

## **DATA PACKAGE GC SEMI-VOLATILES**

**PROJECT NAME : AE1-CTY 3.2.Z-PR-DOCK-DES-ODC - 60693795-1719206**

**AECOM**

**605 3rd Avenue**

**29th Floor**

**New York, NY - 10158**

**Phone No: 212-973-2900**

**ORDER ID : Q3434**

**ATTENTION : Rob Forstner**



**Laboratory Certification ID # 20012**



|                                             |     |
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## Cover Page

**Order ID :** Q3434

**Project ID :** AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206

**Client :** AECOM

**Lab Sample Number**

Q3434-01  
Q3434-02  
Q3434-03

**Client Sample Number**

PR132-WC1-20251022  
PR132-WC2-20251022  
TB

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: 11/5/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

## **CASE NARRATIVE**

### **AECOM**

**Project Name: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206**

**Project # N/A**

**Order ID # Q3434**

**Test Name: TPH GC**

### **A. Number of Samples and Date of Receipt:**

1 Solid sample was received on 10/22/2025.

### **B. Parameters**

According to the Chain of Custody document, the following analyses were requested:  
TPH GC. This data package contains results for TPH GC.

### **C. Analytical Techniques:**

The analysis were performed on instrument FID\_F. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis of TPH GC 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 were met for all analysis.

The Retention Times were met for all analysis.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the requirements for all compounds.

The RPD were met for all analysis.

The Blank Spike met requirements for all compounds.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

### **E. Additional Comments:**

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

### **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



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

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\_\_\_\_\_

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## 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: <ul style="list-style-type: none"> <li>(1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.)</li> <li>(2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.</li> </ul> |
| 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**

ORDER ID: Q3434

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.<br><br>The Initial Calibration met the requirements.<br><br>The Continuous Calibration met the requirements.                                                                                                    |    |    | ✓   |
| 4. Blak Contamination - If yes, list compounds and concentrations in each blank:                                                                                                                                                                                                                                                                                                                              |    | ✓  |     |
| 5. Surrogate Recoveries Meet Criteria<br><br>If not met, list those compounds and their recoveries which fall outside the acceptable ranges.                                                                                                                                                                                                                                                                  |    |    | ✓   |
| 6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria<br><br>If not met, list those compounds and their recoveries which fall outside the acceptable range.<br><br>The MS recoveries met the requirements for all compounds.<br><br>The MSD recoveries met the requirements for all compounds.<br><br>The Blank Spike met requirements for all compounds.<br><br>The RPD were met for all analysis. |    |    | ✓   |
| 7. Retention Time Shift Meet Criteria (if applicable)<br><br>Comments:                                                                                                                                                                                                                                                                                                                                        |    |    | ✓   |
| 8. Extraction Holding Time Met<br><br>If not met, list number of days exceeded for each sample:                                                                                                                                                                                                                                                                                                               |    |    | ✓   |
| 9. Analysis Holding Time Met<br><br>If not met, list those compounds and their recoveries which fall outside the acceptable range.                                                                                                                                                                                                                                                                            |    |    | ✓   |



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**GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY (CONTINUED)**

NA NO YES

ADDITIONAL COMMENTS:

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

\_\_\_\_\_  
QA REVIEW

\_\_\_\_\_  
Date

## APPENDIX A

### QA REVIEW GENERAL DOCUMENTATION

Project #: Q3434

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: 11/05/2025

## LAB CHRONICLE

|                 |              |                   |                                                  |
|-----------------|--------------|-------------------|--------------------------------------------------|
| <b>OrderID:</b> | Q3434        | <b>OrderDate:</b> | 10/22/2025 1:40:00 PM                            |
| <b>Client:</b>  | AECOM        | <b>Project:</b>   | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |
| <b>Contact:</b> | Rob Forstner | <b>Location:</b>  | D41,VOA Ref. #2 Soil,VOA Ref. #3 Water           |

| LabID    | ClientID               | Matrix | Test          | Method | Sample Date | Prep Date | Anal Date | Received |
|----------|------------------------|--------|---------------|--------|-------------|-----------|-----------|----------|
| Q3434-01 | PR132-WC1-2025102<br>2 | SOIL   |               |        | 10/22/25    |           |           | 10/22/25 |
|          |                        |        | Pesticide-TCL | 8081B  |             | 10/23/25  | 10/23/25  |          |
|          |                        |        | TPH GC        | 8015D  |             | 10/29/25  | 10/30/25  |          |
| Q3434-02 | PR132-WC2-2025102<br>2 | WATER  |               |        | 10/22/25    |           |           | 10/22/25 |
|          |                        |        | Pesticide-TCL | 8081B  |             | 10/28/25  | 10/28/25  |          |



# QC SUMMARY

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**SOIL TPH GC SURROGATE RECOVERY**

Lab Name: Alliance

Client: AECOM

Lab Code: ACE

SDG No.: Q3434

| CLIENT ID          | S1<br>TETRACOSANE-d50 | S2 | S3 | S4 | TOT<br>OUT |
|--------------------|-----------------------|----|----|----|------------|
| PIBLK-FF016631.D   | 90                    |    |    |    | 0          |
| PIBLK-FF016641.D   | 93                    |    |    |    | 0          |
| PB170324BL         | 81                    |    |    |    | 0          |
| PB170324BS         | 92                    |    |    |    | 0          |
| PR132-WC1-20251022 | 54                    |    |    |    | 0          |
| WASTEMS            | 56                    |    |    |    | 0          |
| WASTEMSD           | 56                    |    |    |    | 0          |

**QC LIMITS**

TETRACOSANE-d50

For Water : 29-130

For Soil : 37-130

# Column to be used to flag recovery values

\* Values outside of contract required QC limits

D Surrogate Diluted Out

**SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY**

|                           |                 |                  |                   |
|---------------------------|-----------------|------------------|-------------------|
| <b>Lab Name:</b>          | <u>Alliance</u> | <b>Client:</b>   | <u>AECOM</u>      |
| <b>Lab Code:</b>          | <u>ACE</u>      | <b>SDG No:</b>   | <u>Q3434</u>      |
| <b>Client Sample ID :</b> | <u>WASTEMS</u>  | <b>Datafile:</b> | <u>FF016638.D</u> |

| COMPOUND               | SPIKE<br>ADDED<br>ug/kg | SAMPLE<br>CONCENTRATION<br>ug/kg | MS/MSD<br>CONCENTRATION<br>ug/kg | % REC | Qual | QC LIMITS(%) |
|------------------------|-------------------------|----------------------------------|----------------------------------|-------|------|--------------|
| Petroleum Hydrocarbons | 12967                   | 83100                            | 93000                            | 76%   |      | 68-131       |

**SOIL TPH GC MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY**

|                           |                 |                  |                   |
|---------------------------|-----------------|------------------|-------------------|
| <b>Lab Name:</b>          | <u>Alliance</u> | <b>Client:</b>   | <u>AECOM</u>      |
| <b>Lab Code:</b>          | <u>ACE</u>      | <b>SDG No:</b>   | <u>Q3434</u>      |
| <b>Client Sample ID :</b> | <u>WASTEMSD</u> | <b>Datafile:</b> | <u>FF016639.D</u> |

| COMPOUND               | SPIKE<br>ADDED<br>ug/kg | SAMPLE<br>CONCENTRATION<br>ug/kg | MS/MSD<br>CONCENTRATION<br>ug/kg | % REC | Qual | QC LIMITS(%) |
|------------------------|-------------------------|----------------------------------|----------------------------------|-------|------|--------------|
| Petroleum Hydrocarbons | 12971                   | 83100                            | 92000                            | 69%   |      | 68-131       |

**MS/MSD % Recovery RPD : 10.6**

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

|                           |                   |                  |                   |
|---------------------------|-------------------|------------------|-------------------|
| <b>Lab Name:</b>          | <u>Alliance</u>   | <b>Client:</b>   | <u>AECOM</u>      |
| <b>Lab Code:</b>          | <u>ACE</u>        | <b>SDG No:</b>   | <u>Q3434</u>      |
| <b>Client Sample ID :</b> | <u>PB170324BS</u> | <b>Datafile:</b> | <u>FF016635.D</u> |

| COMPOUND               | SPIKE<br>ADDED<br>ug/kg | CONCENTRATION<br>ug/kg | LCS/LCSD<br>CONCENTRATION<br>ug/kg | % REC | QC LIMITS (%) |
|------------------------|-------------------------|------------------------|------------------------------------|-------|---------------|
| Petroleum Hydrocarbons | 11322                   | 0                      | 11326                              | 100   | 68-131        |

4B  
METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

PB170324BL

Lab Name: Alliance

Contract: AECO02

Lab Code: ACE

SDG NO.: Q3434

Lab File ID: FF016634.D

Lab Sample ID: PB170324BL

Instrument ID: ff

Date Extracted: 10/30/2025

Matrix: (soil/water) Soil

Date Analyzed: 10/30/25

Level: (low/med) low

Time Analyzed: 12:22

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

| CLIENT<br>SAMPLE NO. | LAB<br>SAMPLE ID | LAB<br>FILE ID | DATE<br>ANALYZED |
|----------------------|------------------|----------------|------------------|
| PB170324BS           | PB170324BS       | FF016635.D     | 10/30/25         |
| PR132-WC1-20251022   | Q3434-01         | FF016636.D     | 10/30/25         |
| WASTEMS              | Q3474-01MS       | FF016638.D     | 10/30/25         |
| WASTEMSD             | Q3474-01MSD      | FF016639.D     | 10/30/25         |

COMMENTS: \_\_\_\_\_



# SAMPLE DATA

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## Report of Analysis

|                    |                                                  |            |                 |          |
|--------------------|--------------------------------------------------|------------|-----------------|----------|
| Client:            | AECOM                                            |            | Date Collected: | 10/22/25 |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |            | Date Received:  | 10/22/25 |
| Client Sample ID:  | PR132-WC1-20251022                               |            | SDG No.:        | Q3434    |
| Lab Sample ID:     | Q3434-01                                         |            | Matrix:         | SOIL     |
| Analytical Method: | 8015D TPH                                        |            | % Solid:        | 57.9     |
| Sample Wt/Vol:     | 30.06 g                                          | Final Vol: | 1 mL            | Test:    |
| Prep Method:       | SW3541                                           | Prep Date  | 10/29/25        |          |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana.      | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|----------------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |                |          |
| PHC               | Petroleum Hydrocarbons | 39700 |      | 1  | 662      | 4880       | ug/kg   | 10/30/25 13:21 | PB170324 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |                |          |
| 16416-32-3        | TETRACOSANE-d50        | 10.9  |      |    | 37 - 130 | 54%        | SPK: 20 |                |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016636.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 13:21  
Operator : YP\AJ  
Sample : Q3434-01  
Misc :  
ALS Vial : 33 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
PR132-WC1-20251022

Integration File: autoint1.e  
Quant Time: Oct 31 02:21:10 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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... | 15.056 | 1134151  | 10.856 ug/ml |
| Target Compounds              |        |          |              |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

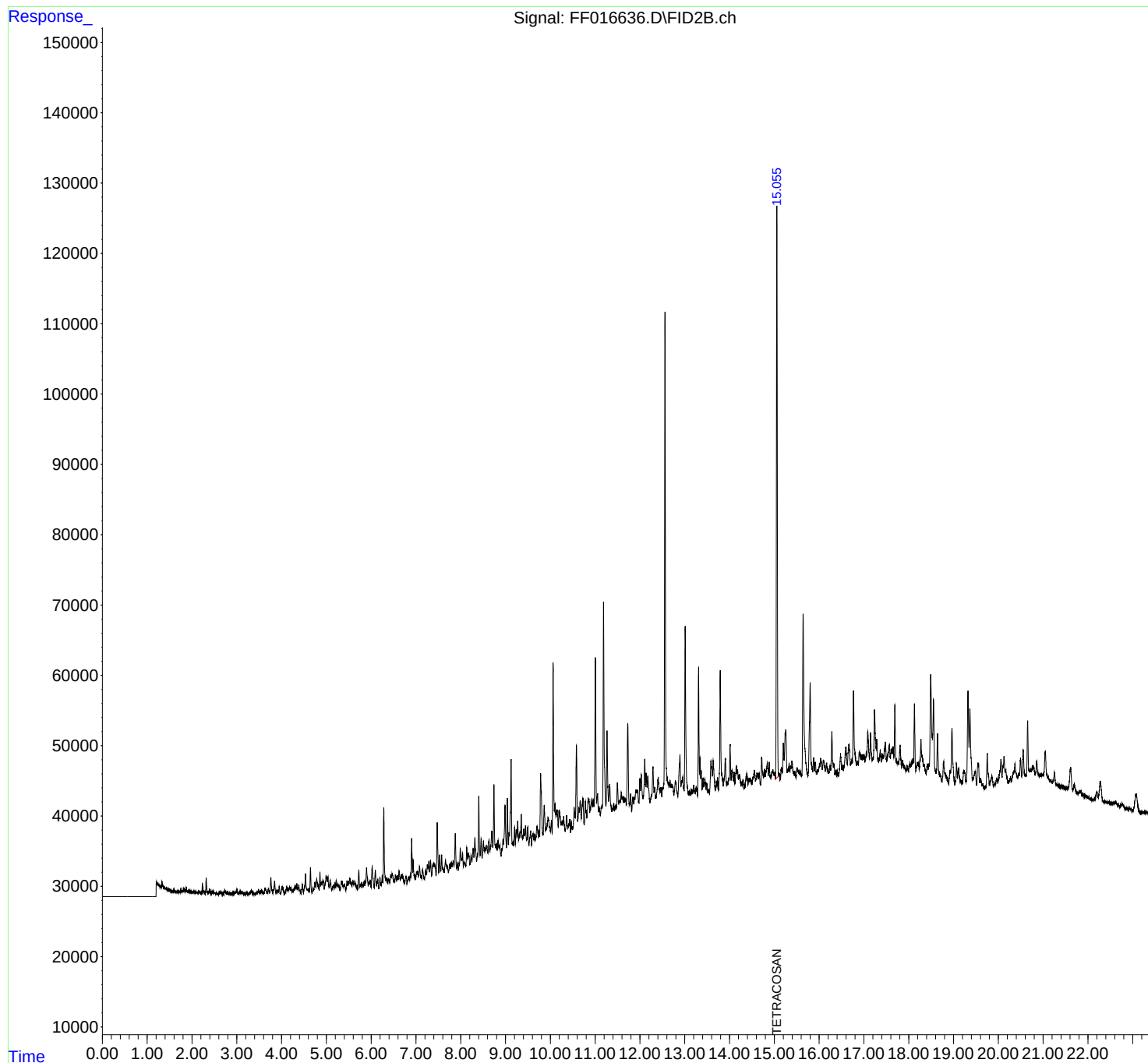
(m)=manual int.

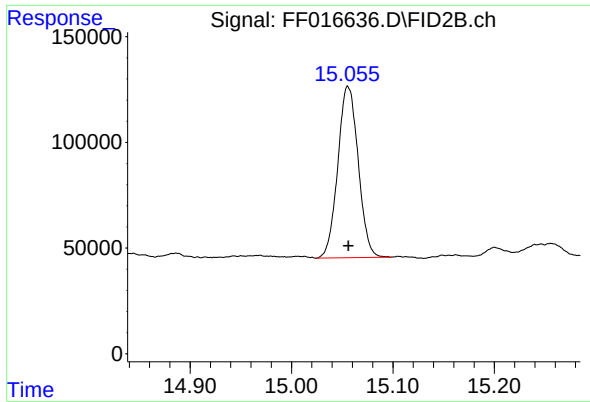
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016636.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 13:21  
Operator : YP\AJ  
Sample : Q3434-01  
Misc :  
ALS Vial : 33 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
PR132-WC1-20251022

Integration File: autoint1.e  
Quant Time: Oct 31 02:21:10 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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.: 15.056 min  
Delta R.T.: 0.000 min  
Response: 1134151  
Conc: 10.86 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PR132-WC1-20251022

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Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016636.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 13:21  
Sample : Q3434-01  
Misc :  
ALS Vial : 33 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br># | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-----------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1         | 1.924       | 1.900        | 1.945      | BV       | 252            | 2180         | 0.14%          | 0.003%        |
| 2         | 1.949       | 1.945        | 1.965      | PV       | 81             | 531          | 0.03%          | 0.001%        |
| 3         | 1.984       | 1.965        | 2.020      | VV       | 218            | 3110         | 0.20%          | 0.004%        |
| 4         | 2.047       | 2.020        | 2.070      | PV       | 274            | 4333         | 0.28%          | 0.006%        |
| 5         | 2.074       | 2.070        | 2.107      | VV       | 177            | 2263         | 0.15%          | 0.003%        |
| 6         | 2.109       | 2.107        | 2.133      | VV       | 170            | 1686         | 0.11%          | 0.002%        |
| 7         | 2.136       | 2.133        | 2.151      | VV       | 142            | 1180         | 0.08%          | 0.002%        |
| 8         | 2.155       | 2.151        | 2.165      | VV       | 114            | 837          | 0.05%          | 0.001%        |
| 9         | 2.171       | 2.165        | 2.181      | VV       | 141            | 1016         | 0.07%          | 0.001%        |
| 10        | 2.194       | 2.181        | 2.222      | VV       | 115            | 2193         | 0.14%          | 0.003%        |
| 11        | 2.232       | 2.222        | 2.295      | VV       | 1505           | 20073        | 1.30%          | 0.027%        |
| 12        | 2.318       | 2.295        | 2.356      | VV       | 2230           | 26864        | 1.74%          | 0.036%        |
| 13        | 2.386       | 2.356        | 2.397      | VV       | 425            | 7940         | 0.51%          | 0.011%        |
| 14        | 2.405       | 2.397        | 2.433      | VV       | 484            | 5181         | 0.34%          | 0.007%        |
| 15        | 2.452       | 2.433        | 2.470      | VV       | 328            | 4157         | 0.27%          | 0.006%        |
| 16        | 2.484       | 2.470        | 2.513      | VV       | 469            | 6440         | 0.42%          | 0.009%        |
| 17        | 2.517       | 2.513        | 2.542      | VV       | 160            | 2085         | 0.13%          | 0.003%        |
| 18        | 2.552       | 2.542        | 2.585      | VV       | 144            | 2257         | 0.15%          | 0.003%        |
| 19        | 2.618       | 2.585        | 2.624      | PV       | 379            | 4160         | 0.27%          | 0.006%        |
| 20        | 2.630       | 2.624        | 2.674      | VV       | 337            | 6135         | 0.40%          | 0.008%        |
| 21        | 2.698       | 2.674        | 2.709      | PV       | 171            | 2473         | 0.16%          | 0.003%        |
| 22        | 2.739       | 2.709        | 2.767      | VV       | 588            | 12443        | 0.81%          | 0.017%        |
| 23        | 2.772       | 2.767        | 2.787      | VV       | 248            | 2337         | 0.15%          | 0.003%        |
| 24        | 2.802       | 2.787        | 2.826      | VV       | 331            | 4239         | 0.27%          | 0.006%        |
| 25        | 2.846       | 2.826        | 2.872      | VV       | 205            | 3570         | 0.23%          | 0.005%        |
| 26        | 2.884       | 2.872        | 2.907      | VV       | 244            | 2839         | 0.18%          | 0.004%        |
| 27        | 2.926       | 2.907        | 2.942      | VV       | 242            | 3766         | 0.24%          | 0.005%        |
| 28        | 2.957       | 2.942        | 2.967      | VV       | 253            | 3693         | 0.24%          | 0.005%        |
| 29        | 2.970       | 2.967        | 2.976      | VV       | 262            | 1294         | 0.08%          | 0.002%        |
| 30        | 3.003       | 2.976        | 3.035      | VV       | 735            | 13966        | 0.90%          | 0.019%        |
| 31        | 3.038       | 3.035        | 3.043      | VV       | 180            | 655          | 0.04%          | 0.001%        |
| 32        | 3.052       | 3.043        | 3.061      | VV       | 207            | 1973         | 0.13%          | 0.003%        |
| 33        | 3.085       | 3.061        | 3.113      | VV       | 501            | 10218        | 0.66%          | 0.014%        |
| 34        | 3.120       | 3.113        | 3.143      | VV       | 362            | 3999         | 0.26%          | 0.005%        |
| 35        | 3.152       | 3.143        | 3.195      | VV       | 164            | 3063         | 0.20%          | 0.004%        |
| 36        | 3.196       | 3.195        | 3.203      | VV       | 150            | 423          | 0.03%          | 0.001%        |

|    |       |       |       |    | rters |       |       |        |
|----|-------|-------|-------|----|-------|-------|-------|--------|
| 37 | 3.217 | 3.203 | 3.246 | VV | 194   | 3382  | 0.22% | 0.005% |
| 38 | 3.270 | 3.246 | 3.276 | VV | 192   | 2485  | 0.16% | 0.003% |
| 39 | 3.297 | 3.276 | 3.314 | VV | 349   | 6167  | 0.40% | 0.008% |
| 40 | 3.328 | 3.314 | 3.357 | VV | 593   | 8232  | 0.53% | 0.011% |
| 41 | 3.364 | 3.357 | 3.370 | VV | 226   | 1170  | 0.08% | 0.002% |
| 42 | 3.373 | 3.370 | 3.377 | VV | 172   | 514   | 0.03% | 0.001% |
| 43 | 3.385 | 3.377 | 3.396 | VV | 230   | 1085  | 0.07% | 0.001% |
| 44 | 3.435 | 3.396 | 3.439 | VV | 205   | 3039  | 0.20% | 0.004% |
| 45 | 3.455 | 3.439 | 3.470 | VV | 370   | 5247  | 0.34% | 0.007% |
| 46 | 3.481 | 3.470 | 3.501 | VV | 544   | 7083  | 0.46% | 0.009% |
| 47 | 3.526 | 3.501 | 3.541 | VV | 522   | 8134  | 0.53% | 0.011% |
| 48 | 3.554 | 3.541 | 3.570 | VV | 543   | 7231  | 0.47% | 0.010% |
| 49 | 3.580 | 3.570 | 3.586 | VV | 289   | 2241  | 0.15% | 0.003% |
| 50 | 3.594 | 3.586 | 3.606 | VV | 294   | 2534  | 0.16% | 0.003% |
| 51 | 3.628 | 3.606 | 3.641 | VV | 972   | 12056 | 0.78% | 0.016% |
| 52 | 3.648 | 3.641 | 3.677 | VV | 688   | 9177  | 0.59% | 0.012% |
| 53 | 3.709 | 3.677 | 3.739 | VV | 830   | 16649 | 1.08% | 0.022% |
| 54 | 3.761 | 3.739 | 3.805 | VV | 2431  | 39704 | 2.57% | 0.053% |
| 55 | 3.844 | 3.805 | 3.879 | VV | 1916  | 36239 | 2.35% | 0.048% |
| 56 | 3.900 | 3.879 | 3.917 | VV | 604   | 9838  | 0.64% | 0.013% |
| 57 | 3.922 | 3.917 | 3.929 | VV | 355   | 2320  | 0.15% | 0.003% |
| 58 | 3.948 | 3.929 | 3.972 | VV | 1150  | 14542 | 0.94% | 0.019% |
| 59 | 4.013 | 3.972 | 4.025 | PV | 1056  | 18785 | 1.22% | 0.025% |
| 60 | 4.034 | 4.025 | 4.063 | VV | 1024  | 13396 | 0.87% | 0.018% |
| 61 | 4.068 | 4.063 | 4.071 | VV | 220   | 804   | 0.05% | 0.001% |
| 62 | 4.083 | 4.071 | 4.094 | VV | 362   | 3680  | 0.24% | 0.005% |
| 63 | 4.111 | 4.094 | 4.123 | VV | 971   | 12400 | 0.80% | 0.017% |
| 64 | 4.132 | 4.123 | 4.162 | VV | 766   | 14723 | 0.95% | 0.020% |
| 65 | 4.180 | 4.162 | 4.196 | VV | 1049  | 16267 | 1.05% | 0.022% |
| 66 | 4.210 | 4.196 | 4.247 | VV | 930   | 17175 | 1.11% | 0.023% |
| 67 | 4.259 | 4.247 | 4.271 | VV | 548   | 6394  | 0.41% | 0.009% |
| 68 | 4.311 | 4.271 | 4.325 | VV | 1129  | 26318 | 1.70% | 0.035% |
| 69 | 4.341 | 4.325 | 4.361 | VV | 1395  | 20139 | 1.30% | 0.027% |
| 70 | 4.385 | 4.361 | 4.424 | VV | 1253  | 23020 | 1.49% | 0.031% |
| 71 | 4.427 | 4.424 | 4.432 | VV | 173   | 692   | 0.04% | 0.001% |
| 72 | 4.463 | 4.432 | 4.487 | VV | 1247  | 19012 | 1.23% | 0.025% |
| 73 | 4.535 | 4.487 | 4.571 | VV | 2750  | 52814 | 3.42% | 0.071% |
| 74 | 4.587 | 4.571 | 4.596 | VV | 528   | 6605  | 0.43% | 0.009% |
| 75 | 4.600 | 4.596 | 4.622 | VV | 446   | 5265  | 0.34% | 0.007% |
| 76 | 4.647 | 4.622 | 4.684 | VV | 3597  | 44487 | 2.88% | 0.060% |
| 77 | 4.704 | 4.684 | 4.717 | VV | 707   | 8495  | 0.55% | 0.011% |
| 78 | 4.747 | 4.717 | 4.767 | VV | 1474  | 27201 | 1.76% | 0.036% |
| 79 | 4.785 | 4.767 | 4.816 | VV | 1790  | 37556 | 2.43% | 0.050% |
| 80 | 4.821 | 4.816 | 4.842 | VV | 954   | 10637 | 0.69% | 0.014% |
| 81 | 4.858 | 4.842 | 4.874 | VV | 2892  | 31657 | 2.05% | 0.042% |
| 82 | 4.884 | 4.874 | 4.902 | VV | 1335  | 20511 | 1.33% | 0.027% |
| 83 | 4.917 | 4.902 | 4.925 | VV | 1415  | 17748 | 1.15% | 0.024% |
| 84 | 4.935 | 4.925 | 4.953 | VV | 1512  | 18565 | 1.20% | 0.025% |
| 85 | 4.975 | 4.953 | 4.981 | VV | 1269  | 16176 | 1.05% | 0.022% |
| 86 | 4.996 | 4.981 | 5.008 | VV | 2330  | 31652 | 2.05% | 0.042% |
| 87 | 5.012 | 5.008 | 5.026 | VV | 1951  | 18267 | 1.18% | 0.024% |
| 88 | 5.037 | 5.026 | 5.067 | VV | 2157  | 32751 | 2.12% | 0.044% |
| 89 | 5.084 | 5.067 | 5.123 | VV | 1636  | 30926 | 2.00% | 0.041% |

|     |       |       |       |    |        |        |        |        |
|-----|-------|-------|-------|----|--------|--------|--------|--------|
|     |       |       |       |    | rteres |        |        |        |
| 90  | 5.157 | 5.123 | 5.174 | VV | 933    | 18074  | 1.17%  | 0.024% |
| 91  | 5.191 | 5.174 | 5.206 | VV | 1297   | 15540  | 1.01%  | 0.021% |
| 92  | 5.220 | 5.206 | 5.245 | VV | 1540   | 23109  | 1.50%  | 0.031% |
| 93  | 5.257 | 5.245 | 5.273 | VV | 1136   | 14519  | 0.94%  | 0.019% |
| 94  | 5.283 | 5.273 | 5.308 | VV | 822    | 10269  | 0.66%  | 0.014% |
| 95  | 5.335 | 5.308 | 5.348 | VV | 1400   | 19979  | 1.29%  | 0.027% |
| 96  | 5.355 | 5.348 | 5.370 | VV | 1378   | 14419  | 0.93%  | 0.019% |
| 97  | 5.377 | 5.370 | 5.388 | VV | 821    | 7650   | 0.50%  | 0.010% |
| 98  | 5.411 | 5.388 | 5.430 | VV | 921    | 16162  | 1.05%  | 0.022% |
| 99  | 5.463 | 5.430 | 5.477 | PV | 1363   | 19936  | 1.29%  | 0.027% |
| 100 | 5.495 | 5.477 | 5.507 | VV | 1356   | 18987  | 1.23%  | 0.025% |
| 101 | 5.523 | 5.507 | 5.548 | VV | 1713   | 33355  | 2.16%  | 0.045% |
| 102 | 5.557 | 5.548 | 5.572 | VV | 1155   | 12846  | 0.83%  | 0.017% |
| 103 | 5.592 | 5.572 | 5.606 | VV | 1303   | 20509  | 1.33%  | 0.027% |
| 104 | 5.618 | 5.606 | 5.646 | VV | 1242   | 23302  | 1.51%  | 0.031% |
| 105 | 5.653 | 5.646 | 5.671 | VV | 981    | 10573  | 0.68%  | 0.014% |
| 106 | 5.683 | 5.671 | 5.699 | VV | 591    | 7169   | 0.46%  | 0.010% |
| 107 | 5.726 | 5.699 | 5.748 | VV | 2803   | 38304  | 2.48%  | 0.051% |
| 108 | 5.761 | 5.748 | 5.777 | VV | 846    | 10766  | 0.70%  | 0.014% |
| 109 | 5.791 | 5.777 | 5.823 | VV | 1089   | 19807  | 1.28%  | 0.027% |
| 110 | 5.844 | 5.823 | 5.857 | VV | 1054   | 16548  | 1.07%  | 0.022% |
| 111 | 5.871 | 5.857 | 5.877 | VV | 1084   | 10952  | 0.71%  | 0.015% |
| 112 | 5.897 | 5.877 | 5.935 | VV | 3094   | 61336  | 3.97%  | 0.082% |
| 113 | 5.948 | 5.935 | 5.957 | VV | 1067   | 11950  | 0.77%  | 0.016% |
| 114 | 5.981 | 5.957 | 5.998 | VV | 1273   | 22821  | 1.48%  | 0.031% |
| 115 | 6.023 | 5.998 | 6.066 | VV | 3039   | 62754  | 4.06%  | 0.084% |
| 116 | 6.094 | 6.066 | 6.118 | VV | 2662   | 41695  | 2.70%  | 0.056% |
| 117 | 6.131 | 6.118 | 6.136 | VV | 907    | 8478   | 0.55%  | 0.011% |
| 118 | 6.149 | 6.136 | 6.172 | VV | 1266   | 16226  | 1.05%  | 0.022% |
| 119 | 6.198 | 6.172 | 6.215 | PV | 1662   | 20085  | 1.30%  | 0.027% |
| 120 | 6.248 | 6.215 | 6.263 | VV | 1906   | 30591  | 1.98%  | 0.041% |
| 121 | 6.282 | 6.263 | 6.324 | VV | 11376  | 156786 | 10.15% | 0.210% |
| 122 | 6.341 | 6.324 | 6.363 | VV | 1472   | 27632  | 1.79%  | 0.037% |
| 123 | 6.389 | 6.363 | 6.418 | VV | 1299   | 31892  | 2.06%  | 0.043% |
| 124 | 6.436 | 6.418 | 6.447 | VV | 1709   | 23723  | 1.54%  | 0.032% |
| 125 | 6.472 | 6.447 | 6.502 | VV | 1967   | 48881  | 3.16%  | 0.065% |
| 126 | 6.520 | 6.502 | 6.528 | VV | 905    | 12836  | 0.83%  | 0.017% |
| 127 | 6.544 | 6.528 | 6.563 | VV | 1686   | 27847  | 1.80%  | 0.037% |
| 128 | 6.593 | 6.563 | 6.604 | VV | 1600   | 30284  | 1.96%  | 0.041% |
| 129 | 6.624 | 6.604 | 6.648 | VV | 2267   | 41039  | 2.66%  | 0.055% |
| 130 | 6.673 | 6.648 | 6.685 | VV | 1583   | 29131  | 1.89%  | 0.039% |
| 131 | 6.699 | 6.685 | 6.735 | VV | 1504   | 32664  | 2.11%  | 0.044% |
| 132 | 6.746 | 6.735 | 6.753 | VV | 612    | 6224   | 0.40%  | 0.008% |
| 133 | 6.771 | 6.753 | 6.775 | VV | 1193   | 12013  | 0.78%  | 0.016% |
| 134 | 6.786 | 6.775 | 6.802 | VV | 1276   | 14352  | 0.93%  | 0.019% |
| 135 | 6.837 | 6.802 | 6.861 | VV | 1211   | 30401  | 1.97%  | 0.041% |
| 136 | 6.877 | 6.861 | 6.887 | VV | 1595   | 18246  | 1.18%  | 0.024% |
| 137 | 6.905 | 6.887 | 6.927 | VV | 6618   | 85494  | 5.53%  | 0.114% |
| 138 | 6.939 | 6.927 | 6.967 | VV | 3525   | 51586  | 3.34%  | 0.069% |
| 139 | 6.977 | 6.967 | 6.992 | VV | 1531   | 17601  | 1.14%  | 0.024% |
| 140 | 7.014 | 6.992 | 7.024 | VV | 1773   | 26489  | 1.71%  | 0.035% |
| 141 | 7.035 | 7.024 | 7.052 | VV | 1769   | 25002  | 1.62%  | 0.033% |

|     |       |       |       |    | rteres |        |        |        |
|-----|-------|-------|-------|----|--------|--------|--------|--------|
| 142 | 7.079 | 7.052 | 7.107 | VV | 2452   | 54358  | 3.52%  | 0.073% |
| 143 | 7.116 | 7.107 | 7.128 | VV | 1120   | 12359  | 0.80%  | 0.017% |
| 144 | 7.146 | 7.128 | 7.176 | VV | 1958   | 39947  | 2.59%  | 0.053% |
| 145 | 7.180 | 7.176 | 7.193 | VV | 850    | 7766   | 0.50%  | 0.010% |
| 146 | 7.219 | 7.193 | 7.237 | VV | 1889   | 36806  | 2.38%  | 0.049% |
| 147 | 7.256 | 7.237 | 7.272 | VV | 2675   | 43009  | 2.78%  | 0.058% |
| 148 | 7.286 | 7.272 | 7.305 | VV | 3045   | 47209  | 3.06%  | 0.063% |
| 149 | 7.325 | 7.305 | 7.353 | VV | 3236   | 61099  | 3.95%  | 0.082% |
| 150 | 7.375 | 7.353 | 7.382 | VV | 2485   | 32856  | 2.13%  | 0.044% |
| 151 | 7.395 | 7.382 | 7.419 | VV | 2560   | 54801  | 3.55%  | 0.073% |
| 152 | 7.427 | 7.419 | 7.449 | VV | 2387   | 32885  | 2.13%  | 0.044% |
| 153 | 7.474 | 7.449 | 7.509 | VV | 8384   | 145742 | 9.43%  | 0.195% |
| 154 | 7.530 | 7.509 | 7.552 | VV | 3821   | 63832  | 4.13%  | 0.085% |
| 155 | 7.574 | 7.552 | 7.591 | VV | 3770   | 58377  | 3.78%  | 0.078% |
| 156 | 7.600 | 7.591 | 7.632 | VV | 1966   | 40314  | 2.61%  | 0.054% |
| 157 | 7.660 | 7.632 | 7.692 | VV | 2913   | 78826  | 5.10%  | 0.105% |
| 158 | 7.703 | 7.692 | 7.724 | VV | 2135   | 33344  | 2.16%  | 0.045% |
| 159 | 7.753 | 7.724 | 7.777 | VV | 2234   | 56079  | 3.63%  | 0.075% |
| 160 | 7.790 | 7.777 | 7.805 | VV | 2511   | 36220  | 2.34%  | 0.048% |
| 161 | 7.831 | 7.805 | 7.849 | VV | 2775   | 61657  | 3.99%  | 0.083% |
| 162 | 7.878 | 7.849 | 7.906 | VV | 6596   | 124970 | 8.09%  | 0.167% |
| 163 | 7.923 | 7.906 | 7.945 | VV | 2220   | 42803  | 2.77%  | 0.057% |
| 164 | 7.963 | 7.945 | 7.972 | VV | 2281   | 31646  | 2.05%  | 0.042% |
| 165 | 7.990 | 7.972 | 8.024 | VV | 4439   | 98569  | 6.38%  | 0.132% |
| 166 | 8.040 | 8.024 | 8.058 | VV | 3658   | 60202  | 3.90%  | 0.081% |
| 167 | 8.080 | 8.058 | 8.109 | VV | 2282   | 63155  | 4.09%  | 0.085% |
| 168 | 8.134 | 8.109 | 8.150 | VV | 4415   | 74576  | 4.83%  | 0.100% |
| 169 | 8.165 | 8.150 | 8.202 | VV | 3524   | 93819  | 6.07%  | 0.126% |
| 170 | 8.231 | 8.202 | 8.248 | VV | 3254   | 71286  | 4.61%  | 0.095% |
| 171 | 8.276 | 8.248 | 8.294 | VV | 4180   | 91062  | 5.89%  | 0.122% |
| 172 | 8.315 | 8.294 | 8.355 | VV | 5555   | 139434 | 9.03%  | 0.187% |
| 173 | 8.403 | 8.355 | 8.433 | VV | 11493  | 233837 | 15.14% | 0.313% |
| 174 | 8.455 | 8.433 | 8.477 | VV | 5416   | 105738 | 6.84%  | 0.141% |
| 175 | 8.507 | 8.477 | 8.525 | VV | 5035   | 112659 | 7.29%  | 0.151% |
| 176 | 8.536 | 8.525 | 8.555 | VV | 4088   | 70754  | 4.58%  | 0.095% |
| 177 | 8.583 | 8.555 | 8.607 | VV | 4350   | 119239 | 7.72%  | 0.160% |
| 178 | 8.631 | 8.607 | 8.648 | VV | 4994   | 103383 | 6.69%  | 0.138% |
| 179 | 8.693 | 8.648 | 8.714 | VV | 6293   | 187195 | 12.12% | 0.250% |
| 180 | 8.742 | 8.714 | 8.788 | VV | 12900  | 276800 | 17.92% | 0.370% |
| 181 | 8.799 | 8.788 | 8.817 | VV | 4418   | 68412  | 4.43%  | 0.092% |
| 182 | 8.832 | 8.817 | 8.862 | VV | 4916   | 114254 | 7.40%  | 0.153% |
| 183 | 8.875 | 8.862 | 8.903 | VV | 4159   | 86284  | 5.59%  | 0.115% |
| 184 | 8.917 | 8.903 | 8.925 | VV | 3708   | 42462  | 2.75%  | 0.057% |
| 185 | 8.943 | 8.925 | 8.955 | VV | 4938   | 75806  | 4.91%  | 0.101% |
| 186 | 8.989 | 8.955 | 9.021 | VV | 9752   | 244751 | 15.84% | 0.328% |
| 187 | 9.042 | 9.021 | 9.064 | VV | 10725  | 175338 | 11.35% | 0.235% |
| 188 | 9.081 | 9.064 | 9.089 | VV | 5674   | 76283  | 4.94%  | 0.102% |
| 189 | 9.125 | 9.089 | 9.156 | VV | 16192  | 340143 | 22.02% | 0.455% |
| 190 | 9.164 | 9.156 | 9.169 | VV | 4324   | 34367  | 2.22%  | 0.046% |
| 191 | 9.172 | 9.169 | 9.184 | VV | 4401   | 37028  | 2.40%  | 0.050% |
| 192 | 9.202 | 9.184 | 9.220 | VV | 6481   | 111794 | 7.24%  | 0.150% |
| 193 | 9.238 | 9.220 | 9.257 | VV | 6106   | 116001 | 7.51%  | 0.155% |
| 194 | 9.272 | 9.257 | 9.292 | VV | 7278   | 126382 | 8.18%  | 0.169% |

|     |        |        |        |    |        |        |        |        |
|-----|--------|--------|--------|----|--------|--------|--------|--------|
|     |        |        |        |    | rteres |        |        |        |
| 195 | 9.308  | 9.292  | 9.318  | VV | 5468   | 79574  | 5.15%  | 0.106% |
| 196 | 9.352  | 9.318  | 9.372  | VV | 8198   | 198026 | 12.82% | 0.265% |
| 197 | 9.378  | 9.372  | 9.384  | VV | 4930   | 34456  | 2.23%  | 0.046% |
| 198 | 9.406  | 9.384  | 9.421  | VV | 6044   | 116976 | 7.57%  | 0.157% |
| 199 | 9.446  | 9.421  | 9.472  | VV | 6525   | 168416 | 10.90% | 0.225% |
| 200 | 9.496  | 9.472  | 9.524  | VV | 6160   | 155716 | 10.08% | 0.208% |
| 201 | 9.561  | 9.524  | 9.579  | VV | 5674   | 154399 | 9.99%  | 0.207% |
| 202 | 9.614  | 9.579  | 9.631  | VV | 5317   | 143784 | 9.31%  | 0.192% |
| 203 | 9.646  | 9.631  | 9.663  | VV | 5237   | 93460  | 6.05%  | 0.125% |
| 204 | 9.698  | 9.663  | 9.732  | VV | 6216   | 215833 | 13.97% | 0.289% |
| 205 | 9.745  | 9.732  | 9.762  | VV | 5610   | 92180  | 5.97%  | 0.123% |
| 206 | 9.784  | 9.762  | 9.837  | VV | 13620  | 387405 | 25.08% | 0.518% |
| 207 | 9.865  | 9.837  | 9.897  | VV | 9147   | 248090 | 16.06% | 0.332% |
| 208 | 9.905  | 9.897  | 9.917  | VV | 5952   | 67604  | 4.38%  | 0.090% |
| 209 | 9.949  | 9.917  | 9.983  | VV | 7346   | 261140 | 16.90% | 0.349% |
| 210 | 9.988  | 9.983  | 10.003 | VV | 6038   | 67947  | 4.40%  | 0.091% |
| 211 | 10.024 | 10.003 | 10.042 | VV | 6900   | 136513 | 8.84%  | 0.183% |
| 212 | 10.062 | 10.042 | 10.091 | VV | 29206  | 461694 | 29.89% | 0.618% |
| 213 | 10.104 | 10.091 | 10.126 | VV | 9130   | 173464 | 11.23% | 0.232% |
| 214 | 10.152 | 10.126 | 10.177 | VV | 8243   | 228306 | 14.78% | 0.306% |
| 215 | 10.194 | 10.177 | 10.242 | VV | 8147   | 275614 | 17.84% | 0.369% |
| 216 | 10.252 | 10.242 | 10.267 | VV | 6312   | 93499  | 6.05%  | 0.125% |
| 217 | 10.271 | 10.267 | 10.283 | VV | 6535   | 62455  | 4.04%  | 0.084% |
| 218 | 10.298 | 10.283 | 10.335 | VV | 7236   | 188842 | 12.22% | 0.253% |
| 219 | 10.363 | 10.335 | 10.395 | VV | 7317   | 218885 | 14.17% | 0.293% |
| 220 | 10.409 | 10.395 | 10.415 | VV | 5970   | 69135  | 4.48%  | 0.093% |
| 221 | 10.431 | 10.415 | 10.452 | VV | 6670   | 130768 | 8.46%  | 0.175% |
| 222 | 10.472 | 10.452 | 10.487 | VV | 6173   | 120339 | 7.79%  | 0.161% |
| 223 | 10.493 | 10.487 | 10.499 | VV | 5524   | 38423  | 2.49%  | 0.051% |
| 224 | 10.504 | 10.499 | 10.511 | VV | 5610   | 38669  | 2.50%  | 0.052% |
| 225 | 10.533 | 10.511 | 10.558 | VV | 8260   | 201408 | 13.04% | 0.270% |
| 226 | 10.583 | 10.558 | 10.609 | VV | 17075  | 346368 | 22.42% | 0.463% |
| 227 | 10.633 | 10.609 | 10.650 | VV | 8183   | 181983 | 11.78% | 0.244% |
| 228 | 10.666 | 10.650 | 10.692 | VV | 9124   | 198153 | 12.83% | 0.265% |
| 229 | 10.727 | 10.692 | 10.758 | VV | 9437   | 308267 | 19.95% | 0.413% |
| 230 | 10.781 | 10.758 | 10.814 | VV | 8959   | 246252 | 15.94% | 0.330% |
| 231 | 10.844 | 10.814 | 10.851 | VV | 9406   | 182127 | 11.79% | 0.244% |
| 232 | 10.863 | 10.851 | 10.882 | VV | 9274   | 159371 | 10.32% | 0.213% |
| 233 | 10.892 | 10.882 | 10.898 | VV | 7823   | 71721  | 4.64%  | 0.096% |
| 234 | 10.913 | 10.898 | 10.930 | VV | 9131   | 164253 | 10.63% | 0.220% |
| 235 | 10.934 | 10.930 | 10.943 | VV | 8580   | 63379  | 4.10%  | 0.085% |
| 236 | 10.956 | 10.943 | 10.971 | VV | 9029   | 146204 | 9.46%  | 0.196% |
| 237 | 11.005 | 10.971 | 11.035 | VV | 29237  | 592286 | 38.34% | 0.793% |
| 238 | 11.052 | 11.035 | 11.077 | VV | 9862   | 222582 | 14.41% | 0.298% |
| 239 | 11.089 | 11.077 | 11.117 | VV | 7922   | 174275 | 11.28% | 0.233% |
| 240 | 11.145 | 11.117 | 11.150 | VV | 7994   | 149879 | 9.70%  | 0.201% |
| 241 | 11.187 | 11.150 | 11.239 | VV | 37020  | 818045 | 52.95% | 1.095% |
| 242 | 11.265 | 11.239 | 11.298 | VV | 18638  | 430567 | 27.87% | 0.576% |
| 243 | 11.325 | 11.298 | 11.378 | VV | 10984  | 422075 | 27.32% | 0.565% |
| 244 | 11.389 | 11.378 | 11.397 | VV | 7566   | 81434  | 5.27%  | 0.109% |
| 245 | 11.413 | 11.397 | 11.434 | VV | 8164   | 170221 | 11.02% | 0.228% |
| 246 | 11.444 | 11.434 | 11.453 | VV | 7798   | 86807  | 5.62%  | 0.116% |

