-5.1-012725	12	1.18	8.60	9.78	9.00	90.9	
Q1207-08	JPP-5.1-012725	13	1.18	8.60	9.78	9.00	90.9	
Q1207-09	JPP-4.5-012725	14	1.17	8.82	9.99	8.49	83.0	
Q1207-11	JPP-4.5-012725	15	1.19	8.80	9.99	8.37	81.6	
Q1207-12	JPP-4.5-012725	16	1.19	8.80	9.99	8.37	81.6	
Q1207-13	JPP-16.2-012725	17	1.13	8.80	9.93	9.02	89.7	
Q1207-15	JPP-16.2-012725	18	1.15	8.67	9.82	8.85	88.8	
Q1207-16	JPP-16.2-012725	19	1.15	8.67	9.82	8.85	88.8	
Q1207-17	JPP-20.2-012725	20	1.12	8.77	9.89	8.85	88.1	
Q1207-19	JPP-20.2-012725	21	1.17	8.53	9.7	8.66	87.8	
Q1207-20	JPP-20.2-012725	22	1.17	8.53	9.7	8.66	87.8	
Q1208-01	60304	23	1.00	1.00	2.00	2.00	100.0	oil sample
Q1209-01	WC-4	24	1.17	8.80	9.97	8.5	83.3	
Q1209-02	WC-4-EPH	25	1.15	8.64	9.79	8.39	83.8	
Q1209-03	WC-4-VOC	26	1.14	8.82	9.96	8.56	84.1	
Q1209-05	WC-5	27	1.15	8.82	9.97	8.95	88.4	
Q1209-06	WC-5-EPH	28	1.13	8.85	9.98	8.55	83.8	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 1/29/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 16:40
In Date: 01/28/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:10
Out Date: 01/29/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB134456

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1209-07	WC-5-VOC	29	1.15	8.74	9.89	8.27	81.5	

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

WORKLIST(Hardcopy Internal Chain)

VB 134456

WorkList Name : %1-012825 **WorkList ID :** 187196 **Department :** Wet-Chemistry **Date :** 01-28-2025 07:59:28

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1206-01	JPP-20.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1206-03	JPP-20.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1206-05	JPP-16.3-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1206-07	JPP-16.3-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-01	JPP-2.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-04	JPP-2.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-13	JPP-16.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-15	JPP-16.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-16	JPP-16.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-17	JPP-20.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-19	JPP-20.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-20	JPP-20.2-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-05	JPP-5.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-07	JPP-5.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-08	JPP-5.1-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-09	JPP-4.5-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-11	JPP-4.5-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1207-12	JPP-4.5-012725	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1205-01	VNJ-236	Solid	Percent Solids	Cool 4 deg C	RUTW01	E11	01/27/2025	Chemtech -SO
Q1208-01	60304	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	01/28/2025	Chemtech -SO
Q1209-01	WC-4	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO

Date/Time 01/28/25 15:30

Raw Sample Received by: TB (WC)

Raw Sample Relinquished by: CB SM

Date/Time 01/28/25 17:10

Raw Sample Received by: CB SM

Raw Sample Relinquished by: TB (WC)

WORKLIST(Hardcopy Internal Chain)

JB 134456

WorkList Name : %1-012825 **WorkList ID :** 187196 **Department :** Wet-Chemistry **Date :** 01-28-2025 07:59:28

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1209-02	WC-4-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1209-03	WC-4-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1209-05	WC-5	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1209-06	WC-5-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1209-07	WC-5-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1191-03	A44Y0	Solid	Percent Solids	Cool 4 deg C	PSEG03	N41	01/28/2025	Chemtech -SO
Q1191-04	A44Y1	Solid	Percent Solids	Cool 4 deg C	USEP04	B21	01/24/2025	Chemtech -SO
Q1191-09	VHBLK002	Solid	Percent Solids	Cool 4 deg C	USEP04	B21	01/24/2025	Chemtech -SO
					USEP04	B21	01/25/2025	Chemtech -SO

Date/Time 01/28/25 15:30

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 01/28/25 17:10

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Alliance TECHNICAL GROUP

EXTRACTION LOGPAGE

PB166348

SOP ID:	M3541-ASE Extraction-14				
Clean Up SOP #:	N/A			**Extraction Start Date :**	01/29/2025
Matrix :	Solid			**Extraction Start Time :**	08:45
Weigh By:	EH	**Extraction By:**	RS	**Extraction End Date :**	01/29/2025
Balance check:	EH	**Filter By:**	RS	**Extraction End Time :**	13:15
Balance ID:	EX-SC-2	**pH Meter ID:**	N/A	**Concentration By:**	EH
pH Strip Lot#:	N/A	**Hood ID:**	3,7	**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
Surrogate	1.0ML	20 PPM	PP23935
Spike Sol 1	1.0ML	20 PPM	PP23913
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
MeCl2/Acetone/1:1	N/A	EP2578
Baked Na2SO4	N/A	EP2580
Sand	N/A	E2865
Methylene Chloride	N/A	E3871
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. No MS/MSD Performed as Limited volume recd for all samples.

KD Bath ID:	N/A	**Envap ID:**	NEVAP-02
KD Bath Temperature:	N/A	**Envap Temperature:**	40 °C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/29/25	RP (Extn Lab)	R. Patel/PCB Lab
13:20	**Preparation Group**	**Analysis Group**

Alliance TECHNICAL GROUP

EXTRACTION LOGPAGE

PrepBatch ID : PB166348

Analytical Method: M3541-ASE Extraction-14 **Concentration Date:** 01/29/2025

Sample ID	Client Sample ID	Test	g/mL	PH	Surr/Spike By:		Final Vol. (mL)	JarID	Comments	Prep Pos
					AddedBy	VerifiedBy				
PB166348BL	PB166348BL	Diesel Range Organics	30.01	N/A	RUPESH	Evelyn	1			U4-1
PB166348BS	PB166348BS	Diesel Range Organics	30.02	N/A	RUPESH	Evelyn	1			2
Q1206-01	JPP-20.1-012725	Diesel Range Organics	18.22	N/A	RUPESH	Evelyn	1	D		3
Q1206-05	JPP-16.3-012725	Diesel Range Organics	23.10	N/A	RUPESH	Evelyn	1	D		4
Q1207-01	JPP-2.1-012725	Diesel Range Organics	25.33	N/A	RUPESH	Evelyn	1	D		5
Q1207-05	JPP-5.1-012725	Diesel Range Organics	29.40	N/A	RUPESH	Evelyn	1	D		6
Q1207-09	JPP-4.5-012725	Diesel Range Organics	29.98	N/A	RUPESH	Evelyn	1	D		U2-1
Q1207-13	JPP-16.2-012725	Diesel Range Organics	29.62	N/A	RUPESH	Evelyn	1	D		2
Q1207-17	JPP-20.2-012725	Diesel Range Organics	28.87	N/A	RUPESH	Evelyn	1	D		3

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

1/29/25

166345
8:45

WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q1206D **WorkList ID :** 187263 **Department :** Extraction **Date :** 01-29-2025 08:41:05

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1206-01	JPP-20.1-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1206-05	JPP-16.3-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1207-01	JPP-2.1-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1207-05	JPP-5.1-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1207-09	JPP-4.5-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1207-13	JPP-16.2-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D
Q1207-17	JPP-20.2-012725	Solid	Diesel Range Organics	Cool 4 deg C	RUTW01	E11	01/27/2025	8015D

Date/Time 01/29/25 8:40
Raw Sample Received by: RS (Eat Lab)
Raw Sample Relinquished by: SM

Page 1 of 1

Date/Time 01/29/25 9:05
Raw Sample Received by: SM
Raw Sample Relinquished by: RS (Eat Lab)

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

Prep Standard - Chemical Standard Summary

Order ID : Q1206

Test : Diesel Range Organics

Prepbatch ID : PB166348,

Sequence ID/Qc Batch ID: FE012925,

Standard ID :
EP2578,EP2580,PP23913,PP23935,PP23961,PP23962,PP23963,PP23964,PP23965,PP23966,PP23967,

Chemical ID :
E2865,E3551,E3822,E3828,E3846,E3848,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
2017	1:1 ACETONE/METHYLENE CHLORIDE	EP2578	01/06/2025	06/18/2025	Rajesh Parikh	None	None	RUPESHKUMAR SHAH 01/06/2025

FROM 8000.00000ml of E3846 + 8000.00000ml of E3848 = Final Quantity: 16000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2580	01/17/2025	07/01/2025	Rajesh Parikh	Extraction_SCALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 01/17/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

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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
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

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

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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
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

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

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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
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

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

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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
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

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

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Pest/Pcb STANDARD PREPARATION LOG

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

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CHEMICAL RECEIPT LOG BOOK

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	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-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H2762008	06/26/2025	12/26/2024 / Rajesh	12/13/2024 / Rajesh	E3846

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	06/18/2025	12/18/2024 / Rajesh	12/09/2024 / Rajesh	E3848

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L)	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

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

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

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

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

Sand
Purified
Washed and Ignited

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
Substances Soluble in HCl	<= 0.16 %	0.01

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

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

E 2865

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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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

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H2762008
Manufactured Date: 2024-04-18
Expiration Date:2027-04-18
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected forwater)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.6	<0.1
Water (H_2O)	<= 0.5 %	<0.1 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

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

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

Recd by RP on 12/13/24

E 3846

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

PO: PO2-798 PRODUCT CODE: SHIP DATE: 12/9/2024

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 3848

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

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Tel: (800)356-1688
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

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)

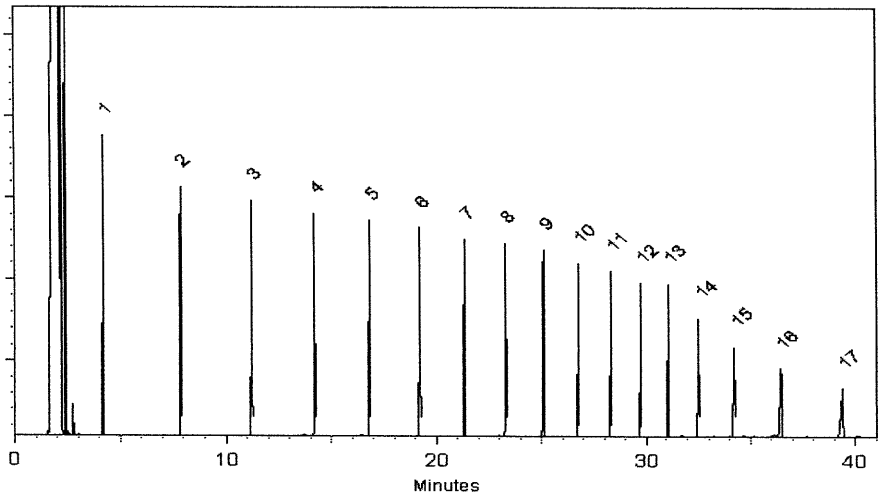
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

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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
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P11962
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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)

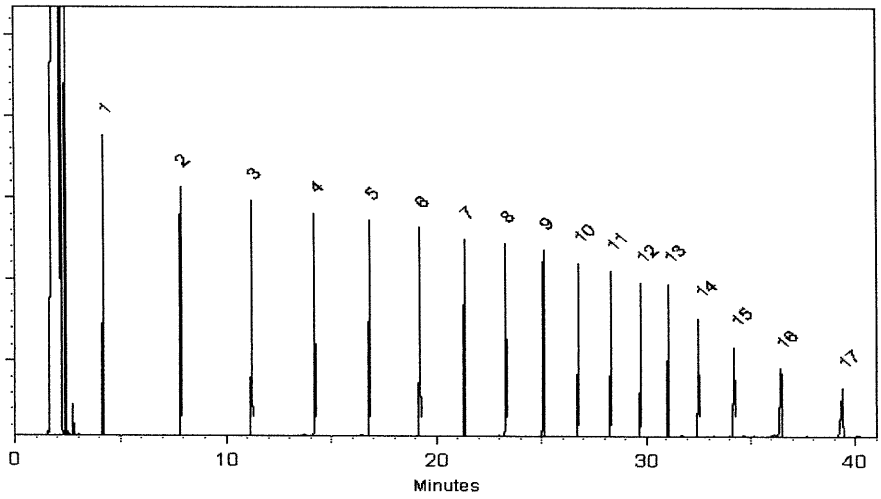
Carrier Gas:
hydrogen-constant pressure 10 psi.

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.

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Reference Material Producer
Certificate #3222.01

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.)

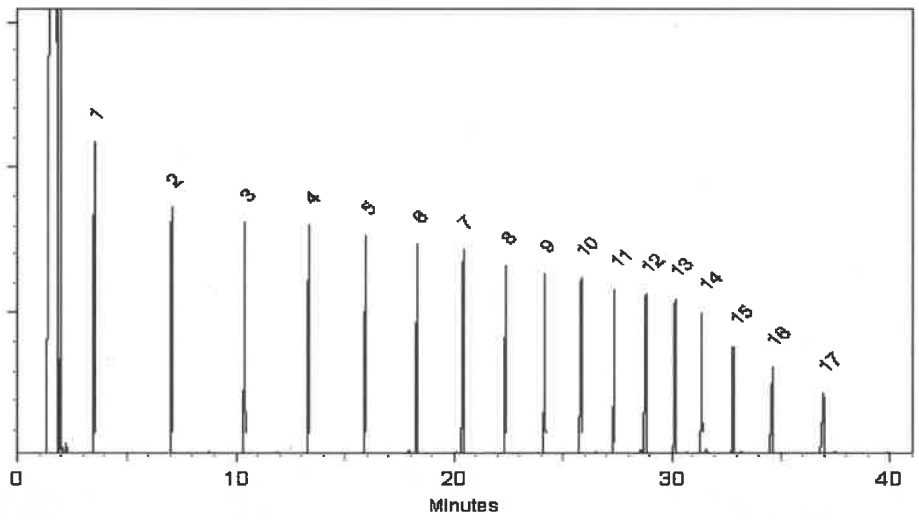
Inj. Temp:
250°C

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.