| rteres |        |        |        |    |       |         |        |        |
|--------|--------|--------|--------|----|-------|---------|--------|--------|
| 247    | 11.462 | 11.453 | 11.477 | VV | 7763  | 108583  | 7.03%  | 0.145% |
| 248    | 11.496 | 11.477 | 11.526 | VV | 11062 | 275038  | 17.80% | 0.368% |
| 249    | 11.541 | 11.526 | 11.548 | VV | 8506  | 111976  | 7.25%  | 0.150% |
| 250    | 11.555 | 11.548 | 11.566 | VV | 8546  | 89486   | 5.79%  | 0.120% |
| 251    | 11.584 | 11.566 | 11.604 | VV | 9649  | 208377  | 13.49% | 0.279% |
| 252    | 11.611 | 11.604 | 11.625 | VV | 8880  | 107078  | 6.93%  | 0.143% |
| 253    | 11.635 | 11.625 | 11.651 | VV | 9040  | 134658  | 8.72%  | 0.180% |
| 254    | 11.662 | 11.651 | 11.665 | VV | 8685  | 74246   | 4.81%  | 0.099% |
| 255    | 11.670 | 11.665 | 11.697 | VV | 8651  | 157567  | 10.20% | 0.211% |
| 256    | 11.728 | 11.697 | 11.763 | VV | 19348 | 492509  | 31.88% | 0.659% |
| 257    | 11.792 | 11.763 | 11.817 | VV | 9317  | 264266  | 17.11% | 0.354% |
| 258    | 11.840 | 11.817 | 11.864 | VV | 8707  | 225866  | 14.62% | 0.302% |
| 259    | 11.884 | 11.864 | 11.890 | VV | 8680  | 130183  | 8.43%  | 0.174% |
| 260    | 11.903 | 11.890 | 11.908 | VV | 9686  | 99826   | 6.46%  | 0.134% |
| 261    | 11.913 | 11.908 | 11.916 | VV | 9711  | 46418   | 3.00%  | 0.062% |
| 262    | 11.922 | 11.916 | 11.939 | VV | 9748  | 129517  | 8.38%  | 0.173% |
| 263    | 11.944 | 11.939 | 11.979 | VV | 9703  | 210129  | 13.60% | 0.281% |
| 264    | 11.999 | 11.979 | 12.012 | VV | 11333 | 196261  | 12.70% | 0.263% |
| 265    | 12.030 | 12.012 | 12.068 | VV | 11882 | 336490  | 21.78% | 0.450% |
| 266    | 12.107 | 12.068 | 12.128 | VV | 13987 | 382099  | 24.73% | 0.511% |
| 267    | 12.140 | 12.128 | 12.159 | VV | 11978 | 208622  | 13.50% | 0.279% |
| 268    | 12.175 | 12.159 | 12.221 | VV | 11448 | 367440  | 23.78% | 0.492% |
| 269    | 12.256 | 12.221 | 12.266 | VV | 8831  | 220843  | 14.30% | 0.296% |
| 270    | 12.291 | 12.266 | 12.313 | VV | 12759 | 306670  | 19.85% | 0.410% |
| 271    | 12.326 | 12.313 | 12.350 | VV | 9855  | 201512  | 13.04% | 0.270% |
| 272    | 12.354 | 12.350 | 12.360 | VV | 8363  | 49815   | 3.22%  | 0.067% |
| 273    | 12.408 | 12.360 | 12.431 | VV | 11166 | 417932  | 27.05% | 0.559% |
| 274    | 12.439 | 12.431 | 12.453 | VV | 9631  | 122132  | 7.91%  | 0.163% |
| 275    | 12.457 | 12.453 | 12.460 | VV | 9152  | 34447   | 2.23%  | 0.046% |
| 276    | 12.469 | 12.460 | 12.487 | VV | 9727  | 151480  | 9.81%  | 0.203% |
| 277    | 12.514 | 12.487 | 12.520 | VV | 9658  | 184925  | 11.97% | 0.247% |
| 278    | 12.560 | 12.520 | 12.635 | VV | 77209 | 1505561 | 97.46% | 2.015% |
| 279    | 12.639 | 12.635 | 12.653 | VV | 10341 | 110383  | 7.15%  | 0.148% |
| 280    | 12.671 | 12.653 | 12.684 | VV | 10469 | 188752  | 12.22% | 0.253% |
| 281    | 12.689 | 12.684 | 12.694 | VV | 9925  | 56525   | 3.66%  | 0.076% |
| 282    | 12.699 | 12.694 | 12.705 | VV | 10019 | 62093   | 4.02%  | 0.083% |
| 283    | 12.717 | 12.705 | 12.757 | VV | 9922  | 292362  | 18.92% | 0.391% |
| 284    | 12.791 | 12.757 | 12.848 | VV | 10414 | 503594  | 32.60% | 0.674% |
| 285    | 12.894 | 12.848 | 12.917 | VV | 14038 | 463141  | 29.98% | 0.620% |
| 286    | 12.930 | 12.917 | 12.937 | VV | 10323 | 120212  | 7.78%  | 0.161% |
| 287    | 12.954 | 12.937 | 12.988 | VV | 10845 | 300297  | 19.44% | 0.402% |
| 288    | 13.011 | 12.988 | 13.082 | VV | 32076 | 827348  | 53.56% | 1.107% |
| 289    | 13.100 | 13.082 | 13.123 | VV | 8686  | 210160  | 13.60% | 0.281% |
| 290    | 13.127 | 13.123 | 13.132 | VV | 8294  | 41171   | 2.67%  | 0.055% |
| 291    | 13.151 | 13.132 | 13.162 | VV | 8857  | 155620  | 10.07% | 0.208% |
| 292    | 13.201 | 13.162 | 13.233 | VV | 9480  | 368925  | 23.88% | 0.494% |
| 293    | 13.261 | 13.233 | 13.286 | VV | 9073  | 275991  | 17.87% | 0.369% |
| 294    | 13.310 | 13.286 | 13.330 | VV | 26128 | 427902  | 27.70% | 0.573% |
| 295    | 13.342 | 13.330 | 13.358 | VV | 13267 | 196170  | 12.70% | 0.263% |
| 296    | 13.369 | 13.358 | 13.392 | VV | 11388 | 211260  | 13.68% | 0.283% |
| 297    | 13.406 | 13.392 | 13.426 | VV | 10263 | 193252  | 12.51% | 0.259% |
| 298    | 13.448 | 13.426 | 13.474 | VV | 10199 | 275034  | 17.80% | 0.368% |
| 299    | 13.493 | 13.474 | 13.520 | VV | 9521  | 246382  | 15.95% | 0.330% |

|     |        |        |        |    |        |         |         |        |
|-----|--------|--------|--------|----|--------|---------|---------|--------|
|     |        |        |        |    | rteres |         |         |        |
| 300 | 13.539 | 13.520 | 13.553 | VV | 8683   | 165489  | 10.71%  | 0.221% |
| 301 | 13.585 | 13.553 | 13.622 | VV | 12580  | 442384  | 28.64%  | 0.592% |
| 302 | 13.635 | 13.622 | 13.685 | VV | 12534  | 399799  | 25.88%  | 0.535% |
| 303 | 13.706 | 13.685 | 13.720 | VV | 9535   | 189138  | 12.24%  | 0.253% |
| 304 | 13.733 | 13.720 | 13.755 | VV | 10185  | 195423  | 12.65%  | 0.262% |
| 305 | 13.793 | 13.755 | 13.862 | VV | 25305  | 820718  | 53.13%  | 1.098% |
| 306 | 13.908 | 13.862 | 13.935 | VV | 12759  | 458783  | 29.70%  | 0.614% |
| 307 | 13.941 | 13.935 | 13.961 | VV | 9304   | 141834  | 9.18%   | 0.190% |
| 308 | 13.983 | 13.961 | 13.991 | VV | 9825   | 171206  | 11.08%  | 0.229% |
| 309 | 14.013 | 13.991 | 14.035 | VV | 14533  | 310031  | 20.07%  | 0.415% |
| 310 | 14.054 | 14.035 | 14.088 | VV | 10936  | 328356  | 21.25%  | 0.439% |
| 311 | 14.104 | 14.088 | 14.122 | VV | 10664  | 196462  | 12.72%  | 0.263% |
| 312 | 14.149 | 14.122 | 14.169 | VV | 11515  | 298105  | 19.30%  | 0.399% |
| 313 | 14.180 | 14.169 | 14.200 | VV | 10848  | 190389  | 12.32%  | 0.255% |
| 314 | 14.221 | 14.200 | 14.257 | VV | 10267  | 324879  | 21.03%  | 0.435% |
| 315 | 14.277 | 14.257 | 14.285 | VV | 9185   | 151358  | 9.80%   | 0.203% |
| 316 | 14.300 | 14.285 | 14.325 | VV | 9495   | 214250  | 13.87%  | 0.287% |
| 317 | 14.337 | 14.325 | 14.346 | VV | 8749   | 103333  | 6.69%   | 0.138% |
| 318 | 14.387 | 14.346 | 14.413 | VV | 10253  | 378269  | 24.49%  | 0.506% |
| 319 | 14.435 | 14.413 | 14.441 | VV | 9268   | 153004  | 9.90%   | 0.205% |
| 320 | 14.453 | 14.441 | 14.493 | VV | 9477   | 280401  | 18.15%  | 0.375% |
| 321 | 14.497 | 14.493 | 14.503 | VV | 9036   | 52925   | 3.43%   | 0.071% |
| 322 | 14.515 | 14.503 | 14.521 | VV | 9579   | 101516  | 6.57%   | 0.136% |
| 323 | 14.555 | 14.521 | 14.579 | VV | 10578  | 342519  | 22.17%  | 0.458% |
| 324 | 14.613 | 14.579 | 14.633 | VV | 10201  | 312676  | 20.24%  | 0.418% |
| 325 | 14.642 | 14.633 | 14.648 | VV | 9671   | 85738   | 5.55%   | 0.115% |
| 326 | 14.659 | 14.648 | 14.692 | VV | 10112  | 243946  | 15.79%  | 0.326% |
| 327 | 14.716 | 14.692 | 14.757 | VV | 12269  | 397306  | 25.72%  | 0.532% |
| 328 | 14.761 | 14.757 | 14.765 | VV | 9825   | 45578   | 2.95%   | 0.061% |
| 329 | 14.783 | 14.765 | 14.801 | VV | 10501  | 218786  | 14.16%  | 0.293% |
| 330 | 14.844 | 14.801 | 14.865 | VV | 11344  | 405344  | 26.24%  | 0.542% |
| 331 | 14.887 | 14.865 | 14.911 | VV | 11395  | 279926  | 18.12%  | 0.375% |
| 332 | 14.915 | 14.911 | 14.922 | VV | 9574   | 61019   | 3.95%   | 0.082% |
| 333 | 14.969 | 14.922 | 14.996 | VV | 10346  | 437167  | 28.30%  | 0.585% |
| 334 | 15.006 | 14.996 | 15.024 | VV | 9832   | 163379  | 10.58%  | 0.219% |
| 335 | 15.056 | 15.024 | 15.099 | VV | 90149  | 1544856 | 100.00% | 2.067% |
| 336 | 15.105 | 15.099 | 15.110 | VV | 9645   | 62230   | 4.03%   | 0.083% |
| 337 | 15.113 | 15.110 | 15.131 | VV | 9640   | 115198  | 7.46%   | 0.154% |
| 338 | 15.162 | 15.131 | 15.179 | VV | 10465  | 285500  | 18.48%  | 0.382% |
| 339 | 15.200 | 15.179 | 15.218 | VV | 13987  | 282296  | 18.27%  | 0.378% |
| 340 | 15.256 | 15.218 | 15.287 | VV | 15762  | 543361  | 35.17%  | 0.727% |
| 341 | 15.301 | 15.287 | 15.309 | VV | 10164  | 135656  | 8.78%   | 0.182% |
| 342 | 15.314 | 15.309 | 15.318 | VV | 10211  | 52953   | 3.43%   | 0.071% |
| 343 | 15.330 | 15.318 | 15.349 | VV | 11033  | 187806  | 12.16%  | 0.251% |
| 344 | 15.361 | 15.349 | 15.374 | VV | 10637  | 157326  | 10.18%  | 0.211% |
| 345 | 15.392 | 15.374 | 15.421 | VV | 11182  | 292081  | 18.91%  | 0.391% |
| 346 | 15.426 | 15.421 | 15.440 | VV | 9740   | 110563  | 7.16%   | 0.148% |
| 347 | 15.449 | 15.440 | 15.454 | VV | 9737   | 80858   | 5.23%   | 0.108% |
| 348 | 15.461 | 15.454 | 15.482 | VV | 9716   | 156681  | 10.14%  | 0.210% |
| 349 | 15.511 | 15.482 | 15.547 | VV | 10111  | 376641  | 24.38%  | 0.504% |
| 350 | 15.552 | 15.547 | 15.557 | VV | 9885   | 52783   | 3.42%   | 0.071% |
| 351 | 15.561 | 15.557 | 15.574 | VV | 9564   | 99318   | 6.43%   | 0.133% |

|     |        |        |        |    | rteres |         |        |        |
|-----|--------|--------|--------|----|--------|---------|--------|--------|
| 352 | 15.588 | 15.574 | 15.610 | VV | 9587   | 201953  | 13.07% | 0.270% |
| 353 | 15.643 | 15.610 | 15.752 | VV | 31858  | 1238055 | 80.14% | 1.657% |
| 354 | 15.800 | 15.752 | 15.858 | VV | 22070  | 834761  | 54.03% | 1.117% |
| 355 | 15.877 | 15.858 | 15.896 | VV | 11363  | 236920  | 15.34% | 0.317% |
|     |        |        |        |    |        |         |        |        |
| 356 | 15.915 | 15.896 | 15.947 | VV | 10592  | 300211  | 19.43% | 0.402% |
| 357 | 15.962 | 15.947 | 15.973 | VV | 9522   | 145630  | 9.43%  | 0.195% |
| 358 | 16.012 | 15.973 | 16.017 | VV | 10483  | 259948  | 16.83% | 0.348% |
| 359 | 16.038 | 16.017 | 16.071 | VV | 11106  | 334618  | 21.66% | 0.448% |
| 360 | 16.093 | 16.071 | 16.131 | VV | 10880  | 367274  | 23.77% | 0.491% |
|     |        |        |        |    |        |         |        |        |
| 361 | 16.134 | 16.131 | 16.146 | VV | 9730   | 84597   | 5.48%  | 0.113% |
| 362 | 16.169 | 16.146 | 16.183 | VV | 10413  | 221514  | 14.34% | 0.296% |
| 363 | 16.192 | 16.183 | 16.198 | VV | 9518   | 84647   | 5.48%  | 0.113% |
| 364 | 16.201 | 16.198 | 16.211 | VV | 9503   | 69155   | 4.48%  | 0.093% |
| 365 | 16.215 | 16.211 | 16.226 | VV | 9138   | 81318   | 5.26%  | 0.109% |
|     |        |        |        |    |        |         |        |        |
| 366 | 16.238 | 16.226 | 16.259 | VV | 9913   | 189456  | 12.26% | 0.254% |
| 367 | 16.285 | 16.259 | 16.317 | VV | 14750  | 401133  | 25.97% | 0.537% |
| 368 | 16.322 | 16.317 | 16.327 | VV | 10210  | 64069   | 4.15%  | 0.086% |
| 369 | 16.331 | 16.327 | 16.350 | VV | 10159  | 128548  | 8.32%  | 0.172% |
| 370 | 16.356 | 16.350 | 16.362 | VV | 9029   | 65898   | 4.27%  | 0.088% |
|     |        |        |        |    |        |         |        |        |
| 371 | 16.381 | 16.362 | 16.400 | VV | 9243   | 198810  | 12.87% | 0.266% |
| 372 | 16.408 | 16.400 | 16.420 | VV | 9131   | 105593  | 6.84%  | 0.141% |
| 373 | 16.426 | 16.420 | 16.433 | VV | 8829   | 68998   | 4.47%  | 0.092% |
| 374 | 16.479 | 16.433 | 16.504 | VV | 11504  | 417451  | 27.02% | 0.559% |
| 375 | 16.525 | 16.504 | 16.537 | VV | 9769   | 185831  | 12.03% | 0.249% |
|     |        |        |        |    |        |         |        |        |
| 376 | 16.542 | 16.537 | 16.549 | VV | 9460   | 70399   | 4.56%  | 0.094% |
| 377 | 16.557 | 16.549 | 16.560 | VV | 9816   | 64860   | 4.20%  | 0.087% |
| 378 | 16.597 | 16.560 | 16.628 | VV | 12241  | 447638  | 28.98% | 0.599% |
| 379 | 16.671 | 16.628 | 16.700 | VV | 12772  | 483338  | 31.29% | 0.647% |
| 380 | 16.706 | 16.700 | 16.710 | VV | 9978   | 60522   | 3.92%  | 0.081% |
|     |        |        |        |    |        |         |        |        |
| 381 | 16.717 | 16.710 | 16.724 | VV | 10165  | 84923   | 5.50%  | 0.114% |
| 382 | 16.736 | 16.724 | 16.743 | VV | 10393  | 117530  | 7.61%  | 0.157% |
| 383 | 16.768 | 16.743 | 16.835 | VV | 20236  | 713642  | 46.19% | 0.955% |
| 384 | 16.839 | 16.835 | 16.843 | VV | 9856   | 46378   | 3.00%  | 0.062% |
| 385 | 16.855 | 16.843 | 16.861 | VV | 10116  | 105272  | 6.81%  | 0.141% |
|     |        |        |        |    |        |         |        |        |
| 386 | 16.865 | 16.861 | 16.879 | VV | 9975   | 109483  | 7.09%  | 0.147% |
| 387 | 16.897 | 16.879 | 16.909 | VV | 11404  | 191213  | 12.38% | 0.256% |
| 388 | 16.913 | 16.909 | 16.932 | VV | 11201  | 150795  | 9.76%  | 0.202% |
| 389 | 16.941 | 16.932 | 16.958 | VV | 10973  | 166720  | 10.79% | 0.223% |
| 390 | 16.981 | 16.958 | 16.996 | VV | 10946  | 243072  | 15.73% | 0.325% |
|     |        |        |        |    |        |         |        |        |
| 391 | 17.004 | 16.996 | 17.019 | VV | 10975  | 147407  | 9.54%  | 0.197% |
| 392 | 17.051 | 17.019 | 17.056 | VV | 11302  | 230371  | 14.91% | 0.308% |
| 393 | 17.061 | 17.056 | 17.066 | VV | 11278  | 67190   | 4.35%  | 0.090% |
| 394 | 17.088 | 17.066 | 17.126 | VV | 14211  | 436391  | 28.25% | 0.584% |
| 395 | 17.146 | 17.126 | 17.183 | VV | 13999  | 397058  | 25.70% | 0.531% |
|     |        |        |        |    |        |         |        |        |
| 396 | 17.187 | 17.183 | 17.193 | VV | 10111  | 63375   | 4.10%  | 0.085% |
| 397 | 17.238 | 17.193 | 17.277 | VV | 17106  | 639542  | 41.40% | 0.856% |
| 398 | 17.287 | 17.277 | 17.312 | VV | 12860  | 239667  | 15.51% | 0.321% |
| 399 | 17.319 | 17.312 | 17.328 | VV | 10134  | 98980   | 6.41%  | 0.132% |
| 400 | 17.335 | 17.328 | 17.340 | VV | 10126  | 69658   | 4.51%  | 0.093% |
|     |        |        |        |    |        |         |        |        |
| 401 | 17.365 | 17.340 | 17.387 | VV | 11338  | 294747  | 19.08% | 0.394% |
| 402 | 17.400 | 17.387 | 17.420 | VV | 10712  | 205587  | 13.31% | 0.275% |
| 403 | 17.427 | 17.420 | 17.439 | VV | 10532  | 118531  | 7.67%  | 0.159% |
| 404 | 17.481 | 17.439 | 17.507 | VV | 12251  | 452154  | 29.27% | 0.605% |

|     |        |        |        |    |        |        |        |        |
|-----|--------|--------|--------|----|--------|--------|--------|--------|
|     |        |        |        |    | rteres |        |        |        |
| 405 | 17.513 | 17.507 | 17.518 | VV | 9960   | 65862  | 4.26%  | 0.088% |
| 406 | 17.533 | 17.518 | 17.540 | VV | 10602  | 134274 | 8.69%  | 0.180% |
| 407 | 17.560 | 17.540 | 17.566 | VV | 11817  | 174049 | 11.27% | 0.233% |
| 408 | 17.569 | 17.566 | 17.593 | VV | 12064  | 179073 | 11.59% | 0.240% |
| 409 | 17.617 | 17.593 | 17.622 | VV | 11082  | 187919 | 12.16% | 0.251% |
| 410 | 17.628 | 17.622 | 17.643 | VV | 11260  | 137016 | 8.87%  | 0.183% |
| 411 | 17.653 | 17.643 | 17.668 | VV | 11577  | 160798 | 10.41% | 0.215% |
| 412 | 17.690 | 17.668 | 17.726 | VV | 17484  | 432990 | 28.03% | 0.579% |
| 413 | 17.731 | 17.726 | 17.739 | VV | 9611   | 72876  | 4.72%  | 0.098% |
| 414 | 17.743 | 17.739 | 17.751 | VV | 9296   | 67252  | 4.35%  | 0.090% |
| 415 | 17.758 | 17.751 | 17.769 | VV | 9345   | 98474  | 6.37%  | 0.132% |
| 416 | 17.773 | 17.769 | 17.777 | VV | 9492   | 44558  | 2.88%  | 0.060% |
| 417 | 17.807 | 17.777 | 17.836 | VV | 11723  | 357414 | 23.14% | 0.478% |
| 418 | 17.856 | 17.836 | 17.882 | VV | 9469   | 249882 | 16.18% | 0.334% |
| 419 | 17.889 | 17.882 | 17.921 | VV | 8819   | 197314 | 12.77% | 0.264% |
| 420 | 17.924 | 17.921 | 17.939 | VV | 8348   | 89501  | 5.79%  | 0.120% |
| 421 | 17.965 | 17.939 | 17.971 | VV | 8554   | 155456 | 10.06% | 0.208% |
| 422 | 17.976 | 17.971 | 17.996 | VV | 8558   | 122744 | 7.95%  | 0.164% |
| 423 | 18.010 | 17.996 | 18.016 | VV | 8625   | 99587  | 6.45%  | 0.133% |
| 424 | 18.027 | 18.016 | 18.043 | VV | 9094   | 144447 | 9.35%  | 0.193% |
| 425 | 18.063 | 18.043 | 18.071 | VV | 9098   | 143248 | 9.27%  | 0.192% |
| 426 | 18.089 | 18.071 | 18.103 | VV | 9549   | 179303 | 11.61% | 0.240% |
| 427 | 18.127 | 18.103 | 18.159 | VV | 17298  | 390078 | 25.25% | 0.522% |
| 428 | 18.175 | 18.159 | 18.181 | VV | 8484   | 105899 | 6.85%  | 0.142% |
| 429 | 18.195 | 18.181 | 18.202 | VV | 8898   | 113104 | 7.32%  | 0.151% |
| 430 | 18.212 | 18.202 | 18.232 | VV | 8915   | 153111 | 9.91%  | 0.205% |
| 431 | 18.273 | 18.232 | 18.294 | VV | 12203  | 369082 | 23.89% | 0.494% |
| 432 | 18.298 | 18.294 | 18.329 | VV | 9897   | 192068 | 12.43% | 0.257% |
| 433 | 18.348 | 18.329 | 18.364 | VV | 8560   | 174667 | 11.31% | 0.234% |
| 434 | 18.369 | 18.364 | 18.389 | VV | 7661   | 112221 | 7.26%  | 0.150% |
| 435 | 18.417 | 18.389 | 18.436 | VV | 8593   | 226267 | 14.65% | 0.303% |
| 436 | 18.447 | 18.436 | 18.457 | VV | 8563   | 102887 | 6.66%  | 0.138% |
| 437 | 18.490 | 18.457 | 18.520 | VV | 21180  | 565242 | 36.59% | 0.756% |
| 438 | 18.523 | 18.520 | 18.529 | VV | 12681  | 68043  | 4.40%  | 0.091% |
| 439 | 18.552 | 18.529 | 18.595 | VV | 17666  | 472412 | 30.58% | 0.632% |
| 440 | 18.600 | 18.595 | 18.607 | VV | 7407   | 51000  | 3.30%  | 0.068% |
| 441 | 18.643 | 18.607 | 18.687 | VV | 12693  | 424381 | 27.47% | 0.568% |
| 442 | 18.690 | 18.687 | 18.742 | VV | 7046   | 207289 | 13.42% | 0.277% |
| 443 | 18.780 | 18.742 | 18.833 | VV | 8665   | 388643 | 25.16% | 0.520% |
| 444 | 18.838 | 18.833 | 18.867 | VV | 6708   | 126742 | 8.20%  | 0.170% |
| 445 | 18.873 | 18.867 | 18.895 | VV | 5941   | 95911  | 6.21%  | 0.128% |
| 446 | 18.922 | 18.895 | 18.937 | VV | 7122   | 164604 | 10.65% | 0.220% |
| 447 | 18.965 | 18.937 | 19.028 | VV | 13273  | 461826 | 29.89% | 0.618% |
| 448 | 19.065 | 19.028 | 19.087 | VV | 8083   | 230431 | 14.92% | 0.308% |
| 449 | 19.107 | 19.087 | 19.111 | VV | 7460   | 96292  | 6.23%  | 0.129% |
| 450 | 19.115 | 19.111 | 19.152 | VV | 7454   | 154619 | 10.01% | 0.207% |
| 451 | 19.155 | 19.152 | 19.170 | VV | 5734   | 61958  | 4.01%  | 0.083% |
| 452 | 19.179 | 19.170 | 19.197 | VV | 5573   | 84478  | 5.47%  | 0.113% |
| 453 | 19.226 | 19.197 | 19.232 | VV | 6877   | 130604 | 8.45%  | 0.175% |
| 454 | 19.237 | 19.232 | 19.275 | VV | 7038   | 163391 | 10.58% | 0.219% |
| 455 | 19.323 | 19.275 | 19.346 | VV | 18269  | 464488 | 30.07% | 0.622% |
| 456 | 19.366 | 19.346 | 19.426 | VV | 15608  | 474132 | 30.69% | 0.634% |

|     |        |        |        |    | rteres |        |        |        |
|-----|--------|--------|--------|----|--------|--------|--------|--------|
| 457 | 19.430 | 19.426 | 19.434 | VV | 5754   | 30260  | 1.96%  | 0.040% |
| 458 | 19.446 | 19.434 | 19.450 | VV | 5903   | 53823  | 3.48%  | 0.072% |
| 459 | 19.476 | 19.450 | 19.483 | VV | 6723   | 126368 | 8.18%  | 0.169% |
| 460 | 19.491 | 19.483 | 19.514 | VV | 6773   | 107075 | 6.93%  | 0.143% |
|     |        |        |        |    |        |        |        |        |
| 461 | 19.548 | 19.514 | 19.555 | VV | 7864   | 162564 | 10.52% | 0.218% |
| 462 | 19.561 | 19.555 | 19.584 | VV | 7511   | 110445 | 7.15%  | 0.148% |
| 463 | 19.602 | 19.584 | 19.639 | VV | 5636   | 170266 | 11.02% | 0.228% |
| 464 | 19.653 | 19.639 | 19.674 | VV | 4868   | 95879  | 6.21%  | 0.128% |
| 465 | 19.680 | 19.674 | 19.687 | VV | 4461   | 31761  | 2.06%  | 0.043% |
|     |        |        |        |    |        |        |        |        |
| 466 | 19.690 | 19.687 | 19.697 | VV | 4252   | 26646  | 1.72%  | 0.036% |
| 467 | 19.709 | 19.697 | 19.715 | VV | 4464   | 43244  | 2.80%  | 0.058% |
| 468 | 19.720 | 19.715 | 19.724 | VV | 4311   | 24224  | 1.57%  | 0.032% |
| 469 | 19.754 | 19.724 | 19.808 | VV | 9054   | 308035 | 19.94% | 0.412% |
| 470 | 19.855 | 19.808 | 19.892 | VV | 5781   | 256537 | 16.61% | 0.343% |
|     |        |        |        |    |        |        |        |        |
| 471 | 19.906 | 19.892 | 19.912 | VV | 4580   | 53325  | 3.45%  | 0.071% |
| 472 | 19.919 | 19.912 | 19.923 | VV | 4641   | 29775  | 1.93%  | 0.040% |
| 473 | 19.926 | 19.923 | 19.933 | VV | 4667   | 29410  | 1.90%  | 0.039% |
| 474 | 19.937 | 19.933 | 19.942 | VV | 4757   | 25320  | 1.64%  | 0.034% |
| 475 | 19.964 | 19.942 | 19.987 | VV | 5236   | 134191 | 8.69%  | 0.180% |
|     |        |        |        |    |        |        |        |        |
| 476 | 20.060 | 19.987 | 20.082 | VV | 7977   | 347068 | 22.47% | 0.464% |
| 477 | 20.103 | 20.082 | 20.108 | VV | 6980   | 98632  | 6.38%  | 0.132% |
| 478 | 20.128 | 20.108 | 20.150 | VV | 8316   | 186505 | 12.07% | 0.250% |
| 479 | 20.159 | 20.150 | 20.216 | VV | 6507   | 220863 | 14.30% | 0.296% |
| 480 | 20.223 | 20.216 | 20.228 | VV | 4609   | 32990  | 2.14%  | 0.044% |
|     |        |        |        |    |        |        |        |        |
| 481 | 20.273 | 20.228 | 20.292 | VV | 5375   | 186637 | 12.08% | 0.250% |
| 482 | 20.343 | 20.292 | 20.348 | VV | 6076   | 183335 | 11.87% | 0.245% |
| 483 | 20.374 | 20.348 | 20.424 | VV | 7142   | 276288 | 17.88% | 0.370% |
| 484 | 20.428 | 20.424 | 20.435 | VV | 5331   | 33777  | 2.19%  | 0.045% |
| 485 | 20.444 | 20.435 | 20.449 | VV | 5496   | 44942  | 2.91%  | 0.060% |
|     |        |        |        |    |        |        |        |        |
| 486 | 20.459 | 20.449 | 20.474 | VV | 5770   | 83687  | 5.42%  | 0.112% |
| 487 | 20.496 | 20.474 | 20.523 | VV | 7861   | 191341 | 12.39% | 0.256% |
| 488 | 20.554 | 20.523 | 20.594 | VV | 8932   | 290492 | 18.80% | 0.389% |
| 489 | 20.598 | 20.594 | 20.617 | VV | 5384   | 73141  | 4.73%  | 0.098% |
| 490 | 20.655 | 20.617 | 20.698 | VV | 13025  | 368434 | 23.85% | 0.493% |
|     |        |        |        |    |        |        |        |        |
| 491 | 20.703 | 20.698 | 20.709 | VV | 5852   | 37762  | 2.44%  | 0.051% |
| 492 | 20.729 | 20.709 | 20.743 | VV | 6013   | 119164 | 7.71%  | 0.159% |
| 493 | 20.765 | 20.743 | 20.791 | VV | 6591   | 179560 | 11.62% | 0.240% |
| 494 | 20.794 | 20.791 | 20.822 | VV | 6322   | 108429 | 7.02%  | 0.145% |
| 495 | 20.830 | 20.822 | 20.836 | VV | 5577   | 43605  | 2.82%  | 0.058% |
|     |        |        |        |    |        |        |        |        |
| 496 | 20.857 | 20.836 | 20.896 | VV | 6995   | 217860 | 14.10% | 0.292% |
| 497 | 20.900 | 20.896 | 20.910 | VV | 5298   | 43590  | 2.82%  | 0.058% |
| 498 | 20.914 | 20.910 | 20.921 | VV | 5163   | 32508  | 2.10%  | 0.044% |
| 499 | 20.931 | 20.921 | 20.948 | VV | 5060   | 81917  | 5.30%  | 0.110% |
| 500 | 20.967 | 20.948 | 20.976 | VV | 5262   | 83240  | 5.39%  | 0.111% |
|     |        |        |        |    |        |        |        |        |
| 501 | 20.990 | 20.976 | 21.007 | VV | 5133   | 96413  | 6.24%  | 0.129% |
| 502 | 21.048 | 21.007 | 21.107 | VV | 8314   | 358366 | 23.20% | 0.480% |
| 503 | 21.112 | 21.107 | 21.132 | VV | 4724   | 69986  | 4.53%  | 0.094% |
| 504 | 21.137 | 21.132 | 21.144 | VV | 4339   | 30181  | 1.95%  | 0.040% |
| 505 | 21.156 | 21.144 | 21.161 | VV | 4258   | 43152  | 2.79%  | 0.058% |
|     |        |        |        |    |        |        |        |        |
| 506 | 21.167 | 21.161 | 21.178 | VV | 4202   | 41805  | 2.71%  | 0.056% |
| 507 | 21.182 | 21.178 | 21.210 | VV | 4068   | 73764  | 4.77%  | 0.099% |
| 508 | 21.253 | 21.210 | 21.300 | VV | 5191   | 225180 | 14.58% | 0.301% |
| 509 | 21.306 | 21.300 | 21.316 | VV | 3417   | 32099  | 2.08%  | 0.043% |

|     |        |        |        |    |        |        |        |        |
|-----|--------|--------|--------|----|--------|--------|--------|--------|
|     |        |        |        |    | rteres |        |        |        |
| 510 | 21.322 | 21.316 | 21.327 | VV | 3400   | 22773  | 1.47%  | 0.030% |
| 511 | 21.338 | 21.327 | 21.347 | VV | 3499   | 41242  | 2.67%  | 0.055% |
| 512 | 21.354 | 21.347 | 21.364 | VV | 3387   | 32235  | 2.09%  | 0.043% |
| 513 | 21.374 | 21.364 | 21.387 | VV | 3203   | 41902  | 2.71%  | 0.056% |
| 514 | 21.397 | 21.387 | 21.403 | VV | 3227   | 30956  | 2.00%  | 0.041% |
| 515 | 21.414 | 21.403 | 21.432 | VV | 3291   | 53890  | 3.49%  | 0.072% |
| 516 | 21.437 | 21.432 | 21.449 | VV | 3013   | 29465  | 1.91%  | 0.039% |
| 517 | 21.456 | 21.449 | 21.466 | VV | 3116   | 30327  | 1.96%  | 0.041% |
| 518 | 21.490 | 21.466 | 21.516 | VV | 3017   | 84821  | 5.49%  | 0.114% |
| 519 | 21.522 | 21.516 | 21.539 | VV | 2763   | 38423  | 2.49%  | 0.051% |
| 520 | 21.545 | 21.539 | 21.552 | VV | 2863   | 21842  | 1.41%  | 0.029% |
| 521 | 21.563 | 21.552 | 21.571 | VV | 2940   | 31361  | 2.03%  | 0.042% |
| 522 | 21.615 | 21.571 | 21.663 | VV | 5650   | 217652 | 14.09% | 0.291% |
| 523 | 21.693 | 21.663 | 21.742 | VV | 3253   | 123334 | 7.98%  | 0.165% |
| 524 | 21.746 | 21.742 | 21.759 | VV | 1976   | 19782  | 1.28%  | 0.026% |
| 525 | 21.764 | 21.759 | 21.770 | VV | 1942   | 12484  | 0.81%  | 0.017% |
| 526 | 21.779 | 21.770 | 21.792 | VV | 1998   | 25363  | 1.64%  | 0.034% |
| 527 | 21.801 | 21.792 | 21.808 | VV | 2062   | 18855  | 1.22%  | 0.025% |
| 528 | 21.811 | 21.808 | 21.818 | VV | 2128   | 12150  | 0.79%  | 0.016% |
| 529 | 21.825 | 21.818 | 21.861 | VV | 2101   | 49112  | 3.18%  | 0.066% |
| 530 | 21.868 | 21.861 | 21.897 | VV | 1770   | 35947  | 2.33%  | 0.048% |
| 531 | 21.901 | 21.897 | 21.925 | VV | 1540   | 22576  | 1.46%  | 0.030% |
| 532 | 21.935 | 21.925 | 21.945 | VV | 1448   | 16405  | 1.06%  | 0.022% |
| 533 | 21.950 | 21.945 | 21.960 | VV | 1442   | 11700  | 0.76%  | 0.016% |
| 534 | 21.970 | 21.960 | 21.978 | VV | 1407   | 13967  | 0.90%  | 0.019% |
| 535 | 21.986 | 21.978 | 22.003 | VV | 1210   | 16310  | 1.06%  | 0.022% |
| 536 | 22.010 | 22.003 | 22.017 | VV | 1124   | 8530   | 0.55%  | 0.011% |
| 537 | 22.023 | 22.017 | 22.037 | VV | 1188   | 12983  | 0.84%  | 0.017% |
| 538 | 22.043 | 22.037 | 22.050 | VV | 931    | 6462   | 0.42%  | 0.009% |
| 539 | 22.064 | 22.050 | 22.076 | VV | 908    | 12689  | 0.82%  | 0.017% |
| 540 | 22.082 | 22.076 | 22.091 | VV | 749    | 5902   | 0.38%  | 0.008% |
| 541 | 22.094 | 22.091 | 22.104 | VV | 742    | 5337   | 0.35%  | 0.007% |
| 542 | 22.116 | 22.104 | 22.124 | VV | 727    | 8014   | 0.52%  | 0.011% |
| 543 | 22.136 | 22.124 | 22.146 | VV | 854    | 9888   | 0.64%  | 0.013% |
| 544 | 22.153 | 22.146 | 22.158 | VV | 832    | 5527   | 0.36%  | 0.007% |
| 545 | 22.198 | 22.158 | 22.232 | VV | 1782   | 55870  | 3.62%  | 0.075% |
| 546 | 22.277 | 22.232 | 22.344 | VV | 3188   | 109374 | 7.08%  | 0.146% |
| 547 | 22.353 | 22.344 | 22.363 | VV | 241    | 1986   | 0.13%  | 0.003% |
| 548 | 22.367 | 22.363 | 22.395 | VV | 226    | 2906   | 0.19%  | 0.004% |

Sum of corrected areas: 74729794

FF102925.M Fri Oct 31 03:45:20 2025



# CALIBRATION SUMMARY

|    |
|----|
| 1  |
| 2  |
| 3  |
| 4  |
| 5  |
| 6  |
| 7  |
| 8  |
| 9  |
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**TPH GC INITIAL CALIBRATION SUMMARY**

Lab Name: Alliance Contract: AECO02  
 ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-171  
 Lab Code: ACE SDG No.: Q3434

| Calibration Sequence : FF102925 |            | Test : TPH GC    |                 |
|---------------------------------|------------|------------------|-----------------|
| Concentration (PPM)             | Area Count | Reference Factor | File ID         |
| 85                              | 9472915    | 111446           | FF016603.D      |
| 170                             | 18165984   | 106859           | FF016604.D      |
| 340                             | 37023074   | 108891           | FF016605.D      |
| 850                             | 89698209   | 105527           | FF016606.D      |
| 1700                            | 169764046  | 99861            | FF016607.D      |
| AVG RF : 106517                 |            | % RSD : 4.074    | AVG RT : 15.059 |

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016603.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 10:39  
 Operator : YP\AJ  
 Sample : 100 TRPH STD  
 Misc :  
 ALS Vial : 71 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 100 TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 29 11:25:51 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 11:21:39 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... | 15.064 | 9733531  | 97.182 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.040  | 10350779 | 96.937 ug/ml |
| 2) N-DECANE                   | 4.577  | 10535689 | 97.169 ug/ml |
| 3) N-DODECANE                 | 6.757  | 10655869 | 97.262 ug/ml |
| 4) N-TETRADECANE              | 8.592  | 10776848 | 97.151 ug/ml |
| 5) N-HEXADECANE               | 10.200 | 10807655 | 97.177 ug/ml |
| 6) N-OCTADECANE               | 11.647 | 11088236 | 97.169 ug/ml |
| 7) N-EICOSANE                 | 12.961 | 11393354 | 97.116 ug/ml |
| 8) N-DOCOSANE                 | 14.162 | 11113191 | 97.184 ug/ml |
| 10) N-TETRACOSANE             | 15.269 | 11063677 | 97.217 ug/ml |
| 11) N-HEXACOSANE              | 16.294 | 10732434 | 97.330 ug/ml |
| 12) N-OCTACOSANE              | 17.248 | 10583031 | 97.296 ug/ml |
| 13) N-TRIACONTANE             | 18.138 | 10372109 | 97.232 ug/ml |
| 14) N-DOTRIACONTANE           | 18.975 | 9760051  | 97.148 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.762 | 8984214  | 97.186 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.504 | 7905974  | 97.436 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.263 | 7124793  | 97.678 ug/ml |
| 18) N-TETRACONTANE            | 22.208 | 6516142  | 97.834 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

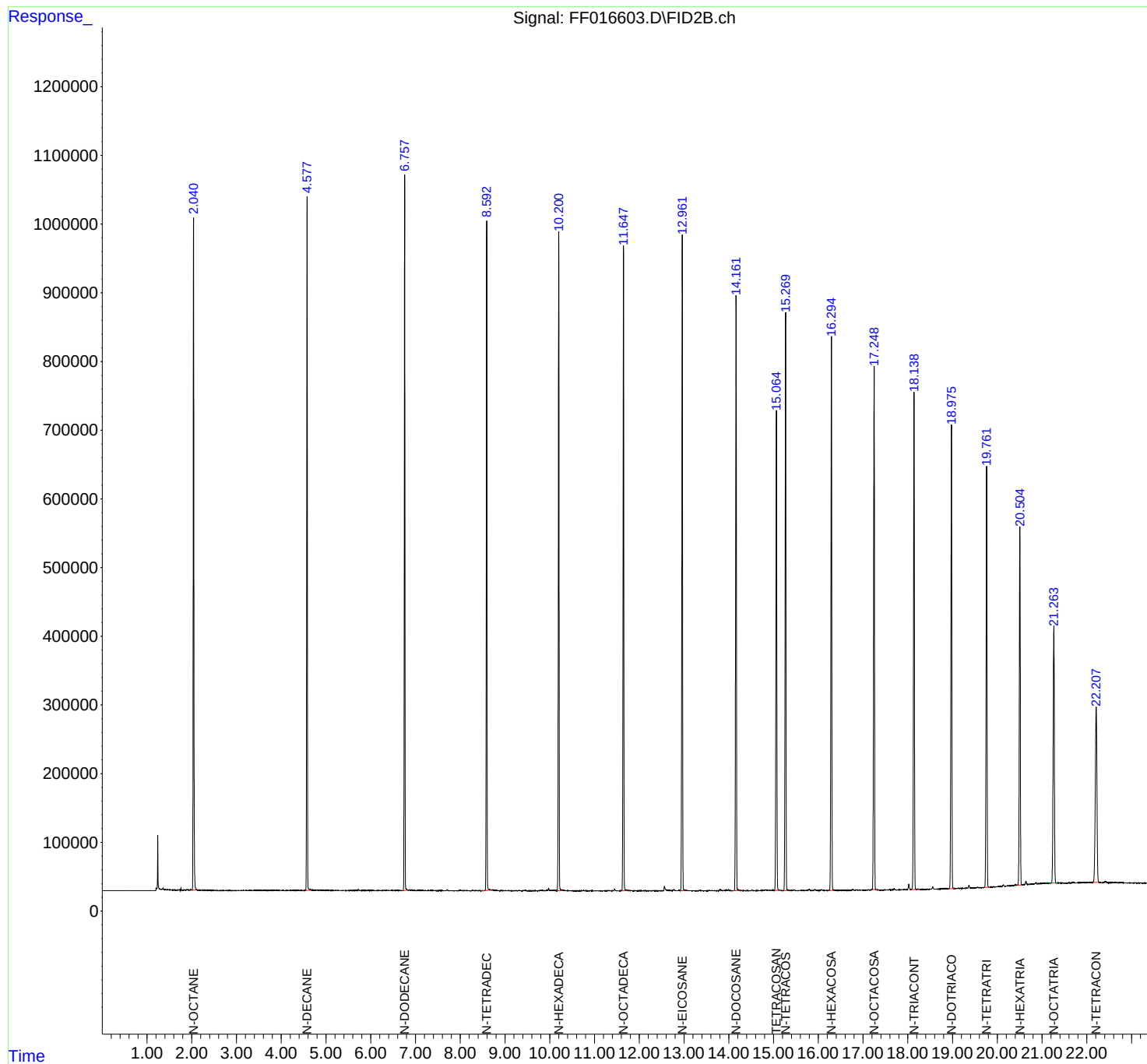
(m)=manual int.

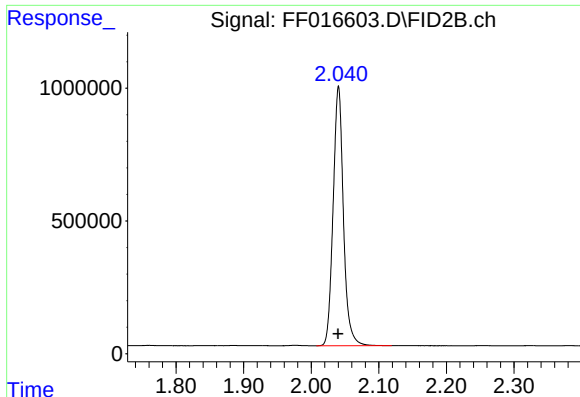
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016603.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 10:39  
Operator : YP\AJ  
Sample : 100 TRPH STD  
Misc :  
ALS Vial : 71 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 29 11:25:51 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 11:21:39 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

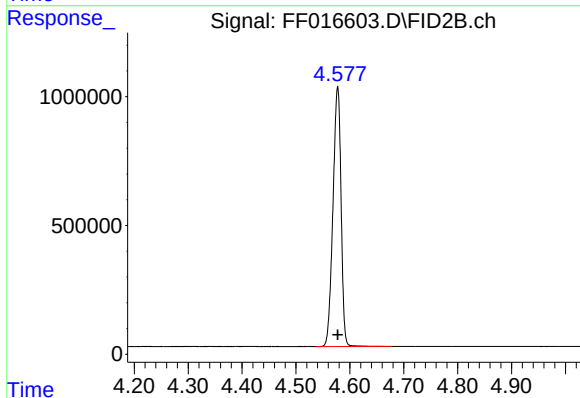




#1 N-OCTANE

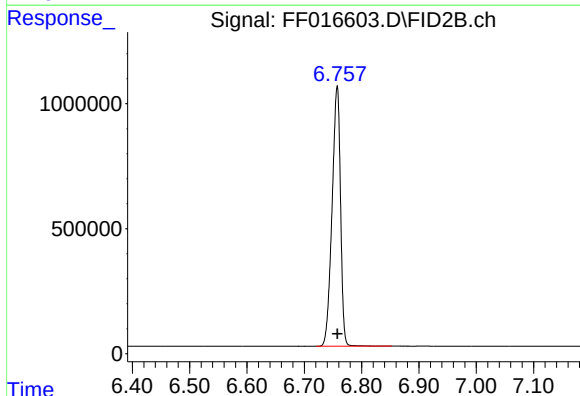
R.T.: 2.040 min  
Delta R.T.: 0.000 min  
Response: 10350779  
Conc: 96.94 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD



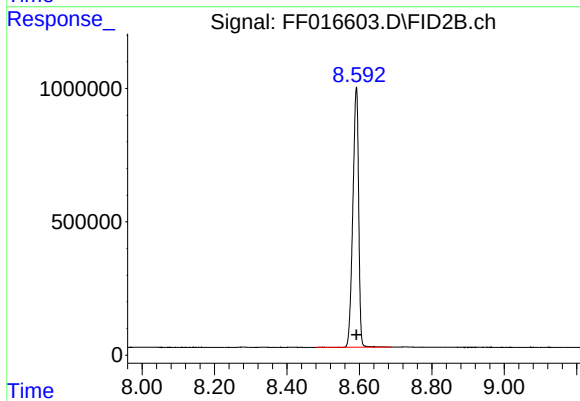
#2 N-DECANE

R.T.: 4.577 min  
Delta R.T.: 0.000 min  
Response: 10535689  
Conc: 97.17 ug/ml



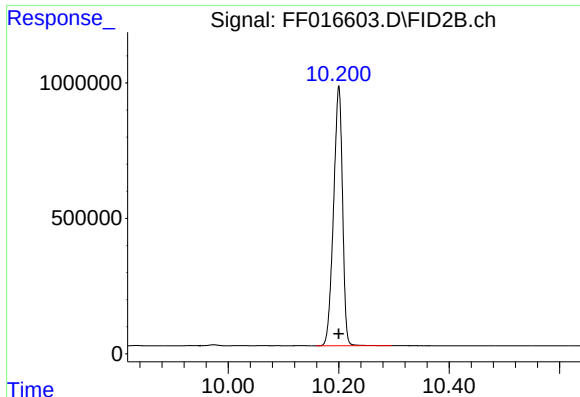
#3 N-DODECANE

R.T.: 6.757 min  
Delta R.T.: 0.000 min  
Response: 10655869  
Conc: 97.26 ug/ml



#4 N-TETRADECANE

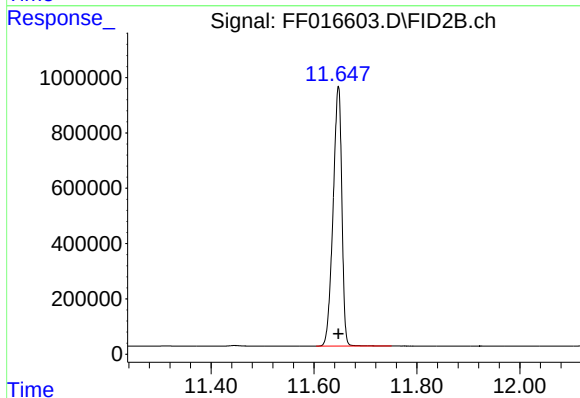
R.T.: 8.592 min  
Delta R.T.: 0.000 min  
Response: 10776848  
Conc: 97.15 ug/ml



#5 N-HEXADECANE

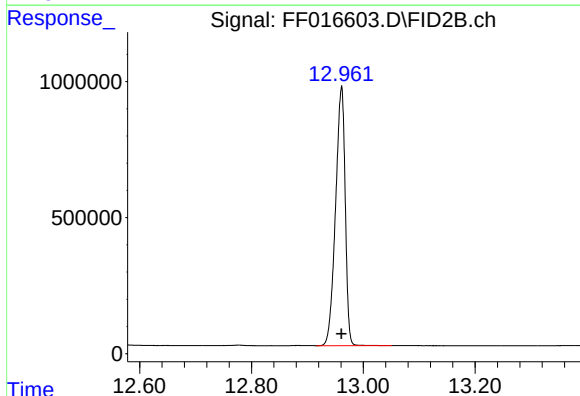
R.T.: 10.200 min  
Delta R.T.: 0.000 min  
Response: 10807655  
Conc: 97.18 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD



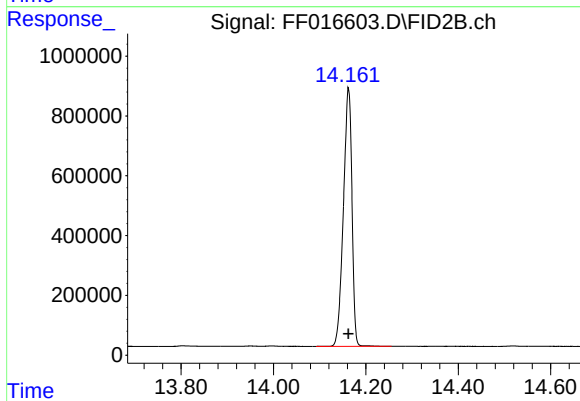
#6 N-OCTADECANE

R.T.: 11.647 min  
Delta R.T.: 0.000 min  
Response: 11088236  
Conc: 97.17 ug/ml



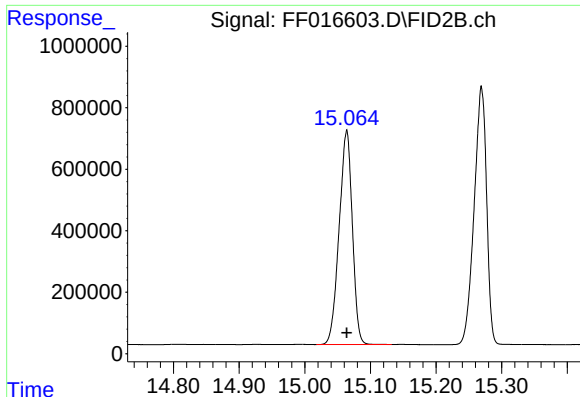
#7 N-EICOSANE

R.T.: 12.961 min  
Delta R.T.: 0.000 min  
Response: 11393354  
Conc: 97.12 ug/ml



#8 N-DOCOSANE

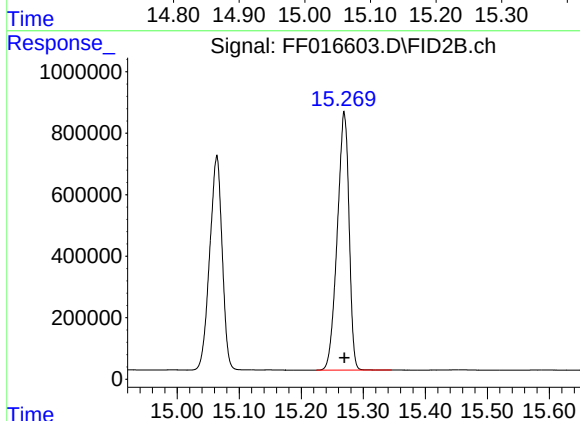
R.T.: 14.162 min  
Delta R.T.: 0.000 min  
Response: 11113191  
Conc: 97.18 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

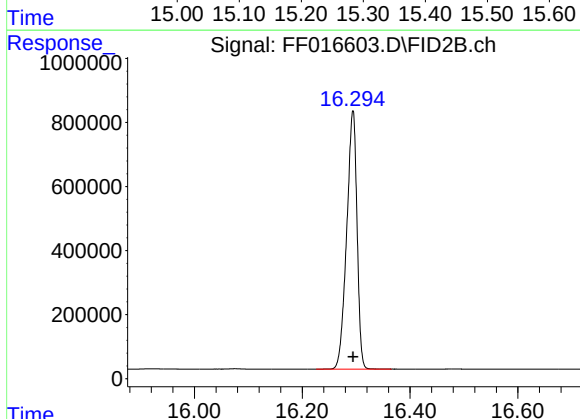
R.T.: 15.064 min  
Delta R.T.: 0.000 min  
Response: 9733531  
Conc: 97.18 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD



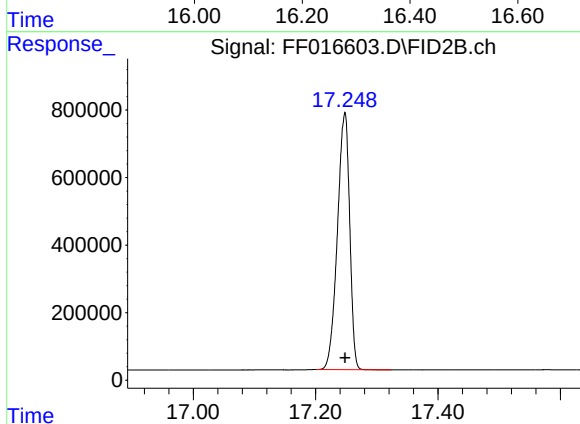
#10 N-TETRACOSANE

R.T.: 15.269 min  
Delta R.T.: 0.000 min  
Response: 11063677  
Conc: 97.22 ug/ml



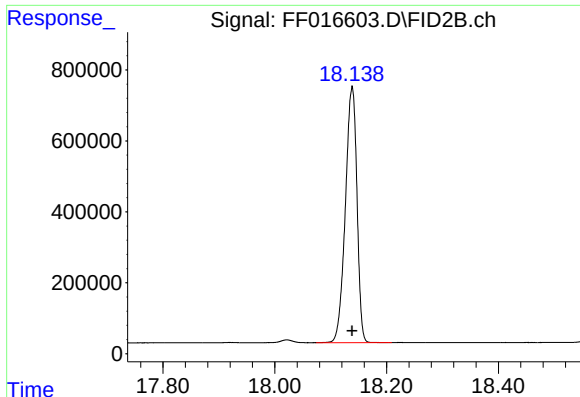
#11 N-HEXACOSANE

R.T.: 16.294 min  
Delta R.T.: 0.000 min  
Response: 10732434  
Conc: 97.33 ug/ml



#12 N-OCTACOSANE

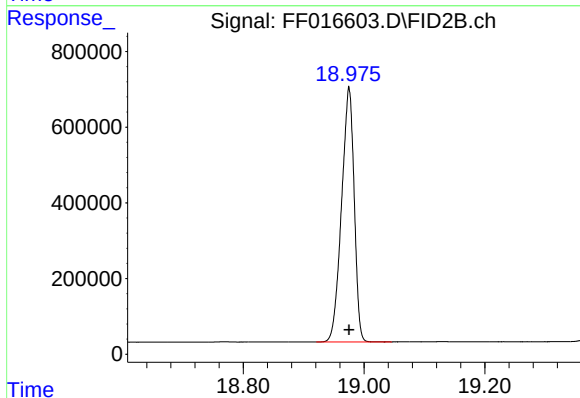
R.T.: 17.248 min  
Delta R.T.: 0.000 min  
Response: 10583031  
Conc: 97.30 ug/ml



#13 N-TRIACONTANE

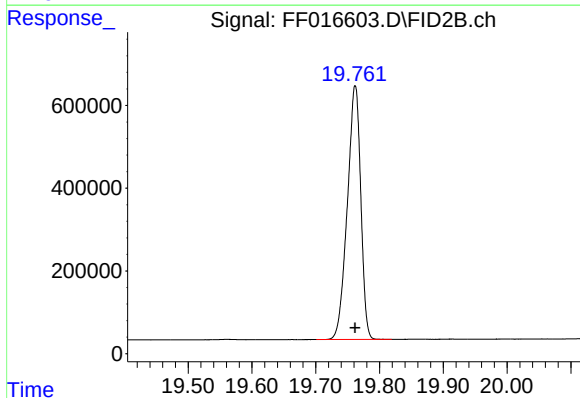
R.T.: 18.138 min  
Delta R.T.: 0.000 min  
Response: 10372109  
Conc: 97.23 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD



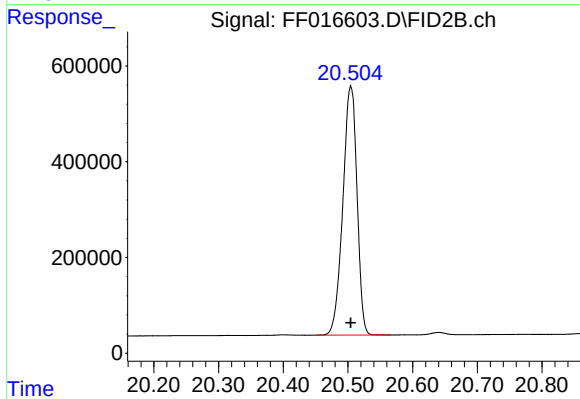
#14 N-DOTRIACONTANE

R.T.: 18.975 min  
Delta R.T.: 0.000 min  
Response: 9760051  
Conc: 97.15 ug/ml



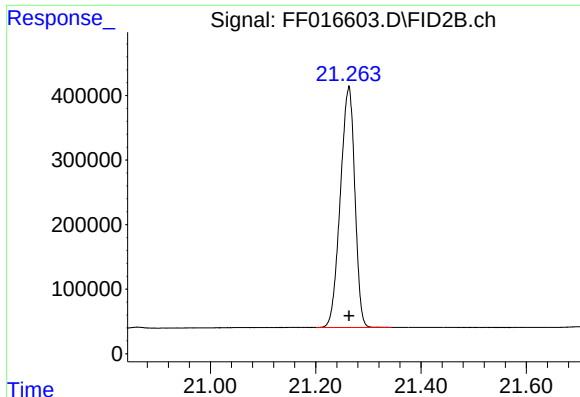
#15 N-TETRATRIACONTANE

R.T.: 19.762 min  
Delta R.T.: 0.000 min  
Response: 8984214  
Conc: 97.19 ug/ml



#16 N-HEXATRIACONTANE

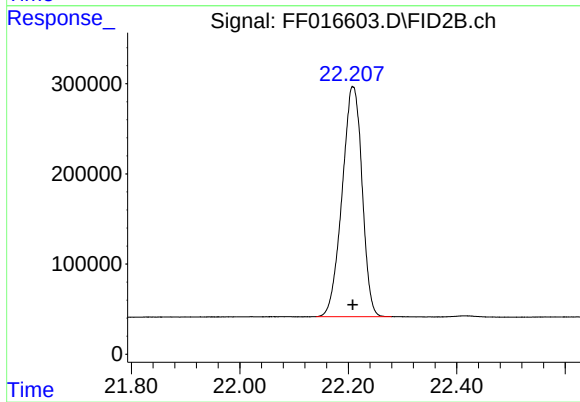
R.T.: 20.504 min  
Delta R.T.: 0.000 min  
Response: 7905974  
Conc: 97.44 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.263 min  
Delta R.T.: 0.000 min  
Response: 7124793  
Conc: 97.68 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
100 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.208 min  
Delta R.T.: 0.000 min  
Response: 6516142  
Conc: 97.83 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016603.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 10:39  
Sample : 100 TRPH STD  
Misc :  
ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.040       | 2.007        | 2.119      | BB       | 978926         | 10350779     | 90.85%         | 5.767%        |
| 2                       | 4.577       | 4.537        | 4.677      | BB       | 1009879        | 10535689     | 92.47%         | 5.870%        |
| 3                       | 6.757       | 6.721        | 6.852      | BB       | 1040951        | 10655869     | 93.53%         | 5.936%        |
| 4                       | 8.592       | 8.481        | 8.689      | BB       | 978638         | 10776848     | 94.59%         | 6.004%        |
| 5                       | 10.200      | 10.159       | 10.296     | BB       | 961065         | 10807655     | 94.86%         | 6.021%        |
| 6                       | 11.647      | 11.604       | 11.751     | BB       | 938761         | 11088236     | 97.32%         | 6.177%        |
| 7                       | 12.961      | 12.916       | 13.051     | BB       | 949787         | 11393354     | 100.00%        | 6.347%        |
| 8                       | 14.162      | 14.092       | 14.256     | BB       | 863717         | 11113191     | 97.54%         | 6.191%        |
| 9                       | 15.064      | 15.017       | 15.132     | PV       | 697468         | 9733531      | 85.43%         | 5.423%        |
| 10                      | 15.269      | 15.224       | 15.346     | BB       | 839507         | 11063677     | 97.11%         | 6.164%        |
| 11                      | 16.294      | 16.226       | 16.366     | BB       | 807679         | 10732434     | 94.20%         | 5.979%        |
| 12                      | 17.248      | 17.201       | 17.324     | BB       | 759772         | 10583031     | 92.89%         | 5.896%        |
| 13                      | 18.138      | 18.074       | 18.209     | BB       | 722950         | 10372109     | 91.04%         | 5.778%        |
| 14                      | 18.975      | 18.921       | 19.046     | BB       | 670646         | 9760051      | 85.66%         | 5.437%        |
| 15                      | 19.762      | 19.701       | 19.819     | BB       | 613287         | 8984214      | 78.85%         | 5.005%        |
| 16                      | 20.504      | 20.451       | 20.567     | BB       | 520304         | 7905974      | 69.39%         | 4.405%        |
| 17                      | 21.263      | 21.201       | 21.344     | BB       | 372378         | 7124793      | 62.53%         | 3.969%        |
| 18                      | 22.208      | 22.141       | 22.280     | BBA      | 254474         | 6516142      | 57.19%         | 3.630%        |
| Sum of corrected areas: |             |              |            |          |                | 179497576    |                |               |

FF102925.M Thu Oct 30 14:02:31 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016604.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 11:08  
 Operator : YP\AJ  
 Sample : 50 TRPH STD  
 Misc :  
 ALS Vial : 72 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 50 TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 29 11:21:56 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 11:21:39 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... | 15.060 | 5149058  | 50.000 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.040  | 5502498  | 50.000 ug/ml |
| 2) N-DECANE                   | 4.575  | 5574754  | 50.000 ug/ml |
| 3) N-DODECANE                 | 6.754  | 5627850  | 50.000 ug/ml |
| 4) N-TETRADECANE              | 8.588  | 5704427  | 50.000 ug/ml |
| 5) N-HEXADECANE               | 10.197 | 5717820  | 50.000 ug/ml |
| 6) N-OCTADECANE               | 11.643 | 5867144  | 50.000 ug/ml |
| 7) N-EICOSANE                 | 12.956 | 6034989  | 50.000 ug/ml |
| 8) N-DOCOSANE                 | 14.159 | 5878573  | 50.000 ug/ml |
| 10) N-TETRACOSANE             | 15.265 | 5848590  | 50.000 ug/ml |
| 11) N-HEXACOSANE              | 16.290 | 5660622  | 50.000 ug/ml |
| 12) N-OCTACOSANE              | 17.243 | 5585650  | 50.000 ug/ml |
| 13) N-TRIACONTANE             | 18.134 | 5481373  | 50.000 ug/ml |
| 14) N-DOTRIACONTANE           | 18.970 | 5166597  | 50.000 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.756 | 4752224  | 50.000 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.501 | 4161006  | 50.000 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.258 | 3731765  | 50.000 ug/ml |
| 18) N-TETRACONTANE            | 22.205 | 3402327  | 50.000 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

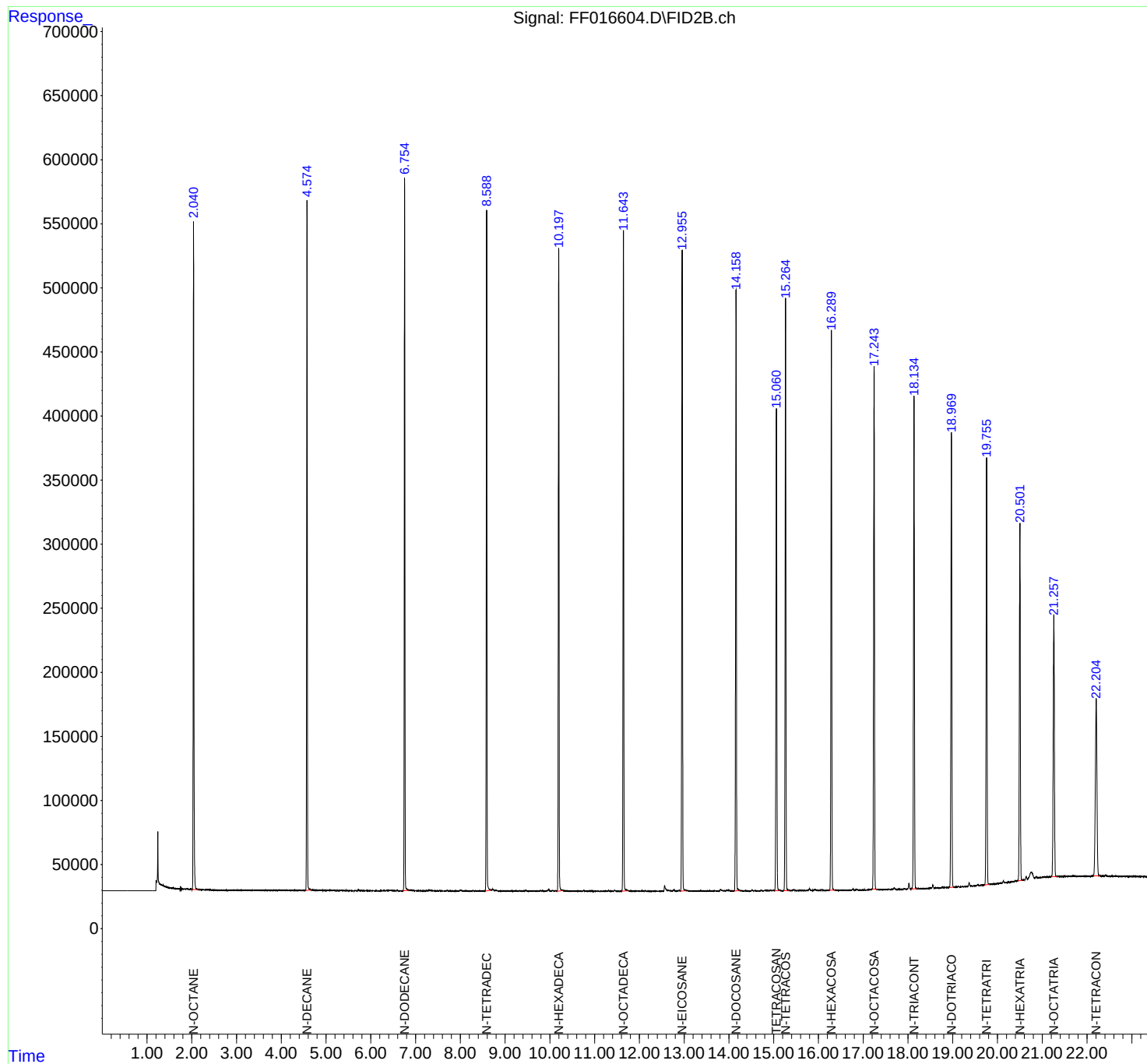
(m)=manual int.

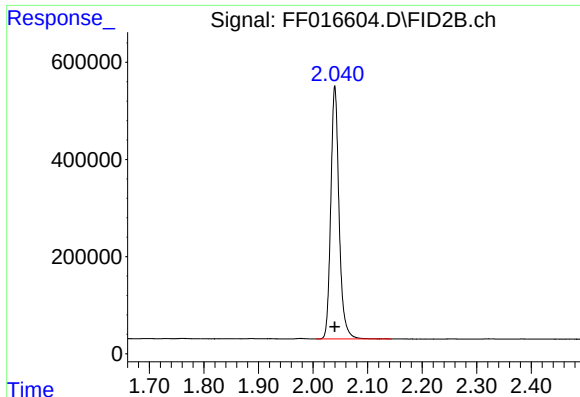
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016604.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 11:08  
Operator : YP\AJ  
Sample : 50 TRPH STD  
Misc :  
ALS Vial : 72 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 29 11:21:56 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 11:21:39 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

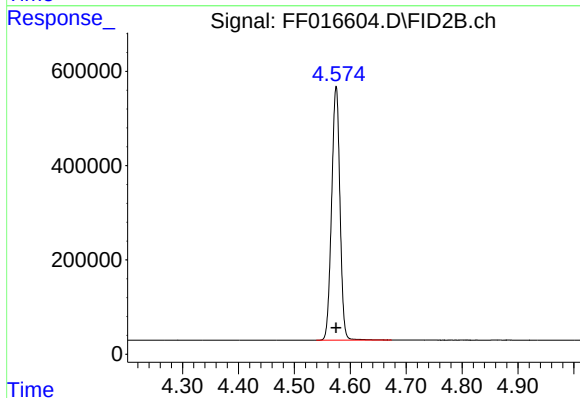




#1 N-OCTANE

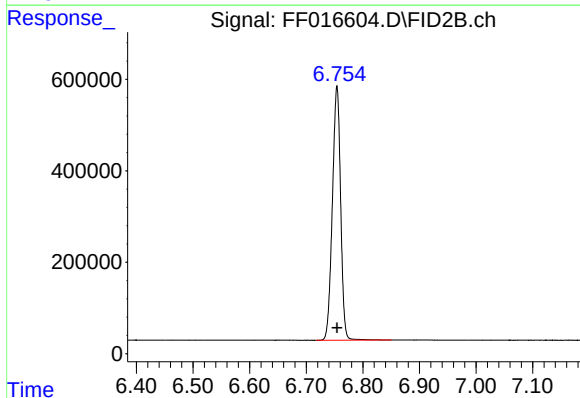
R.T.: 2.040 min  
Delta R.T.: 0.000 min  
Response: 5502498  
Conc: 50.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD



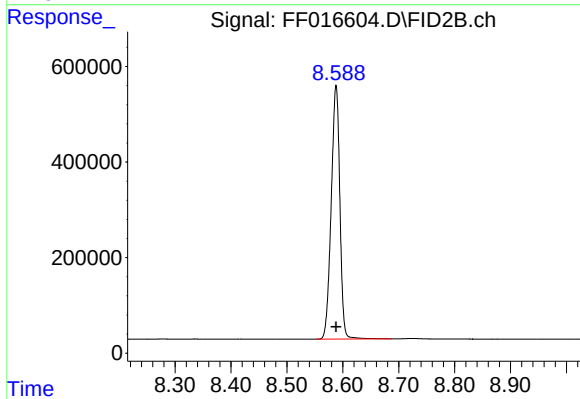
#2 N-DECANE

R.T.: 4.575 min  
Delta R.T.: 0.000 min  
Response: 5574754  
Conc: 50.00 ug/ml



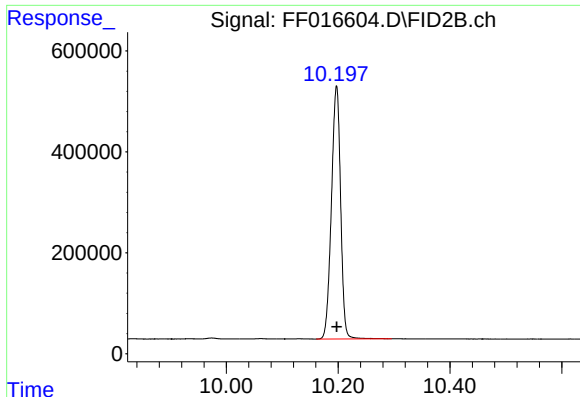
#3 N-DODECANE

R.T.: 6.754 min  
Delta R.T.: 0.000 min  
Response: 5627850  
Conc: 50.00 ug/ml



#4 N-TETRADECANE

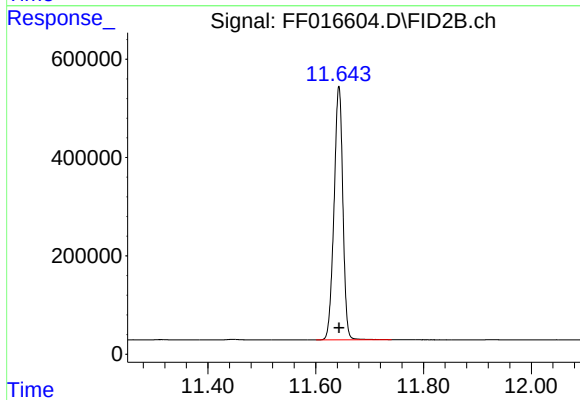
R.T.: 8.588 min  
Delta R.T.: 0.000 min  
Response: 5704427  
Conc: 50.00 ug/ml



#5 N-HEXADECANE

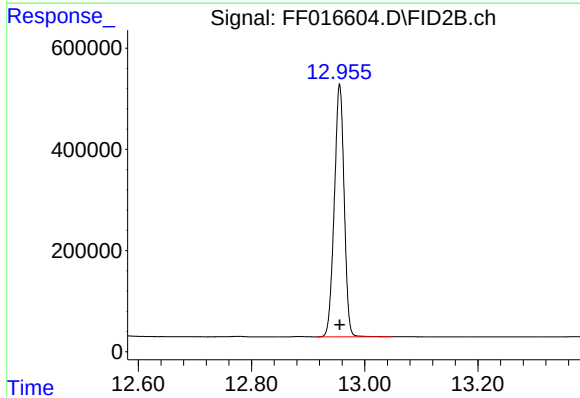
R.T.: 10.197 min  
Delta R.T.: 0.000 min  
Response: 5717820  
Conc: 50.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD



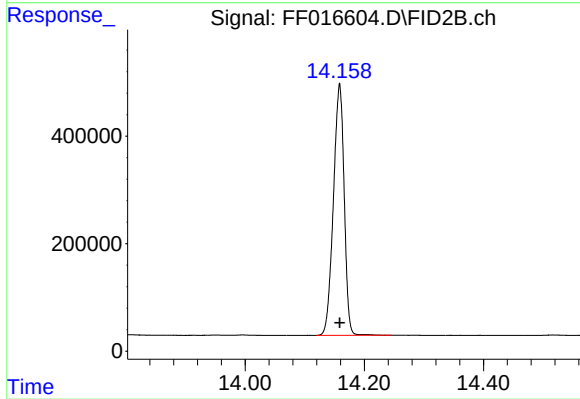
#6 N-OCTADECANE

R.T.: 11.643 min  
Delta R.T.: 0.000 min  
Response: 5867144  
Conc: 50.00 ug/ml



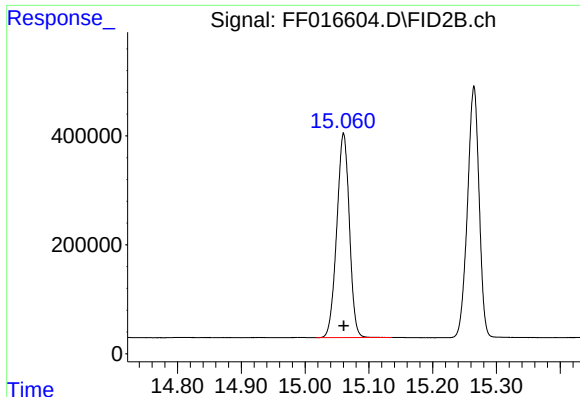
#7 N-EICOSANE

R.T.: 12.956 min  
Delta R.T.: 0.000 min  
Response: 6034989  
Conc: 50.00 ug/ml



#8 N-DOCOSANE

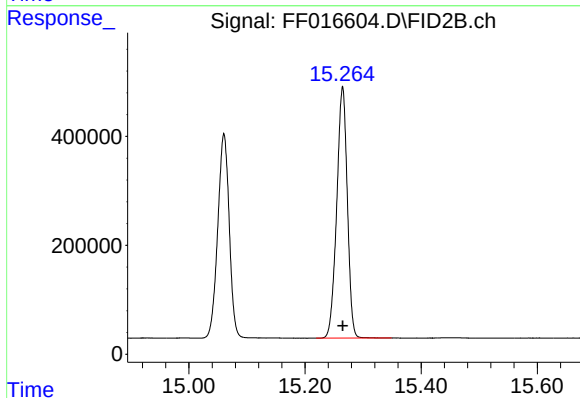
R.T.: 14.159 min  
Delta R.T.: 0.000 min  
Response: 5878573  
Conc: 50.00 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

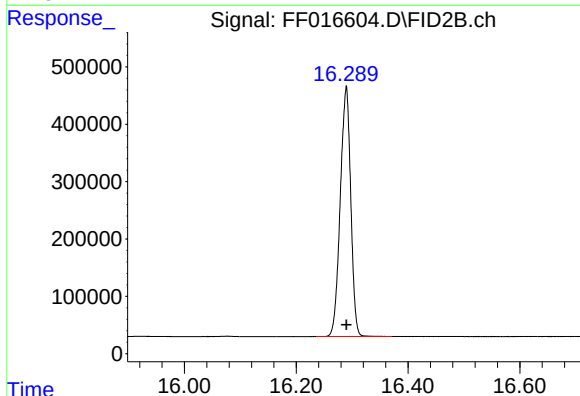
R.T.: 15.060 min  
Delta R.T.: 0.000 min  
Response: 5149058  
Conc: 50.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD



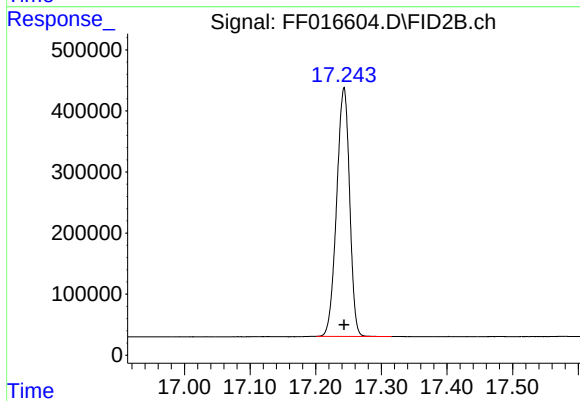
#10 N-TETRACOSANE

R.T.: 15.265 min  
Delta R.T.: 0.000 min  
Response: 5848590  
Conc: 50.00 ug/ml



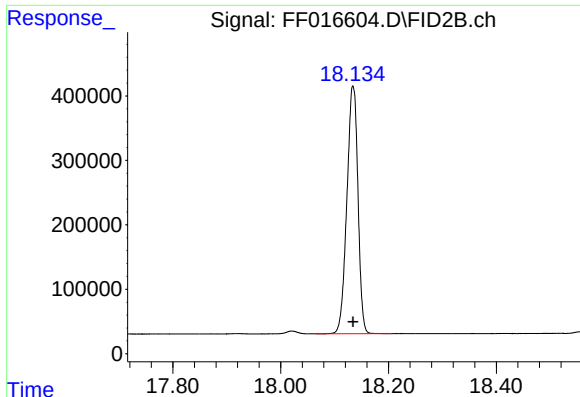
#11 N-HEXACOSANE

R.T.: 16.290 min  
Delta R.T.: 0.000 min  
Response: 5660622  
Conc: 50.00 ug/ml



#12 N-OCTACOSANE

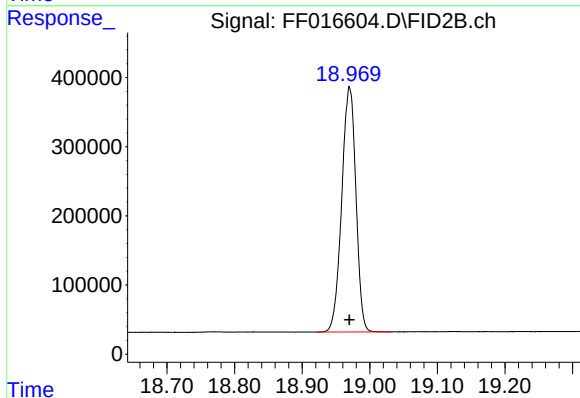
R.T.: 17.243 min  
Delta R.T.: 0.000 min  
Response: 5585650  
Conc: 50.00 ug/ml



#13 N-TRIACONTANE

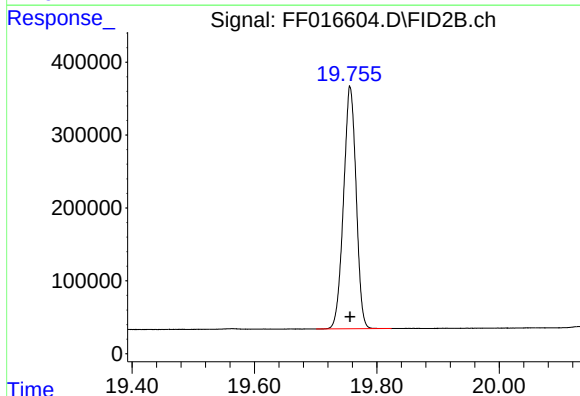
R.T.: 18.134 min  
Delta R.T.: 0.000 min  
Response: 5481373  
Conc: 50.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD



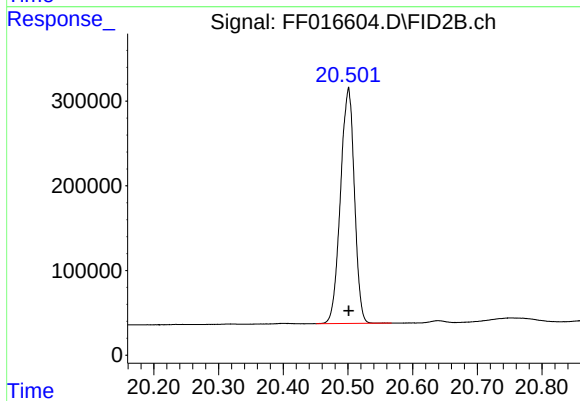
#14 N-DOTRIACONTANE

R.T.: 18.970 min  
Delta R.T.: 0.000 min  
Response: 5166597  
Conc: 50.00 ug/ml



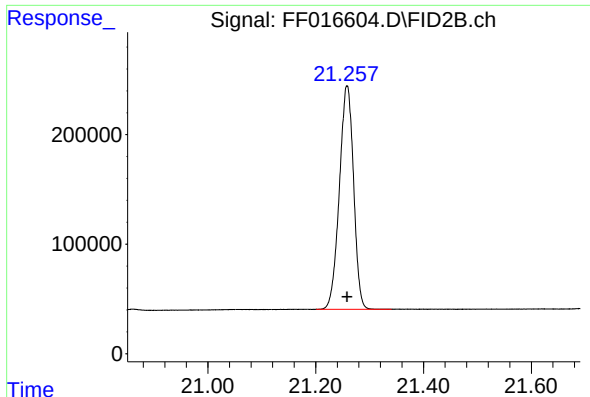
#15 N-TETRATRIACONTANE

R.T.: 19.756 min  
Delta R.T.: 0.000 min  
Response: 4752224  
Conc: 50.00 ug/ml



#16 N-HEXATRIACONTANE

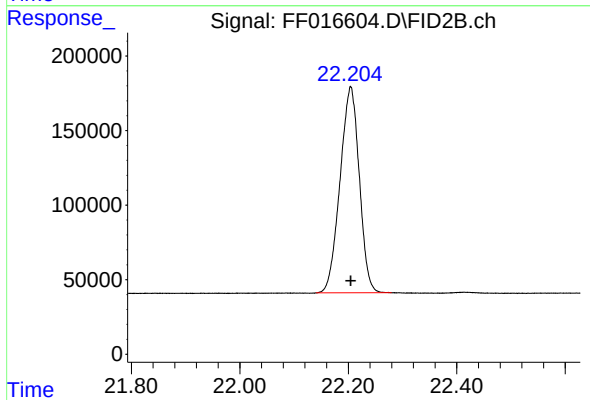
R.T.: 20.501 min  
Delta R.T.: 0.000 min  
Response: 4161006  
Conc: 50.00 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.258 min  
Delta R.T.: 0.000 min  
Response: 3731765  
Conc: 50.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.205 min  
Delta R.T.: 0.000 min  
Response: 3402327  
Conc: 50.00 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016604.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 11:08  
Sample : 50 TRPH STD  
Misc :  
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.040       | 2.006        | 2.144      | BB       | 519795         | 5502498      | 91.18%         | 5.801%        |
| 2                       | 4.575       | 4.539        | 4.674      | BB       | 537685         | 5574754      | 92.37%         | 5.878%        |
| 3                       | 6.754       | 6.717        | 6.851      | BB       | 555629         | 5627850      | 93.25%         | 5.934%        |
| 4                       | 8.588       | 8.552        | 8.687      | BB       | 530235         | 5704427      | 94.52%         | 6.014%        |
| 5                       | 10.197      | 10.161       | 10.296     | BB       | 502017         | 5717820      | 94.74%         | 6.028%        |
| 6                       | 11.643      | 11.601       | 11.741     | BB       | 516032         | 5867144      | 97.22%         | 6.186%        |
| 7                       | 12.956      | 12.914       | 13.047     | BB       | 499545         | 6034989      | 100.00%        | 6.363%        |
| 8                       | 14.159      | 14.119       | 14.246     | BB       | 468523         | 5878573      | 97.41%         | 6.198%        |
| 9                       | 15.060      | 15.017       | 15.136     | BB       | 375426         | 5149058      | 85.32%         | 5.429%        |
| 10                      | 15.265      | 15.219       | 15.349     | BB       | 460953         | 5848590      | 96.91%         | 6.166%        |
| 11                      | 16.290      | 16.236       | 16.371     | BB       | 434184         | 5660622      | 93.80%         | 5.968%        |
| 12                      | 17.243      | 17.201       | 17.316     | BB       | 407179         | 5585650      | 92.55%         | 5.889%        |
| 13                      | 18.134      | 18.066       | 18.206     | BB       | 384172         | 5481373      | 90.83%         | 5.779%        |
| 14                      | 18.970      | 18.921       | 19.032     | BB       | 352548         | 5166597      | 85.61%         | 5.447%        |
| 15                      | 19.756      | 19.701       | 19.824     | BB       | 333464         | 4752224      | 78.74%         | 5.010%        |
| 16                      | 20.501      | 20.451       | 20.567     | BB       | 277826         | 4161006      | 68.95%         | 4.387%        |
| 17                      | 21.258      | 21.201       | 21.341     | BB       | 204060         | 3731765      | 61.84%         | 3.934%        |
| 18                      | 22.205      | 22.141       | 22.280     | BBA      | 138519         | 3402327      | 56.38%         | 3.587%        |
| Sum of corrected areas: |             |              |            |          |                |              | 94847264       |               |

FF102925.M Thu Oct 30 14:03:00 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016605.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 11:38  
 Operator : YP\AJ  
 Sample : 20 TRPH STD  
 Misc :  
 ALS Vial : 73 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 20 TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 29 11:52:48 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 11:52:39 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... | 15.058 | 2131379  | 20.836 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.040  | 2266549  | 20.801 ug/ml |
| 2) N-DECANE                   | 4.574  | 2268475  | 20.605 ug/ml |
| 3) N-DODECANE                 | 6.752  | 2288864  | 20.586 ug/ml |
| 4) N-TETRADECANE              | 8.586  | 2313575  | 20.563 ug/ml |
| 5) N-HEXADECANE               | 10.195 | 2319047  | 20.560 ug/ml |
| 6) N-OCTADECANE               | 11.641 | 2398012  | 20.665 ug/ml |
| 7) N-EICOSANE                 | 12.954 | 2484512  | 20.770 ug/ml |
| 8) N-DOCOSANE                 | 14.155 | 2433628  | 20.837 ug/ml |
| 10) N-TETRACOSANE             | 15.262 | 2421913  | 20.836 ug/ml |
| 11) N-HEXACOSANE              | 16.287 | 2346236  | 20.834 ug/ml |
| 12) N-OCTACOSANE              | 17.241 | 2324789  | 20.895 ug/ml |
| 13) N-TRIACONTANE             | 18.132 | 2291884  | 20.966 ug/ml |
| 14) N-DOTRIACONTANE           | 18.969 | 2178741  | 21.093 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.755 | 1997939  | 21.047 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.499 | 1733916  | 20.893 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.255 | 1562428  | 20.925 ug/ml |
| 18) N-TETRACONTANE            | 22.201 | 1392566  | 20.596 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

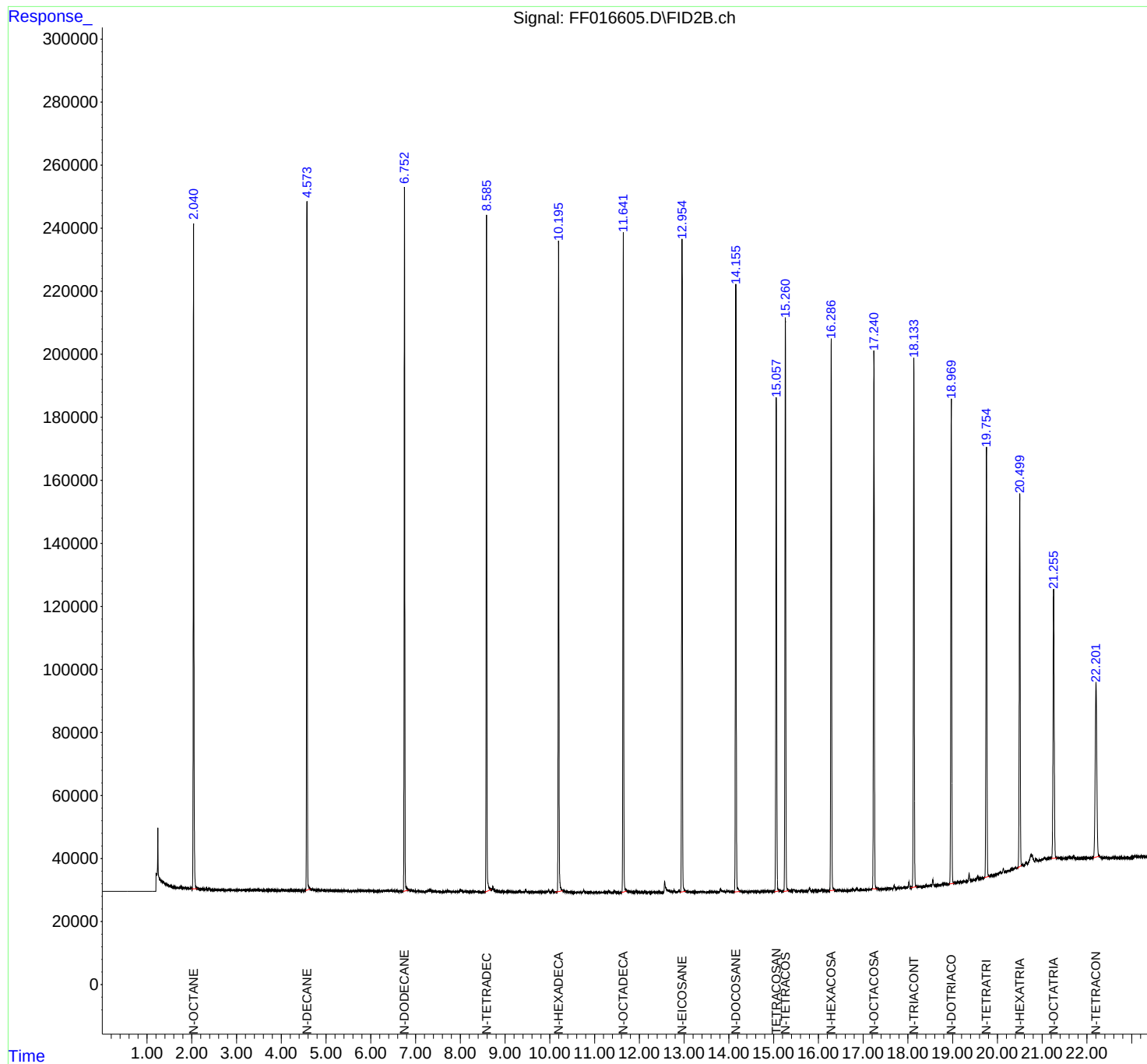
(m)=manual int.