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Reference Material Producer
Certificate #3222.01

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.)

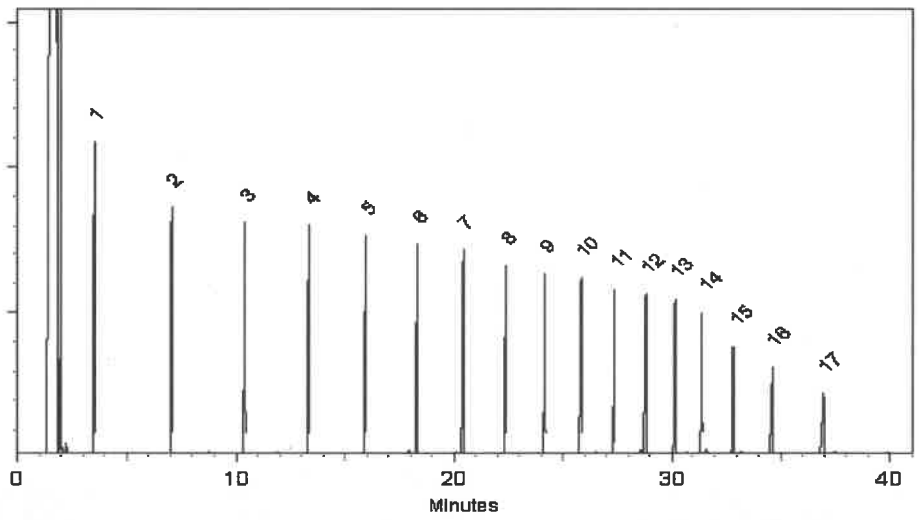
Inj. Temp:
250°C

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

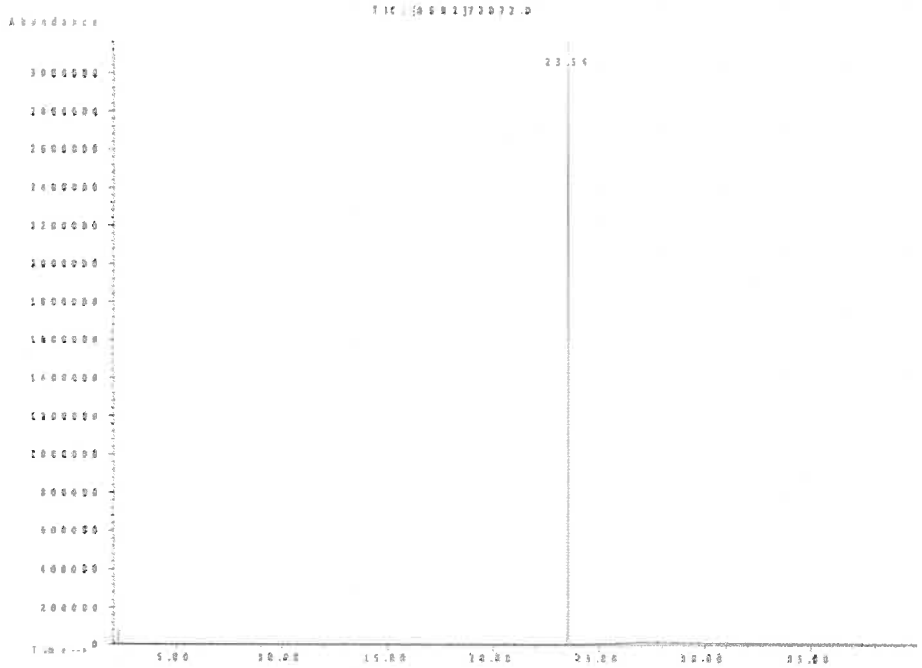
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

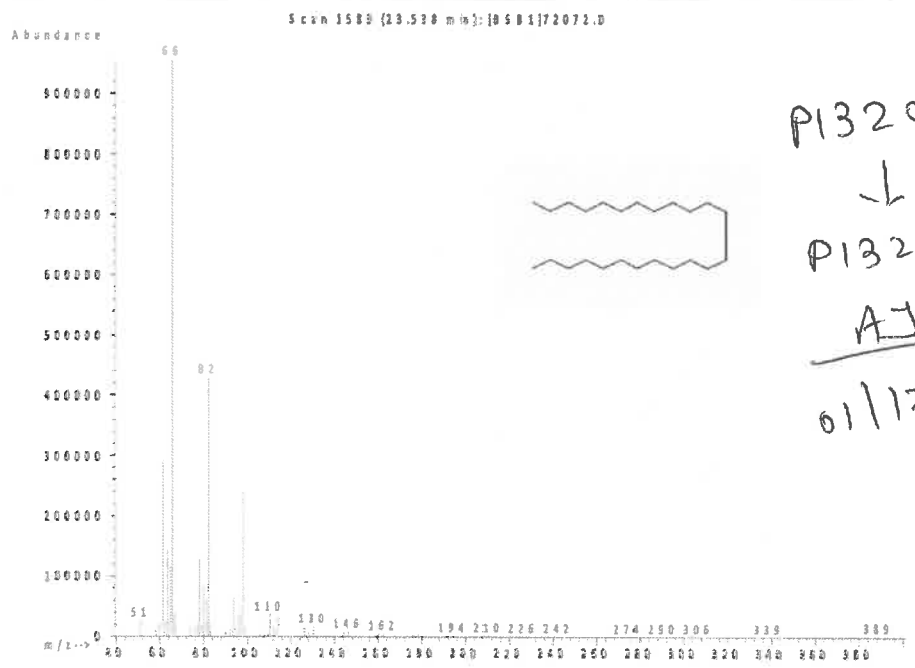
Weight(s) shown below were combined and diluted to (mL): 200.0

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.