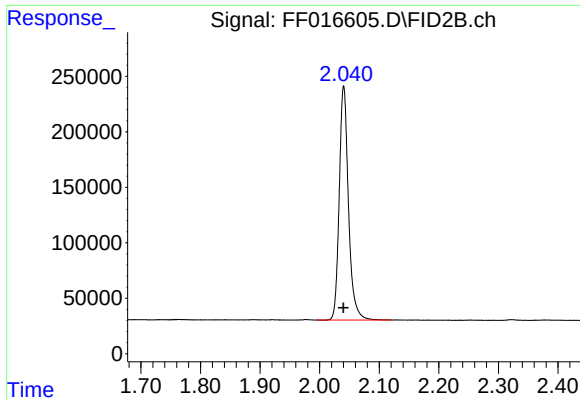
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016605.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 11:38  
Operator : YP\AJ  
Sample : 20 TRPH STD  
Misc :  
ALS Vial : 73 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 29 11:52:48 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 11:52:39 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

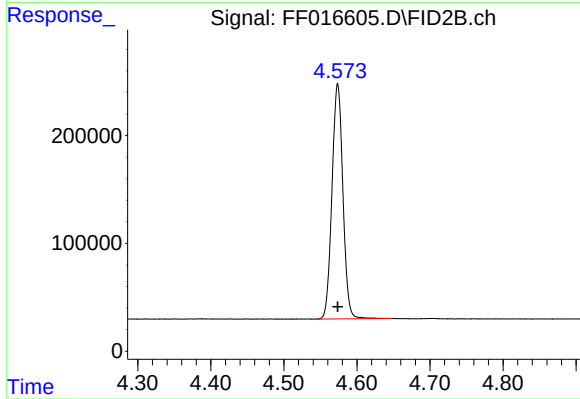




#1 N-OCTANE

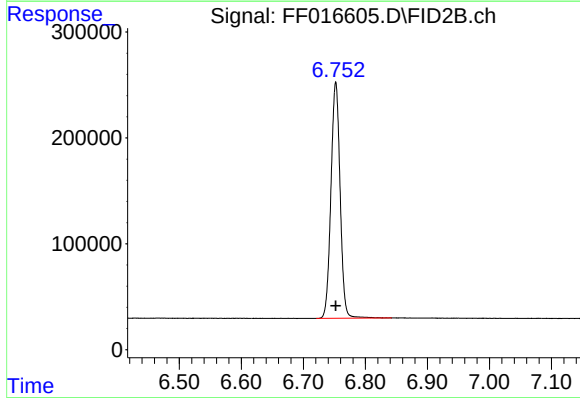
R.T.: 2.040 min  
Delta R.T.: 0.000 min  
Response: 2266549  
Conc: 20.80 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD



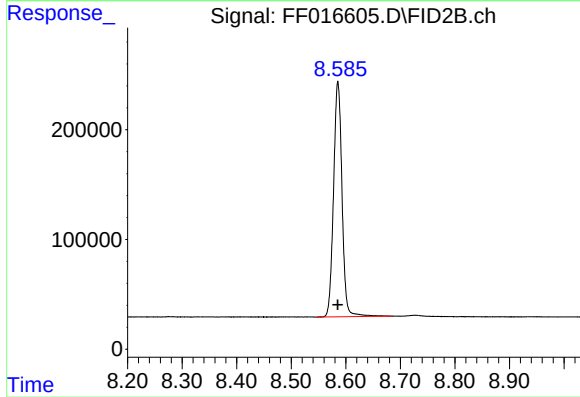
#2 N-DECANE

R.T.: 4.574 min  
Delta R.T.: 0.000 min  
Response: 2268475  
Conc: 20.61 ug/ml



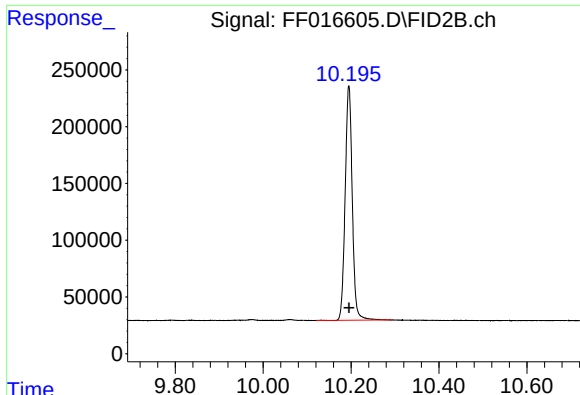
#3 N-DODECANE

R.T.: 6.752 min  
Delta R.T.: 0.000 min  
Response: 2288864  
Conc: 20.59 ug/ml



#4 N-TETRADECANE

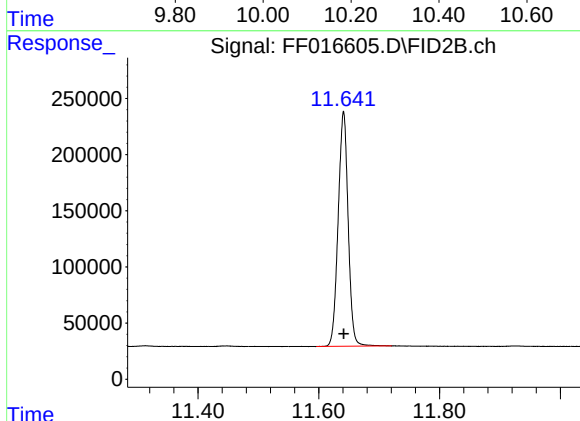
R.T.: 8.586 min  
Delta R.T.: 0.000 min  
Response: 2313575  
Conc: 20.56 ug/ml



#5 N-HEXADECANE

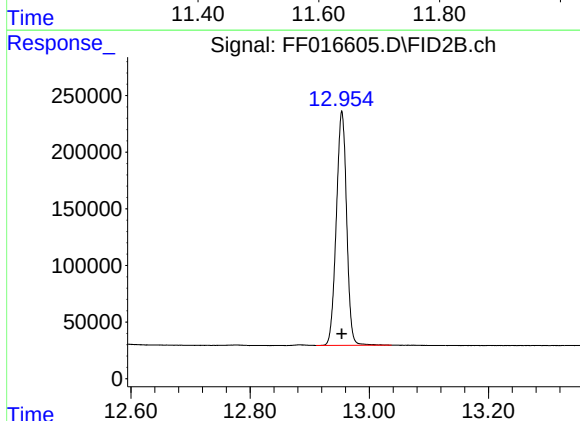
R.T.: 10.195 min  
Delta R.T.: 0.000 min  
Response: 2319047  
Conc: 20.56 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD



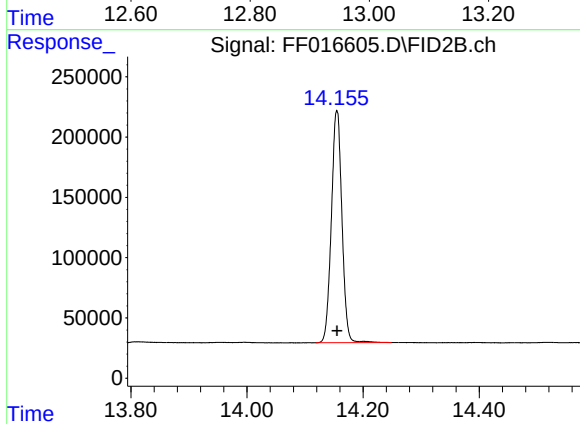
#6 N-OCTADECANE

R.T.: 11.641 min  
Delta R.T.: 0.000 min  
Response: 2398012  
Conc: 20.67 ug/ml



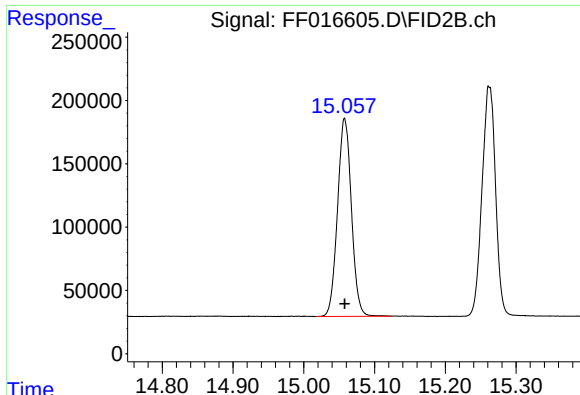
#7 N-EICOSANE

R.T.: 12.954 min  
Delta R.T.: 0.000 min  
Response: 2484512  
Conc: 20.77 ug/ml



#8 N-DOCOSANE

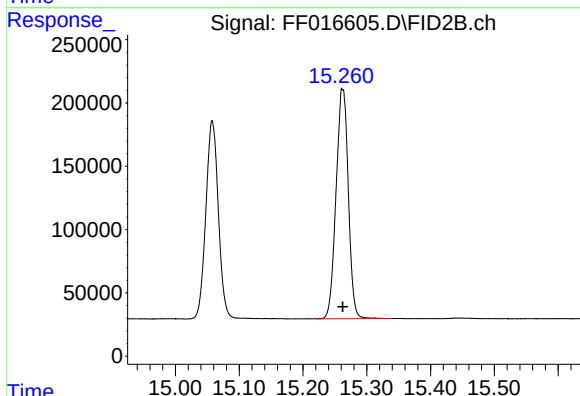
R.T.: 14.155 min  
Delta R.T.: 0.000 min  
Response: 2433628  
Conc: 20.84 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

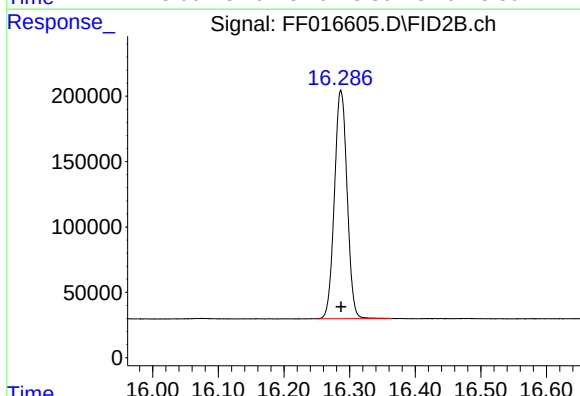
R.T.: 15.058 min  
Delta R.T.: 0.000 min  
Response: 2131379  
Conc: 20.84 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD



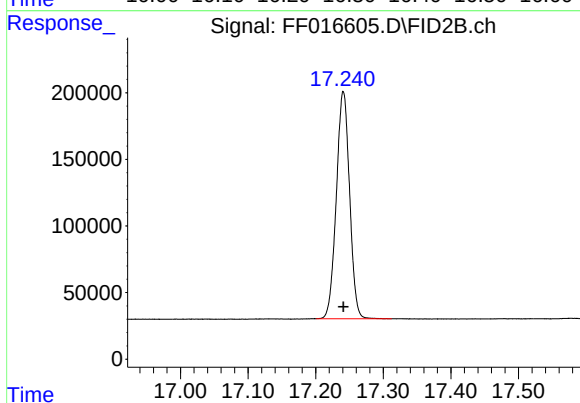
#10 N-TETRACOSANE

R.T.: 15.262 min  
Delta R.T.: 0.000 min  
Response: 2421913  
Conc: 20.84 ug/ml



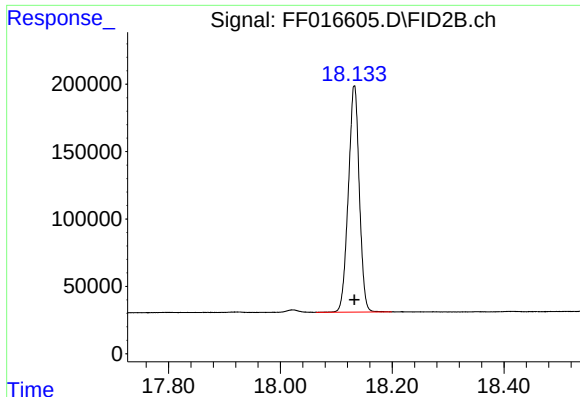
#11 N-HEXACOSANE

R.T.: 16.287 min  
Delta R.T.: 0.000 min  
Response: 2346236  
Conc: 20.83 ug/ml



#12 N-OCTACOSANE

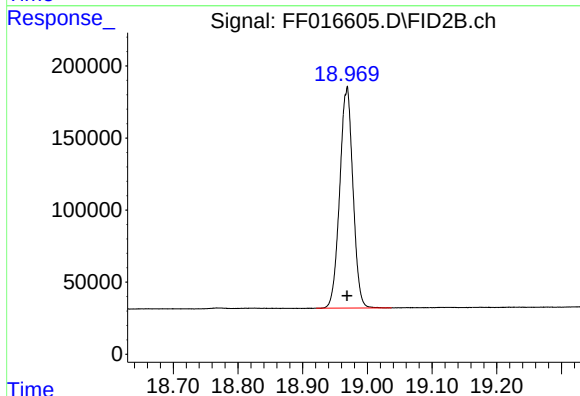
R.T.: 17.241 min  
Delta R.T.: 0.000 min  
Response: 2324789  
Conc: 20.89 ug/ml



#13 N-TRIACONTANE

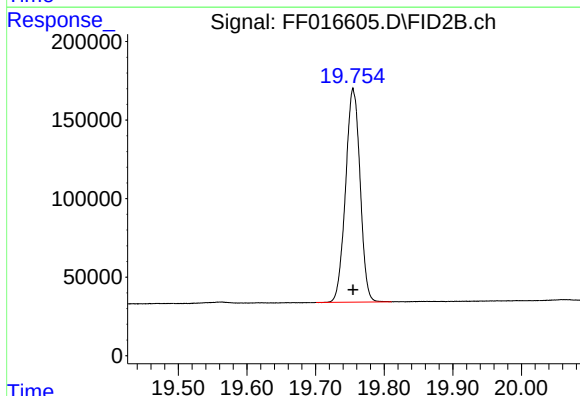
R.T.: 18.132 min  
Delta R.T.: 0.000 min  
Response: 2291884  
Conc: 20.97 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD



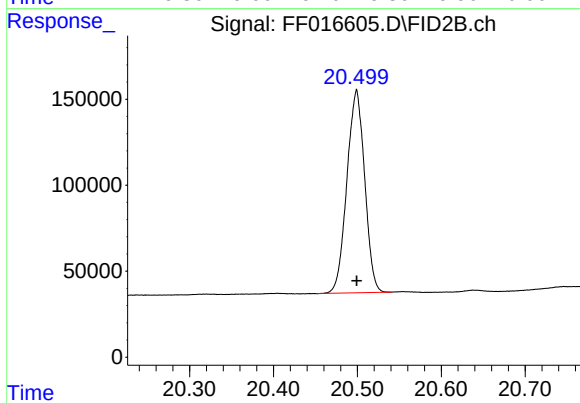
#14 N-DOTRIACONTANE

R.T.: 18.969 min  
Delta R.T.: 0.000 min  
Response: 2178741  
Conc: 21.09 ug/ml



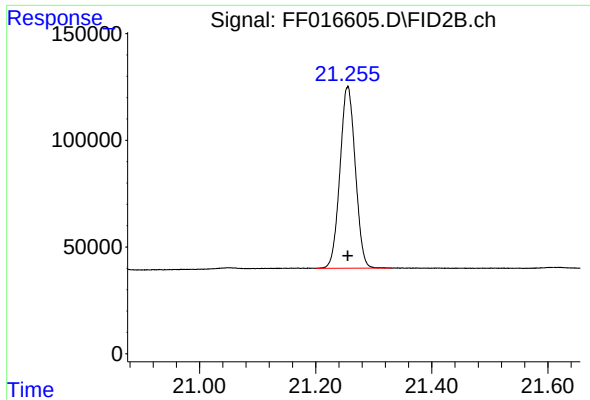
#15 N-TETRATRIACONTANE

R.T.: 19.755 min  
Delta R.T.: 0.000 min  
Response: 1997939  
Conc: 21.05 ug/ml



#16 N-HEXATRIACONTANE

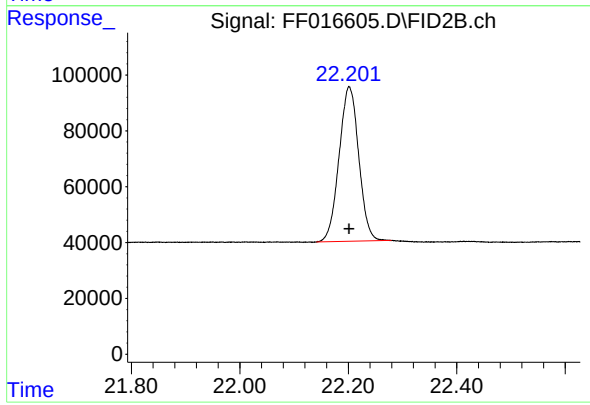
R.T.: 20.499 min  
Delta R.T.: 0.000 min  
Response: 1733916  
Conc: 20.89 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.255 min  
Delta R.T.: 0.000 min  
Response: 1562428  
Conc: 20.92 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
20 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.201 min  
Delta R.T.: 0.000 min  
Response: 1392566  
Conc: 20.60 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016605.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 11:38  
Sample : 20 TRPH STD  
Misc :  
ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.040       | 1.994        | 2.121      | BB       | 211050         | 2266549      | 91.23%         | 5.789%        |
| 2                       | 4.574       | 4.544        | 4.647      | BB       | 218188         | 2268475      | 91.30%         | 5.794%        |
| 3                       | 6.752       | 6.721        | 6.842      | BB       | 223344         | 2288864      | 92.13%         | 5.846%        |
| 4                       | 8.586       | 8.546        | 8.684      | BB       | 214310         | 2313575      | 93.12%         | 5.909%        |
| 5                       | 10.195      | 10.121       | 10.292     | BB       | 206669         | 2319047      | 93.34%         | 5.923%        |
| 6                       | 11.641      | 11.596       | 11.721     | BB       | 209130         | 2398012      | 96.52%         | 6.124%        |
| 7                       | 12.954      | 12.911       | 13.037     | BB       | 206941         | 2484512      | 100.00%        | 6.345%        |
| 8                       | 14.155      | 14.119       | 14.249     | BB       | 192424         | 2433628      | 97.95%         | 6.215%        |
| 9                       | 15.058      | 15.017       | 15.124     | BB       | 156454         | 2131379      | 85.79%         | 5.444%        |
| 10                      | 15.262      | 15.221       | 15.339     | BB       | 180639         | 2421913      | 97.48%         | 6.186%        |
| 11                      | 16.287      | 16.249       | 16.364     | BB       | 174224         | 2346236      | 94.43%         | 5.992%        |
| 12                      | 17.241      | 17.201       | 17.312     | BB       | 170677         | 2324789      | 93.57%         | 5.937%        |
| 13                      | 18.132      | 18.064       | 18.199     | BB       | 167931         | 2291884      | 92.25%         | 5.853%        |
| 14                      | 18.969      | 18.921       | 19.037     | BB       | 154148         | 2178741      | 87.69%         | 5.564%        |
| 15                      | 19.755      | 19.701       | 19.811     | BB       | 135819         | 1997939      | 80.42%         | 5.103%        |
| 16                      | 20.499      | 20.451       | 20.541     | BV       | 118072         | 1733916      | 69.79%         | 4.428%        |
| 17                      | 21.255      | 21.201       | 21.331     | BB       | 85428          | 1562428      | 62.89%         | 3.990%        |
| 18                      | 22.201      | 22.141       | 22.280     | BBA      | 55461          | 1392566      | 56.05%         | 3.557%        |
| Sum of corrected areas: |             |              |            |          |                |              | 39154453       |               |

FF102925.M Thu Oct 30 14:03:23 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016606.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 12:07  
 Operator : YP\AJ  
 Sample : 10 TRPH STD  
 Misc :  
 ALS Vial : 74 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 10 TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 29 12:22:37 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:22:28 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... | 15.057 | 1053130  | 10.220 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.041  | 1110103  | 10.140 ug/ml |
| 2) N-DECANE                   | 4.573  | 1094769  | 9.958 ug/ml  |
| 3) N-DODECANE                 | 6.752  | 1100538  | 9.923 ug/ml  |
| 4) N-TETRADECANE              | 8.585  | 1102080  | 9.846 ug/ml  |
| 5) N-HEXADECANE               | 10.194 | 1117179  | 9.928 ug/ml  |
| 6) N-OCTADECANE               | 11.640 | 1168812  | 10.054 ug/ml |
| 7) N-EICOSANE                 | 12.952 | 1230636  | 10.214 ug/ml |
| 8) N-DOCOSANE                 | 14.154 | 1199081  | 10.199 ug/ml |
| 10) N-TETRACOSANE             | 15.261 | 1195246  | 10.211 ug/ml |
| 11) N-HEXACOSANE              | 16.286 | 1154953  | 10.191 ug/ml |
| 12) N-OCTACOSANE              | 17.240 | 1148793  | 10.242 ug/ml |
| 13) N-TRIACONTANE             | 18.131 | 1139029  | 10.312 ug/ml |
| 14) N-DOTRIACONTANE           | 18.967 | 1089648  | 10.406 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.755 | 997160   | 10.374 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.499 | 861823   | 10.286 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.257 | 776718   | 10.299 ug/ml |
| 18) N-TETRACONTANE            | 22.201 | 679416   | 10.037 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

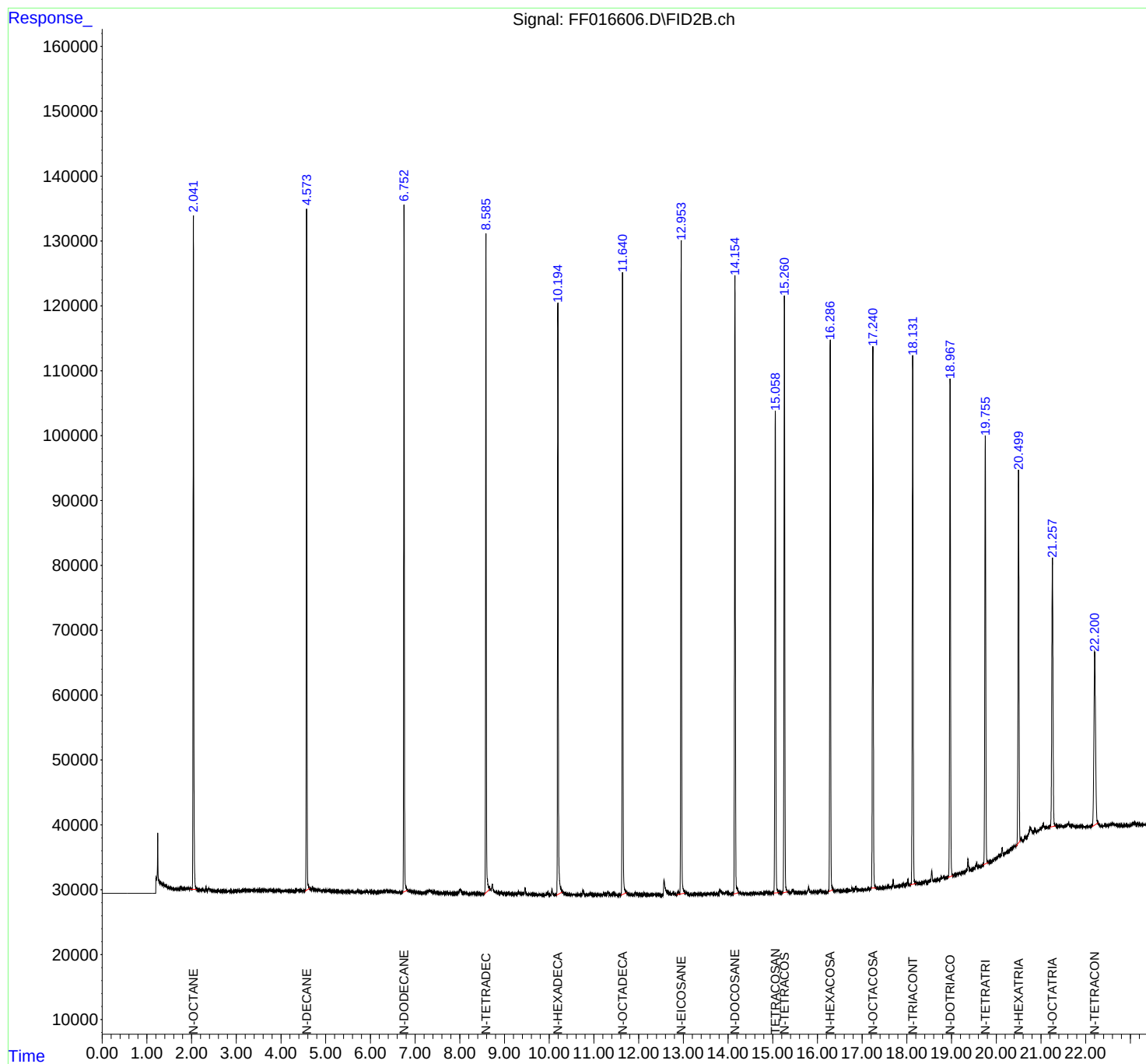
(m)=manual int.

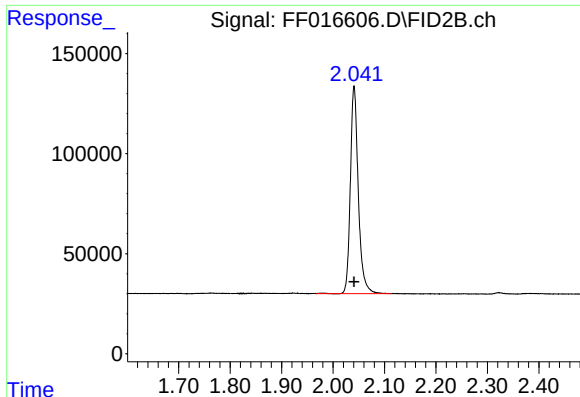
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016606.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 12:07  
Operator : YP\AJ  
Sample : 10 TRPH STD  
Misc :  
ALS Vial : 74 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 29 12:22:37 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:22:28 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

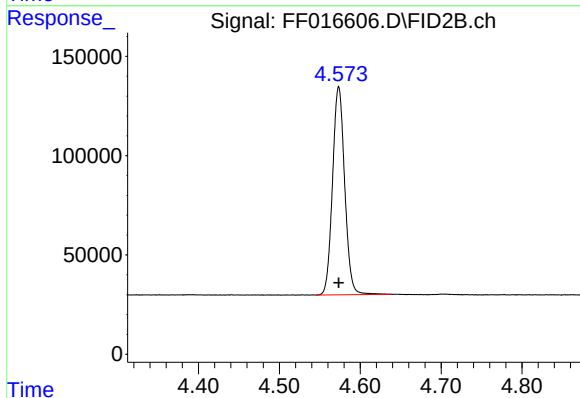




#1 N-OCTANE

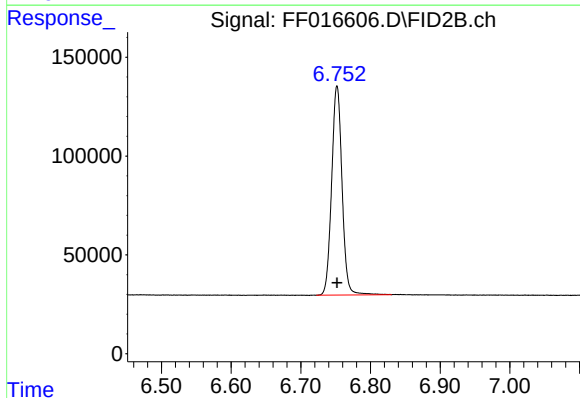
R.T.: 2.041 min  
Delta R.T.: 0.000 min  
Response: 1110103  
Conc: 10.14 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD



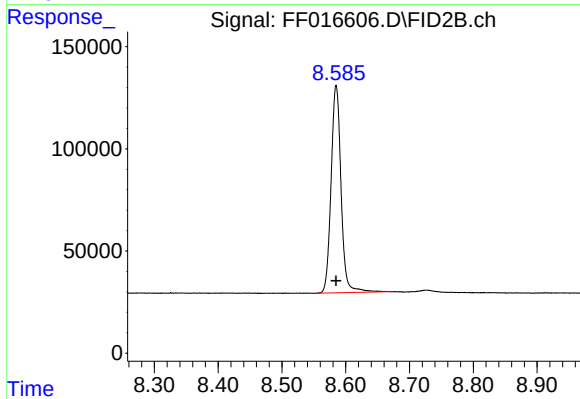
#2 N-DECANE

R.T.: 4.573 min  
Delta R.T.: 0.000 min  
Response: 1094769  
Conc: 9.96 ug/ml



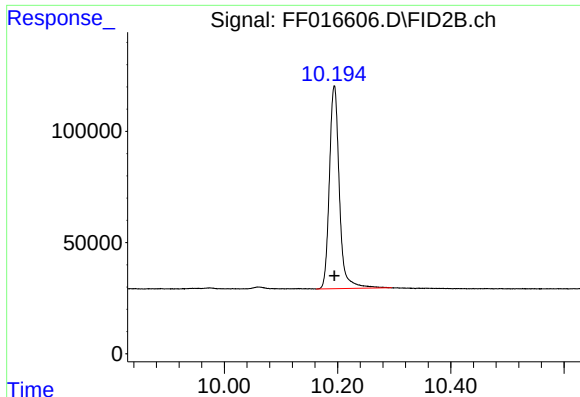
#3 N-DODECANE

R.T.: 6.752 min  
Delta R.T.: 0.000 min  
Response: 1100538  
Conc: 9.92 ug/ml



#4 N-TETRADECANE

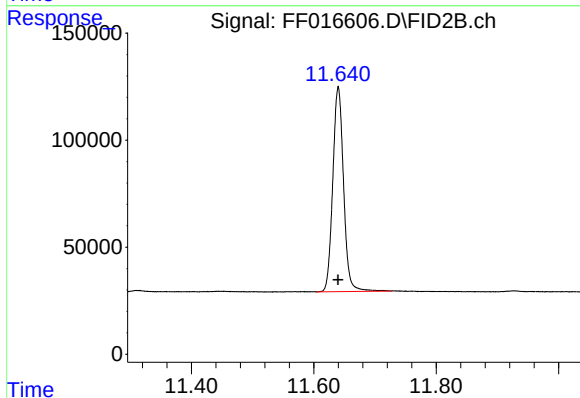
R.T.: 8.585 min  
Delta R.T.: 0.000 min  
Response: 1102080  
Conc: 9.85 ug/ml



#5 N-HEXADECANE

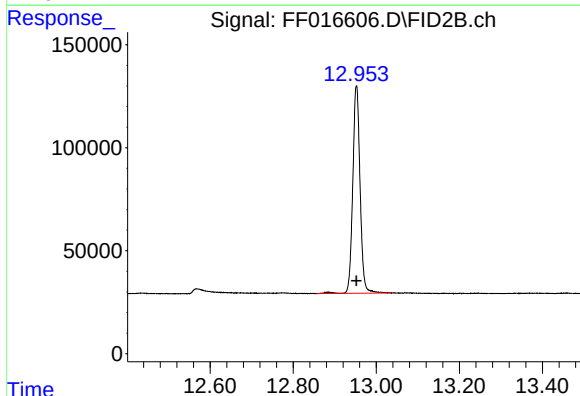
R.T.: 10.194 min  
Delta R.T.: 0.000 min  
Response: 1117179  
Conc: 9.93 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD



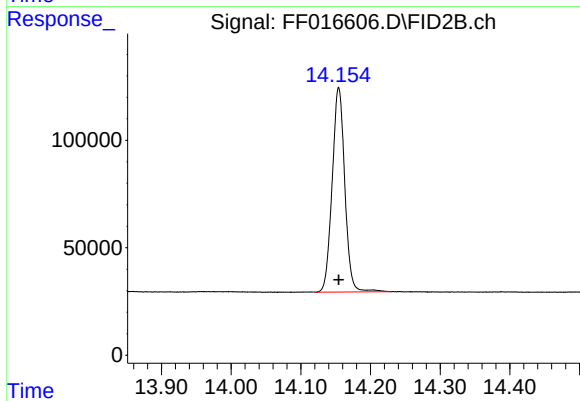
#6 N-OCTADECANE

R.T.: 11.640 min  
Delta R.T.: 0.000 min  
Response: 1168812  
Conc: 10.05 ug/ml



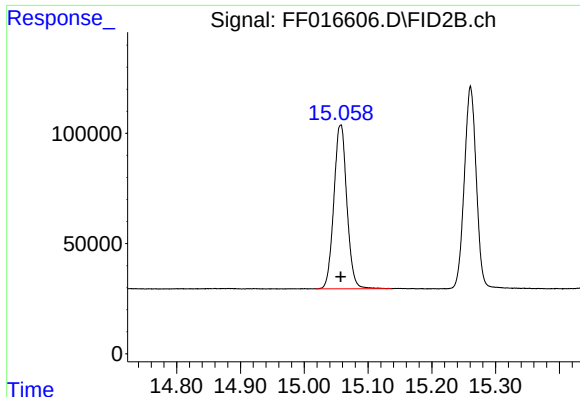
#7 N-EICOSANE

R.T.: 12.952 min  
Delta R.T.: 0.000 min  
Response: 1230636  
Conc: 10.21 ug/ml



#8 N-DOCOSANE

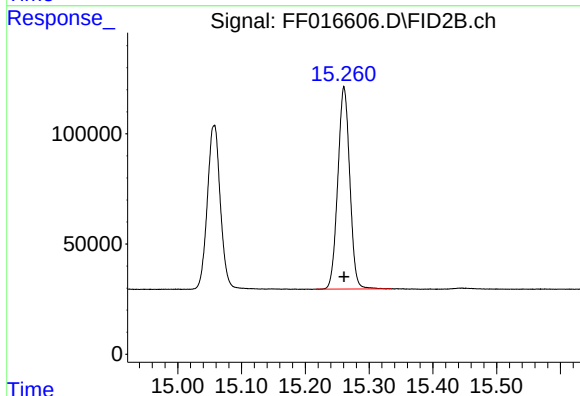
R.T.: 14.154 min  
Delta R.T.: 0.000 min  
Response: 1199081  
Conc: 10.20 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

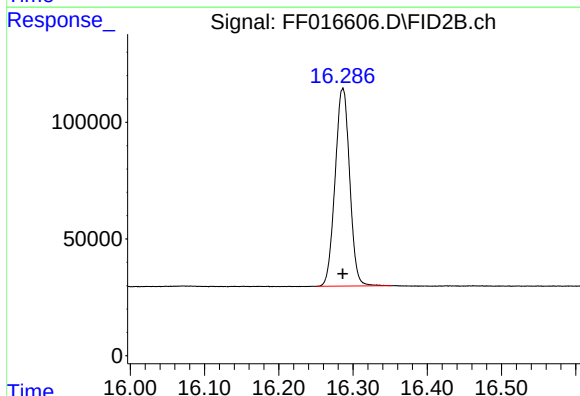
R.T.: 15.057 min  
Delta R.T.: 0.000 min  
Response: 1053130  
Conc: 10.22 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD



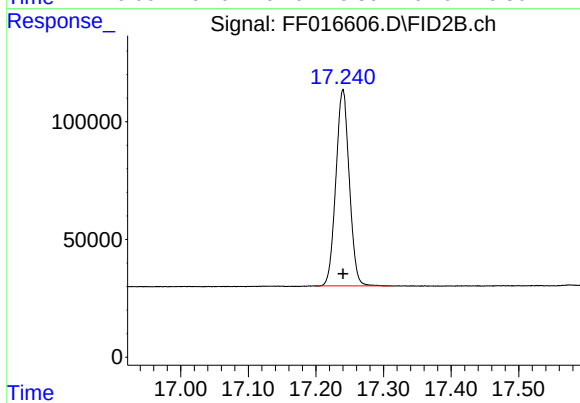
#10 N-TETRACOSANE

R.T.: 15.261 min  
Delta R.T.: 0.000 min  
Response: 1195246  
Conc: 10.21 ug/ml



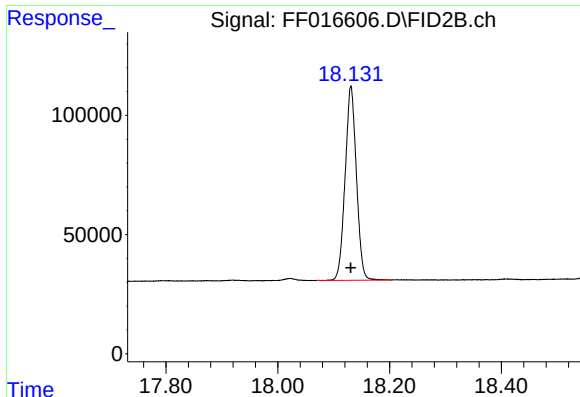
#11 N-HEXACOSANE

R.T.: 16.286 min  
Delta R.T.: 0.000 min  
Response: 1154953  
Conc: 10.19 ug/ml



#12 N-OCTACOSANE

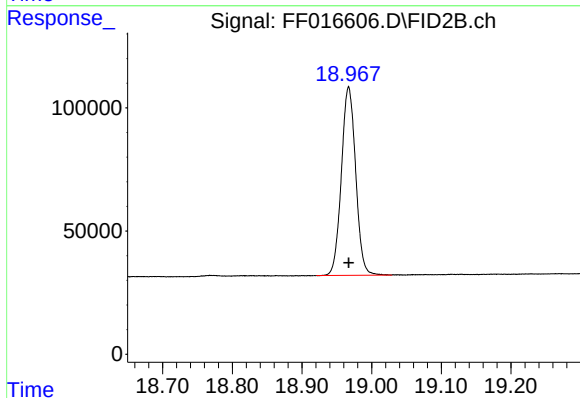
R.T.: 17.240 min  
Delta R.T.: 0.000 min  
Response: 1148793  
Conc: 10.24 ug/ml



#13 N-TRIACONTANE

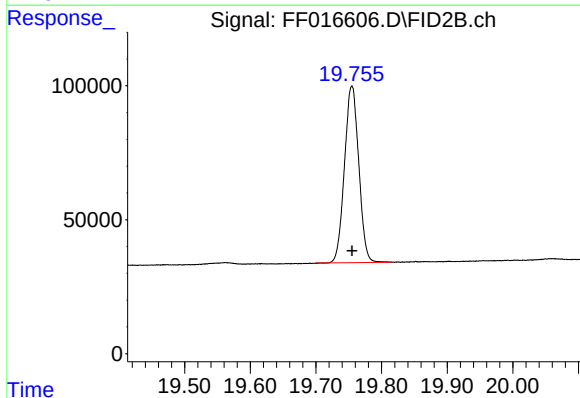
R.T.: 18.131 min  
Delta R.T.: 0.000 min  
Response: 1139029  
Conc: 10.31 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD



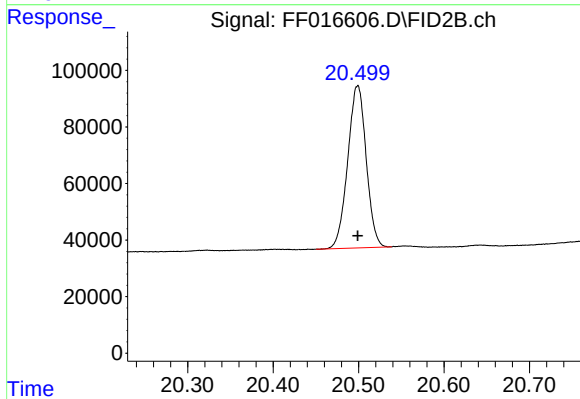
#14 N-DOTRIACONTANE

R.T.: 18.967 min  
Delta R.T.: 0.000 min  
Response: 1089648  
Conc: 10.41 ug/ml



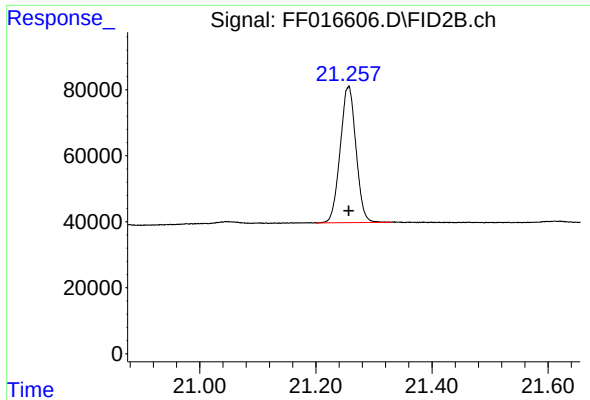
#15 N-TETRATRIACONTANE

R.T.: 19.755 min  
Delta R.T.: 0.000 min  
Response: 997160  
Conc: 10.37 ug/ml



#16 N-HEXATRIACONTANE

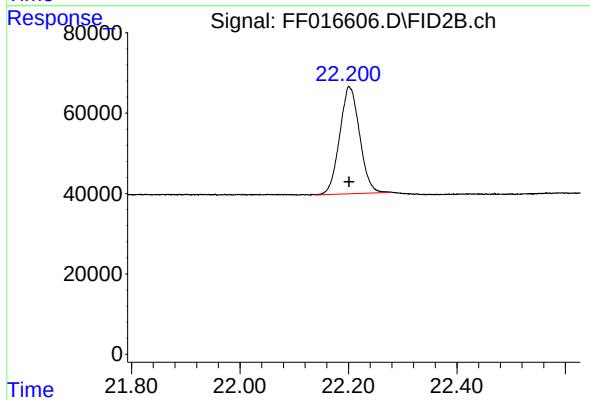
R.T.: 20.499 min  
Delta R.T.: 0.000 min  
Response: 861823  
Conc: 10.29 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.257 min  
Delta R.T.: 0.000 min  
Response: 776718  
Conc: 10.30 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
10 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.201 min  
Delta R.T.: 0.000 min  
Response: 679416  
Conc: 10.04 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016606.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 12:07  
Sample : 10 TRPH STD  
Misc :  
ALS Vial : 74 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.041       | 1.967        | 2.114      | BB       | 103768         | 1110103      | 90.21%         | 5.776%        |
| 2                       | 4.573       | 4.545        | 4.639      | BB       | 104878         | 1094769      | 88.96%         | 5.696%        |
| 3                       | 6.752       | 6.722        | 6.830      | BB       | 105867         | 1100538      | 89.43%         | 5.726%        |
| 4                       | 8.585       | 8.554        | 8.672      | BB       | 101529         | 1102080      | 89.55%         | 5.734%        |
| 5                       | 10.194      | 10.162       | 10.295     | BB       | 91242          | 1117179      | 90.78%         | 5.813%        |
| 6                       | 11.640      | 11.604       | 11.727     | BB       | 95776          | 1168812      | 94.98%         | 6.082%        |
| 7                       | 12.952      | 12.855       | 13.037     | BB       | 100675         | 1230636      | 100.00%        | 6.403%        |
| 8                       | 14.154      | 14.122       | 14.230     | BB       | 95252          | 1199081      | 97.44%         | 6.239%        |
| 9                       | 15.057      | 15.019       | 15.137     | BB       | 74231          | 1053130      | 85.58%         | 5.480%        |
| 10                      | 15.261      | 15.217       | 15.335     | BB       | 91744          | 1195246      | 97.12%         | 6.219%        |
| 11                      | 16.286      | 16.250       | 16.352     | BB       | 84900          | 1154953      | 93.85%         | 6.009%        |
| 12                      | 17.240      | 17.200       | 17.312     | BB       | 83436          | 1148793      | 93.35%         | 5.977%        |
| 13                      | 18.131      | 18.069       | 18.204     | BB       | 81386          | 1139029      | 92.56%         | 5.927%        |
| 14                      | 18.967      | 18.920       | 19.029     | BB       | 76640          | 1089648      | 88.54%         | 5.670%        |
| 15                      | 19.755      | 19.700       | 19.815     | BB       | 65959          | 997160       | 81.03%         | 5.188%        |
| 16                      | 20.499      | 20.450       | 20.539     | BV       | 57248          | 861823       | 70.03%         | 4.484%        |
| 17                      | 21.257      | 21.200       | 21.330     | BB       | 41494          | 776718       | 63.12%         | 4.041%        |
| 18                      | 22.201      | 22.140       | 22.280     | BBA      | 26675          | 679416       | 55.21%         | 3.535%        |
| Sum of corrected areas: |             |              |            |          |                |              | 19219111       |               |

FF102925.M Thu Oct 30 14:03:44 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016607.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 12:37  
 Operator : YP\AJ  
 Sample : 5 TRPH STD  
 Misc :  
 ALS Vial : 75 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 5 TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 29 12:47:36 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:47:26 2025  
 Response via : Initial Calibration  
 Integrator: ChemStation

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

| Compound                      | R.T.   | Response | Conc Units  |
|-------------------------------|--------|----------|-------------|
| -----                         |        |          |             |
| System Monitoring Compounds   |        |          |             |
| 9) S TETRACOSANE-d50 (SURR... | 15.056 | 550877   | 5.273 ug/ml |
| Target Compounds              |        |          |             |
| 1) N-OCTANE                   | 2.042  | 585385   | 5.274 ug/ml |
| 2) N-DECANE                   | 4.574  | 567417   | 5.128 ug/ml |
| 3) N-DODECANE                 | 6.753  | 559098   | 5.033 ug/ml |
| 4) N-TETRADECANE              | 8.586  | 554115   | 4.960 ug/ml |
| 5) N-HEXADECANE               | 10.195 | 558414   | 4.970 ug/ml |
| 6) N-OCTADECANE               | 11.640 | 600673   | 5.133 ug/ml |
| 7) N-EICOSANE                 | 12.953 | 643049   | 5.266 ug/ml |
| 8) N-DOCOSANE                 | 14.154 | 628663   | 5.274 ug/ml |
| 10) N-TETRACOSANE             | 15.261 | 621091   | 5.242 ug/ml |
| 11) N-HEXACOSANE              | 16.287 | 605262   | 5.269 ug/ml |
| 12) N-OCTACOSANE              | 17.240 | 605577   | 5.314 ug/ml |
| 13) N-TRIACONTANE             | 18.131 | 599711   | 5.338 ug/ml |
| 14) N-DOTRIACONTANE           | 18.967 | 585750   | 5.464 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.754 | 534045   | 5.435 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.498 | 461922   | 5.402 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.256 | 410442   | 5.348 ug/ml |
| 18) N-TETRACONTANE            | 22.204 | 352301   | 5.162 ug/ml |
| -----                         |        |          |             |

(f)=RT Delta > 1/2 Window

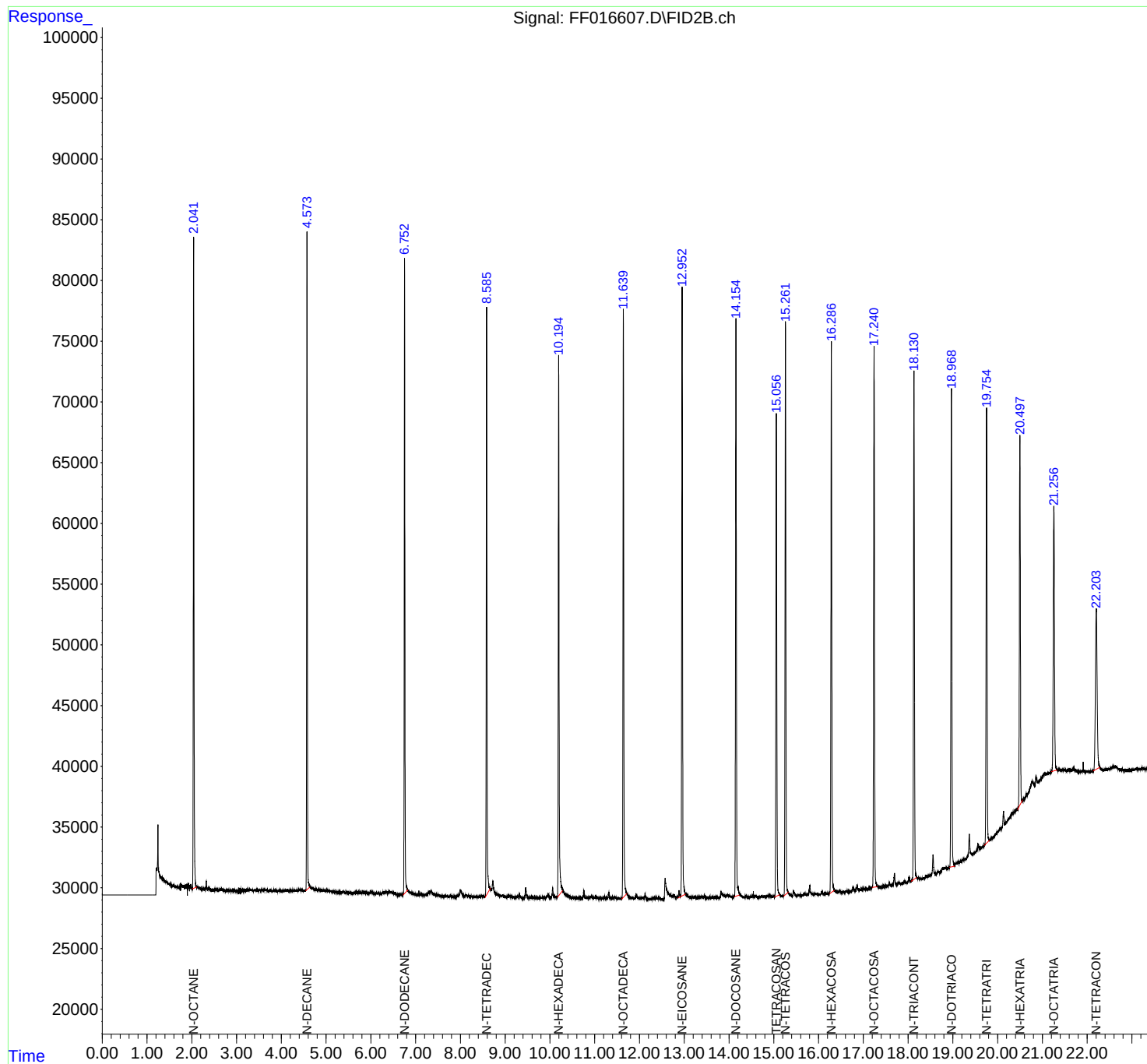
(m)=manual int.