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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

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Santa Rosa, CA 95403

(707)525-5788
(800)878-7654 Toll Free
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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

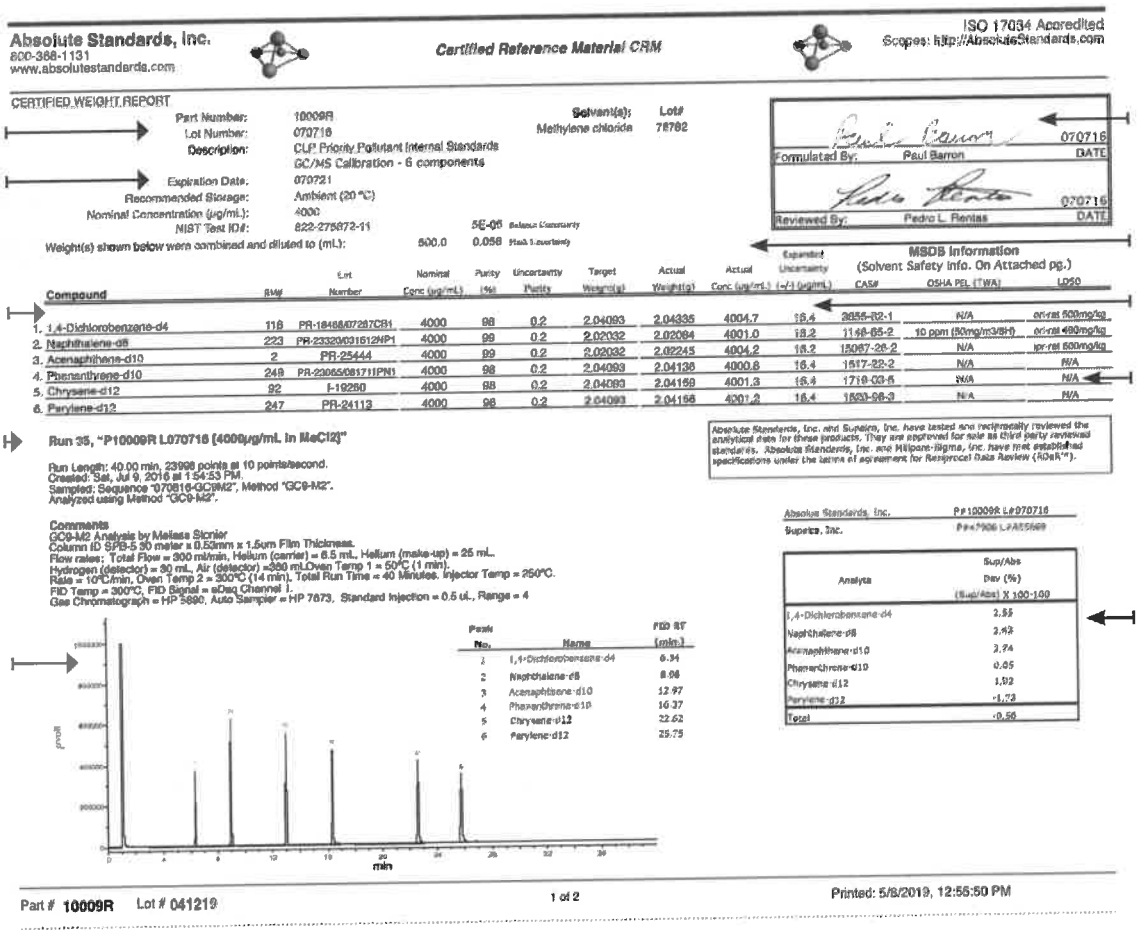
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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-230650/31711PN1	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 "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

Formulator / Reviewer

Actual Concentration

Target Compounds

Uncertainty Values

Health & Safety

Method of Analysis

3rd Party Comparison

Qualitative / Quantitative

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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.
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

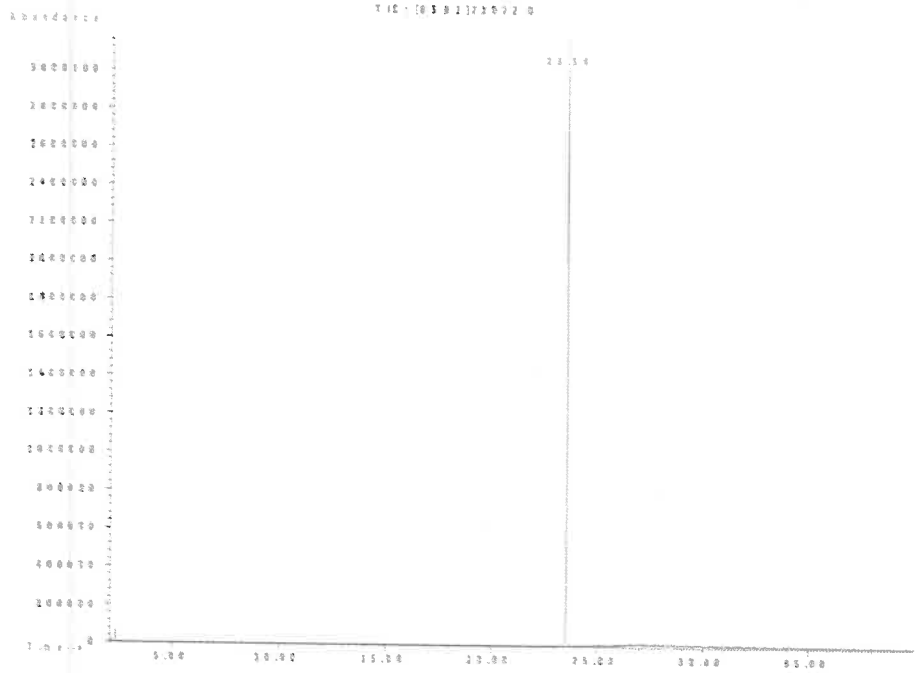
P13477 → P13496 } X.P. 07/24/24

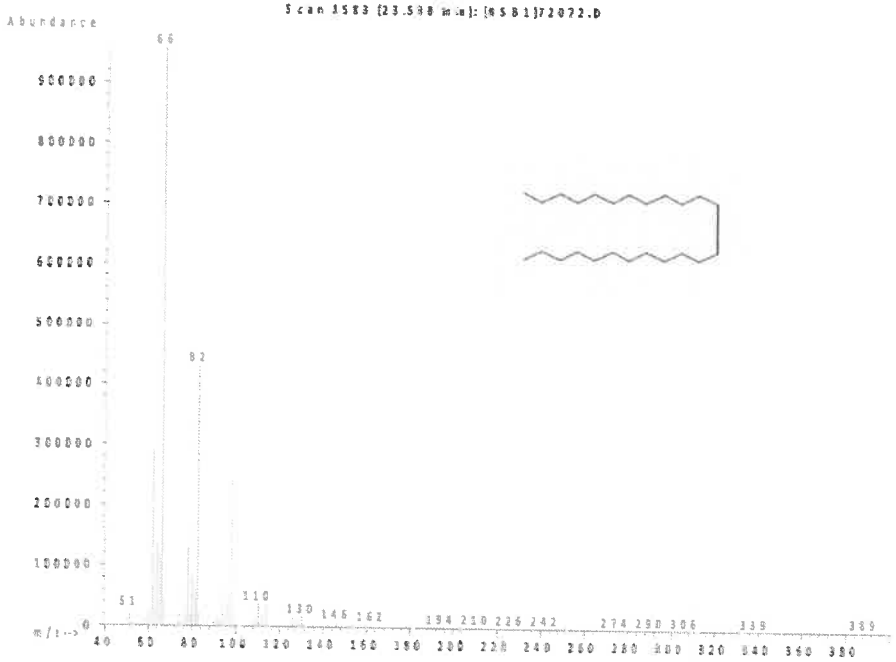
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