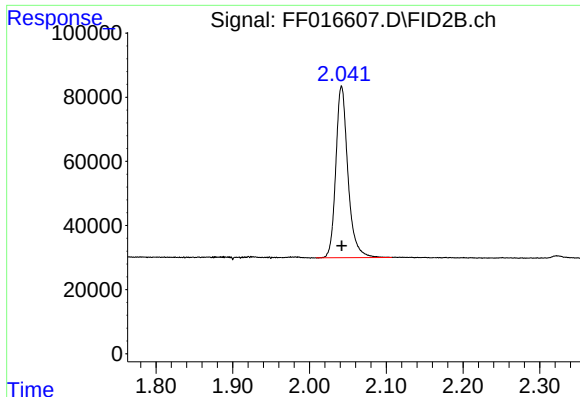
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016607.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 12:37  
Operator : YP\AJ  
Sample : 5 TRPH STD  
Misc :  
ALS Vial : 75 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 29 12:47:36 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:47:26 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

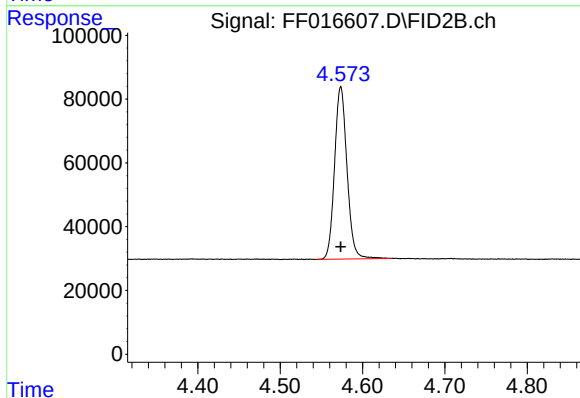




#1 N-OCTANE

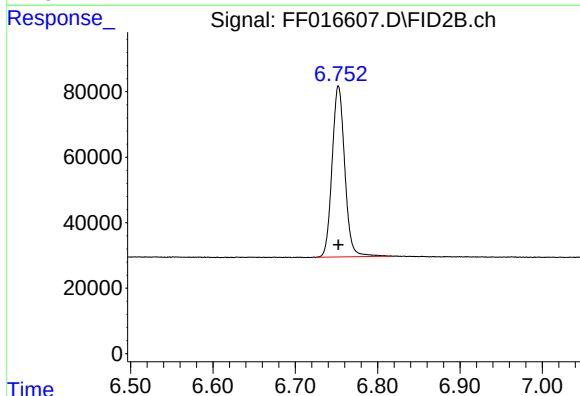
R.T.: 2.042 min  
Delta R.T.: 0.000 min  
Response: 585385  
Conc: 5.27 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD



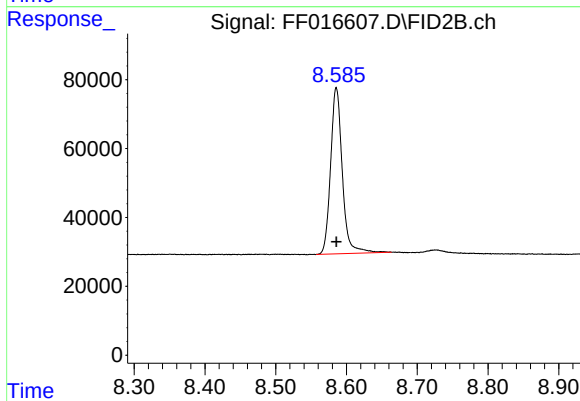
#2 N-DECANE

R.T.: 4.574 min  
Delta R.T.: 0.000 min  
Response: 567417  
Conc: 5.13 ug/ml



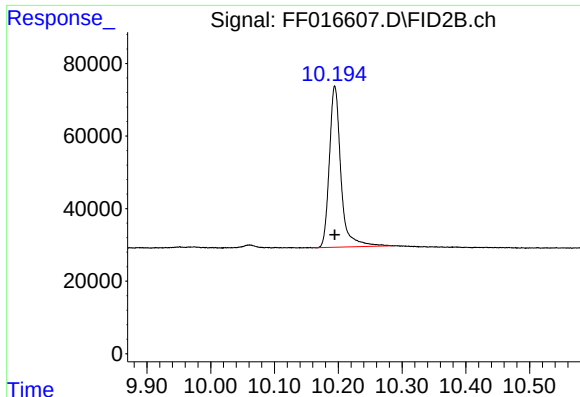
#3 N-DODECANE

R.T.: 6.753 min  
Delta R.T.: 0.000 min  
Response: 559098  
Conc: 5.03 ug/ml



#4 N-TETRADECANE

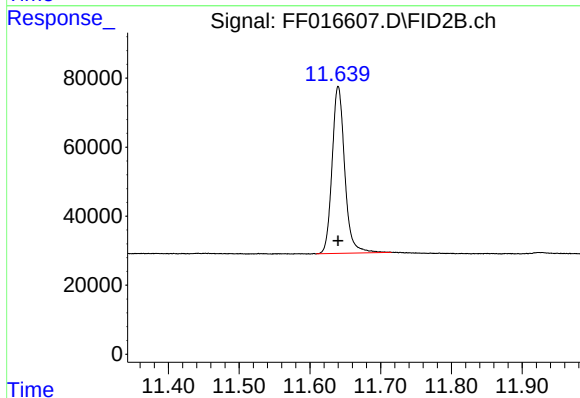
R.T.: 8.586 min  
Delta R.T.: 0.000 min  
Response: 554115  
Conc: 4.96 ug/ml



#5 N-HEXADECANE

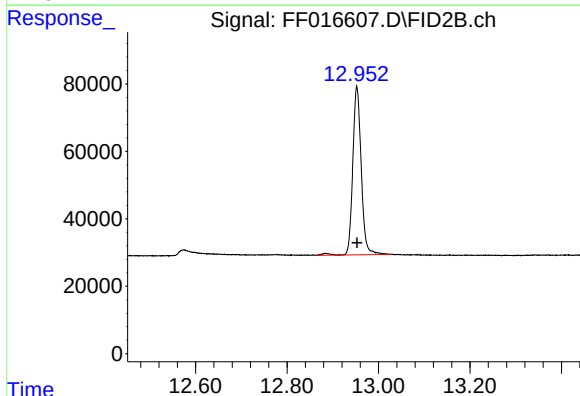
R.T.: 10.195 min  
Delta R.T.: 0.000 min  
Response: 558414  
Conc: 4.97 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD



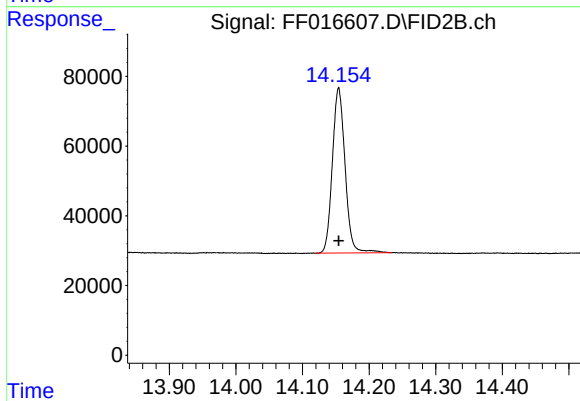
#6 N-OCTADECANE

R.T.: 11.640 min  
Delta R.T.: 0.000 min  
Response: 600673  
Conc: 5.13 ug/ml



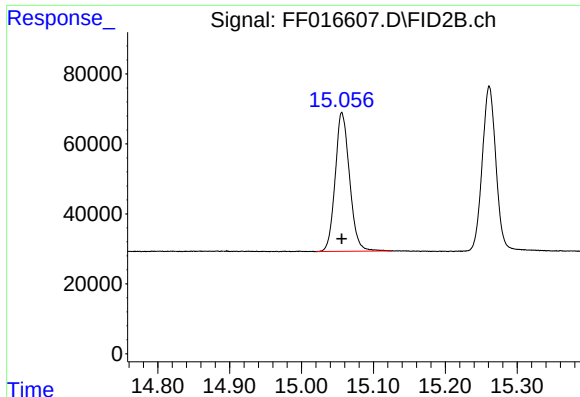
#7 N-EICOSANE

R.T.: 12.953 min  
Delta R.T.: 0.000 min  
Response: 643049  
Conc: 5.27 ug/ml



#8 N-DOCOSANE

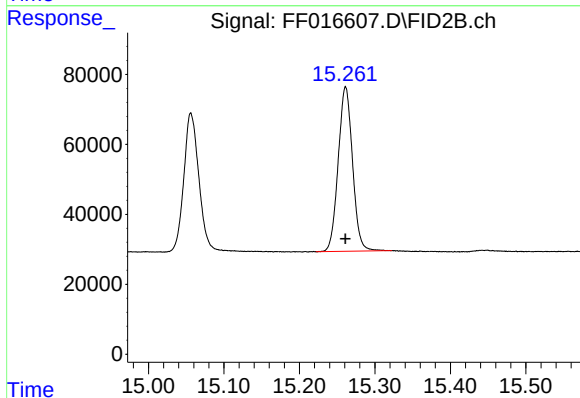
R.T.: 14.154 min  
Delta R.T.: 0.000 min  
Response: 628663  
Conc: 5.27 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

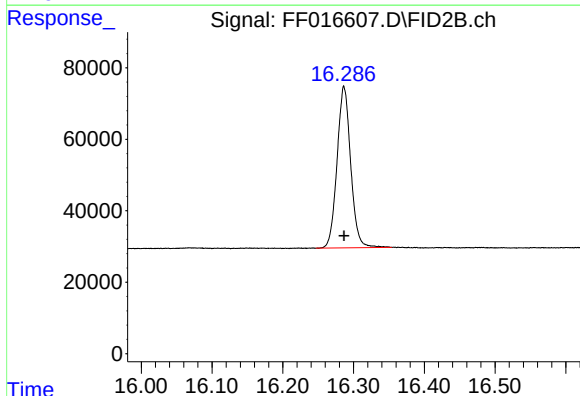
R.T.: 15.056 min  
Delta R.T.: 0.000 min  
Response: 550877  
Conc: 5.27 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD



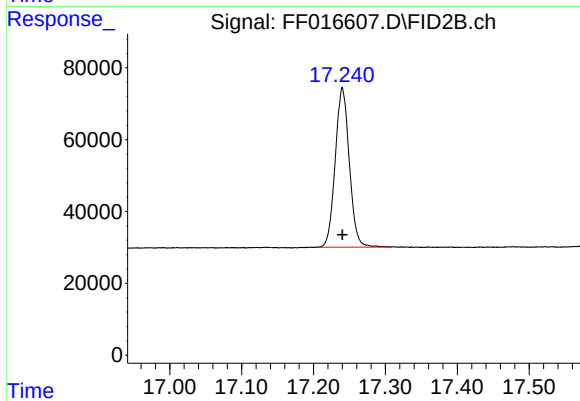
#10 N-TETRACOSANE

R.T.: 15.261 min  
Delta R.T.: 0.000 min  
Response: 621091  
Conc: 5.24 ug/ml



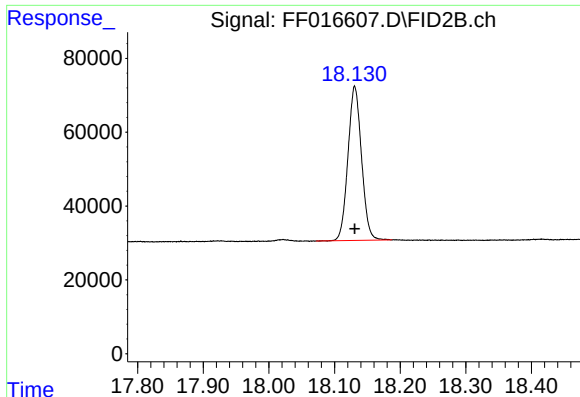
#11 N-HEXACOSANE

R.T.: 16.287 min  
Delta R.T.: 0.000 min  
Response: 605262  
Conc: 5.27 ug/ml



#12 N-OCTACOSANE

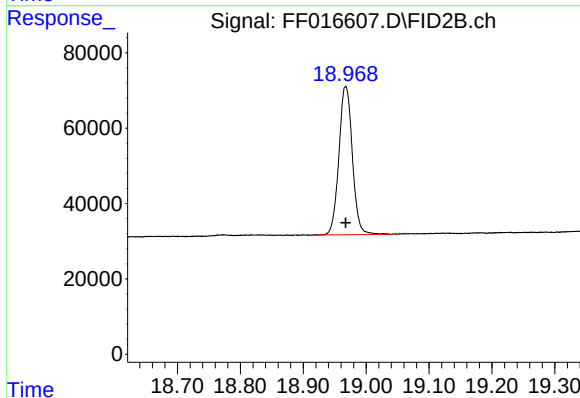
R.T.: 17.240 min  
Delta R.T.: 0.000 min  
Response: 605577  
Conc: 5.31 ug/ml



#13 N-TRIACONTANE

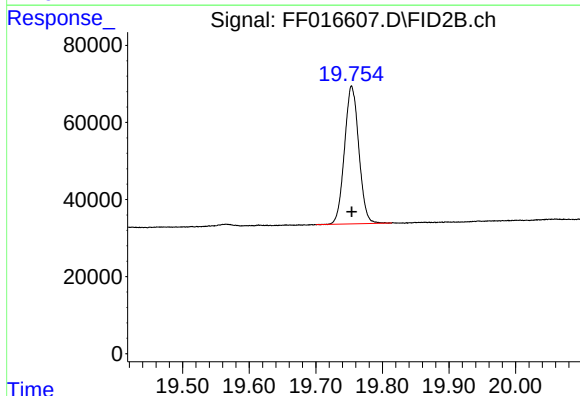
R.T.: 18.131 min  
Delta R.T.: 0.000 min  
Response: 599711  
Conc: 5.34 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD



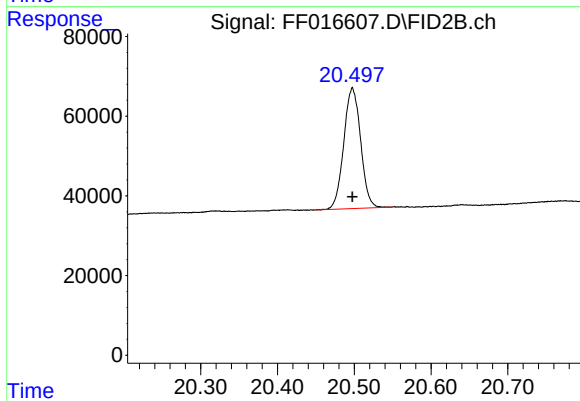
#14 N-DOTRIACONTANE

R.T.: 18.967 min  
Delta R.T.: 0.000 min  
Response: 585750  
Conc: 5.46 ug/ml



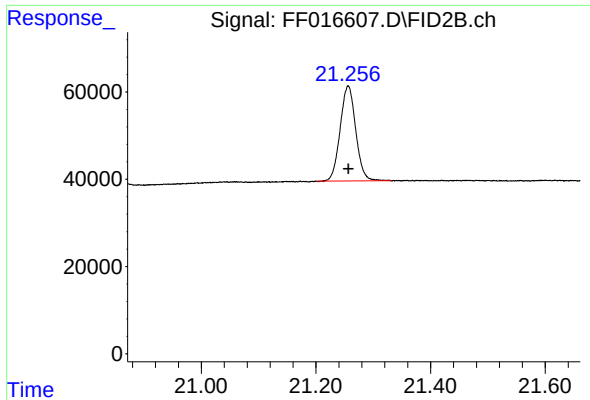
#15 N-TETRATRIACONTANE

R.T.: 19.754 min  
Delta R.T.: 0.000 min  
Response: 534045  
Conc: 5.43 ug/ml



#16 N-HEXATRIACONTANE

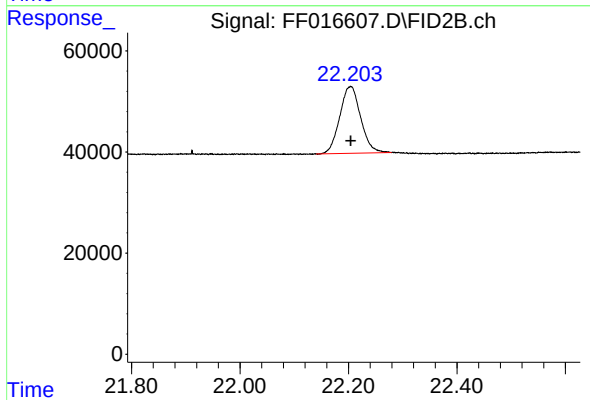
R.T.: 20.498 min  
Delta R.T.: 0.000 min  
Response: 461922  
Conc: 5.40 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.256 min  
Delta R.T.: 0.000 min  
Response: 410442  
Conc: 5.35 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
5 TRPH STD



#18 N-TETRACONTANE

R.T.: 22.204 min  
Delta R.T.: 0.000 min  
Response: 352301  
Conc: 5.16 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016607.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 12:37  
Sample : 5 TRPH STD  
Misc :  
ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.042       | 2.009        | 2.107      | BB       | 53514          | 585385       | 91.03%         | 5.840%        |
| 2                       | 4.574       | 4.544        | 4.635      | BB       | 54103          | 567417       | 88.24%         | 5.661%        |
| 3                       | 6.753       | 6.725        | 6.817      | BB       | 52306          | 559098       | 86.94%         | 5.578%        |
| 4                       | 8.586       | 8.557        | 8.664      | BB       | 48304          | 554115       | 86.17%         | 5.528%        |
| 5                       | 10.195      | 10.165       | 10.284     | BB       | 44343          | 558414       | 86.84%         | 5.571%        |
| 6                       | 11.640      | 11.609       | 11.715     | BB       | 48442          | 600673       | 93.41%         | 5.992%        |
| 7                       | 12.953      | 12.864       | 13.029     | BB       | 49961          | 643049       | 100.00%        | 6.415%        |
| 8                       | 14.154      | 14.120       | 14.234     | BB       | 47434          | 628663       | 97.76%         | 6.272%        |
| 9                       | 15.056      | 15.020       | 15.125     | BB       | 39714          | 550877       | 85.67%         | 5.496%        |
| 10                      | 15.261      | 15.222       | 15.322     | BB       | 47078          | 621091       | 96.59%         | 6.196%        |
| 11                      | 16.287      | 16.247       | 16.354     | BB       | 44985          | 605262       | 94.12%         | 6.038%        |
| 12                      | 17.240      | 17.204       | 17.309     | BB       | 44397          | 605577       | 94.17%         | 6.041%        |
| 13                      | 18.131      | 18.072       | 18.187     | BB       | 41812          | 599711       | 93.26%         | 5.983%        |
| 14                      | 18.967      | 18.920       | 19.040     | BB       | 39272          | 585750       | 91.09%         | 5.844%        |
| 15                      | 19.754      | 19.700       | 19.814     | BB       | 35787          | 534045       | 83.05%         | 5.328%        |
| 16                      | 20.498      | 20.450       | 20.549     | BB       | 30327          | 461922       | 71.83%         | 4.608%        |
| 17                      | 21.256      | 21.200       | 21.332     | BB       | 21777          | 410442       | 63.83%         | 4.095%        |
| 18                      | 22.204      | 22.140       | 22.280     | BBA      | 13220          | 352301       | 54.79%         | 3.515%        |
| Sum of corrected areas: |             |              |            |          |                |              | 10023794       |               |

FF102925.M Thu Oct 30 14:04:00 2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
 Data File : FF016608.D  
 Signal(s) : FID2B.ch  
 Acq On : 29 Oct 2025 13:06  
 Operator : YP\AJ  
 Sample : FF102925ICV  
 Misc :  
 ALS Vial : 76 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 FF102925ICV

Integration File: autoint1.e  
 Quant Time: Oct 29 13:24:39 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.060 | 4952815  | 47.407 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.040  | 5287479  | 47.637 ug/ml |
| 2) N-DECANE                   | 4.575  | 5365136  | 48.489 ug/ml |
| 3) N-DODECANE                 | 6.754  | 5414291  | 48.739 ug/ml |
| 4) N-TETRADECANE              | 8.587  | 5485210  | 49.101 ug/ml |
| 5) N-HEXADECANE               | 10.196 | 5499692  | 48.948 ug/ml |
| 6) N-OCTADECANE               | 11.642 | 5646170  | 48.246 ug/ml |
| 7) N-EICOSANE                 | 12.957 | 5803629  | 47.529 ug/ml |
| 8) N-DOCOSANE                 | 14.159 | 5653581  | 47.427 ug/ml |
| 10) N-TETRACOSANE             | 15.265 | 5626796  | 47.488 ug/ml |
| 11) N-HEXACOSANE              | 16.289 | 5450407  | 47.445 ug/ml |
| 12) N-OCTACOSANE              | 17.244 | 5372820  | 47.148 ug/ml |
| 13) N-TRIACONTANE             | 18.133 | 5269614  | 46.900 ug/ml |
| 14) N-DOTRIACONTANE           | 18.970 | 4967306  | 46.338 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.756 | 4570706  | 46.516 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.499 | 4012368  | 46.924 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.257 | 3607849  | 47.006 ug/ml |
| 18) N-TETRACONTANE            | 22.204 | 3292580  | 48.245 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

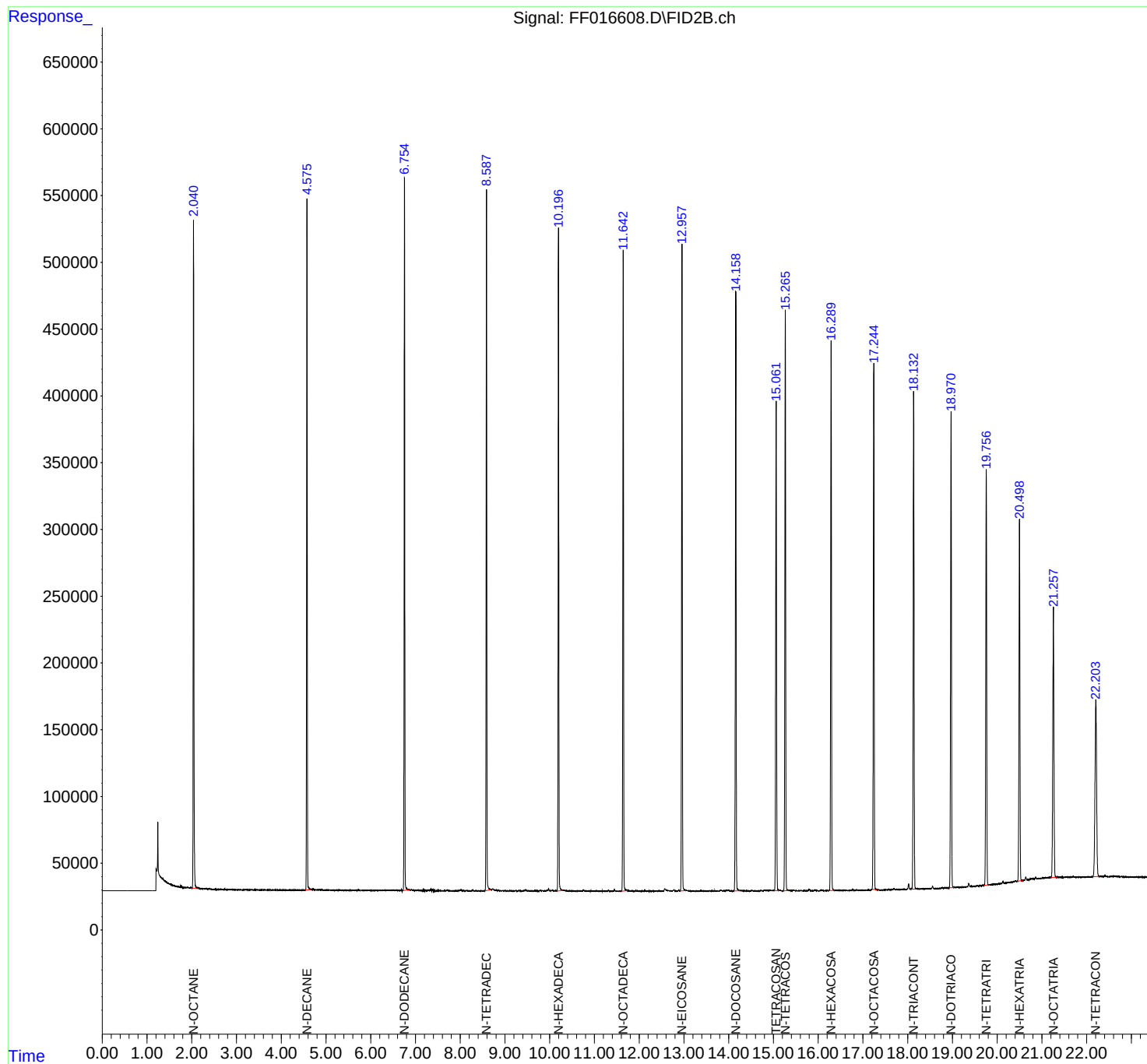
(m)=manual int.

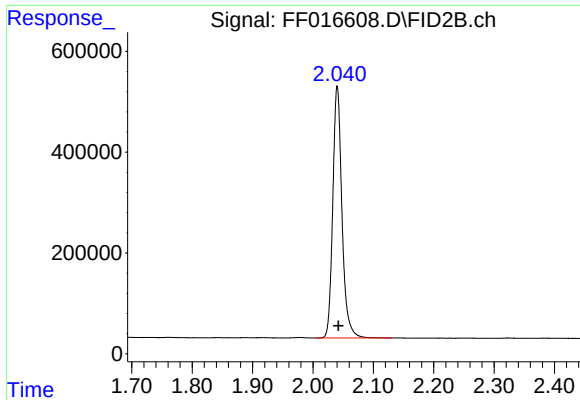
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016608.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 13:06  
Operator : YP\AJ  
Sample : FF102925ICV  
Misc :  
ALS Vial : 76 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV

Integration File: autoint1.e  
Quant Time: Oct 29 13:24:39 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

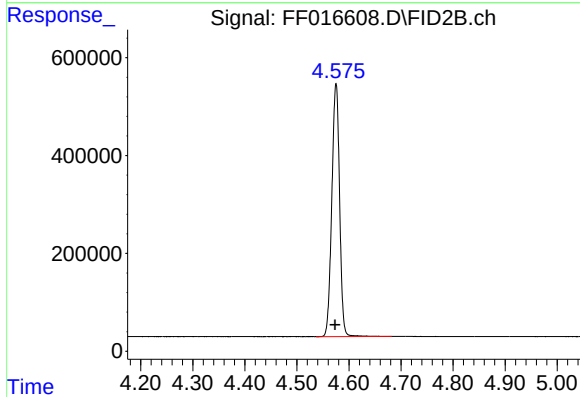




#1 N-OCTANE

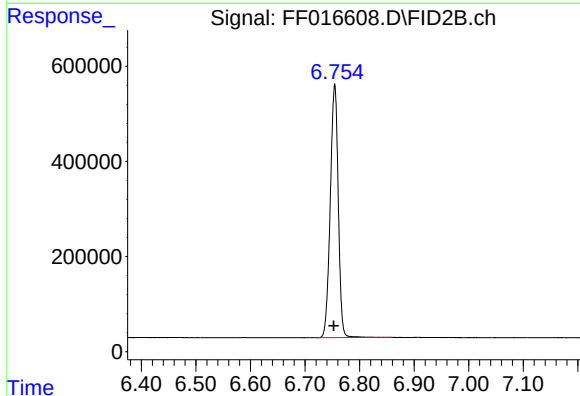
R.T.: 2.040 min  
Delta R.T.: -0.002 min  
Response: 5287479  
Conc: 47.64 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV



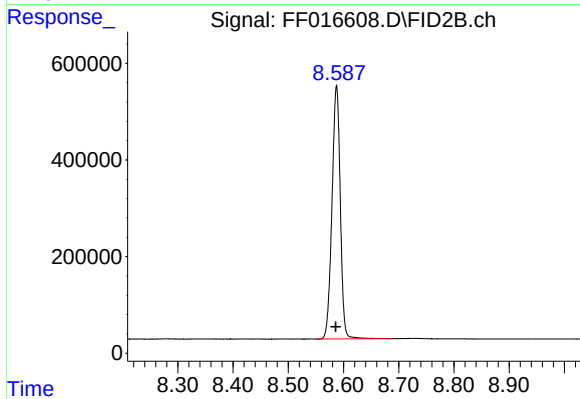
#2 N-DECANE

R.T.: 4.575 min  
Delta R.T.: 0.002 min  
Response: 5365136  
Conc: 48.49 ug/ml



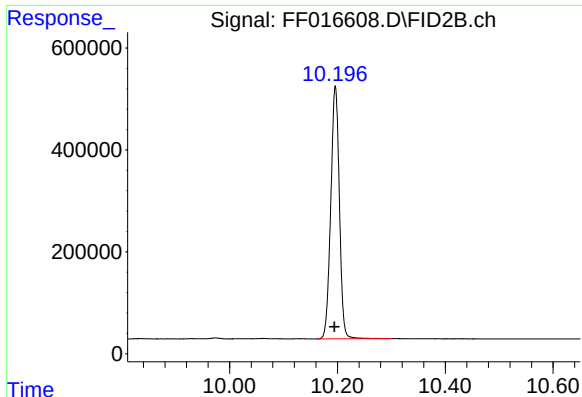
#3 N-DODECANE

R.T.: 6.754 min  
Delta R.T.: 0.002 min  
Response: 5414291  
Conc: 48.74 ug/ml



#4 N-TETRADECANE

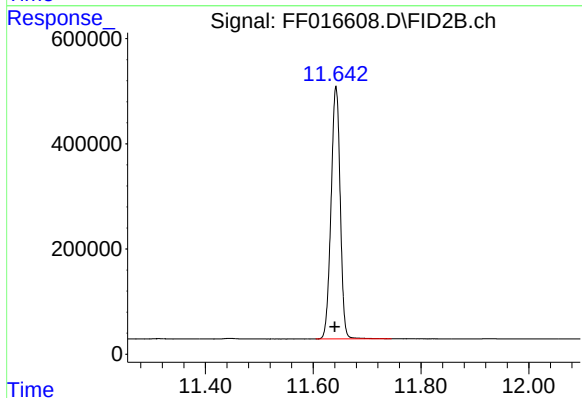
R.T.: 8.587 min  
Delta R.T.: 0.002 min  
Response: 5485210  
Conc: 49.10 ug/ml



#5 N-HEXADECANE

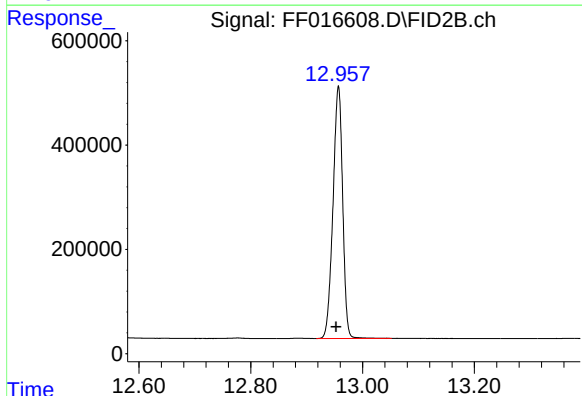
R.T.: 10.196 min  
Delta R.T.: 0.002 min  
Response: 5499692  
Conc: 48.95 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV



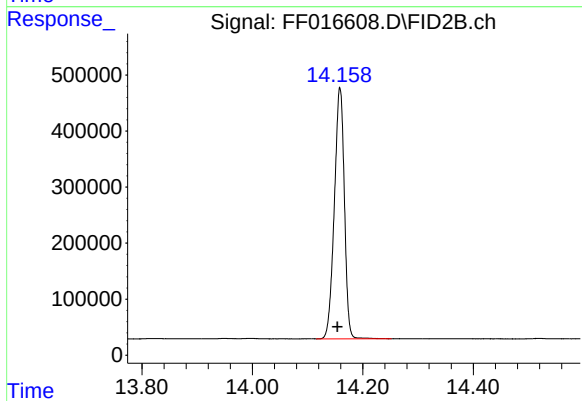
#6 N-OCTADECANE

R.T.: 11.642 min  
Delta R.T.: 0.002 min  
Response: 5646170  
Conc: 48.25 ug/ml



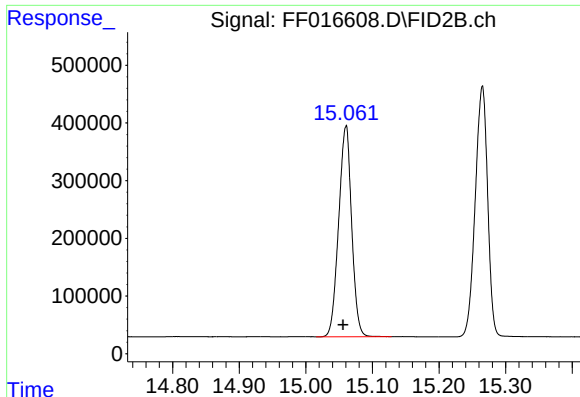
#7 N-EICOSANE

R.T.: 12.957 min  
Delta R.T.: 0.004 min  
Response: 5803629  
Conc: 47.53 ug/ml



#8 N-DOCOSANE

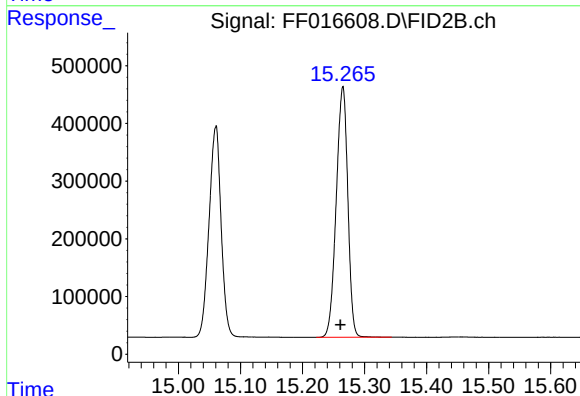
R.T.: 14.159 min  
Delta R.T.: 0.004 min  
Response: 5653581  
Conc: 47.43 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

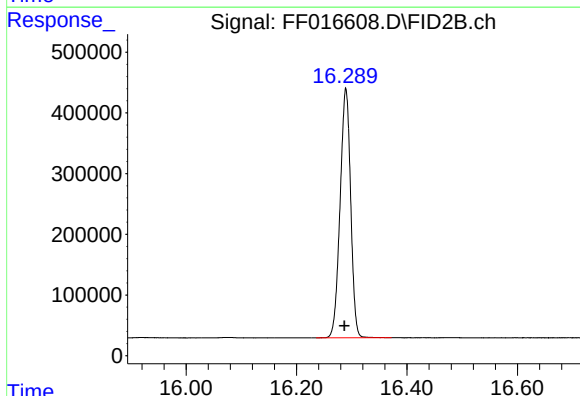
R.T.: 15.060 min  
Delta R.T.: 0.004 min  
Response: 4952815  
Conc: 47.41 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV



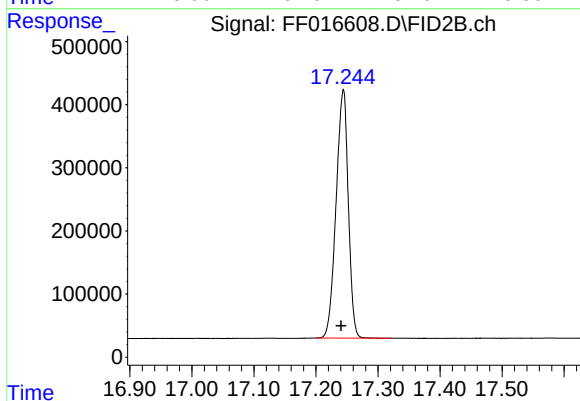
#10 N-TETRACOSANE

R.T.: 15.265 min  
Delta R.T.: 0.004 min  
Response: 5626796  
Conc: 47.49 ug/ml



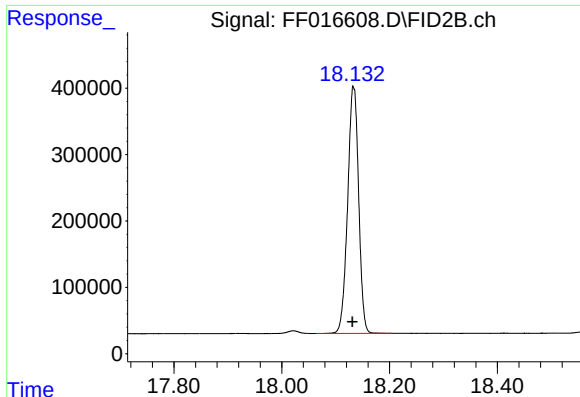
#11 N-HEXACOSANE

R.T.: 16.289 min  
Delta R.T.: 0.003 min  
Response: 5450407  
Conc: 47.44 ug/ml



#12 N-OCTACOSANE

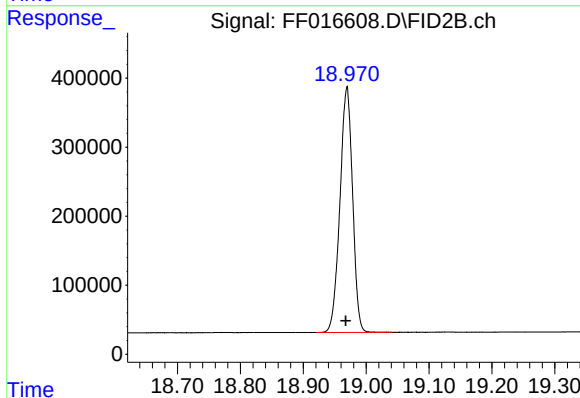
R.T.: 17.244 min  
Delta R.T.: 0.004 min  
Response: 5372820  
Conc: 47.15 ug/ml



#13 N-TRIACONTANE

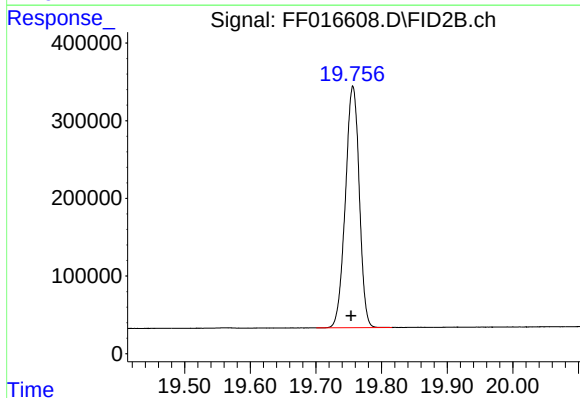
R.T.: 18.133 min  
Delta R.T.: 0.002 min  
Response: 5269614  
Conc: 46.90 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV



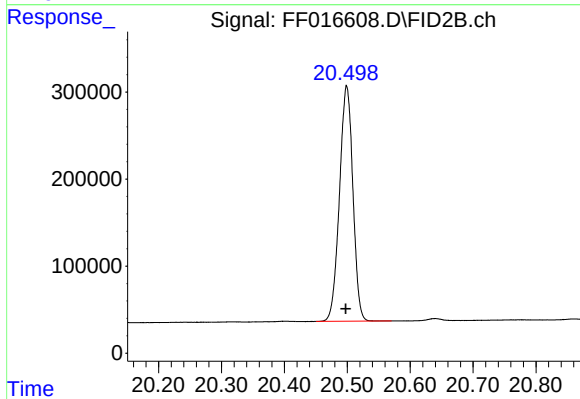
#14 N-DOTRIACONTANE

R.T.: 18.970 min  
Delta R.T.: 0.002 min  
Response: 4967306  
Conc: 46.34 ug/ml



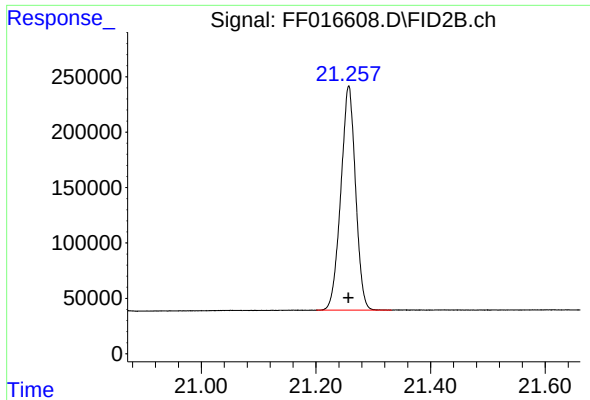
#15 N-TETRATRIACONTANE

R.T.: 19.756 min  
Delta R.T.: 0.003 min  
Response: 4570706  
Conc: 46.52 ug/ml



#16 N-HEXATRIACONTANE

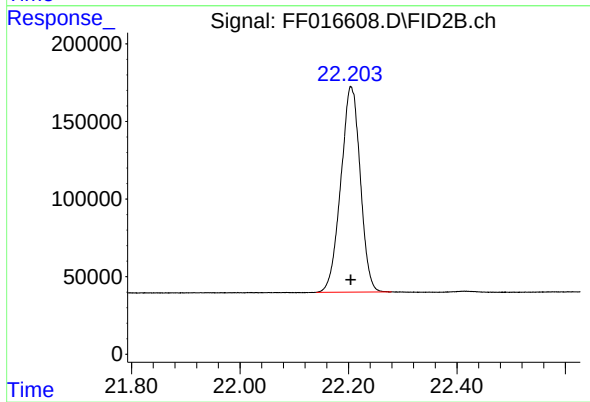
R.T.: 20.499 min  
Delta R.T.: 0.002 min  
Response: 4012368  
Conc: 46.92 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.257 min  
Delta R.T.: 0.000 min  
Response: 3607849  
Conc: 47.01 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
FF102925ICV



#18 N-TETRACONTANE

R.T.: 22.204 min  
Delta R.T.: 0.000 min  
Response: 3292580  
Conc: 48.24 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF102925\  
Data File : FF016608.D  
Signal(s) : FID2B.ch  
Acq On : 29 Oct 2025 13:06  
Sample : FF102925ICV  
Misc :  
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.040       | 2.005        | 2.130      | BB       | 499409         | 5287479      | 91.11%         | 5.793%        |
| 2                       | 4.575       | 4.537        | 4.682      | BB       | 517837         | 5365136      | 92.44%         | 5.878%        |
| 3                       | 6.754       | 6.720        | 6.859      | BB       | 531096         | 5414291      | 93.29%         | 5.932%        |
| 4                       | 8.587       | 8.550        | 8.687      | BB       | 524173         | 5485210      | 94.51%         | 6.009%        |
| 5                       | 10.196      | 10.160       | 10.300     | BB       | 496852         | 5499692      | 94.76%         | 6.025%        |
| 6                       | 11.642      | 11.605       | 11.745     | BB       | 479057         | 5646170      | 97.29%         | 6.186%        |
| 7                       | 12.957      | 12.917       | 13.052     | BB       | 484195         | 5803629      | 100.00%        | 6.358%        |
| 8                       | 14.159      | 14.115       | 14.252     | BB       | 447509         | 5653581      | 97.41%         | 6.194%        |
| 9                       | 15.060      | 15.015       | 15.129     | BV       | 365458         | 4952815      | 85.34%         | 5.426%        |
| 10                      | 15.265      | 15.222       | 15.344     | BB       | 435332         | 5626796      | 96.95%         | 6.164%        |
| 11                      | 16.289      | 16.235       | 16.372     | BB       | 411425         | 5450407      | 93.91%         | 5.971%        |
| 12                      | 17.244      | 17.200       | 17.322     | BB       | 393407         | 5372820      | 92.58%         | 5.886%        |
| 13                      | 18.133      | 18.064       | 18.204     | BB       | 369308         | 5269614      | 90.80%         | 5.773%        |
| 14                      | 18.970      | 18.920       | 19.040     | BB       | 354615         | 4967306      | 85.59%         | 5.442%        |
| 15                      | 19.756      | 19.700       | 19.815     | BB       | 310910         | 4570706      | 78.76%         | 5.007%        |
| 16                      | 20.499      | 20.450       | 20.570     | BB       | 270850         | 4012368      | 69.14%         | 4.396%        |
| 17                      | 21.257      | 21.200       | 21.332     | BB       | 202393         | 3607849      | 62.17%         | 3.953%        |
| 18                      | 22.204      | 22.140       | 22.280     | BBA      | 132626         | 3292580      | 56.73%         | 3.607%        |
| Sum of corrected areas: |             |              |            |          |                |              | 91278449       |               |

FF102925.M Thu Oct 30 14:04:18 2025

## TPH GC CONTINUING CALIBRATION SUMMARY

50 PPM TRPH STD

Lab Name: Alliane Contract: AECO02  
ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 6  
Lab Code: ACE SDG No.: Q3434  
DataFile: FF016632.D Analyst Name: YP\AJ Analyst Date: 10-30-2025

| Conc. (PPM) | Area Count | RF    | Average RF | %D    |
|-------------|------------|-------|------------|-------|
| 850         | 84691500   | 99637 | 106517     | 6.459 |

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
 Data File : FF016632.D  
 Signal(s) : FID2B.ch  
 Acq On : 30 Oct 2025 11:23  
 Operator : YP\AJ  
 Sample : 50 PPM TRPH STD  
 Misc :  
 ALS Vial : 53 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 50 PPM TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 31 02:19:49 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.058 | 4863197  | 46.549 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.039  | 5130934  | 46.227 ug/ml |
| 2) N-DECANE                   | 4.574  | 5190161  | 46.907 ug/ml |
| 3) N-DODECANE                 | 6.753  | 5240413  | 47.174 ug/ml |
| 4) N-TETRADECANE              | 8.586  | 5318144  | 47.605 ug/ml |
| 5) N-HEXADECANE               | 10.195 | 5341028  | 47.536 ug/ml |
| 6) N-OCTADECANE               | 11.640 | 5490567  | 46.917 ug/ml |
| 7) N-EICOSANE                 | 12.955 | 5671399  | 46.446 ug/ml |
| 8) N-DOCOSANE                 | 14.155 | 5533705  | 46.422 ug/ml |
| 10) N-TETRACOSANE             | 15.262 | 5528170  | 46.655 ug/ml |
| 11) N-HEXACOSANE              | 16.288 | 5364115  | 46.694 ug/ml |
| 12) N-OCTACOSANE              | 17.241 | 5301095  | 46.519 ug/ml |
| 13) N-TRIACONTANE             | 18.131 | 5221371  | 46.471 ug/ml |
| 14) N-DOTRIACONTANE           | 18.968 | 4947461  | 46.153 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.755 | 4560348  | 46.410 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.498 | 4002518  | 46.808 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.255 | 3594228  | 46.829 ug/ml |
| 18) N-TETRACONTANE            | 22.203 | 3255843  | 47.706 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

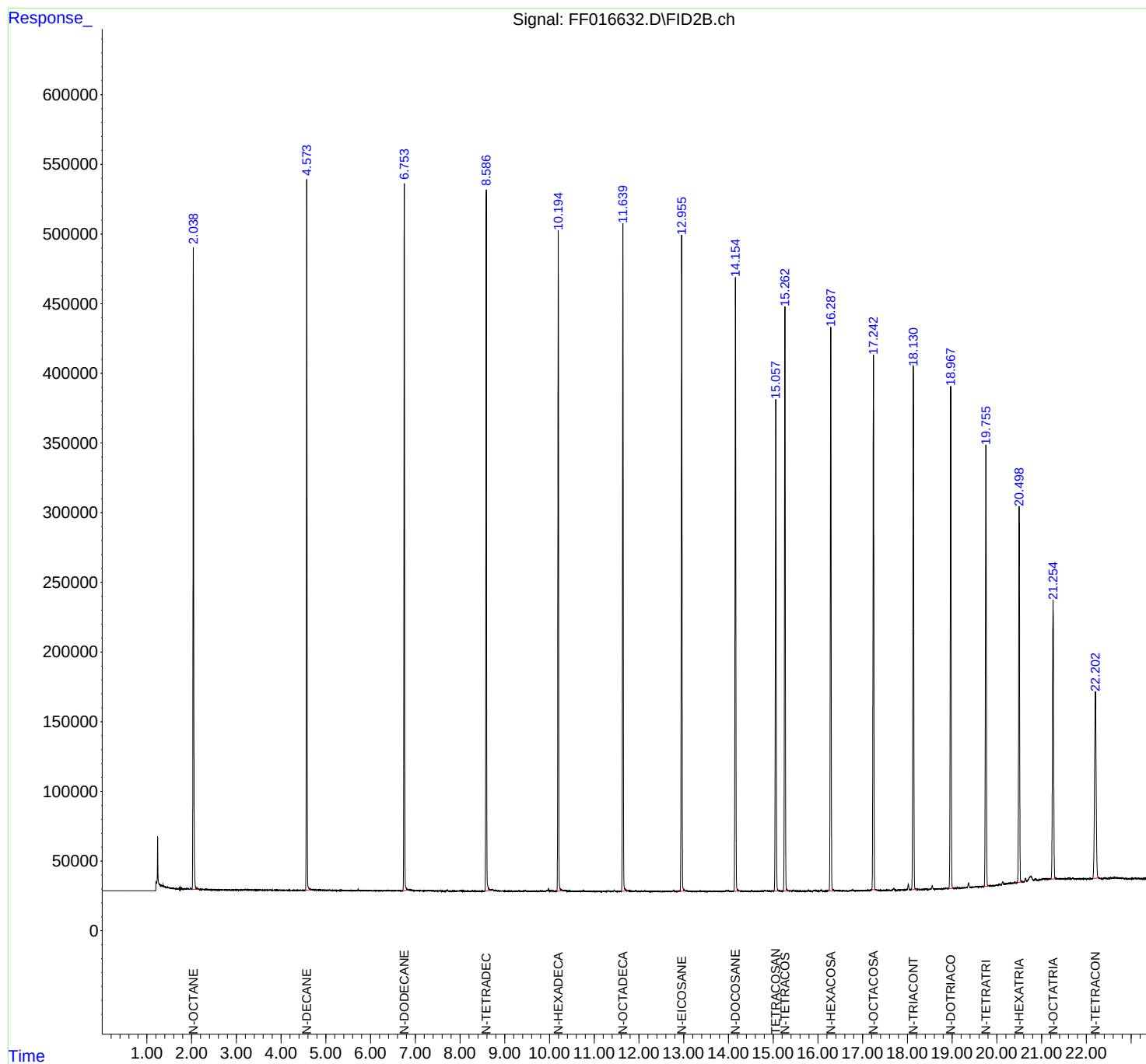
(m)=manual int.