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

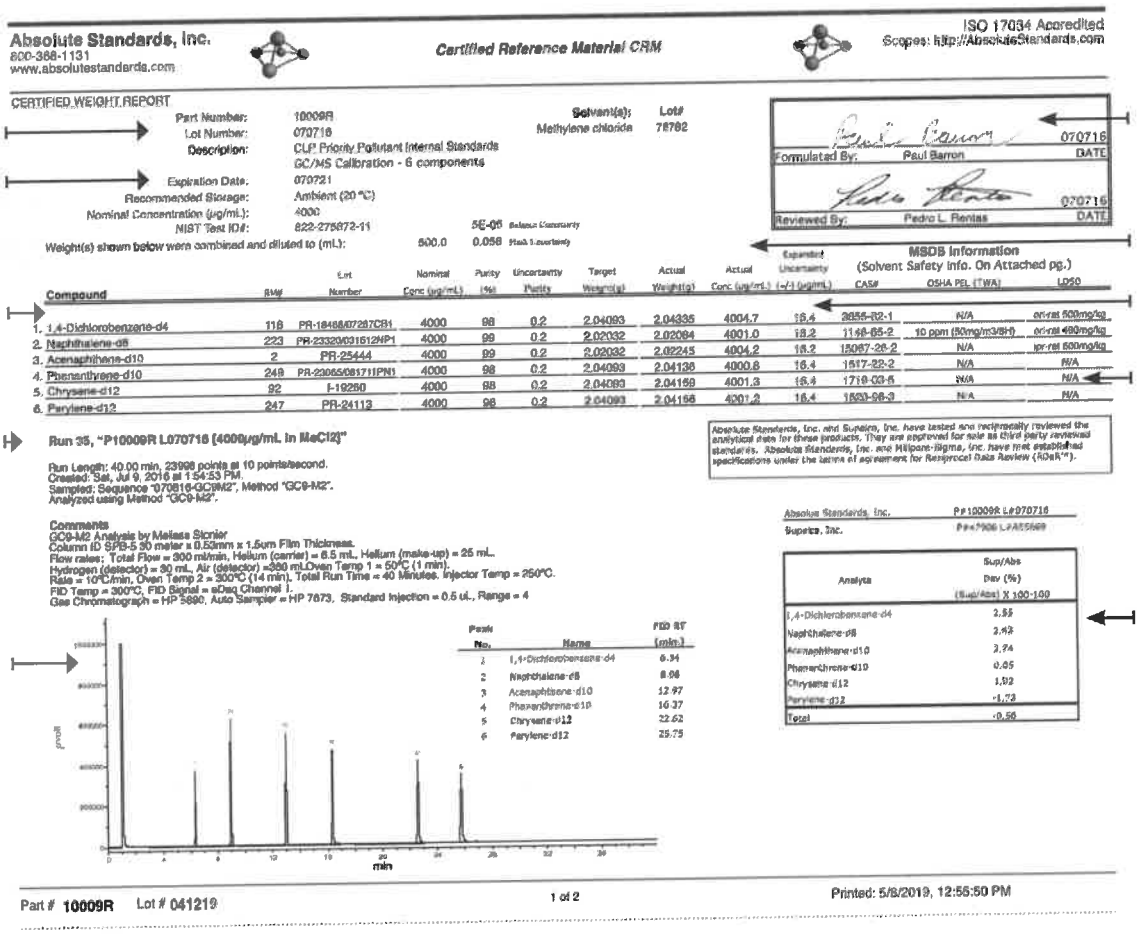
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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 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 "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

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

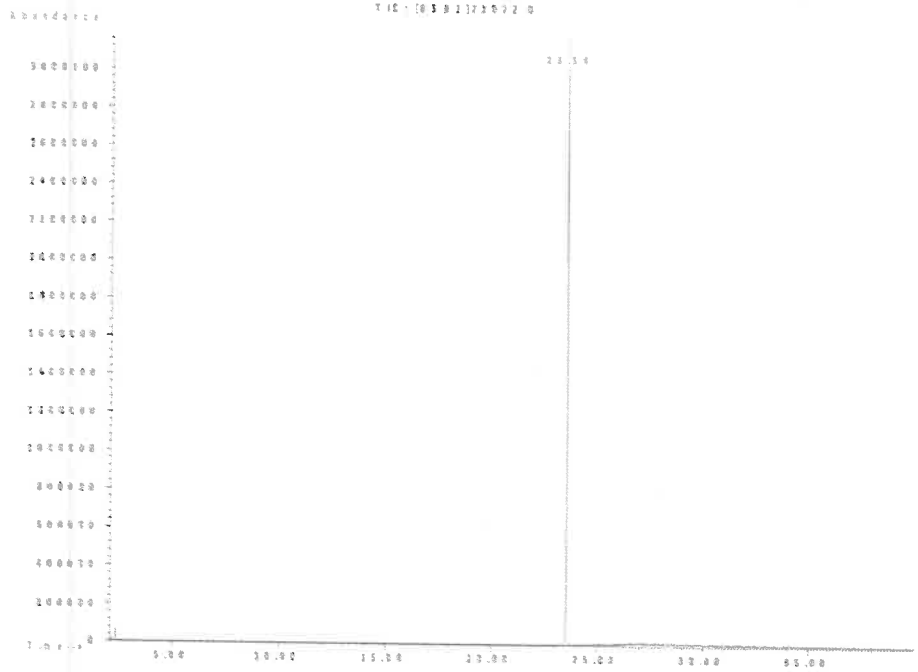
P13477 → P13496 } X.P. 07/24/24

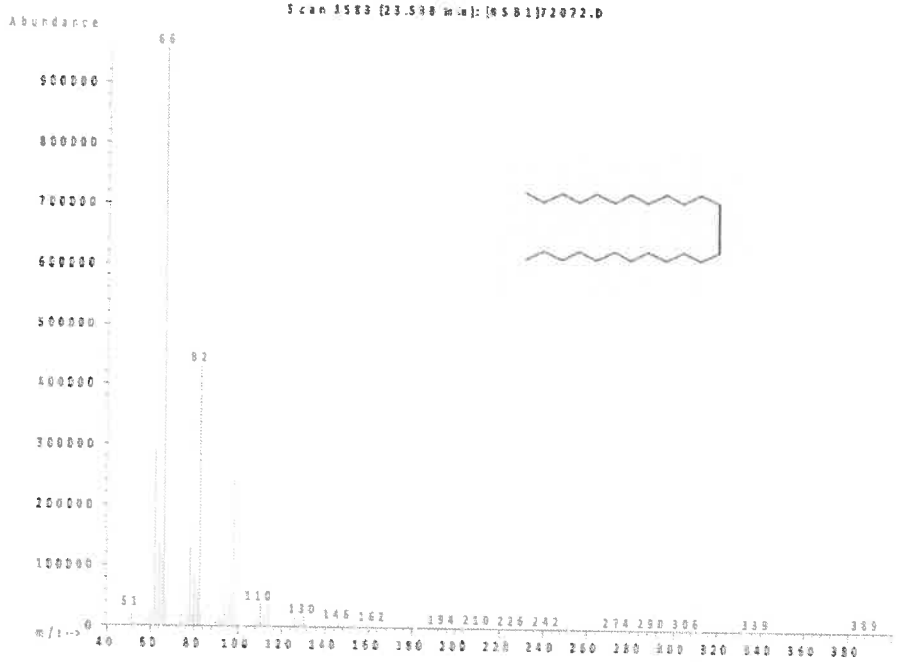
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

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

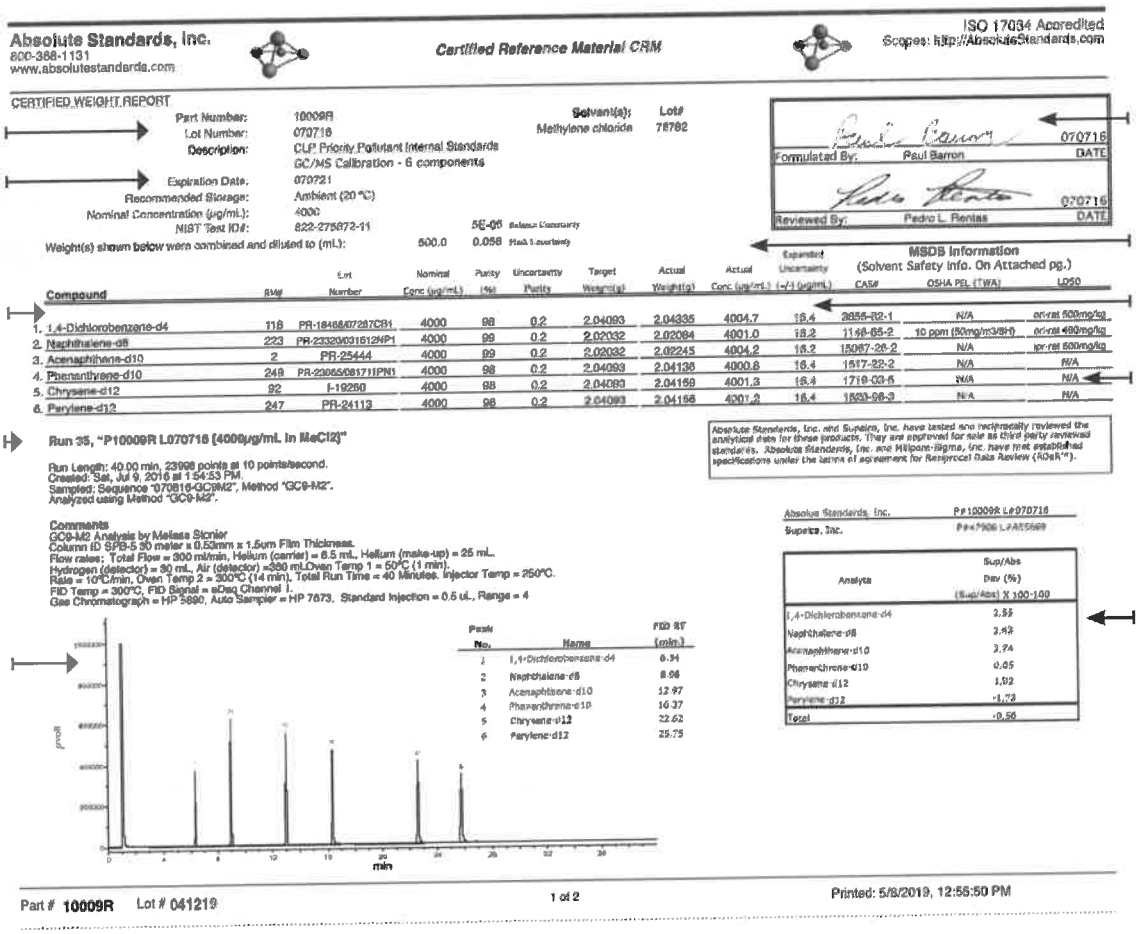
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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 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