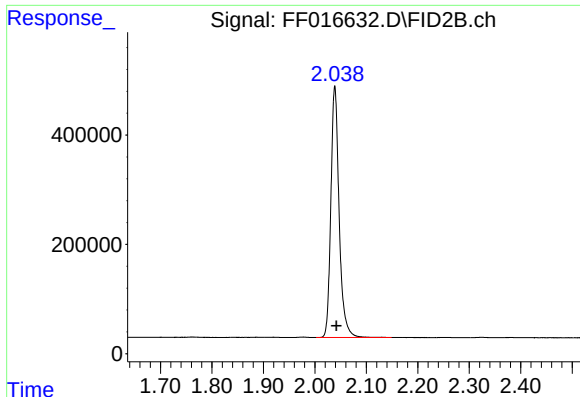
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016632.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 11:23  
Operator : YP\AJ  
Sample : 50 PPM TRPH STD  
Misc :  
ALS Vial : 53 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 31 02:19:49 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

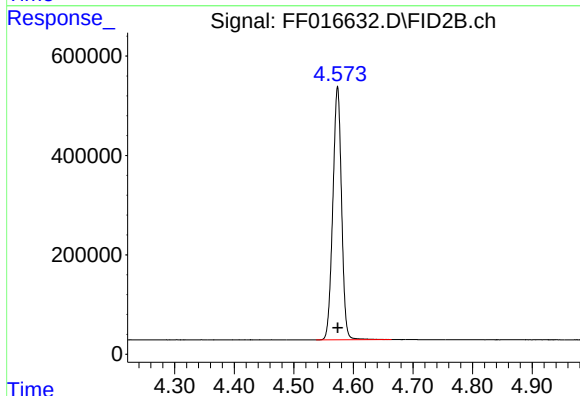




#1 N-OCTANE

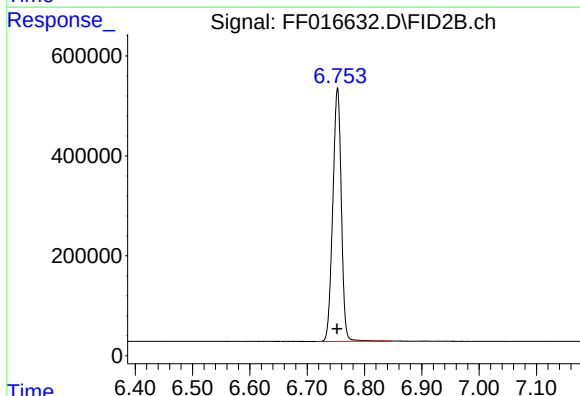
R.T.: 2.039 min  
Delta R.T.: -0.003 min  
Response: 5130934  
Conc: 46.23 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



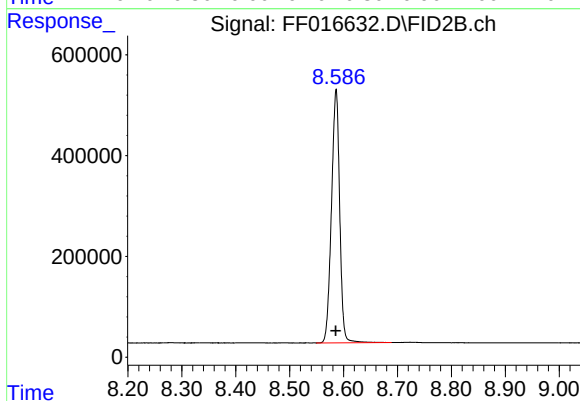
#2 N-DECANE

R.T.: 4.574 min  
Delta R.T.: 0.000 min  
Response: 5190161  
Conc: 46.91 ug/ml



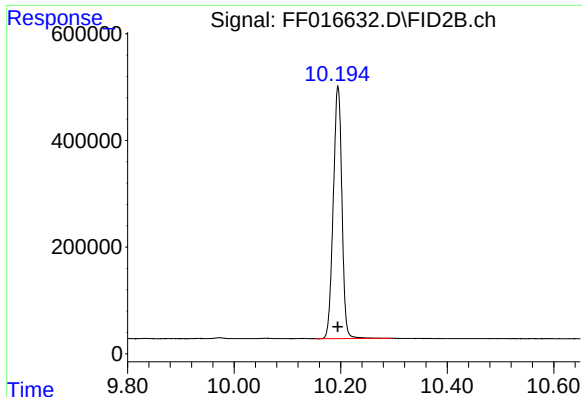
#3 N-DODECANE

R.T.: 6.753 min  
Delta R.T.: 0.000 min  
Response: 5240413  
Conc: 47.17 ug/ml



#4 N-TETRADECANE

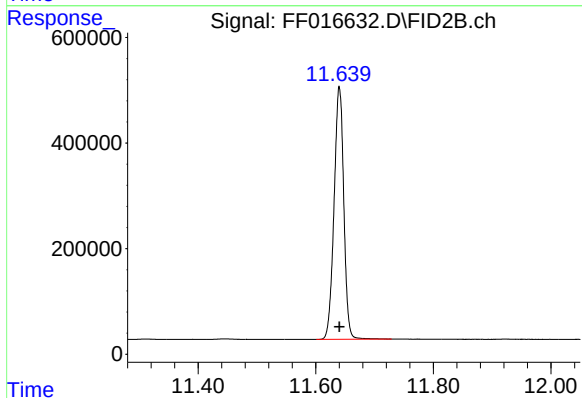
R.T.: 8.586 min  
Delta R.T.: 0.000 min  
Response: 5318144  
Conc: 47.61 ug/ml



#5 N-HEXADECANE

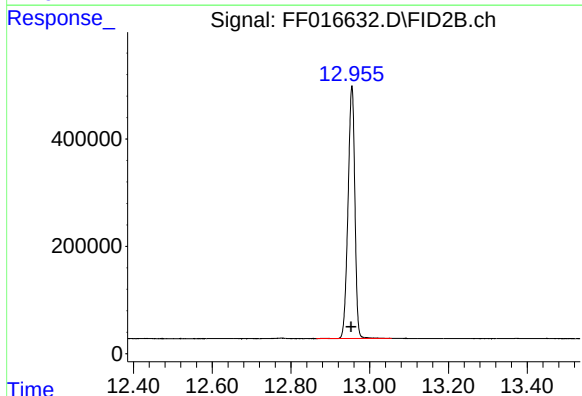
R.T.: 10.195 min  
Delta R.T.: 0.000 min  
Response: 5341028  
Conc: 47.54 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



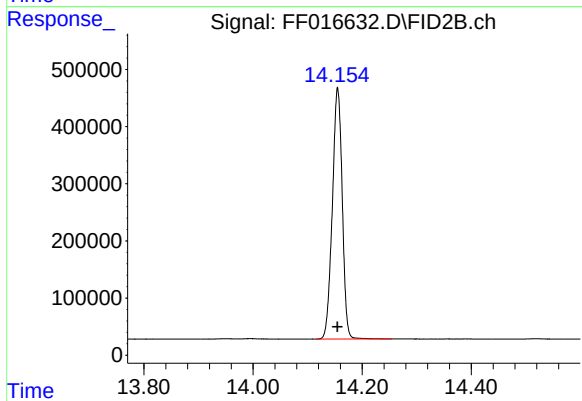
#6 N-OCTADECANE

R.T.: 11.640 min  
Delta R.T.: 0.000 min  
Response: 5490567  
Conc: 46.92 ug/ml



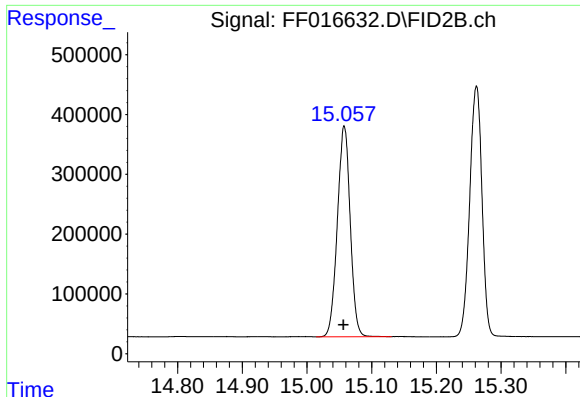
#7 N-EICOSANE

R.T.: 12.955 min  
Delta R.T.: 0.002 min  
Response: 5671399  
Conc: 46.45 ug/ml



#8 N-DOCOSANE

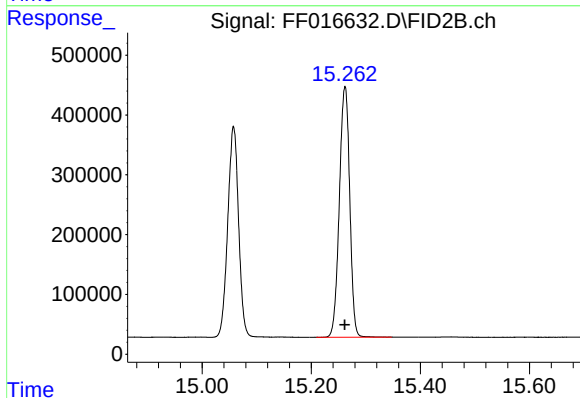
R.T.: 14.155 min  
Delta R.T.: 0.000 min  
Response: 5533705  
Conc: 46.42 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

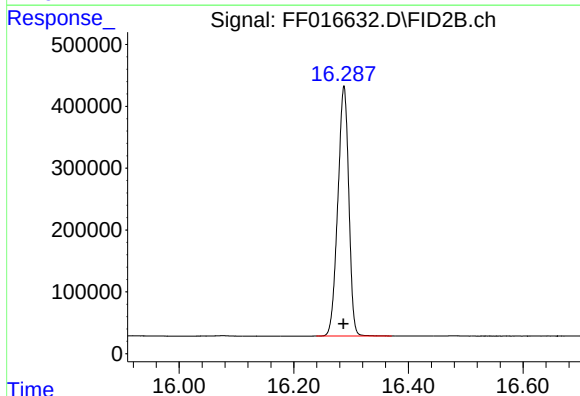
R.T.: 15.058 min  
Delta R.T.: 0.002 min  
Response: 4863197  
Conc: 46.55 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



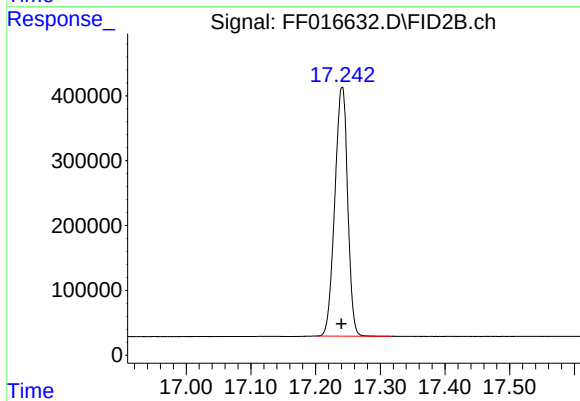
#10 N-TETRACOSANE

R.T.: 15.262 min  
Delta R.T.: 0.000 min  
Response: 5528170  
Conc: 46.66 ug/ml



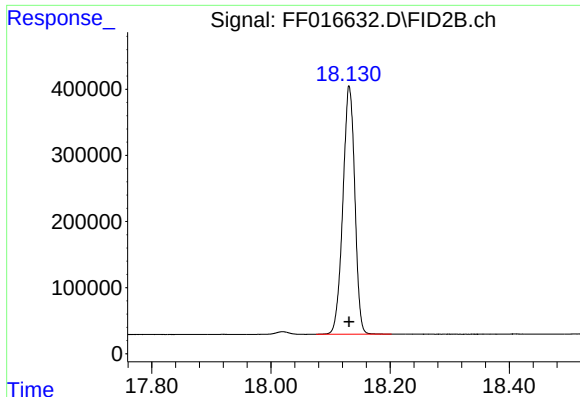
#11 N-HEXACOSANE

R.T.: 16.288 min  
Delta R.T.: 0.001 min  
Response: 5364115  
Conc: 46.69 ug/ml



#12 N-OCTACOSANE

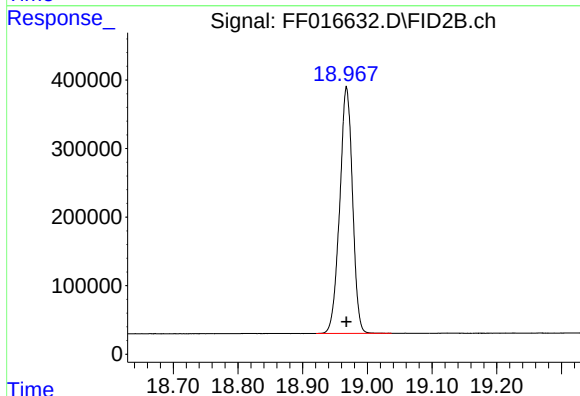
R.T.: 17.241 min  
Delta R.T.: 0.000 min  
Response: 5301095  
Conc: 46.52 ug/ml



#13 N-TRIACONTANE

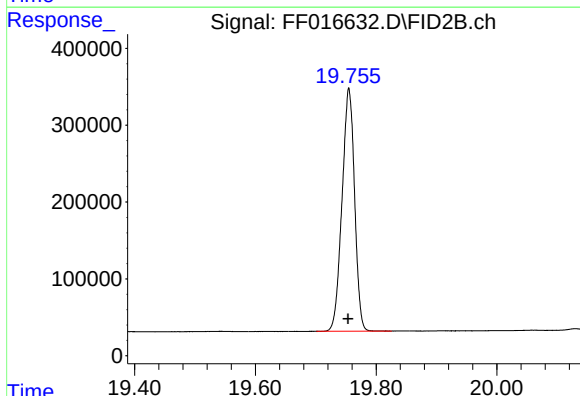
R.T.: 18.131 min  
Delta R.T.: 0.000 min  
Response: 5221371  
Conc: 46.47 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



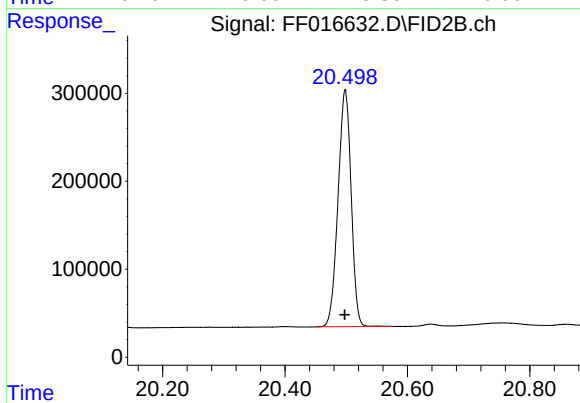
#14 N-DOTRIACONTANE

R.T.: 18.968 min  
Delta R.T.: 0.000 min  
Response: 4947461  
Conc: 46.15 ug/ml



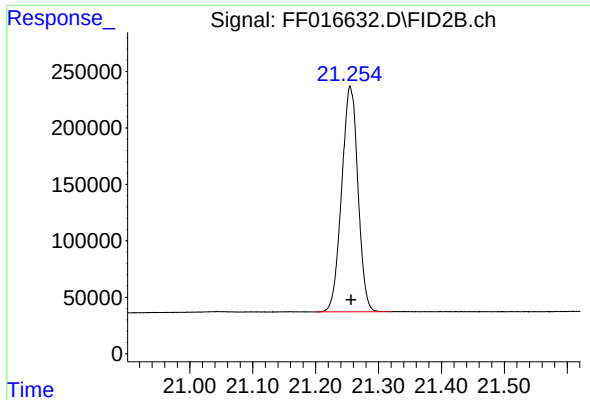
#15 N-TETRATRIACONTANE

R.T.: 19.755 min  
Delta R.T.: 0.001 min  
Response: 4560348  
Conc: 46.41 ug/ml



#16 N-HEXATRIACONTANE

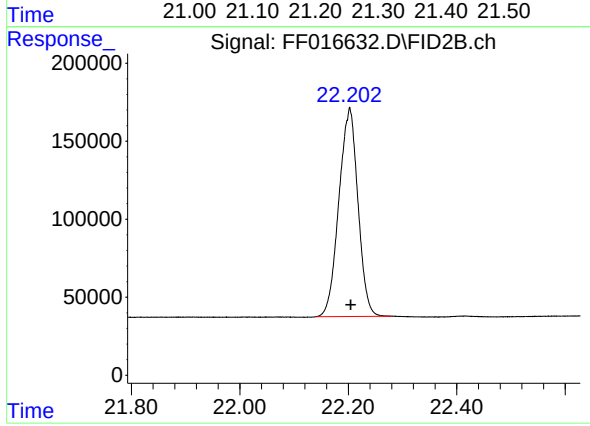
R.T.: 20.498 min  
Delta R.T.: 0.000 min  
Response: 4002518  
Conc: 46.81 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.255 min  
Delta R.T.: -0.002 min  
Response: 3594228  
Conc: 46.83 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



#18 N-TETRACONTANE

R.T.: 22.203 min  
Delta R.T.: -0.002 min  
Response: 3255843  
Conc: 47.71 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016632.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 11:23  
Sample : 50 PPM TRPH STD  
Misc :  
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.039       | 2.002        | 2.149      | BB       | 460452         | 5130934      | 90.47%         | 5.729%        |
| 2                       | 4.574       | 4.537        | 4.664      | BB       | 510330         | 5190161      | 91.51%         | 5.796%        |
| 3                       | 6.753       | 6.716        | 6.847      | BB       | 506530         | 5240413      | 92.40%         | 5.852%        |
| 4                       | 8.586       | 8.549        | 8.689      | BB       | 502260         | 5318144      | 93.77%         | 5.938%        |
| 5                       | 10.195      | 10.154       | 10.296     | BB       | 472701         | 5341028      | 94.17%         | 5.964%        |
| 6                       | 11.640      | 11.601       | 11.729     | BB       | 476254         | 5490567      | 96.81%         | 6.131%        |
| 7                       | 12.955      | 12.864       | 13.056     | BB       | 470475         | 5671399      | 100.00%        | 6.333%        |
| 8                       | 14.155      | 14.116       | 14.254     | BB       | 438127         | 5533705      | 97.57%         | 6.179%        |
| 9                       | 15.058      | 15.014       | 15.131     | BB       | 352399         | 4863197      | 85.75%         | 5.430%        |
| 10                      | 15.262      | 15.209       | 15.347     | BB       | 419420         | 5528170      | 97.47%         | 6.173%        |
| 11                      | 16.288      | 16.239       | 16.371     | BB       | 404424         | 5364115      | 94.58%         | 5.990%        |
| 12                      | 17.241      | 17.201       | 17.317     | BB       | 383781         | 5301095      | 93.47%         | 5.919%        |
| 13                      | 18.131      | 18.076       | 18.202     | BB       | 376203         | 5221371      | 92.06%         | 5.830%        |
| 14                      | 18.968      | 18.921       | 19.037     | BB       | 359713         | 4947461      | 87.24%         | 5.525%        |
| 15                      | 19.755      | 19.701       | 19.826     | BB       | 316708         | 4560348      | 80.41%         | 5.092%        |
| 16                      | 20.498      | 20.451       | 20.574     | BB       | 270358         | 4002518      | 70.57%         | 4.469%        |
| 17                      | 21.255      | 21.201       | 21.321     | BB       | 199857         | 3594228      | 63.37%         | 4.013%        |
| 18                      | 22.203      | 22.141       | 22.280     | BBA      | 133831         | 3255843      | 57.41%         | 3.636%        |
| Sum of corrected areas: |             |              |            |          |                |              | 89554698       |               |

FF102925.M Fri Oct 31 03:39:26 2025

**TPH GC CONTINUING CALIBRATION SUMMARY**

**50 PPM TRPH STD**

Lab Name: Alliane Contract: AECO02  
ProjectID: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 6  
Lab Code: ACE SDG No.: Q3434  
DataFile: FF016642.D Analyst Name: YP\AJ Analyst Date: 10-30-2025

| Conc. (PPM) | Area Count | RF     | Average RF | %D    |
|-------------|------------|--------|------------|-------|
| 850         | 89241081   | 104990 | 106517     | 1.434 |

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
 Data File : FF016642.D  
 Signal(s) : FID2B.ch  
 Acq On : 30 Oct 2025 16:19  
 Operator : YP\AJ  
 Sample : 50 PPM TRPH STD  
 Misc :  
 ALS Vial : 53 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 50 PPM TRPH STD

Integration File: autoint1.e  
 Quant Time: Oct 31 02:23:16 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.064 | 4908262  | 46.980 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.042  | 5503468  | 49.583 ug/ml |
| 2) N-DECANE                   | 4.576  | 5661170  | 51.164 ug/ml |
| 3) N-DODECANE                 | 6.756  | 5701201  | 51.322 ug/ml |
| 4) N-TETRADECANE              | 8.589  | 5690854  | 50.942 ug/ml |
| 5) N-HEXADECANE               | 10.199 | 5653977  | 50.321 ug/ml |
| 6) N-OCTADECANE               | 11.645 | 5767112  | 49.280 ug/ml |
| 7) N-EICOSANE                 | 12.958 | 5883664  | 48.185 ug/ml |
| 8) N-DOCOSANE                 | 14.162 | 5666373  | 47.535 ug/ml |
| 10) N-TETRACOSANE             | 15.268 | 5594925  | 47.219 ug/ml |
| 11) N-HEXACOSANE              | 16.293 | 5363442  | 46.688 ug/ml |
| 12) N-OCTACOSANE              | 17.247 | 5258244  | 46.143 ug/ml |
| 13) N-TRIACONTANE             | 18.140 | 5268771  | 46.893 ug/ml |
| 14) N-DOTRIACONTANE           | 18.976 | 5244186  | 48.921 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.764 | 4997205  | 50.856 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.506 | 4452874  | 52.075 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.265 | 3930120  | 51.205 ug/ml |
| 18) N-TETRACONTANE            | 22.216 | 3603495  | 52.800 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

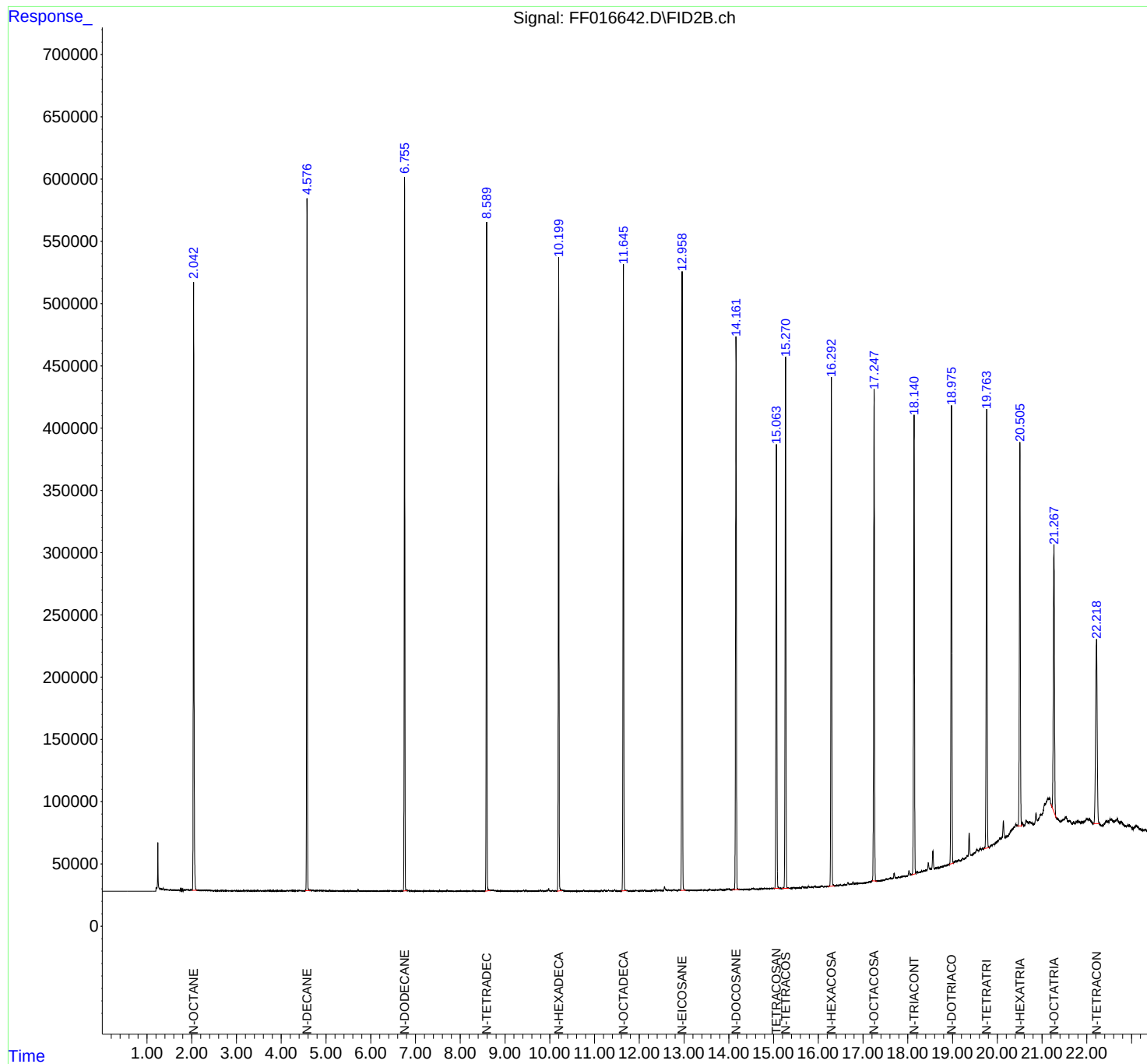
(m)=manual int.

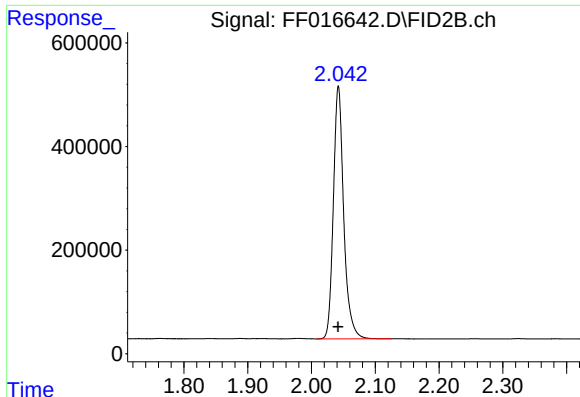
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016642.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 16:19  
Operator : YP\AJ  
Sample : 50 PPM TRPH STD  
Misc :  
ALS Vial : 53 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD

Integration File: autoint1.e  
Quant Time: Oct 31 02:23:16 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

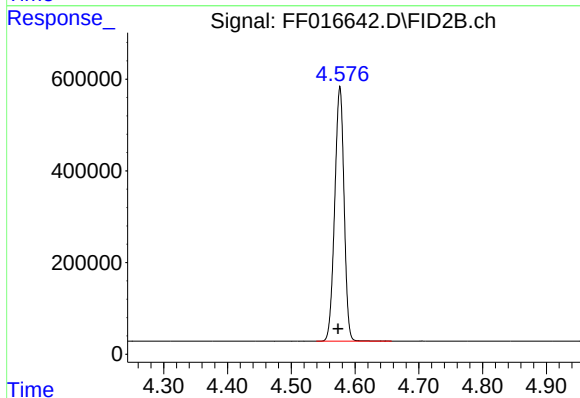




#1 N-OCTANE

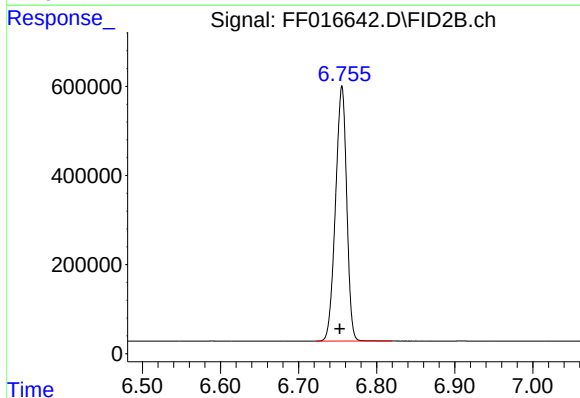
R.T.: 2.042 min  
Delta R.T.: 0.000 min  
Response: 5503468  
Conc: 49.58 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



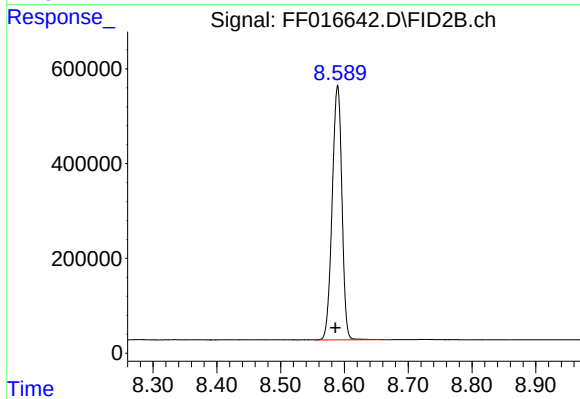
#2 N-DECANE

R.T.: 4.576 min  
Delta R.T.: 0.003 min  
Response: 5661170  
Conc: 51.16 ug/ml



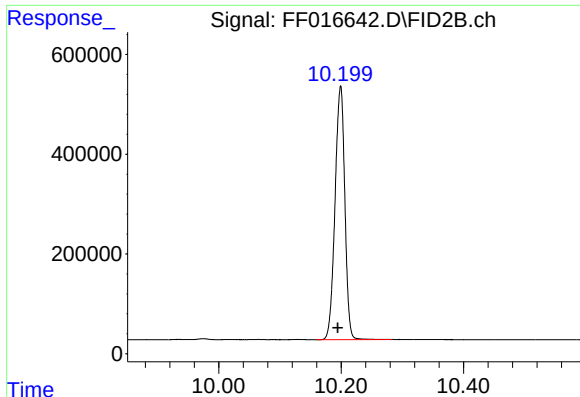
#3 N-DODECANE

R.T.: 6.756 min  
Delta R.T.: 0.003 min  
Response: 5701201  
Conc: 51.32 ug/ml



#4 N-TETRADECANE

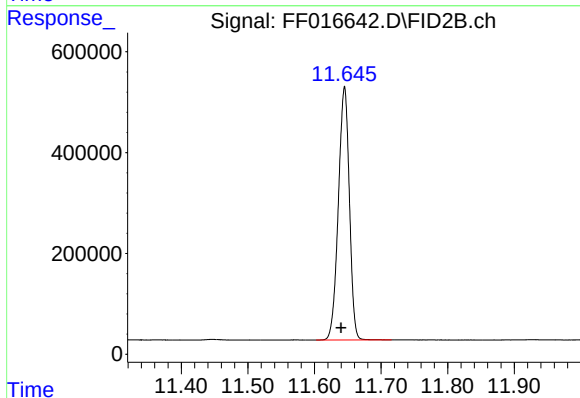
R.T.: 8.589 min  
Delta R.T.: 0.004 min  
Response: 5690854  
Conc: 50.94 ug/ml



#5 N-HEXADECANE

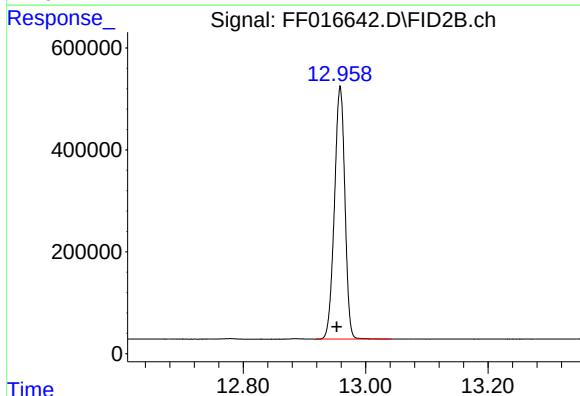
R.T.: 10.199 min  
Delta R.T.: 0.005 min  
Response: 5653977  
Conc: 50.32 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



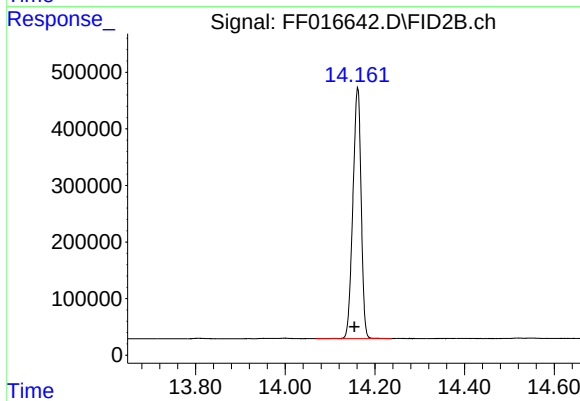
#6 N-OCTADECANE

R.T.: 11.645 min  
Delta R.T.: 0.005 min  
Response: 5767112  
Conc: 49.28 ug/ml



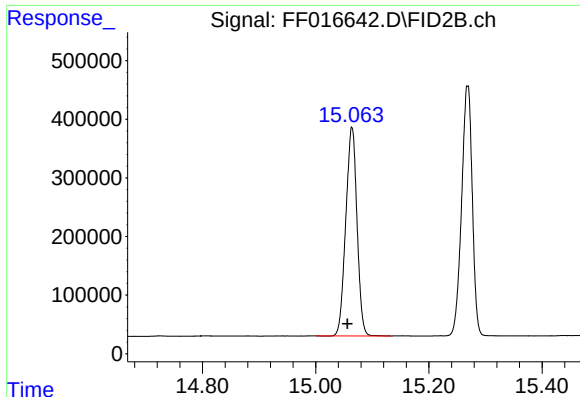
#7 N-EICOSANE

R.T.: 12.958 min  
Delta R.T.: 0.006 min  
Response: 5883664  
Conc: 48.18 ug/ml



#8 N-DOCOSANE

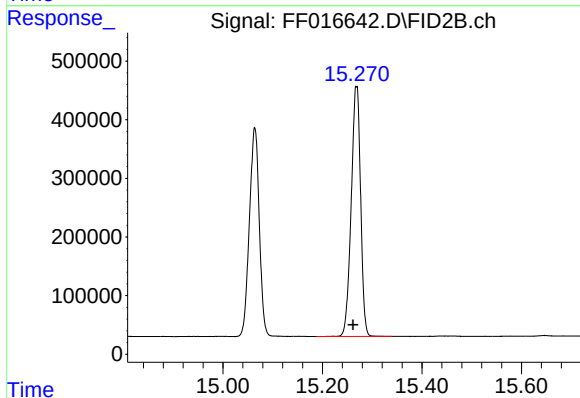
R.T.: 14.162 min  
Delta R.T.: 0.007 min  
Response: 5666373  
Conc: 47.53 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

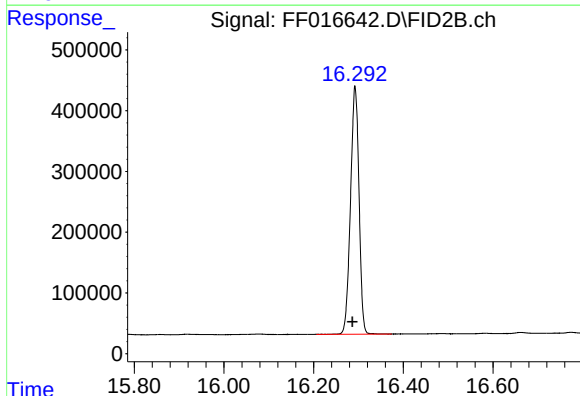
R.T.: 15.064 min  
Delta R.T.: 0.008 min  
Response: 4908262  
Conc: 46.98 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



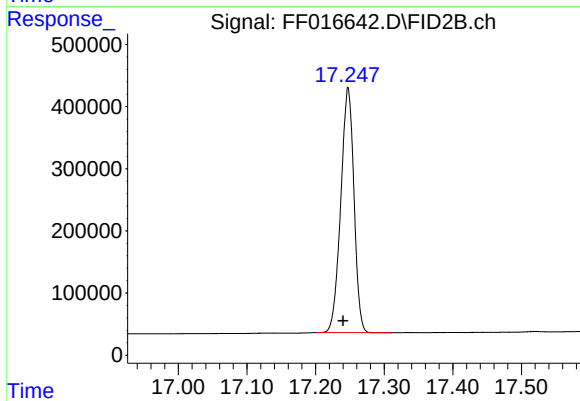
#10 N-TETRACOSANE

R.T.: 15.268 min  
Delta R.T.: 0.007 min  
Response: 5594925  
Conc: 47.22 ug/ml



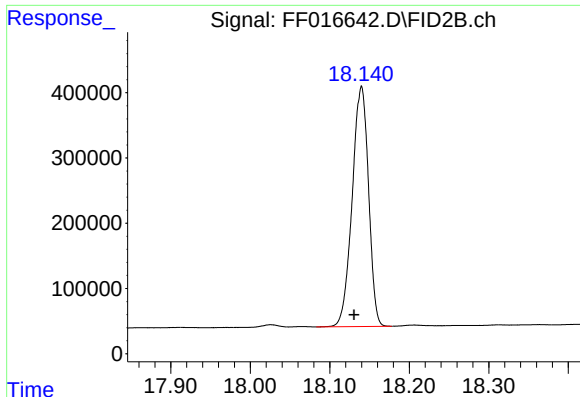
#11 N-HEXACOSANE

R.T.: 16.293 min  
Delta R.T.: 0.006 min  
Response: 5363442  
Conc: 46.69 ug/ml



#12 N-OCTACOSANE

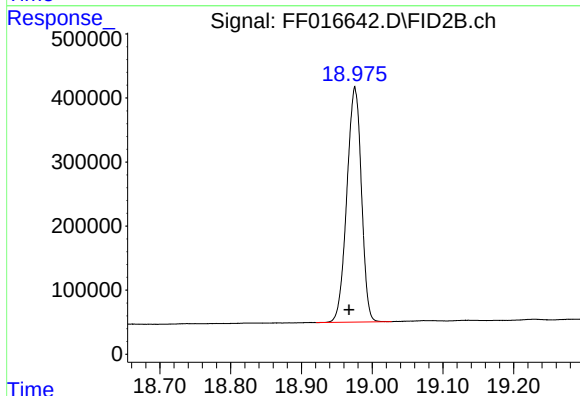
R.T.: 17.247 min  
Delta R.T.: 0.007 min  
Response: 5258244  
Conc: 46.14 ug/ml



#13 N-TRIACONTANE

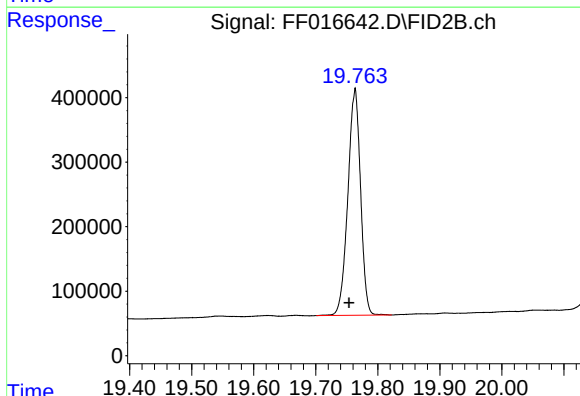
R.T.: 18.140 min  
Delta R.T.: 0.009 min  
Response: 5268771  
Conc: 46.89 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



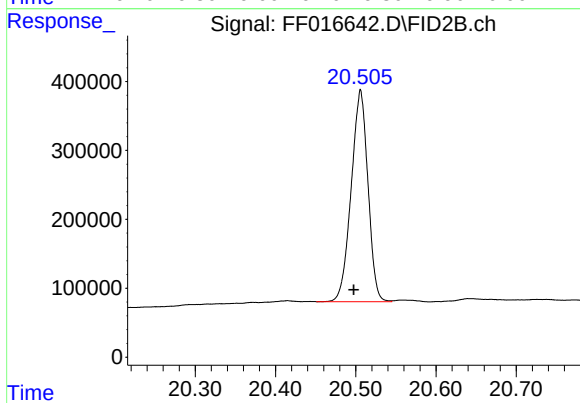
#14 N-DOTRIACONTANE

R.T.: 18.976 min  
Delta R.T.: 0.008 min  
Response: 5244186  
Conc: 48.92 ug/ml



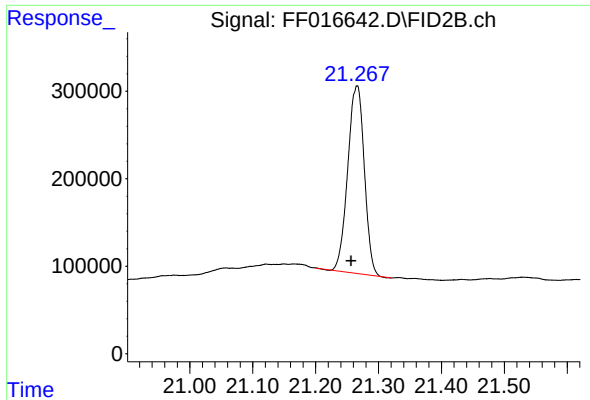
#15 N-TETRATRIACONTANE

R.T.: 19.764 min  
Delta R.T.: 0.010 min  
Response: 4997205  
Conc: 50.86 ug/ml



#16 N-HEXATRIACONTANE

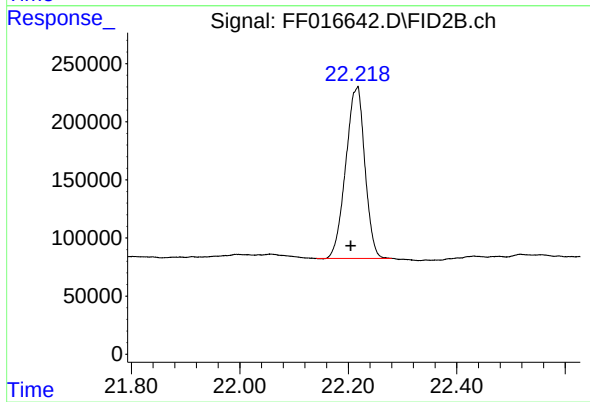
R.T.: 20.506 min  
Delta R.T.: 0.008 min  
Response: 4452874  
Conc: 52.08 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.265 min  
Delta R.T.: 0.009 min  
Response: 3930120  
Conc: 51.20 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
50 PPM TRPH STD



#18 N-TETRACONTANE

R.T.: 22.216 min  
Delta R.T.: 0.011 min  
Response: 3603495  
Conc: 52.80 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016642.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 16:19  
Sample : 50 PPM TRPH STD  
Misc :  
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.042       | 2.007        | 2.126      | BB       | 487999         | 5503468      | 93.54%         | 5.845%        |
| 2                       | 4.576       | 4.539        | 4.657      | BB       | 553835         | 5661170      | 96.22%         | 6.013%        |
| 3                       | 6.756       | 6.722        | 6.819      | BB       | 573318         | 5701201      | 96.90%         | 6.055%        |
| 4                       | 8.589       | 8.556        | 8.674      | BB       | 535763         | 5690854      | 96.72%         | 6.044%        |
| 5                       | 10.199      | 10.159       | 10.282     | BB       | 508668         | 5653977      | 96.10%         | 6.005%        |
| 6                       | 11.645      | 11.602       | 11.716     | BB       | 503555         | 5767112      | 98.02%         | 6.125%        |
| 7                       | 12.958      | 12.919       | 13.042     | BB       | 496035         | 5883664      | 100.00%        | 6.249%        |
| 8                       | 14.162      | 14.069       | 14.237     | BB       | 443351         | 5666373      | 96.31%         | 6.018%        |
| 9                       | 15.064      | 15.001       | 15.134     | BB       | 356066         | 4908262      | 83.42%         | 5.213%        |
| 10                      | 15.268      | 15.187       | 15.339     | BB       | 426305         | 5594925      | 95.09%         | 5.943%        |
| 11                      | 16.293      | 16.206       | 16.374     | BB       | 408326         | 5363442      | 91.16%         | 5.697%        |
| 12                      | 17.247      | 17.201       | 17.311     | BB       | 394897         | 5258244      | 89.37%         | 5.585%        |
| 13                      | 18.140      | 18.083       | 18.178     | PV       | 368456         | 5268771      | 89.55%         | 5.596%        |
| 14                      | 18.976      | 18.921       | 19.027     | BV       | 366879         | 5244186      | 89.13%         | 5.570%        |
| 15                      | 19.764      | 19.701       | 19.822     | BV       | 352779         | 4997205      | 84.93%         | 5.308%        |
| 16                      | 20.506      | 20.451       | 20.545     | BV       | 308452         | 4452874      | 75.68%         | 4.730%        |
| 17                      | 21.265      | 21.201       | 21.321     | BV       | 214713         | 3930120      | 66.80%         | 4.174%        |
| 18                      | 22.216      | 22.141       | 22.280     | BBA      | 146443         | 3603495      | 61.25%         | 3.827%        |
| Sum of corrected areas: |             |              |            |          |                |              | 94149343       |               |

FF102925.M Fri Oct 31 03:42:52 2025

## Analytical Sequence

|                                                           |                      |
|-----------------------------------------------------------|----------------------|
| Client: AECOM                                             | SDG No.: Q3434       |
| Project: AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 | Instrument ID: FID_F |
| GC Column: RXI-1MS                                        | ID: 0.18 (mm)        |

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES,  
AND STANDARDS IS GIVEN BELOW:

| MEAN SUROGATE RT FROM INITIAL CALIBRATION 15.059 |                  |                           |            |        |   |
|--------------------------------------------------|------------------|---------------------------|------------|--------|---|
| CLIENT<br>SAMPLE NO.                             | LAB<br>SAMPLE ID | DATE AND TIME<br>ANALYZED | DATAFILE   | RT     | # |
| PIBLK01                                          | LBLK01           | 30 Oct 2025 10:24         | FF016631.D | 15.056 |   |
| 50 PPM TRPH STD                                  | 50 PPM TRPH STD  | 30 Oct 2025 11:23         | FF016632.D | 15.058 |   |
| PB170324BL                                       | PB170324BL       | 30 Oct 2025 12:22         | FF016634.D | 15.057 |   |
| PB170324BS                                       | PB170324BS       | 30 Oct 2025 12:52         | FF016635.D | 15.056 |   |
| PR132-WC1-20251022                               | Q3434-01         | 30 Oct 2025 13:21         | FF016636.D | 15.006 |   |
| WASTEMS                                          | Q3474-01MS       | 30 Oct 2025 14:21         | FF016638.D | 15.010 |   |
| WASTEMSD                                         | Q3474-01MSD      | 30 Oct 2025 14:50         | FF016639.D | 15.012 |   |
| PIBLK02                                          | LBLK02           | 30 Oct 2025 15:49         | FF016641.D | 15.062 |   |
| 50 PPM TRPH STD                                  | 50 PPM TRPH STD  | 30 Oct 2025 16:19         | FF016642.D | 15.064 |   |

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

QC Limits  
(± 0.10 minutes)

Lower Limit  
14.959

Upper Limits  
15.159



# QC SAMPLE DATA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

## Report of Analysis

|                    |                                                  |                    |                 |        |
|--------------------|--------------------------------------------------|--------------------|-----------------|--------|
| Client:            | AECOM                                            |                    | Date Collected: |        |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |                    | Date Received:  |        |
| Client Sample ID:  | PB170324BL                                       |                    | SDG No.:        | Q3434  |
| Lab Sample ID:     | PB170324BL                                       |                    | Matrix:         | SOIL   |
| Analytical Method: | 8015D TPH                                        |                    | % Solid:        | 100    |
| Sample Wt/Vol:     | 30.02 g                                          | Final Vol: 1 mL    | Test:           | TPH GC |
| Prep Method:       | SW3541                                           | Prep Date 10/29/25 |                 |        |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana.      | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|----------------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |                |          |
| PHC               | Petroleum Hydrocarbons | 2830  | U    | 1  | 384      | 2830       | ug/kg   | 10/30/25 12:22 | PB170324 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |                |          |
| 16416-32-3        | TETRACOSANE-d50        | 16.2  |      |    | 37 - 130 | 81%        | SPK: 20 |                |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016634.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 12:22  
Operator : YP\AJ  
Sample : PB170324BL  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BL

Integration File: autoint1.e  
Quant Time: Oct 31 02:20:32 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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... | 15.057 | 1694064  | 16.215 ug/ml |
| Target Compounds              |        |          |              |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

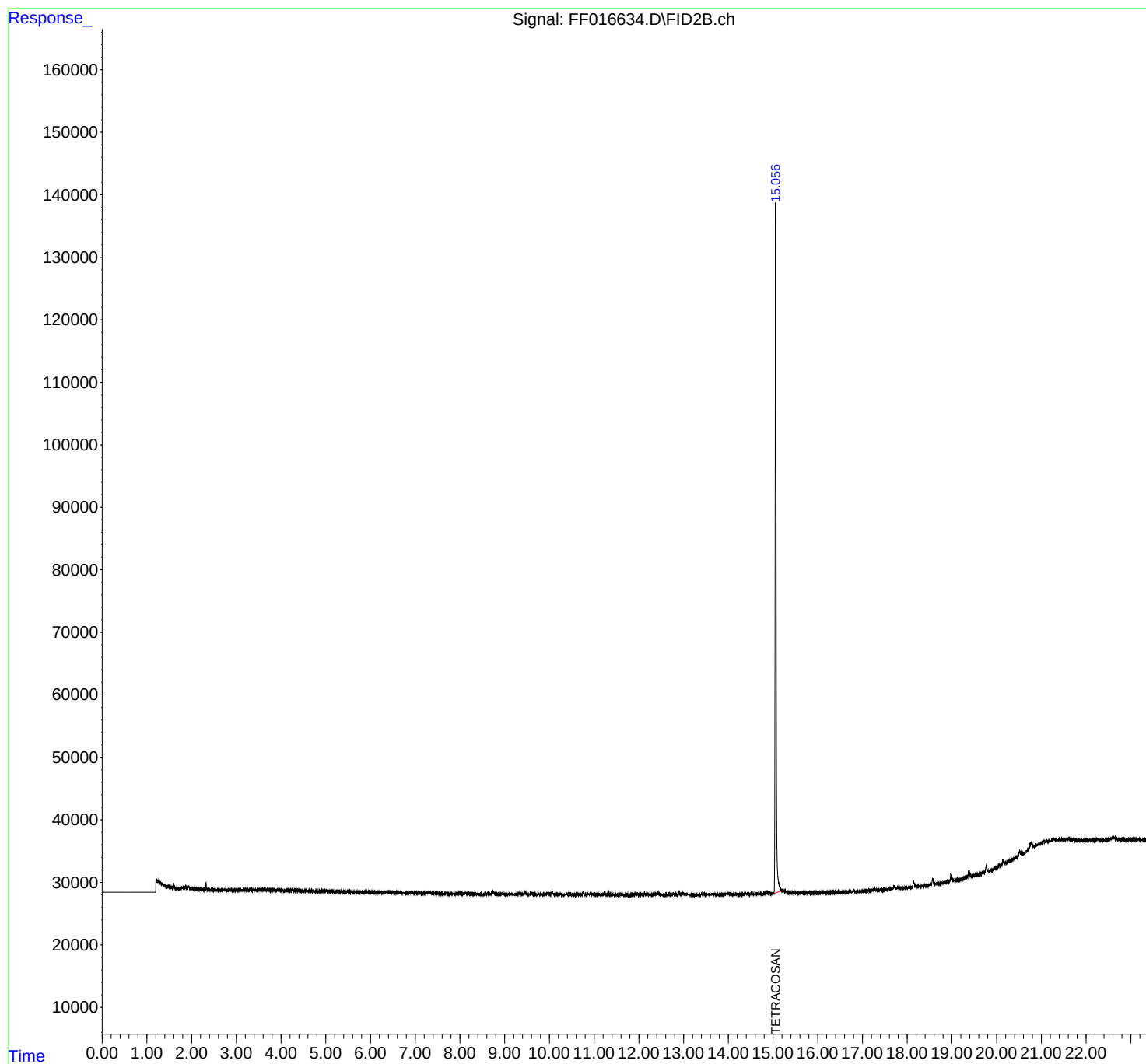
(m)=manual int.