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

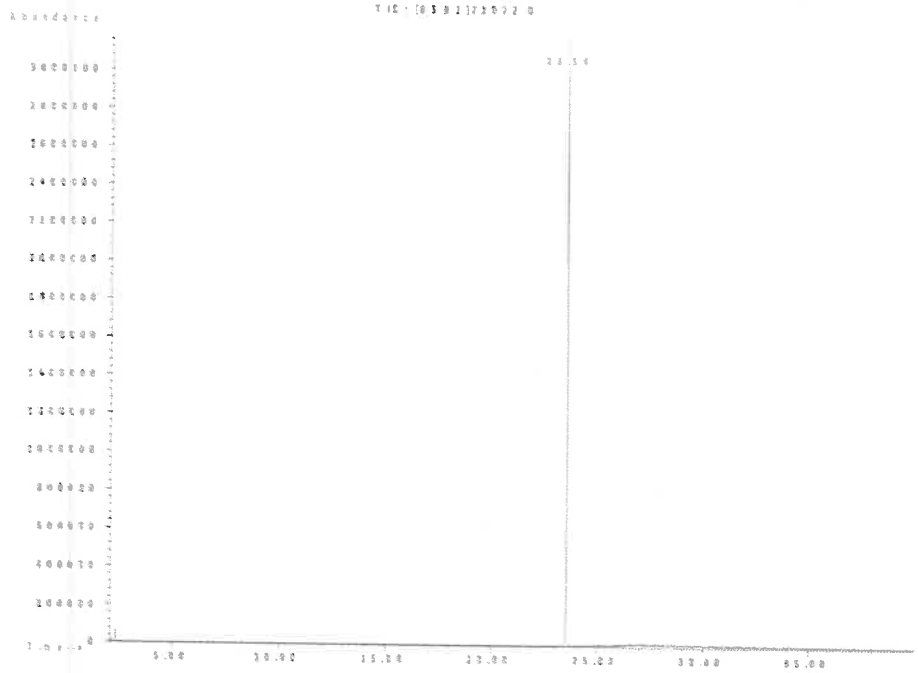
P13477 → P13496 } X.P. 07/24/24

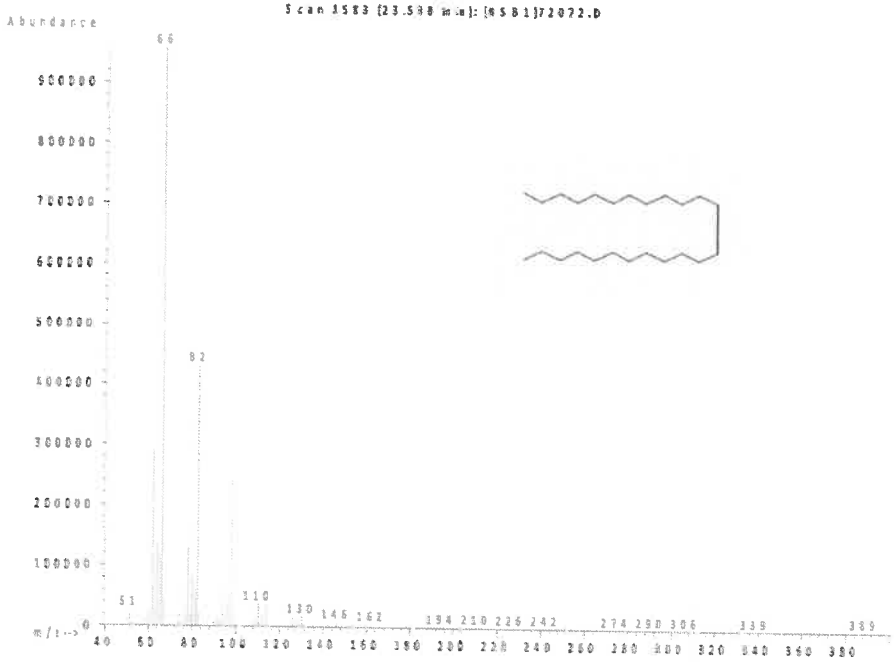
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

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

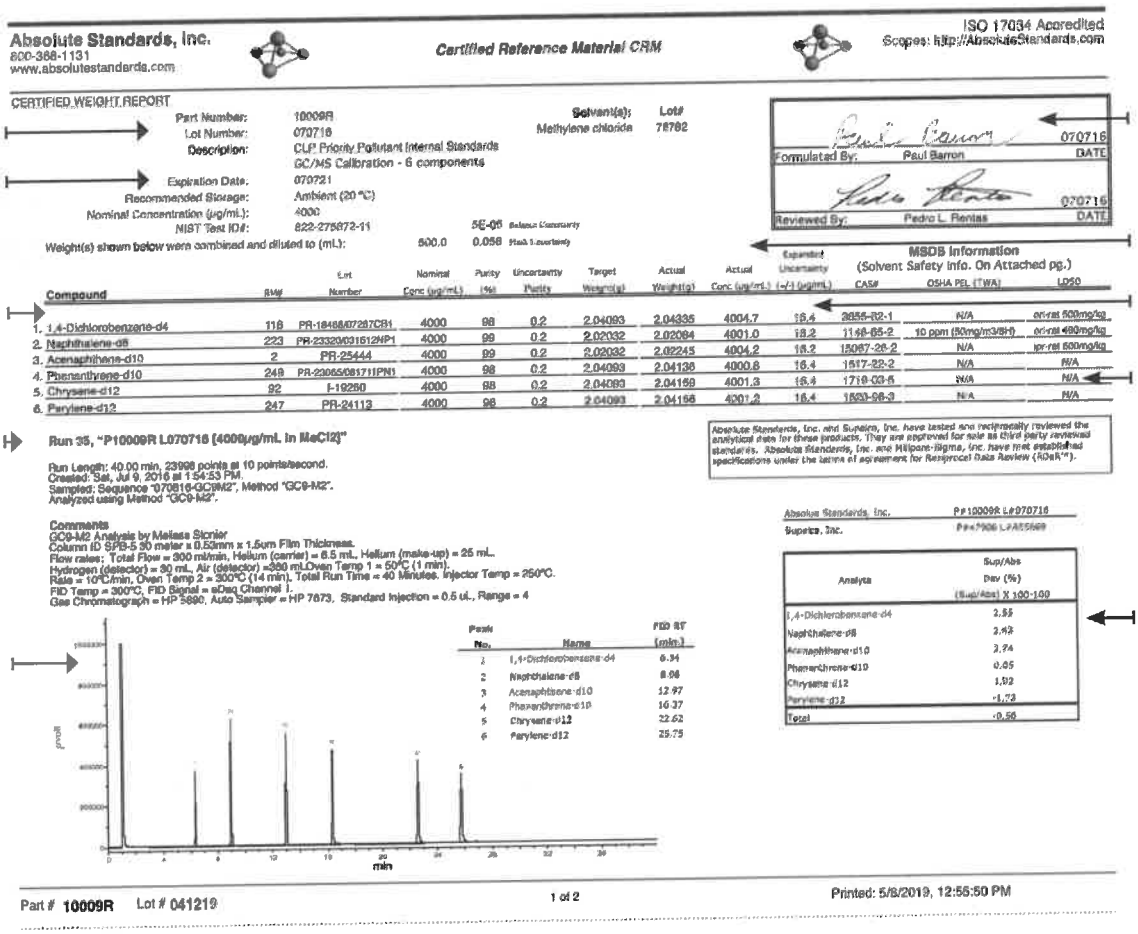
Absolute Standards, Inc. • 44 Rossotto Drive • Hamden, CT 06514
Voice: 800-368-1131 • Fax: 800-410-2577 • eMail: StephenArpie@AbsoluteStandards.com
Document Identification: Certificate of Analysis Rev 14, Date Issued: 05/30/2019

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 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)	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-233230/31612NP1	4000	99	0.2	2.02032	2.02064	4001.0	16.2	1146-65-2	10 ppm (50mg/m3/8H)	orl-rat 480mg/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