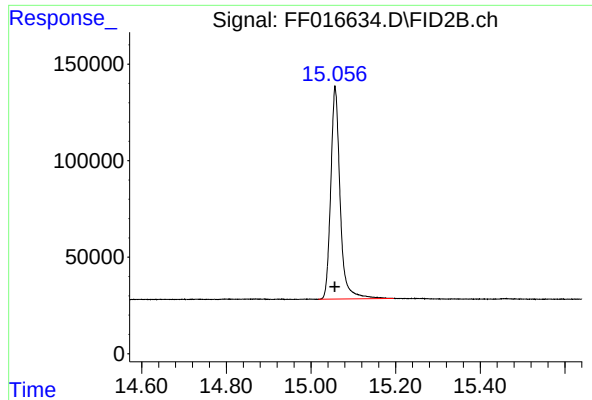
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016634.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 12:22  
Operator : YP\AJ  
Sample : PB170324BL  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BL

Integration File: autoint1.e  
Quant Time: Oct 31 02:20:32 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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.: 15.057 min  
Delta R.T.: 0.001 min  
Response: 1694064  
Conc: 16.22 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BL

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rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016634.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 12:22  
Sample : PB170324BL  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 15.057      | 15.017       | 15.195     | BB       | 110117         | 1694064      | 100.00%        | 100.000%      |
| Sum of corrected areas: |             |              |            |          |                | 1694064      |                |               |

FF102925.M Fri Oct 31 03:40:17 2025

## Report of Analysis

|                    |                                                  |            |                 |          |
|--------------------|--------------------------------------------------|------------|-----------------|----------|
| Client:            | AECOM                                            |            | Date Collected: | 10/30/25 |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |            | Date Received:  | 10/30/25 |
| Client Sample ID:  | PIBLK-FF016631.D                                 |            | SDG No.:        | Q3434    |
| Lab Sample ID:     | I.BLK-FF016631.D                                 |            | Matrix:         | Water    |
| Analytical Method: | 8015D TPH                                        |            | % Solid:        | 0        |
| Sample Wt/Vol:     | 1000 mL                                          | Final Vol: | 1 mL            | Test:    |
| Prep Method:       | SW3510                                           | Prep Date: | TPH GC          |          |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana. | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|-----------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |           |          |
| PHC               | Petroleum Hydrocarbons | 85.0  | U    | 1  | 12.0     | 85.0       | ug/L    | 10/30/25  | FF103025 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |           |          |
| 16416-32-3        | TETRACOSANE-d50        | 17.9  |      |    | 29 - 130 | 90%        | SPK: 20 |           |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016631.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 10:24  
Operator : YP\AJ  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

Integration File: autoint1.e  
Quant Time: Oct 31 02:19:35 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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... | 15.056 | 1874082  | 17.938 ug/ml |
| Target Compounds              |        |          |              |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

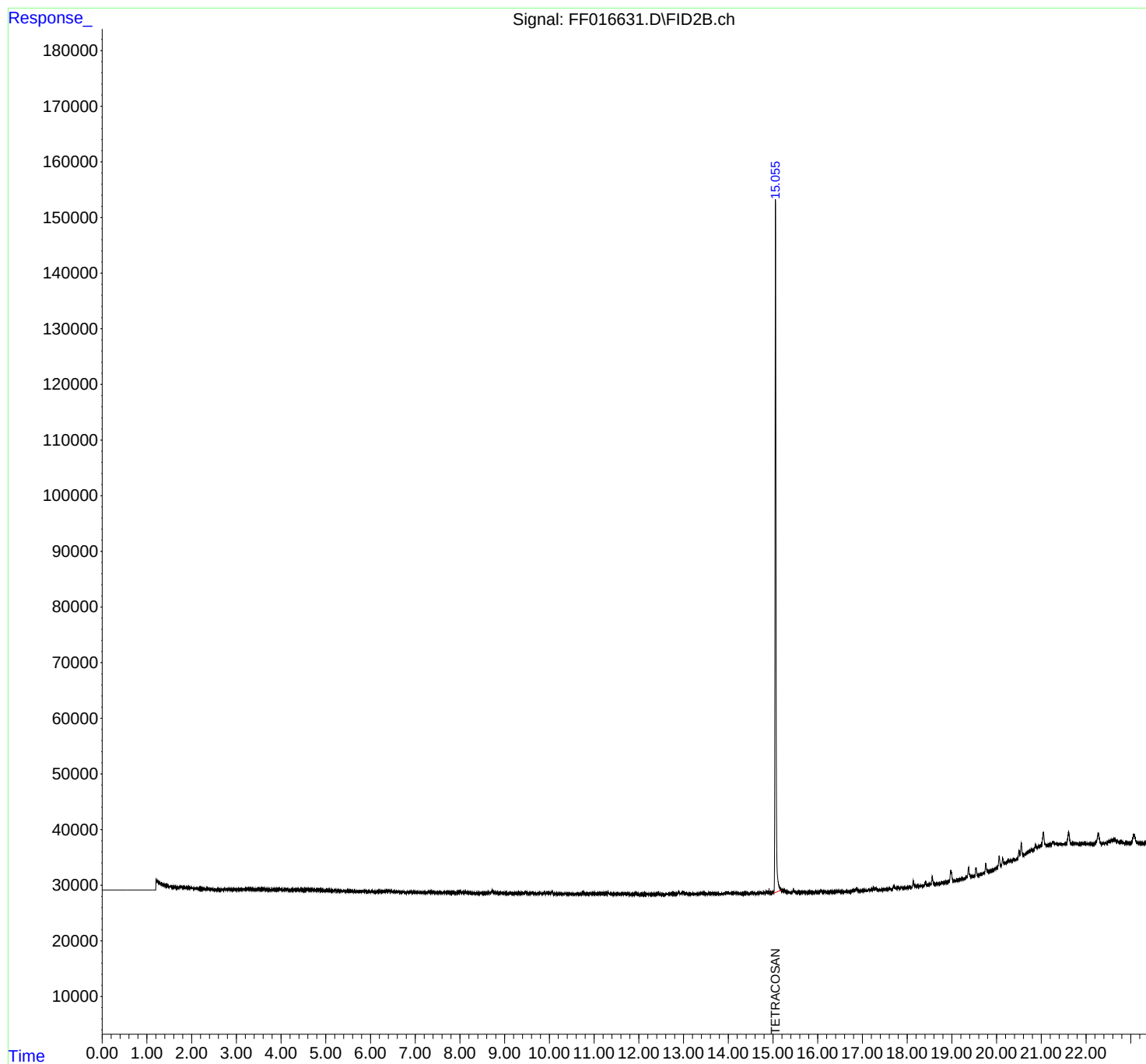
(m)=manual int.

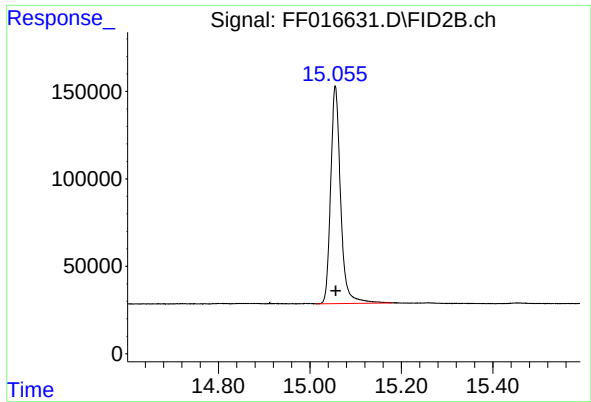
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016631.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 10:24  
Operator : YP\AJ  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

Integration File: autoint1.e  
Quant Time: Oct 31 02:19:35 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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.: 15.056 min  
Delta R.T.: 0.000 min  
Response: 1874082  
Conc: 17.94 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

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rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016631.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 10:24  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 15.056      | 15.014       | 15.179     | BB       | 124482         | 1874082      | 100.00%        | 100.000%      |
| Sum of corrected areas: |             |              |            |          |                | 1874082      |                |               |

FF102925.M Fri Oct 31 03:39:02 2025

## Report of Analysis

|                    |                                                  |            |                 |          |
|--------------------|--------------------------------------------------|------------|-----------------|----------|
| Client:            | AECOM                                            |            | Date Collected: | 10/30/25 |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |            | Date Received:  | 10/30/25 |
| Client Sample ID:  | PIBLK-FF016641.D                                 |            | SDG No.:        | Q3434    |
| Lab Sample ID:     | I.BLK-FF016641.D                                 |            | Matrix:         | Water    |
| Analytical Method: | 8015D TPH                                        |            | % Solid:        | 0        |
| Sample Wt/Vol:     | 1000 mL                                          | Final Vol: | 1 mL            | Test:    |
| Prep Method:       | SW3510                                           | Prep Date: |                 |          |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana. | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|-----------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |           |          |
| PHC               | Petroleum Hydrocarbons | 85.0  | U    | 1  | 12.0     | 85.0       | ug/L    | 10/30/25  | FF103025 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |           |          |
| 16416-32-3        | TETRACOSANE-d50        | 18.6  |      |    | 29 - 130 | 93%        | SPK: 20 |           |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016641.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 15:49  
Operator : YP\AJ  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

Integration File: autoint1.e  
Quant Time: Oct 31 02:22:59 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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... | 15.062 | 1945668  | 18.623 ug/ml |
| Target Compounds              |        |          |              |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

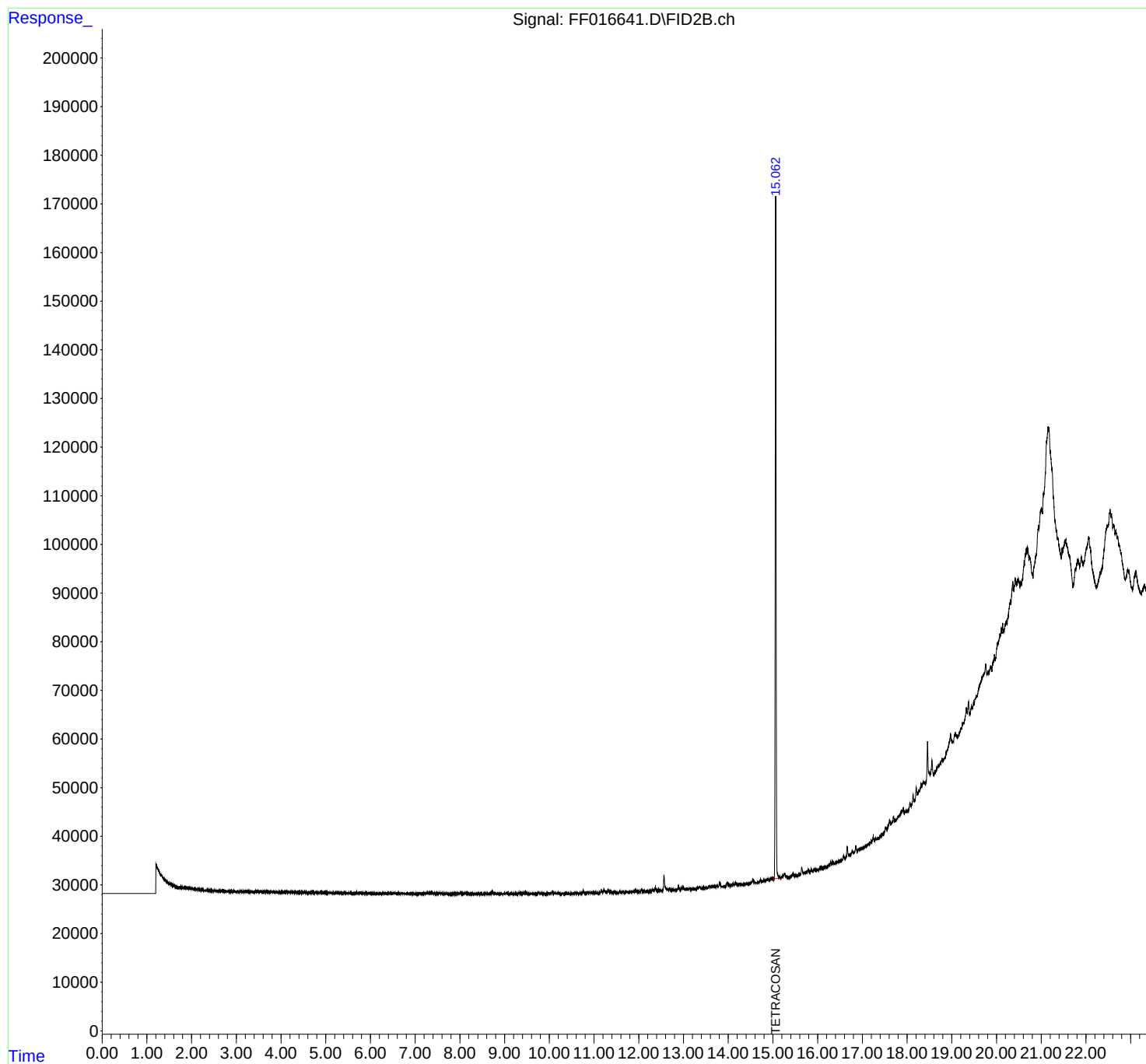
(m)=manual int.

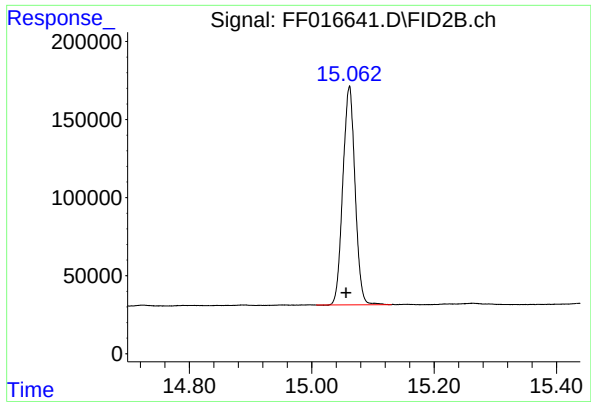
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016641.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 15:49  
Operator : YP\AJ  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

Integration File: autoint1.e  
Quant Time: Oct 31 02:22:59 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 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.: 15.062 min  
Delta R.T.: 0.005 min  
Response: 1945668  
Conc: 18.62 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
I.BLK

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- 14
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- 16
- 17

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016641.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 15:49  
Sample : I.BLK  
Misc :  
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 15.062      | 15.007       | 15.130     | BB       | 140546         | 1945668      | 100.00%        | 100.000%      |
| Sum of corrected areas: |             |              |            |          |                | 1945668      |                |               |

FF102925.M Fri Oct 31 03:41:10 2025

## Report of Analysis

|                    |                                                  |            |                 |       |
|--------------------|--------------------------------------------------|------------|-----------------|-------|
| Client:            | AECOM                                            |            | Date Collected: |       |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |            | Date Received:  |       |
| Client Sample ID:  | PB170324BS                                       |            | SDG No.:        | Q3434 |
| Lab Sample ID:     | PB170324BS                                       |            | Matrix:         | SOIL  |
| Analytical Method: | 8015D TPH                                        |            | % Solid:        | 100   |
| Sample Wt/Vol:     | 30.03 g                                          | Final Vol: | 1 mL            | Test: |
| Prep Method:       | SW3541                                           | Prep Date  | 10/29/25        |       |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana.      | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|----------------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |                |          |
| PHC               | Petroleum Hydrocarbons | 11300 |      | 1  | 384      | 2830       | ug/kg   | 10/30/25 12:52 | PB170324 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |                |          |
| 16416-32-3        | TETRACOSANE-d50        | 18.4  |      |    | 37 - 130 | 92%        | SPK: 20 |                |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
 Data File : FF016635.D  
 Signal(s) : FID2B.ch  
 Acq On : 30 Oct 2025 12:52  
 Operator : YP\AJ  
 Sample : PB170324BS  
 Misc :  
 ALS Vial : 32 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 PB170324BS

Integration File: autoint1.e  
 Quant Time: Oct 31 02:20:46 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.056 | 1918098  | 18.359 ug/ml |
| Target Compounds              |        |          |              |
| 1) N-OCTANE                   | 2.043  | 1796883  | 16.189 ug/ml |
| 2) N-DECANE                   | 4.573  | 2033504  | 18.378 ug/ml |
| 3) N-DODECANE                 | 6.751  | 2071244  | 18.645 ug/ml |
| 4) N-TETRADECANE              | 8.584  | 2121414  | 18.990 ug/ml |
| 5) N-HEXADECANE               | 10.193 | 2143776  | 19.080 ug/ml |
| 6) N-OCTADECANE               | 11.639 | 2219710  | 18.967 ug/ml |
| 7) N-EICOSANE                 | 12.953 | 2306165  | 18.887 ug/ml |
| 8) N-DOCOSANE                 | 14.154 | 2252846  | 18.899 ug/ml |
| 10) N-TETRACOSANE             | 15.261 | 2255410  | 19.035 ug/ml |
| 11) N-HEXACOSANE              | 16.286 | 2193001  | 19.090 ug/ml |
| 12) N-OCTACOSANE              | 17.239 | 2173702  | 19.075 ug/ml |
| 13) N-TRIACONTANE             | 18.130 | 2160479  | 19.229 ug/ml |
| 14) N-DOTRIACONTANE           | 18.967 | 2208427  | 20.602 ug/ml |
| 15) N-TETRATRIACONTANE        | 19.754 | 2373945  | 24.159 ug/ml |
| 16) N-HEXATRIACONTANE         | 20.496 | 2266182  | 26.502 ug/ml |
| 17) N-OCTATRIACONTANE         | 21.254 | 1990960  | 25.940 ug/ml |
| 18) N-TETRACONTANE            | 22.200 | 1660480  | 24.330 ug/ml |
| -----                         |        |          |              |

(f)=RT Delta > 1/2 Window

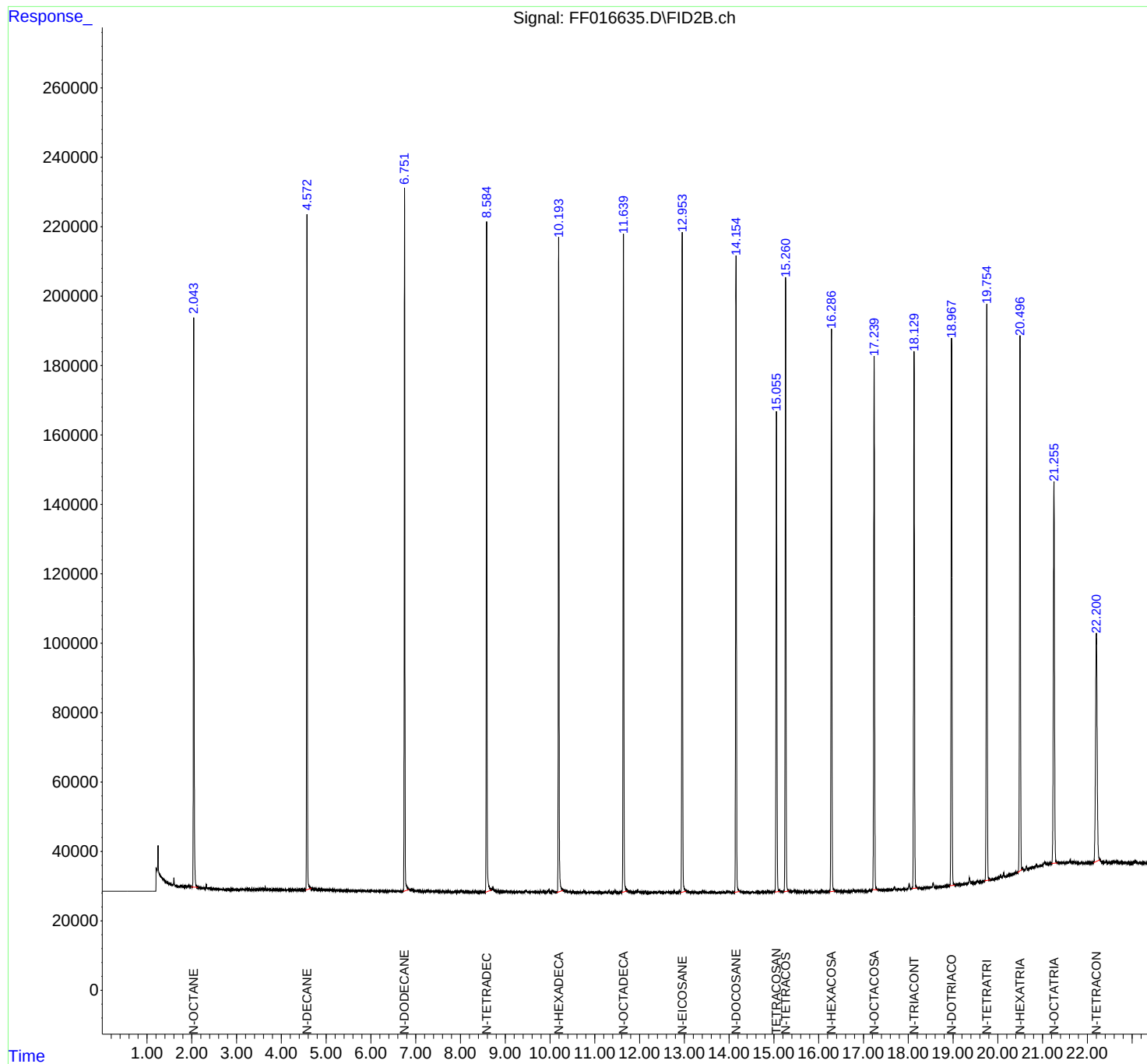
(m)=manual int.

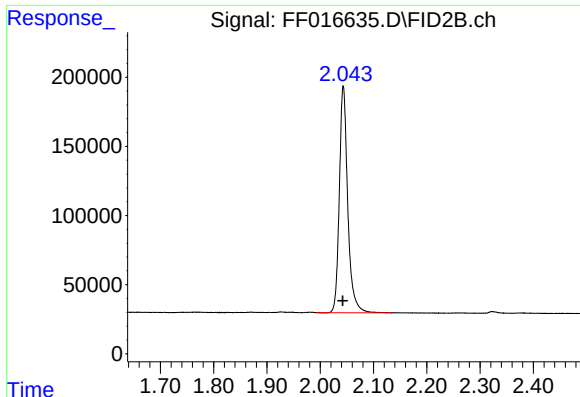
Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016635.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 12:52  
Operator : YP\AJ  
Sample : PB170324BS  
Misc :  
ALS Vial : 32 Sample Multiplier: 1

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS

Integration File: autoint1.e  
Quant Time: Oct 31 02:20:46 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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

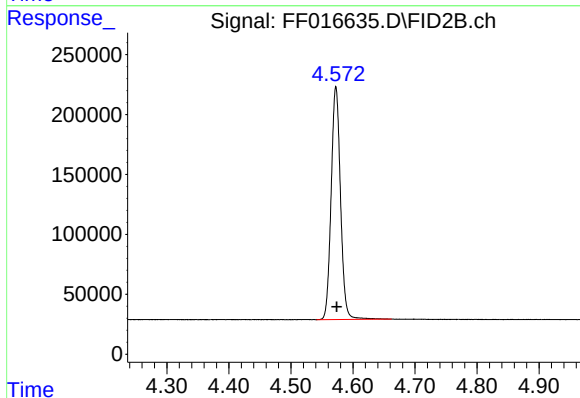




#1 N-OCTANE

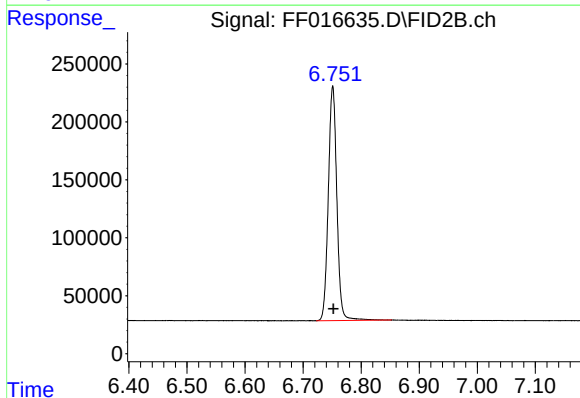
R.T.: 2.043 min  
Delta R.T.: 0.001 min  
Response: 1796883  
Conc: 16.19 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS



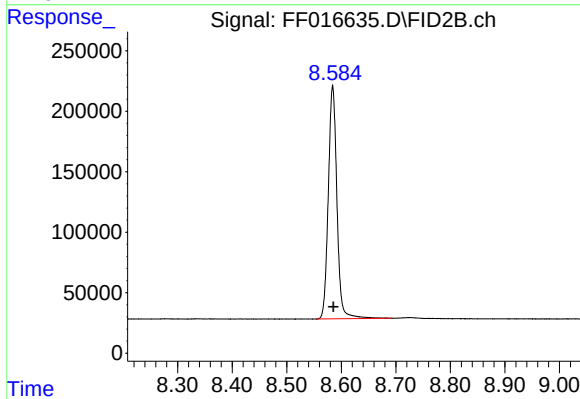
#2 N-DECANE

R.T.: 4.573 min  
Delta R.T.: -0.001 min  
Response: 2033504  
Conc: 18.38 ug/ml



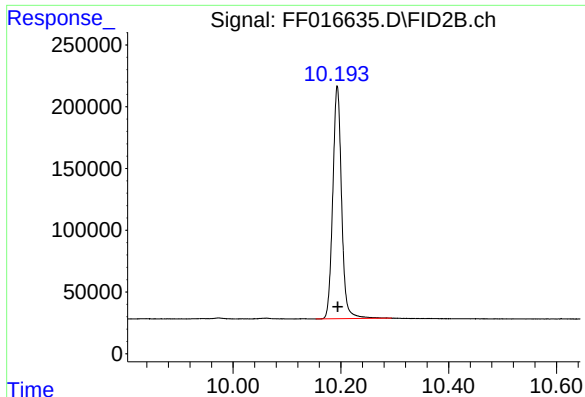
#3 N-DODECANE

R.T.: 6.751 min  
Delta R.T.: -0.001 min  
Response: 2071244  
Conc: 18.65 ug/ml



#4 N-TETRADECANE

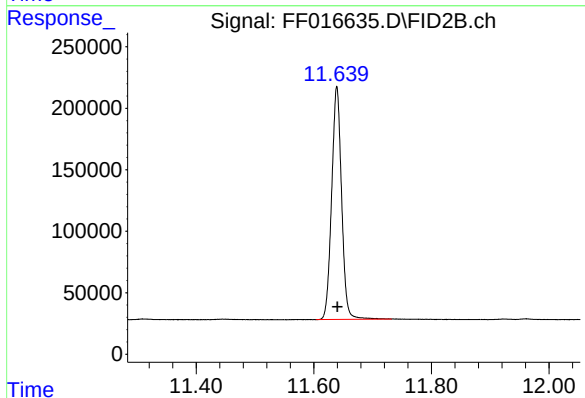
R.T.: 8.584 min  
Delta R.T.: -0.001 min  
Response: 2121414  
Conc: 18.99 ug/ml



#5 N-HEXADECANE

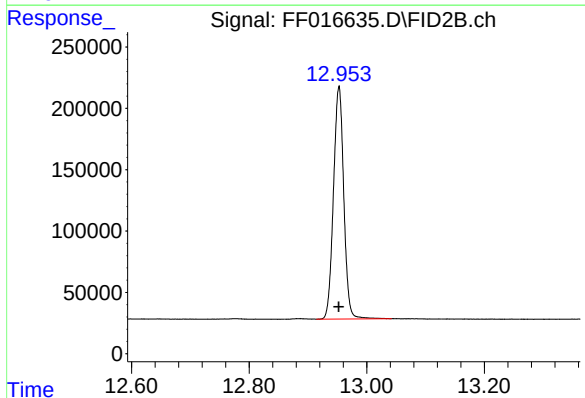
R.T.: 10.193 min  
Delta R.T.: -0.001 min  
Response: 2143776  
Conc: 19.08 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS



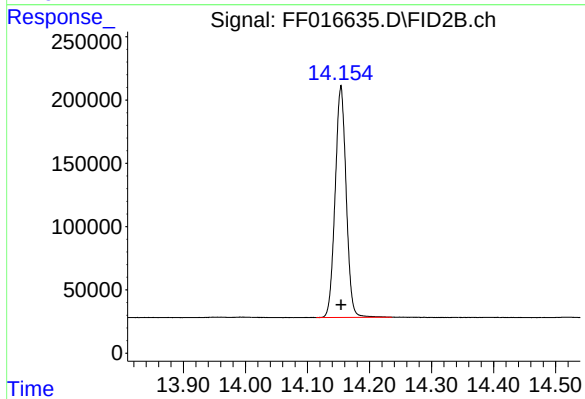
#6 N-OCTADECANE

R.T.: 11.639 min  
Delta R.T.: 0.000 min  
Response: 2219710  
Conc: 18.97 ug/ml



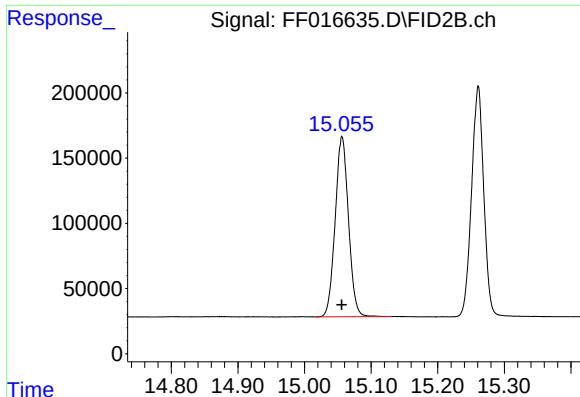
#7 N-EICOSANE

R.T.: 12.953 min  
Delta R.T.: 0.000 min  
Response: 2306165  
Conc: 18.89 ug/ml



#8 N-DOCOSANE

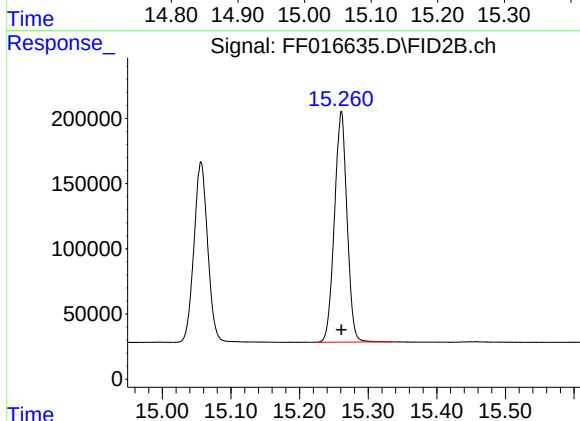
R.T.: 14.154 min  
Delta R.T.: 0.000 min  
Response: 2252846  
Conc: 18.90 ug/ml



#9 TETRACOSANE-d50 (SURROGATE)

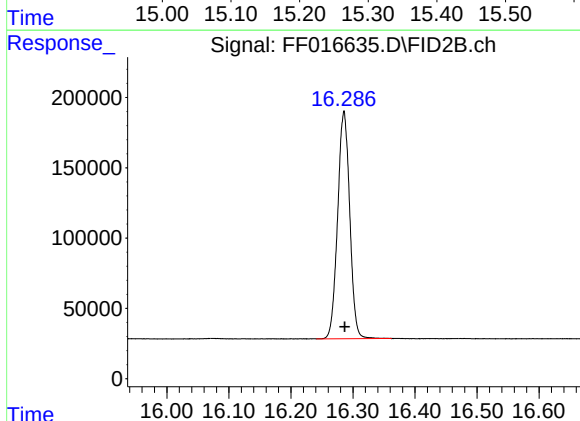
R.T.: 15.056 min  
Delta R.T.: 0.000 min  
Response: 1918098  
Conc: 18.36 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS



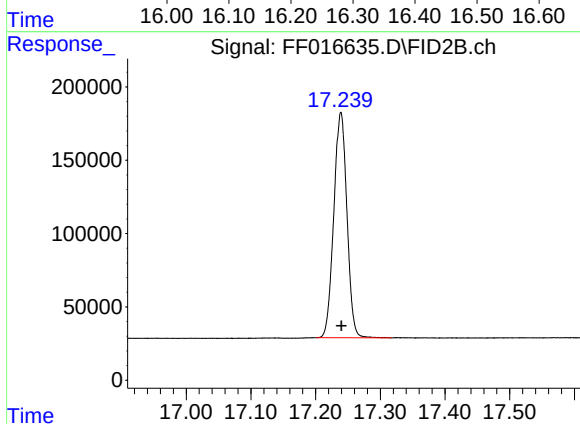
#10 N-TETRACOSANE

R.T.: 15.261 min  
Delta R.T.: 0.000 min  
Response: 2255410  
Conc: 19.03 ug/ml



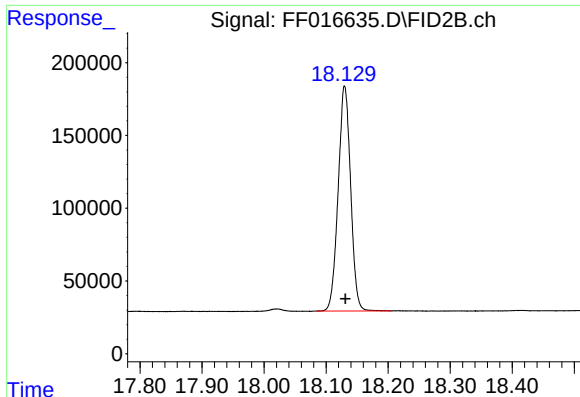
#11 N-HEXACOSANE

R.T.: 16.286 min  
Delta R.T.: -0.001 min  
Response: 2193001  
Conc: 19.09 ug/ml



#12 N-OCTACOSANE

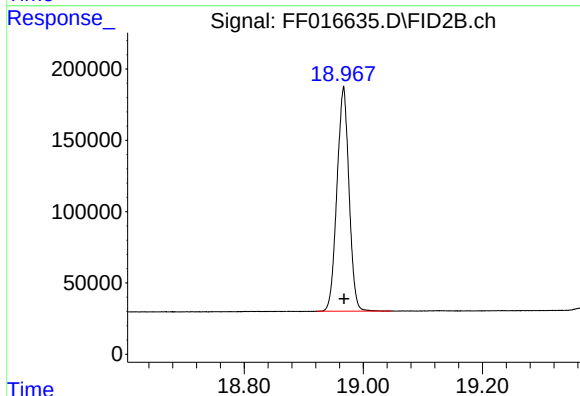
R.T.: 17.239 min  
Delta R.T.: -0.001 min  
Response: 2173702  
Conc: 19.08 ug/ml



#13 N-TRIACONTANE

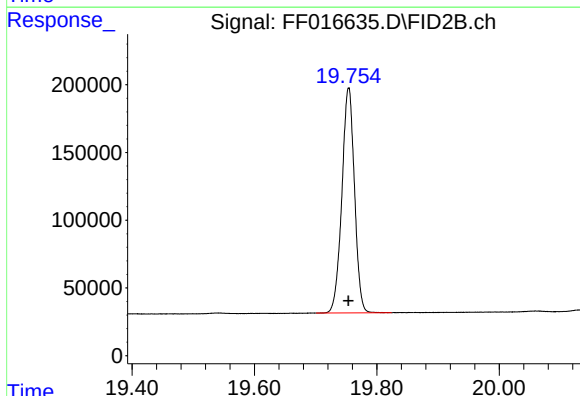
R.T.: 18.130 min  
Delta R.T.: 0.000 min  
Response: 2160479  
Conc: 19.23 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS



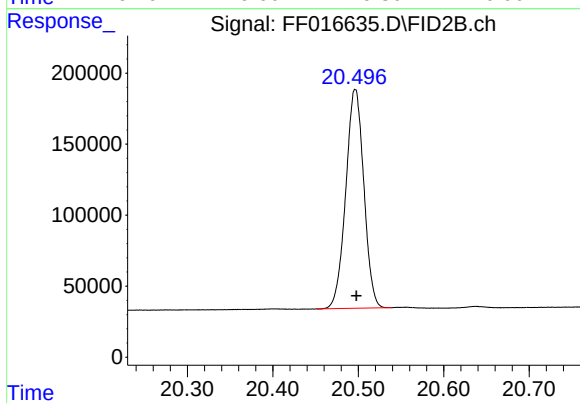
#14 N-DOTRIACONTANE

R.T.: 18.967 min  
Delta R.T.: 0.000 min  
Response: 2208427  
Conc: 20.60 ug/ml



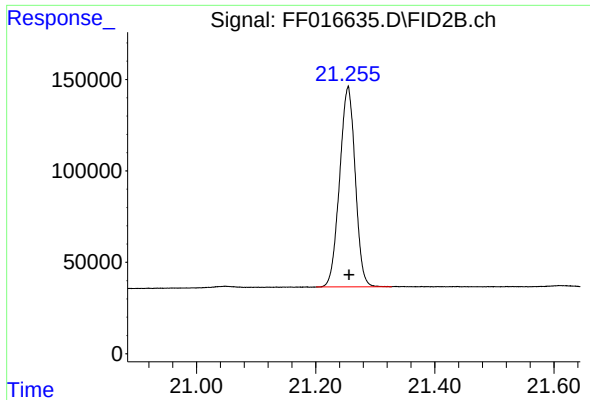
#15 N-TETRATRIACONTANE

R.T.: 19.754 min  
Delta R.T.: 0.000 min  
Response: 2373945  
Conc: 24.16 ug/ml



#16 N-HEXATRIACONTANE

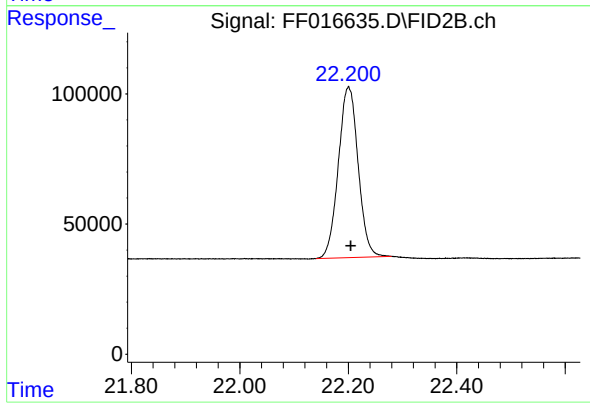
R.T.: 20.496 min  
Delta R.T.: -0.001 min  
Response: 2266182  
Conc: 26.50 ug/ml



#17 N-OCTATRIACONTANE

R.T.: 21.254 min  
Delta R.T.: -0.002 min  
Response: 1990960  
Conc: 25.94 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
PB170324BS



#18 N-TETRACONTANE

R.T.: 22.200 min  
Delta R.T.: -0.004 min  
Response: 1660480  
Conc: 24.33 ug/ml

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016635.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 12:52  
Sample : PB170324BS  
Misc :  
ALS Vial : 32 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br>#               | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-------------------------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1                       | 2.043       | 1.992        | 2.134      | BB       | 163811         | 1796883      | 75.69%         | 4.711%        |
| 2                       | 4.573       | 4.541        | 4.662      | BB       | 194476         | 2033504      | 85.66%         | 5.331%        |
| 3                       | 6.751       | 6.722        | 6.852      | BB       | 202027         | 2071244      | 87.25%         | 5.430%        |
| 4                       | 8.584       | 8.554        | 8.692      | BB       | 192537         | 2121414      | 89.36%         | 5.561%        |
| 5                       | 10.193      | 10.154       | 10.294     | BB       | 188465         | 2143776      | 90.30%         | 5.620%        |
| 6                       | 11.639      | 11.604       | 11.732     | BB       | 189509         | 2219710      | 93.50%         | 5.819%        |
| 7                       | 12.953      | 12.914       | 13.042     | BB       | 189203         | 2306165      | 97.14%         | 6.046%        |
| 8                       | 14.154      | 14.114       | 14.236     | BB       | 183142         | 2252846      | 94.90%         | 5.906%        |
| 9                       | 15.056      | 15.017       | 15.131     | BB       | 138508         | 1918098      | 80.80%         | 5.028%        |
| 10                      | 15.261      | 15.224       | 15.334     | BB       | 177194         | 2255410      | 95.01%         | 5.913%        |
| 11                      | 16.286      | 16.241       | 16.362     | BB       | 162229         | 2193001      | 92.38%         | 5.749%        |
| 12                      | 17.239      | 17.201       | 17.317     | BB       | 153882         | 2173702      | 91.56%         | 5.698%        |
| 13                      | 18.130      | 18.084       | 18.206     | BB       | 154986         | 2160479      | 91.01%         | 5.664%        |
| 14                      | 18.967      | 18.921       | 19.047     | BB       | 157876         | 2208427      | 93.03%         | 5.789%        |
| 15                      | 19.754      | 19.701       | 19.824     | BB       | 166064         | 2373945      | 100.00%        | 6.223%        |
| 16                      | 20.496      | 20.451       | 20.539     | BV       | 154354         | 2266182      | 95.46%         | 5.941%        |
| 17                      | 21.254      | 21.201       | 21.327     | BB       | 109379         | 1990960      | 83.87%         | 5.219%        |
| 18                      | 22.200      | 22.141       | 22.280     | BBA      | 65813          | 1660480      | 69.95%         | 4.353%        |
| Sum of corrected areas: |             |              |            |          |                |              | 38146225       |               |