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

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

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

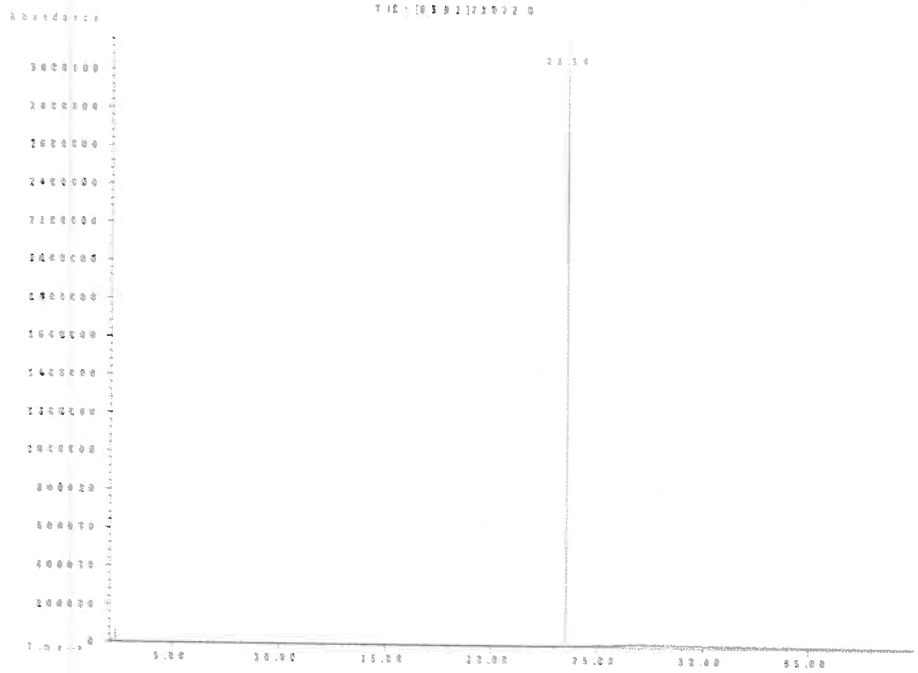
P13477 → P13496 } X.P. 07/24/24

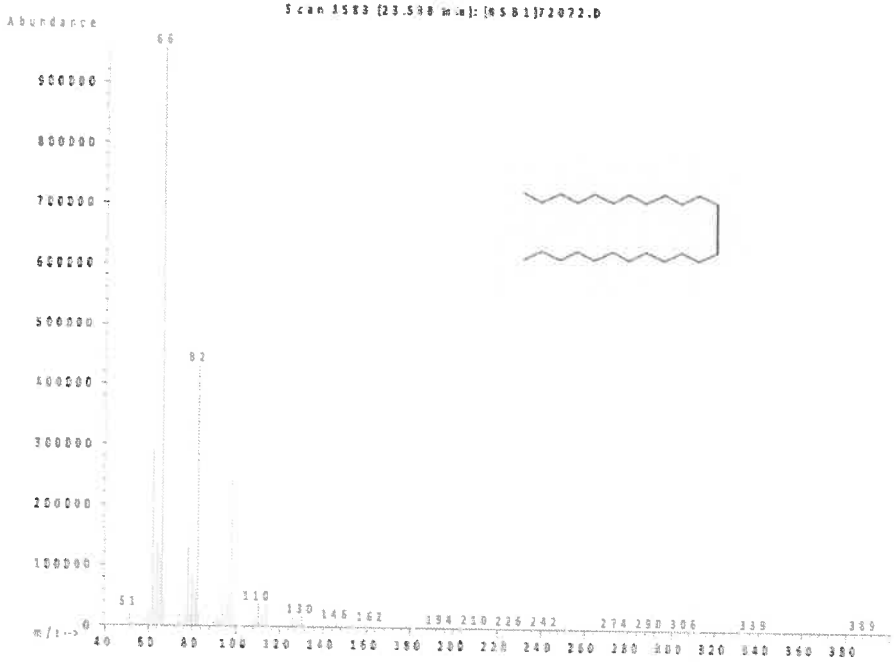
Formulated By:	Prashant Chauhan	101122 DATE
Reviewed By:	Pedro L. Rentas	101122 DATE

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).

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

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

CHEMTECH PROJECT NO. Q1206
QUOTE NO.
COC Number 2041690

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: RU2 Engineering LLC
ADDRESS: 2 Melinda Drive, Monroe Twp, NJ 08831
CITY: ZIP:
ATTENTION: Rutu Manani
PHONE: 609-409-4564 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: SANDTWOBR BMCR Project
PROJECT NO.: LOCATION: Brooklyn, NYC
PROJECT MANAGER: Rutu Manani
e-mail: Rmanani@Ru2eng.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: Same as Company address PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

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

ANALYSIS

1 TCL VOC + TICs + MTBE/TBA
2 TCLP VOCs
3 TPH GRO-DRO
4 TCL SVOCs + TICs
5 TAL Metals
6 Pesticides, PCBs
7 RCRA characteristics
8 Paint filter
9 full TCLP

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	JPP-20,1-012725	Soil		G	1/27/25	14:15	3	X	X	X							
2.	JPP-20,1-012725	Soil	C		1/27/25	14:18	7			X	X	X	X	X	X	X	
3.	JPP-16,3-012725	Soil		G	1/27/25	15:10	3	X	X	X							
4.	JPP-16,3-012725	Soil	C		1/27/25	15:17	7			X	X	X	X	X	X	X	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

PRESERVATIVES: A-HCl, B-HN03, C-H2SO4, D-NaOH, E-ICE, F-OTHER

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
1. RM	1/28/2025	1.	1053 1-28-25
2.		2.	
3.	1259 1-28-25	3.	

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.7 °C
Comments: preserve extra sample jar if additional analysis is Required.

Page ____ of ____
CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling
Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

Laboratory Certification

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

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1206 RUTW01
Client Name : RU2 Engineering, LLC
Client Contact : Rutu Manani
Invoice Name : RU2 Engineering, LLC
Invoice Contact : Rutu Manani

Order Date : 1/28/2025 11:18:51 AM YG 02/03/25
Project Name : ~~SANDTWOBR BMCR Bro~~ NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Receive DateTime : 1/28/2025 12:59:00 PM
Purchase Order :

Project Mgr : Kiran
Report Type : NYS ASP B
EDD Type : Excel NY
Hard Copy Date :
Date Signoff : 1/28/2025 2:56:10 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1206-01	JPP-20.1-012725	Solid	01/27/2025	14:15					
					VOCMS Group1		8260D		10 Bus. Days
Q1206-05	JPP-16.3-012725	Solid	01/27/2025	15:10					
					VOCMS Group1		8260D		10 Bus. Days

Relinguished By :
Date / Time : 1-28-25 1447

Received By :
Date / Time : 1/28/25 14:47

Storage Area : VOA Refridgerator Room

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1206 RUTW01
Client Name : RU2 Engineering, LLC
Client Contact : Rutu Manani
Invoice Name : RU2 Engineering, LLC
Invoice Contact : Rutu Manani

Order Date : 1/28/2025 11:18:51 AM
Project Name : ~~SANDTWOBR BMCR Bro~~ NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Receive DateTime : 1/28/2025 12:59:00 PM
Purchase Order :

Project Mgr : Kiran
Report Type : NYS ASP B
EDD Type : Excel NY
Hard Copy Date :
Date Signoff : 1/28/2025 2:56:10 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1206-~~03~~01	JPP-20.1-012725	Solid	01/27/2025	~~14:18~~ 14:15	Gasoline Range Organics		8015D		10 Bus. Days
Q1206-~~07~~05	JPP-16.3-012725	Solid	01/27/2025	~~15:17~~ 15:10	Gasoline Range Organics		8015D		10 Bus. Days

YG
02/03/25

Relinguished By :
Date / Time : 1-28-25 1447

Received By :
Date / Time : 1/28/25 14:47
Storage Area : VOA Refridgerator Room

P22