FF102925.M Fri Oct 31 03:40:46 2025

## Report of Analysis

|                    |                                                  |            |                 |          |
|--------------------|--------------------------------------------------|------------|-----------------|----------|
| Client:            | AECOM                                            |            | Date Collected: | 10/27/25 |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 |            | Date Received:  | 10/27/25 |
| Client Sample ID:  | WASTEMS                                          |            | SDG No.:        | Q3434    |
| Lab Sample ID:     | Q3474-01MS                                       |            | Matrix:         | SOIL     |
| Analytical Method: | 8015D TPH                                        |            | % Solid:        | 87.2     |
| Sample Wt/Vol:     | 30.07 g                                          | Final Vol: | 1 mL            | Test:    |
| Prep Method:       | SW3541                                           | Prep Date  | 10/29/25        | TPH GC   |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana.      | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|----------------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |                |          |
| PHC               | Petroleum Hydrocarbons | 93000 | E    | 1  | 439      | 3240       | ug/kg   | 10/30/25 14:21 | PB170324 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |                |          |
| 16416-32-3        | TETRACOSANE-d50        | 11.3  |      |    | 37 - 130 | 56%        | SPK: 20 |                |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
 Data File : FF016638.D  
 Signal(s) : FID2B.ch  
 Acq On : 30 Oct 2025 14:21  
 Operator : YP\AJ  
 Sample : Q3474-01MS  
 Misc :  
 ALS Vial : 35 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 WASTEMS

### Manual Integrations APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
 Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e  
 Quant Time: Oct 31 02:21:49 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.058 | 1177063  | 11.266 ug/ml  |
| Target Compounds              |        |          |               |
| 1) N-OCTANE                   | 2.059  | 1769933  | 15.946 ug/ml  |
| 2) N-DECANE                   | 4.576  | 2153319  | 19.461 ug/ml  |
| 3) N-DODECANE                 | 6.752  | 2216916  | 19.957 ug/ml  |
| 4) N-TETRADECANE              | 8.585  | 2224368  | 19.911 ug/ml  |
| 5) N-HEXADECANE               | 10.194 | 2397697  | 21.340 ug/ml  |
| 6) N-OCTADECANE               | 11.641 | 2542507  | 21.726 ug/ml  |
| 7) N-EICOSANE                 | 12.954 | 2383135  | 19.517 ug/ml  |
| 8) N-DOCOSANE                 | 14.157 | 2527752  | 21.205 ug/ml  |
| 10) N-TETRACOSANE             | 15.263 | 2230504  | 18.825 ug/ml  |
| 11) N-HEXACOSANE              | 16.291 | 2159688  | 18.800 ug/ml  |
| 12) N-OCTACOSANE              | 17.244 | 2312212  | 20.290 ug/ml  |
| 13) N-TRIACONTANE             | 18.137 | 2840719  | 25.283 ug/ml  |
| 14) N-DOTRIACONTANE           | 18.974 | 3388503  | 31.610 ug/mlm |
| 15) N-TETRATRIACONTANE        | 19.763 | 2904871  | 29.563 ug/ml  |
| 16) N-HEXATRIACONTANE         | 20.506 | 2626543  | 30.717 ug/ml  |
| 17) N-OCTATRIACONTANE         | 21.266 | 2609516  | 33.999 ug/mlm |
| 18) N-TETRACONTANE            | 22.216 | 2877423  | 42.162 ug/mlm |
| -----                         |        |          |               |

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016638.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 14:21  
Operator : YP\AJ  
Sample : Q3474-01MS  
Misc :  
ALS Vial : 35 Sample Multiplier: 1

## Instrument :

FID\_F

## ClientSampleId :

WASTEMS

## Manual Integrations

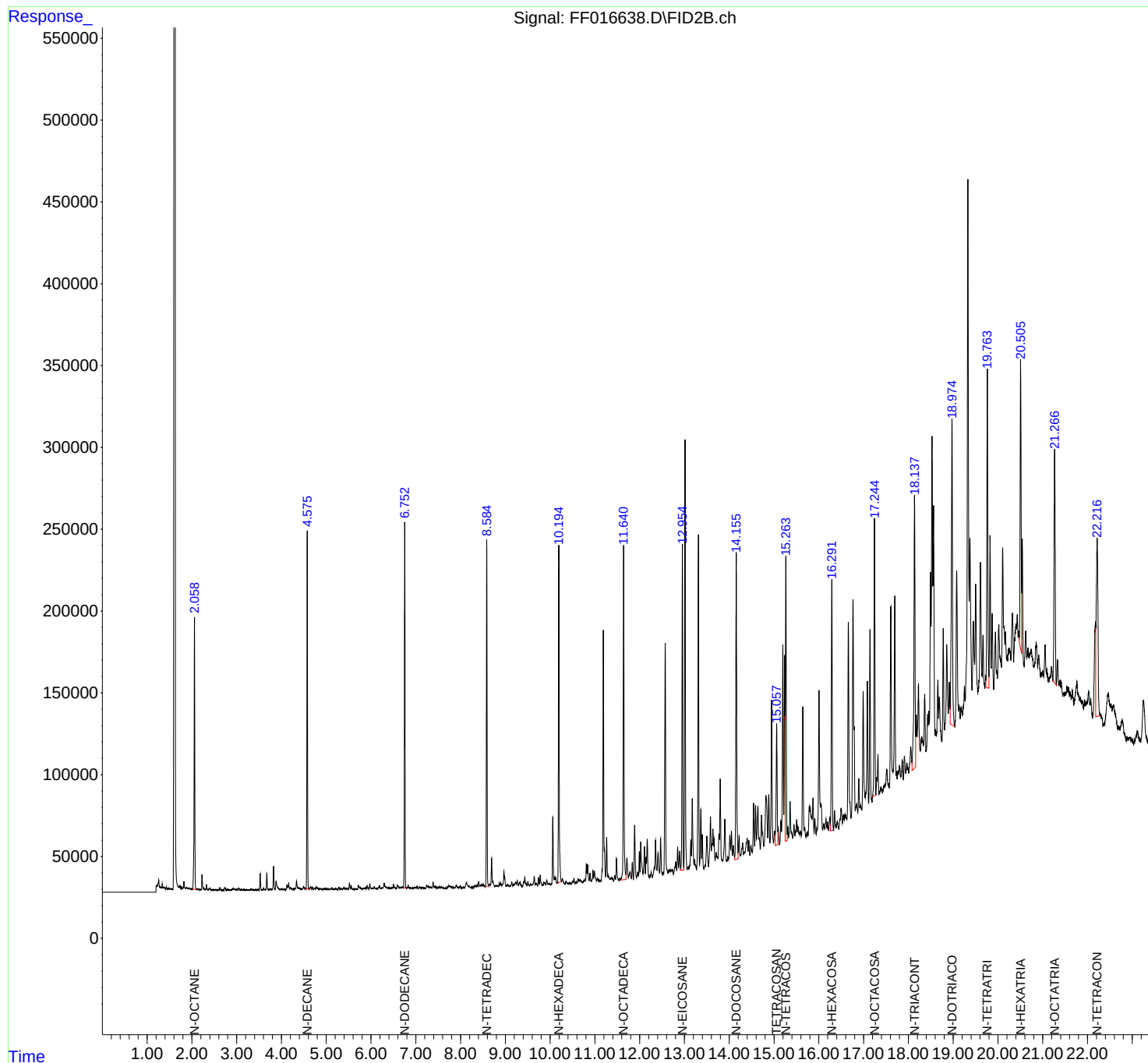
## APPROVED

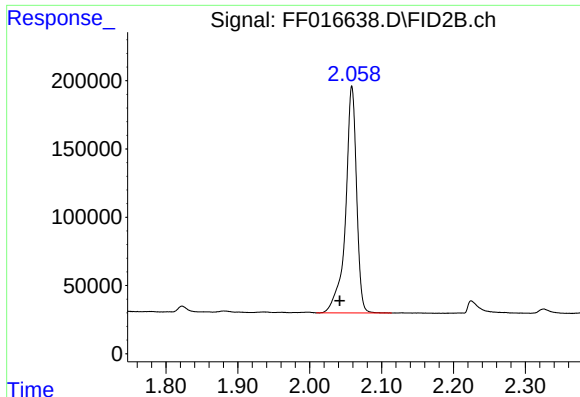
Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e  
Quant Time: Oct 31 02:21:49 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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





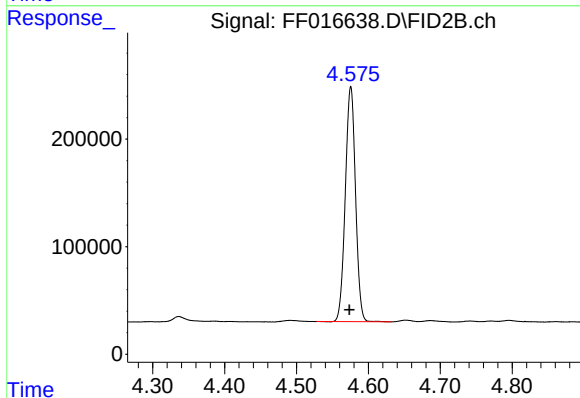
#1 N-OCTANE

R.T.: 2.059 min  
Delta R.T.: 0.017 min  
Response: 1769933  
Conc: 15.95 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS

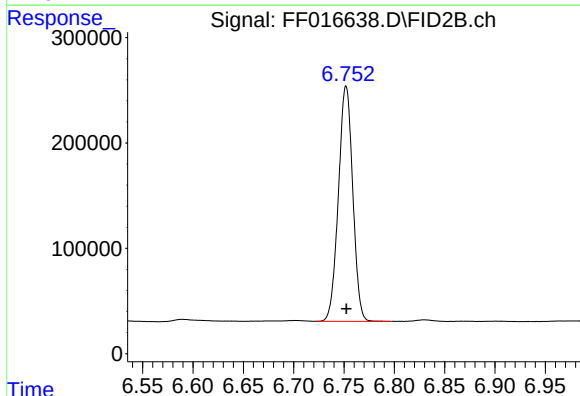
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



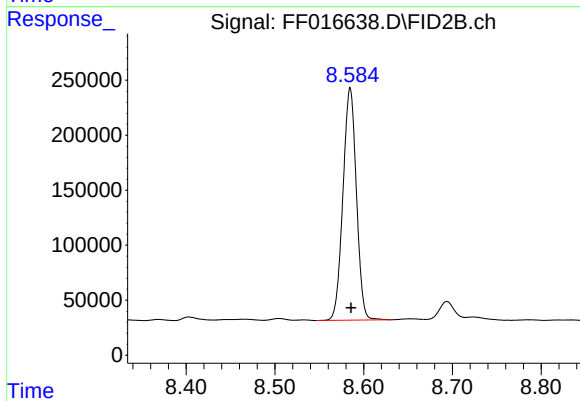
#2 N-DECANE

R.T.: 4.576 min  
Delta R.T.: 0.002 min  
Response: 2153319  
Conc: 19.46 ug/ml



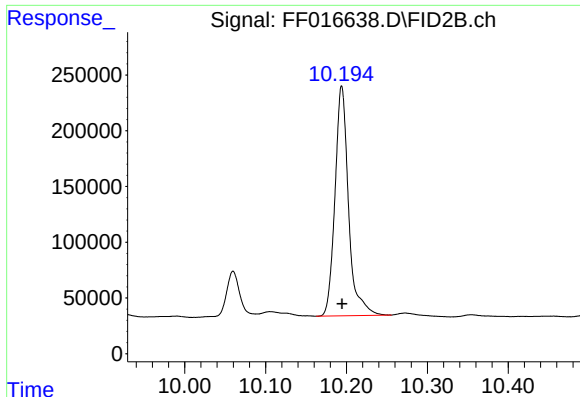
#3 N-DODECANE

R.T.: 6.752 min  
Delta R.T.: 0.000 min  
Response: 2216916  
Conc: 19.96 ug/ml



#4 N-TETRADECANE

R.T.: 8.585 min  
Delta R.T.: 0.000 min  
Response: 2224368  
Conc: 19.91 ug/ml



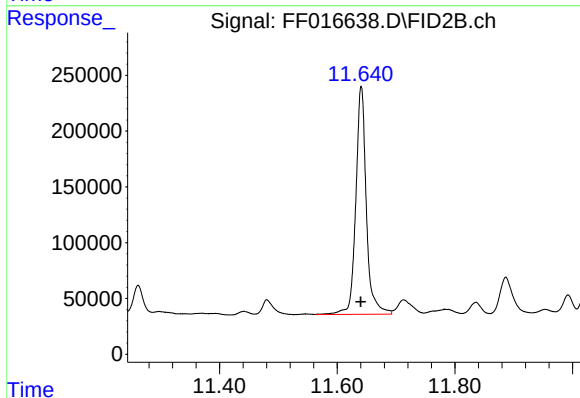
#5 N-HEXADECANE

R.T.: 10.194 min  
Delta R.T.: 0.000 min  
Response: 2397697  
Conc: 21.34 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS

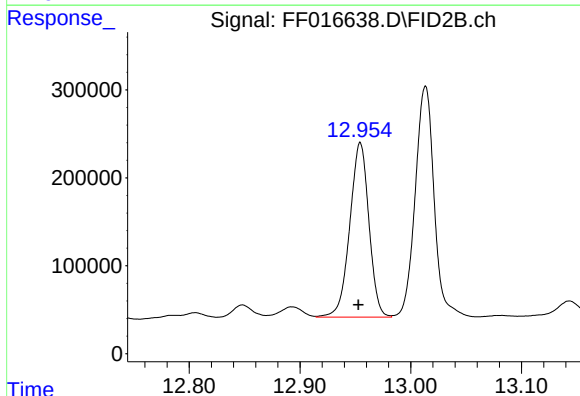
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



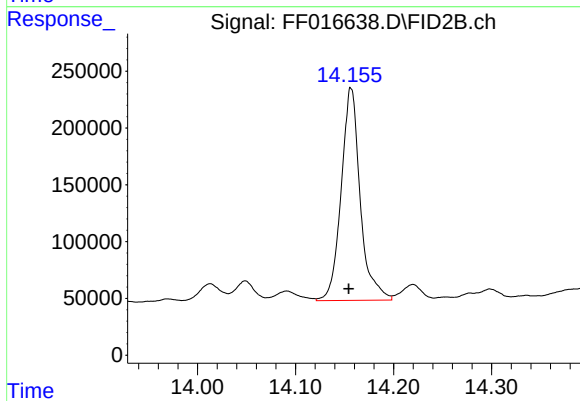
#6 N-OCTADECANE

R.T.: 11.641 min  
Delta R.T.: 0.000 min  
Response: 2542507  
Conc: 21.73 ug/ml



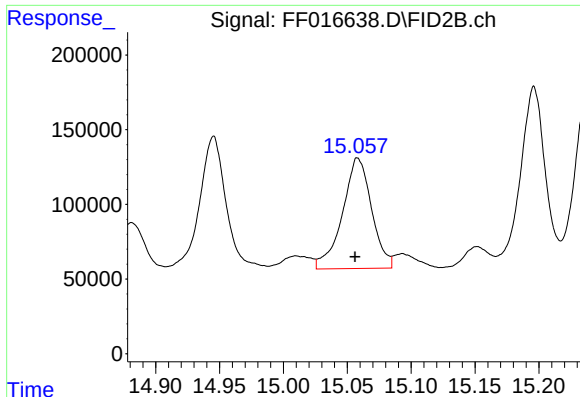
#7 N-EICOSANE

R.T.: 12.954 min  
Delta R.T.: 0.002 min  
Response: 2383135  
Conc: 19.52 ug/ml



#8 N-DOCOSANE

R.T.: 14.157 min  
Delta R.T.: 0.002 min  
Response: 2527752  
Conc: 21.21 ug/ml



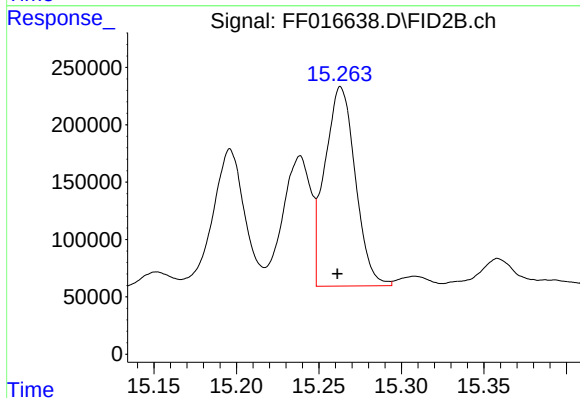
#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.058 min  
Delta R.T.: 0.002 min  
Response: 1177063  
Conc: 11.27 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS

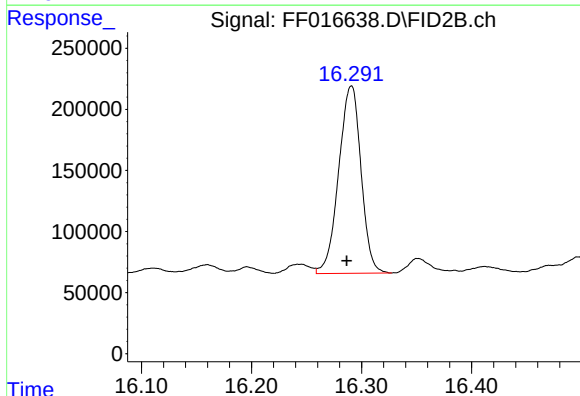
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



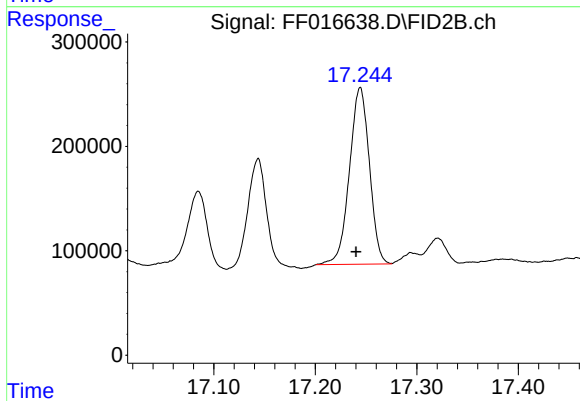
#10 N-TETRACOSANE

R.T.: 15.263 min  
Delta R.T.: 0.002 min  
Response: 2230504  
Conc: 18.82 ug/ml



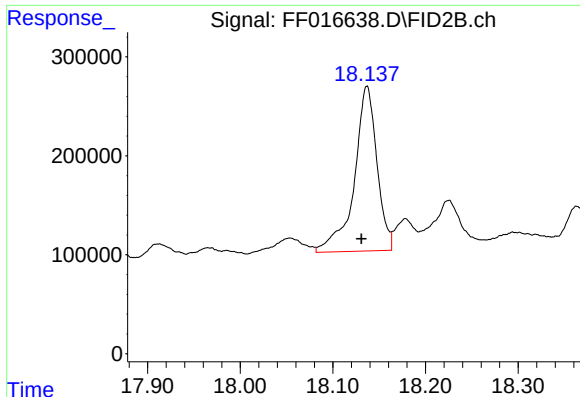
#11 N-HEXACOSANE

R.T.: 16.291 min  
Delta R.T.: 0.004 min  
Response: 2159688  
Conc: 18.80 ug/ml



#12 N-OCTACOSANE

R.T.: 17.244 min  
Delta R.T.: 0.004 min  
Response: 2312212  
Conc: 20.29 ug/ml



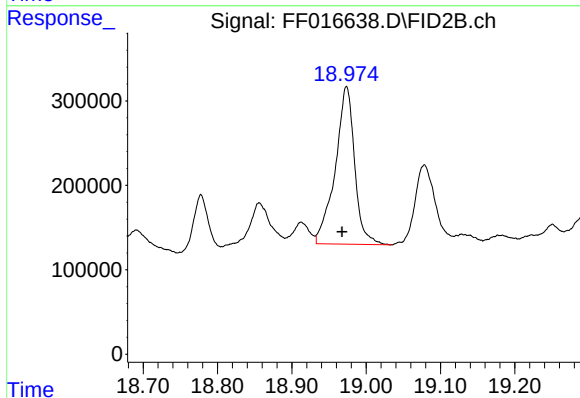
#13 N-TRIACONTANE

R.T.: 18.137 min  
Delta R.T.: 0.006 min  
Response: 2840719  
Conc: 25.28 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS

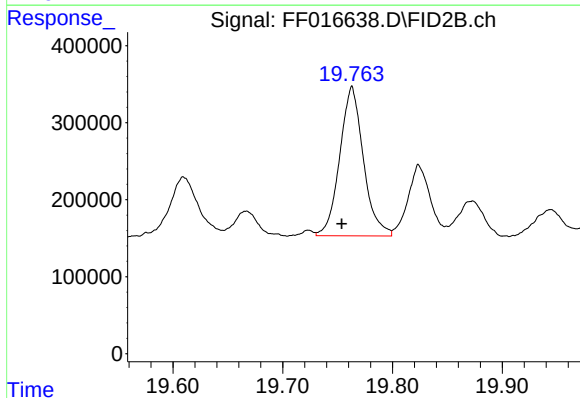
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



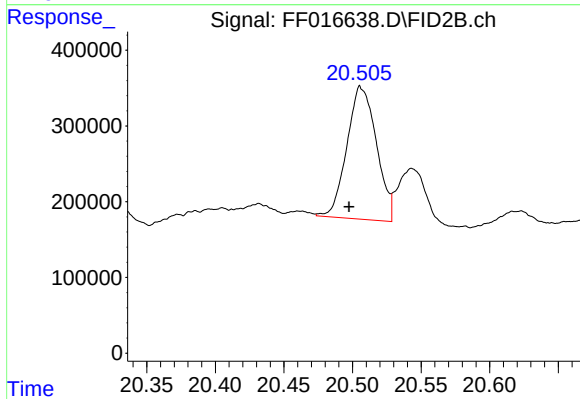
#14 N-DOTRIACONTANE

R.T.: 18.974 min  
Delta R.T.: 0.006 min  
Response: 3388503  
Conc: 31.61 ug/ml m



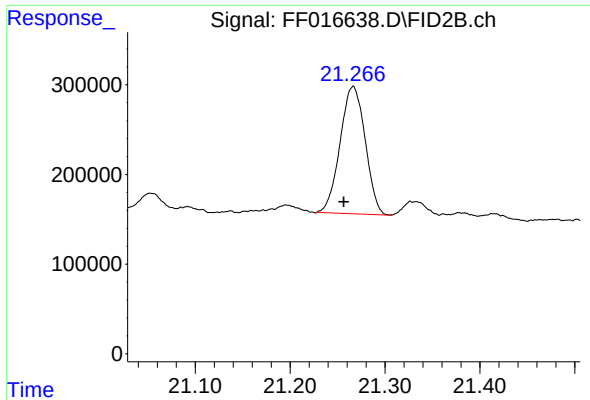
#15 N-TETRATRIACONTANE

R.T.: 19.763 min  
Delta R.T.: 0.009 min  
Response: 2904871  
Conc: 29.56 ug/ml



#16 N-HEXATRIACONTANE

R.T.: 20.506 min  
Delta R.T.: 0.008 min  
Response: 2626543  
Conc: 30.72 ug/ml



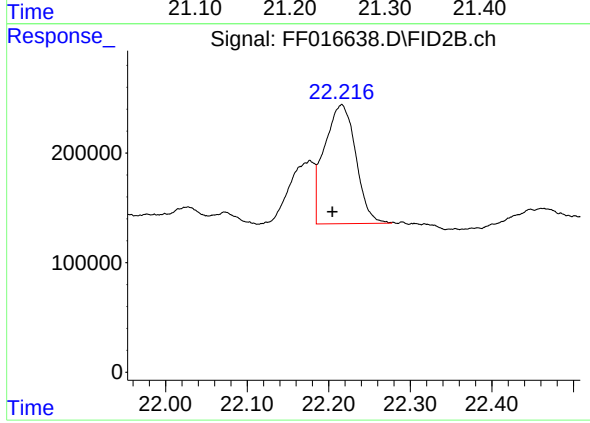
#17 N-OCTATRIACONTANE

R.T.: 21.266 min  
Delta R.T.: 0.010 min  
Response: 2609516  
Conc: 34.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS

Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



#18 N-TETRACONTANE

R.T.: 22.216 min  
Delta R.T.: 0.011 min  
Response: 2877423  
Conc: 42.16 ug/ml m

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMS  
Area Percent Report  
Manual IntegrationsAPPROVED  
Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025

rteres

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF10302  
Data File : FF016638.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 14:21  
Sample : Q3474-01MS  
Misc :  
ALS Vial : 35 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|--------|----------|-----------|---------|-------|-------------|-----------|-------------|------------|
| 1      | 1.936    | 1.906     | 1.952   | BV    | 376         | 2290      | 0.03%       | 0.001%     |
| 2      | 1.961    | 1.952     | 1.974   | PV    | 263         | 1579      | 0.02%       | 0.001%     |
| 3      | 1.997    | 1.974     | 2.013   | VV    | 463         | 4686      | 0.06%       | 0.002%     |
| 4      | 2.059    | 2.013     | 2.123   | PV    | 166312      | 1773335   | 21.20%      | 0.680%     |
| 5      | 2.128    | 2.123     | 2.149   | VV    | 253         | 2051      | 0.02%       | 0.001%     |
| 6      | 2.151    | 2.149     | 2.189   | VV    | 187         | 1225      | 0.01%       | 0.000%     |
| 7      | 2.208    | 2.189     | 2.215   | PV    | 181         | 1824      | 0.02%       | 0.001%     |
| 8      | 2.225    | 2.215     | 2.307   | VV    | 9112        | 109280    | 1.31%       | 0.042%     |
| 9      | 2.326    | 2.307     | 2.365   | VV    | 3207        | 35765     | 0.43%       | 0.014%     |
| 10     | 2.396    | 2.365     | 2.441   | VV    | 998         | 20269     | 0.24%       | 0.008%     |
| 11     | 2.468    | 2.441     | 2.493   | VV    | 282         | 5747      | 0.07%       | 0.002%     |
| 12     | 2.500    | 2.493     | 2.517   | VV    | 288         | 3056      | 0.04%       | 0.001%     |
| 13     | 2.529    | 2.517     | 2.558   | VV    | 257         | 4374      | 0.05%       | 0.002%     |
| 14     | 2.566    | 2.558     | 2.590   | VV    | 130         | 1595      | 0.02%       | 0.001%     |
| 15     | 2.624    | 2.590     | 2.685   | VV    | 1736        | 23187     | 0.28%       | 0.009%     |
| 16     | 2.690    | 2.685     | 2.700   | VV    | 100         | 590       | 0.01%       | 0.000%     |
| 17     | 2.734    | 2.700     | 2.773   | PV    | 1752        | 30262     | 0.36%       | 0.012%     |
| 18     | 2.800    | 2.773     | 2.821   | VV    | 522         | 9293      | 0.11%       | 0.004%     |
| 19     | 2.829    | 2.821     | 2.840   | VV    | 378         | 3422      | 0.04%       | 0.001%     |
| 20     | 2.843    | 2.840     | 2.871   | VV    | 339         | 5325      | 0.06%       | 0.002%     |
| 21     | 2.917    | 2.871     | 2.943   | VV    | 1007        | 24438     | 0.29%       | 0.009%     |
| 22     | 2.955    | 2.943     | 2.984   | VV    | 773         | 13575     | 0.16%       | 0.005%     |
| 23     | 3.010    | 2.984     | 3.024   | VV    | 613         | 11345     | 0.14%       | 0.004%     |
| 24     | 3.045    | 3.024     | 3.086   | VV    | 1525        | 25686     | 0.31%       | 0.010%     |
| 25     | 3.102    | 3.086     | 3.149   | VV    | 592         | 11685     | 0.14%       | 0.004%     |
| 26     | 3.165    | 3.149     | 3.201   | VV    | 446         | 8105      | 0.10%       | 0.003%     |
| 27     | 3.218    | 3.201     | 3.258   | VV    | 356         | 8082      | 0.10%       | 0.003%     |
| 28     | 3.262    | 3.258     | 3.287   | VV    | 173         | 1753      | 0.02%       | 0.001%     |
| 29     | 3.320    | 3.287     | 3.360   | VV    | 793         | 15066     | 0.18%       | 0.006%     |
| 30     | 3.364    | 3.360     | 3.382   | VV    | 211         | 2831      | 0.03%       | 0.001%     |
| 31     | 3.385    | 3.382     | 3.405   | VV    | 222         | 2375      | 0.03%       | 0.001%     |
| 32     | 3.416    | 3.405     | 3.426   | VV    | 246         | 2368      | 0.03%       | 0.001%     |
| 33     | 3.435    | 3.426     | 3.462   | VV    | 306         | 4566      | 0.05%       | 0.002%     |
| 34     | 3.468    | 3.462     | 3.475   | VV    | 215         | 1243      | 0.01%       | 0.000%     |
| 35     | 3.487    | 3.475     | 3.499   | VV    | 252         | 3027      | 0.04%       | 0.001%     |
| 36     | 3.525    | 3.499     | 3.580   | VV    | 10015       | 106848    | 1.28%       | 0.041%     |

|    |       |       |       |    |        |         |        |        |
|----|-------|-------|-------|----|--------|---------|--------|--------|
| 37 | 3.599 | 3.580 | 3.620 | VV | 1226   | 14254   | 0.17%  | 0.005% |
| 38 | 3.637 | 3.620 | 3.650 | VV | 468    | 5971    |        |        |
| 39 | 3.673 | 3.650 | 3.716 | VV | 10148  | 109702  |        |        |
| 40 | 3.733 | 3.716 | 3.743 | VV | 363    | 4886    |        |        |
| 41 | 3.759 | 3.743 | 3.789 | VV | 839    | 14689   |        |        |
| 42 | 3.823 | 3.789 | 3.857 | VV | 14584  | 159670  |        |        |
| 43 | 3.880 | 3.857 | 3.979 | VV | 5561   | 127880  | 1.53%  | 0.049% |
| 44 | 4.004 | 3.979 | 4.055 | VV | 552    | 17517   | 0.21%  | 0.007% |
| 45 | 4.062 | 4.055 | 4.074 | VV | 386    | 3246    | 0.04%  | 0.001% |
| 46 | 4.081 | 4.074 | 4.094 | VV | 297    | 2914    | 0.03%  | 0.001% |
| 47 | 4.123 | 4.094 | 4.142 | VV | 3136   | 46552   | 0.56%  | 0.018% |
| 48 | 4.161 | 4.142 | 4.186 | VV | 3976   | 58454   | 0.70%  | 0.022% |
| 49 | 4.199 | 4.186 | 4.253 | VV | 1260   | 31684   | 0.38%  | 0.012% |
| 50 | 4.274 | 4.253 | 4.283 | VV | 524    | 7737    | 0.09%  | 0.003% |
| 51 | 4.298 | 4.283 | 4.308 | VV | 721    | 9283    | 0.11%  | 0.004% |
| 52 | 4.336 | 4.308 | 4.375 | VV | 5490   | 89332   | 1.07%  | 0.034% |
| 53 | 4.385 | 4.375 | 4.401 | VV | 1127   | 15682   | 0.19%  | 0.006% |
| 54 | 4.407 | 4.401 | 4.429 | VV | 833    | 11451   | 0.14%  | 0.004% |
| 55 | 4.432 | 4.429 | 4.469 | VV | 632    | 12536   | 0.15%  | 0.005% |
| 56 | 4.491 | 4.469 | 4.547 | VV | 1831   | 48999   | 0.59%  | 0.019% |
| 57 | 4.576 | 4.547 | 4.607 | VV | 219412 | 2173070 | 25.97% | 0.833% |
| 58 | 4.611 | 4.607 | 4.633 | VV | 1013   | 11309   | 0.14%  | 0.004% |
| 59 | 4.652 | 4.633 | 4.670 | VV | 2036   | 28170   | 0.34%  | 0.011% |
| 60 | 4.687 | 4.670 | 4.724 | VV | 1638   | 29736   | 0.36%  | 0.011% |
| 61 | 4.741 | 4.724 | 4.756 | VV | 1181   | 15995   | 0.19%  | 0.006% |
| 62 | 4.771 | 4.756 | 4.782 | VV | 1200   | 14494   | 0.17%  | 0.006% |
| 63 | 4.796 | 4.782 | 4.846 | VV | 1797   | 33440   | 0.40%  | 0.013% |
| 64 | 4.861 | 4.846 | 4.875 | VV | 657    | 7584    | 0.09%  | 0.003% |
| 65 | 4.884 | 4.875 | 4.903 | VV | 499    | 5672    | 0.07%  | 0.002% |
| 66 | 4.916 | 4.903 | 4.930 | VV | 359    | 4045    | 0.05%  | 0.002% |
| 67 | 4.944 | 4.930 | 4.975 | VV | 645    | 13321   | 0.16%  | 0.005% |
| 68 | 4.980 | 4.975 | 5.015 | VV | 516    | 9618    | 0.11%  | 0.004% |
| 69 | 5.019 | 5.015 | 5.025 | VV | 382    | 2324    | 0.03%  | 0.001% |
| 70 | 5.042 | 5.025 | 5.061 | VV | 398    | 6927    | 0.08%  | 0.003% |
| 71 | 5.084 | 5.061 | 5.107 | VV | 499    | 8240    | 0.10%  | 0.003% |
| 72 | 5.128 | 5.107 | 5.150 | VV | 1233   | 15077   | 0.18%  | 0.006% |
| 73 | 5.153 | 5.150 | 5.178 | VV | 216    | 2288    | 0.03%  | 0.001% |
| 74 | 5.211 | 5.178 | 5.251 | VV | 734    | 16210   | 0.19%  | 0.006% |
| 75 | 5.280 | 5.251 | 5.318 | VV | 1360   | 23919   | 0.29%  | 0.009% |
| 76 | 5.337 | 5.318 | 5.356 | VV | 554    | 9657    | 0.12%  | 0.004% |
| 77 | 5.360 | 5.356 | 5.370 | VV | 413    | 2781    | 0.03%  | 0.001% |
| 78 | 5.397 | 5.370 | 5.418 | VV | 1352   | 21749   | 0.26%  | 0.008% |
| 79 | 5.421 | 5.418 | 5.446 | VV | 499    | 6713    | 0.08%  | 0.003% |
| 80 | 5.459 | 5.446 | 5.499 | VV | 724    | 13882   | 0.17%  | 0.005% |
| 81 | 5.519 | 5.499 | 5.542 | VV | 3860   | 46634   | 0.56%  | 0.018% |
| 82 | 5.559 | 5.542 | 5.583 | VV | 2442   | 29088   | 0.35%  | 0.011% |
| 83 | 5.591 | 5.583 | 5.608 | VV | 306    | 2991    | 0.04%  | 0.001% |
| 84 | 5.651 | 5.608 | 5.688 | PV | 504    | 9144    | 0.11%  | 0.004% |
| 85 | 5.720 | 5.688 | 5.745 | PV | 2276   | 38417   | 0.46%  | 0.015% |
| 86 | 5.754 | 5.745 | 5.770 | VV | 1180   | 14482   | 0.17%  | 0.006% |
| 87 | 5.781 | 5.770 | 5.807 | VV | 718    | 10466   | 0.13%  | 0.004% |
| 88 | 5.832 | 5.807 | 5.857 | VV | 600    | 13692   | 0.16%  | 0.005% |
| 89 | 5.874 | 5.857 | 5.891 | VV | 1280   | 15079   | 0.18%  | 0.006% |

Instrument :

FID\_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025

|     |       |       |       |    |        |         | Instrument :<br>FID_F                                                          |        | 1  |
|-----|-------|-------|-------|----|--------|---------|--------------------------------------------------------------------------------|--------|----|
|     |       |       |       |    |        |         | ClientSampleId :<br>WASTEMS                                                    |        |    |
|     |       |       |       |    |        |         | Manual IntegrationsAPPROVED                                                    |        |    |
|     |       |       |       |    |        |         | Reviewed By :Rahul Chavli 10/31/2025<br>Supervised By :Yogesh Patel 10/31/2025 |        |    |
|     |       |       |       |    | rteres |         |                                                                                |        | 2  |
| 90  | 5.911 | 5.891 | 5.936 | VV | 2252   | 30050   | 0.36%                                                                          | 0.012% | 3  |
| 91  | 5.941 | 5.936 | 5.954 | VV | 596    | 6259    |                                                                                |        | 4  |
| 92  | 5.974 | 5.954 | 6.018 | VV | 3297   | 47800   |                                                                                |        | 5  |
| 93  | 6.031 | 6.018 | 6.049 | VV | 686    | 8615    |                                                                                |        | 6  |
| 94  | 6.074 | 6.049 | 6.105 | VV | 1515   | 23942   |                                                                                |        | 7  |
| 95  | 6.126 | 6.105 | 6.144 | VV | 452    | 8369    |                                                                                |        | 8  |
| 96  | 6.187 | 6.144 | 6.224 | VV | 2259   | 44208   | 0.53%                                                                          | 0.017% | 9  |
| 97  | 6.228 | 6.224 | 6.239 | VV | 503    | 4282    | 0.05%                                                                          | 0.002% | 10 |
| 98  | 6.253 | 6.239 | 6.267 | VV | 926    | 12129   | 0.14%                                                                          | 0.005% | 11 |
| 99  | 6.294 | 6.267 | 6.382 | VV | 3625   | 103775  | 1.24%                                                                          | 0.040% | 12 |
| 100 | 6.396 | 6.382 | 6.415 | VV | 1294   | 16628   | 0.20%                                                                          | 0.006% | 13 |
| 101 | 6.432 | 6.415 | 6.449 | VV | 614    | 10287   | 0.12%                                                                          | 0.004% | 14 |
| 102 | 6.466 | 6.449 | 6.481 | VV | 885    | 12184   | 0.15%                                                                          | 0.005% | 15 |
| 103 | 6.505 | 6.481 | 6.526 | VV | 2915   | 39754   | 0.48%                                                                          | 0.015% | 16 |
| 104 | 6.531 | 6.526 | 6.566 | VV | 1061   | 15507   | 0.19%                                                                          | 0.006% | 17 |
| 105 | 6.590 | 6.566 | 6.651 | VV | 2483   | 59951   | 0.72%                                                                          | 0.023% | 18 |
| 106 | 6.702 | 6.651 | 6.722 | VV | 1357   | 38408   | 0.46%                                                                          | 0.015% | 19 |
| 107 | 6.752 | 6.722 | 6.803 | VV | 223961 | 2241660 | 26.79%                                                                         | 0.859% | 20 |
| 108 | 6.806 | 6.803 | 6.810 | VV | 513    | 1919    | 0.02%                                                                          | 0.001% | 21 |
| 109 | 6.830 | 6.810 | 6.853 | VV | 1889   | 27829   | 0.33%                                                                          | 0.011% | 22 |
| 110 | 6.868 | 6.853 | 6.887 | VV | 624    | 10278   | 0.12%                                                                          | 0.004% | 23 |
| 111 | 6.893 | 6.887 | 6.895 | VV | 561    | 2360    | 0.03%                                                                          | 0.001% | 24 |
| 112 | 6.901 | 6.895 | 6.927 | VV | 655    | 8499    | 0.10%                                                                          | 0.003% | 25 |
| 113 | 6.979 | 6.927 | 6.999 | VV | 814    | 23355   | 0.28%                                                                          | 0.009% | 26 |
| 114 | 7.027 | 6.999 | 7.060 | VV | 1141   | 23668   | 0.28%                                                                          | 0.009% | 27 |
| 115 | 7.081 | 7.060 | 7.127 | VV | 1131   | 25172   | 0.30%                                                                          | 0.010% | 28 |
| 116 | 7.129 | 7.127 | 7.133 | VV | 338    | 966     | 0.01%                                                                          | 0.000% | 29 |
| 117 | 7.154 | 7.133 | 7.174 | VV | 639    | 11163   | 0.13%                                                                          | 0.004% | 30 |
| 118 | 7.192 | 7.174 | 7.212 | VV | 362    | 5652    | 0.07%                                                                          | 0.002% | 31 |
| 119 | 7.241 | 7.212 | 7.258 | VV | 2223   | 28934   | 0.35%                                                                          | 0.011% | 32 |
| 120 | 7.273 | 7.258 | 7.322 | VV | 1415   | 39271   | 0.47%                                                                          | 0.015% | 33 |
| 121 | 7.332 | 7.322 | 7.355 | VV | 826    | 13234   | 0.16%                                                                          | 0.005% | 34 |
| 122 | 7.387 | 7.355 | 7.407 | VV | 3946   | 51059   | 0.61%                                                                          | 0.020% | 35 |
| 123 | 7.418 | 7.407 | 7.426 | VV | 1127   | 11376   | 0.14%                                                                          | 0.004% | 36 |
| 124 | 7.437 | 7.426 | 7.463 | VV | 1170   | 20551   | 0.25%                                                                          | 0.008% | 37 |
| 125 | 7.477 | 7.463 | 7.507 | VV | 870    | 15021   | 0.18%                                                                          | 0.006% | 38 |
| 126 | 7.525 | 7.507 | 7.547 | VV | 1425   | 17570   | 0.21%                                                                          | 0.007% | 39 |
| 127 | 7.569 | 7.547 | 7.592 | VV | 1330   | 19870   | 0.24%                                                                          | 0.008% | 40 |
| 128 | 7.597 | 7.592 | 7.632 | VV | 588    | 7250    | 0.09%                                                                          | 0.003% | 41 |
| 129 | 7.663 | 7.632 | 7.669 | PV | 234    | 2871    | 0.03%                                                                          | 0.001% | 42 |
| 130 | 7.678 | 7.669 | 7.685 | VV | 228    | 1723    | 0.02%                                                                          | 0.001% | 43 |
| 131 | 7.702 | 7.685 | 7.715 | VV | 1168   | 11887   | 0.14%                                                                          | 0.005% | 44 |
| 132 | 7.739 | 7.715 | 7.784 | VV | 1528   | 45207   | 0.54%                                                                          | 0.017% | 45 |
| 133 | 7.789 | 7.784 | 7.810 | VV | 805    | 9893    | 0.12%                                                                          | 0.004% | 46 |
| 134 | 7.826 | 7.810 | 7.851 | VV | 760    | 12383   | 0.15%                                                                          | 0.005% | 47 |
| 135 | 7.854 | 7.851 | 7.870 | VV | 302    | 2797    | 0.03%                                                                          | 0.001% | 48 |
| 136 | 7.900 | 7.870 | 7.972 | VV | 1736   | 41027   | 0.49%                                                                          | 0.016% | 49 |
| 137 | 7.992 | 7.972 | 8.024 | VV | 1105   | 16532   | 0.20%                                                                          | 0.006% | 50 |
| 138 | 8.047 | 8.024 | 8.057 | VV | 441    | 5907    | 0.07%                                                                          | 0.002% | 51 |
| 139 | 8.066 | 8.057 | 8.084 | VV | 436    | 4291    | 0.05%                                                                          | 0.002% | 52 |
| 140 | 8.132 | 8.084 | 8.173 | VV | 3245   | 89777   | 1.07%                                                                          | 0.034% | 53 |
| 141 | 8.187 | 8.173 | 8.221 | VV | 1583   | 24072   | 0.29%                                                                          | 0.009% | 54 |



|     |        |        |        |    |        |         | Instrument :<br>FID_F       |            |
|-----|--------|--------|--------|----|--------|---------|-----------------------------|------------|
|     |        |        |        |    |        |         | ClientSampleId :<br>WASTEMS |            |
| 195 | 10.557 | 10.549 | 10.562 | VV | 764    | 5450    | 0.07%                       | 0.002%     |
|     |        |        |        |    |        |         | Manual IntegrationsAPPROVED |            |
| 196 | 10.585 | 10.562 | 10.602 | VV | 927    | 15777   |                             |            |
| 197 | 10.624 | 10.602 | 10.651 | VV | 2474   | 52167   |                             |            |
| 198 | 10.666 | 10.651 | 10.697 | VV | 2335   | 46327   |                             |            |
| 199 | 10.704 | 10.697 | 10.724 | VV | 1098   | 11559   | Reviewed By :Rahul Chavli   | 10/31/2025 |
| 200 | 10.753 | 10.724 | 10.766 | VV | 1900   | 24710   | Supervised By :Yogesh Patel | 10/31/2025 |
|     |        |        |        |    |        |         |                             |            |
| 201 | 10.782 | 10.766 | 10.792 | VV | 2186   | 26874   | 0.32%                       | 0.010%     |
| 202 | 10.809 | 10.792 | 10.824 | VV | 11455  | 139144  | 1.66%                       | 0.053%     |
| 203 | 10.837 | 10.824 | 10.871 | VV | 11108  | 157802  | 1.89%                       | 0.060%     |
| 204 | 10.889 | 10.871 | 10.912 | VV | 5668   | 71797   | 0.86%                       | 0.028%     |
| 205 | 10.918 | 10.912 | 10.922 | VV | 916    | 5629    | 0.07%                       | 0.002%     |
|     |        |        |        |    |        |         |                             |            |
| 206 | 10.957 | 10.922 | 10.971 | VV | 7247   | 101815  | 1.22%                       | 0.039%     |
| 207 | 10.989 | 10.971 | 11.035 | VV | 6657   | 128671  | 1.54%                       | 0.049%     |
| 208 | 11.053 | 11.035 | 11.071 | VV | 2166   | 31143   | 0.37%                       | 0.012%     |
| 209 | 11.086 | 11.071 | 11.102 | VV | 1870   | 20859   | 0.25%                       | 0.008%     |
| 210 | 11.115 | 11.102 | 11.136 | VV | 909    | 11092   | 0.13%                       | 0.004%     |
|     |        |        |        |    |        |         |                             |            |
| 211 | 11.160 | 11.136 | 11.163 | VV | 7343   | 63071   | 0.75%                       | 0.024%     |
| 212 | 11.187 | 11.163 | 11.208 | VV | 153440 | 1754903 | 20.98%                      | 0.673%     |
| 213 | 11.212 | 11.208 | 11.239 | VV | 19573  | 204604  | 2.45%                       | 0.078%     |
| 214 | 11.262 | 11.239 | 11.286 | VV | 26959  | 331765  | 3.97%                       | 0.127%     |
| 215 | 11.297 | 11.286 | 11.334 | VV | 3368   | 67850   | 0.81%                       | 0.026%     |
|     |        |        |        |    |        |         |                             |            |
| 216 | 11.342 | 11.334 | 11.349 | VV | 1304   | 10736   | 0.13%                       | 0.004%     |
| 217 | 11.371 | 11.349 | 11.381 | VV | 1684   | 25980   | 0.31%                       | 0.010%     |
| 218 | 11.392 | 11.381 | 11.421 | VV | 1410   | 19140   | 0.23%                       | 0.007%     |
| 219 | 11.441 | 11.421 | 11.460 | PV | 3185   | 38799   | 0.46%                       | 0.015%     |
| 220 | 11.480 | 11.460 | 11.527 | VV | 13405  | 174879  | 2.09%                       | 0.067%     |
|     |        |        |        |    |        |         |                             |            |
| 221 | 11.547 | 11.527 | 11.564 | VV | 532    | 6849    | 0.08%                       | 0.003%     |
| 222 | 11.641 | 11.564 | 11.692 | VV | 204432 | 2544681 | 30.42%                      | 0.976%     |
| 223 | 11.713 | 11.692 | 11.748 | VV | 12824  | 221291  | 2.65%                       | 0.085%     |
| 224 | 11.784 | 11.748 | 11.812 | VV | 4038   | 96739   | 1.16%                       | 0.037%     |
| 225 | 11.836 | 11.812 | 11.861 | VV | 10294  | 127061  | 1.52%                       | 0.049%     |
|     |        |        |        |    |        |         |                             |            |
| 226 | 11.887 | 11.861 | 11.932 | VV | 32775  | 485208  | 5.80%                       | 0.186%     |
| 227 | 11.953 | 11.932 | 11.971 | VV | 3739   | 51743   | 0.62%                       | 0.020%     |
| 228 | 11.992 | 11.971 | 12.007 | VV | 16451  | 186984  | 2.23%                       | 0.072%     |
| 229 | 12.023 | 12.007 | 12.073 | VV | 22319  | 396667  | 4.74%                       | 0.152%     |
| 230 | 12.106 | 12.073 | 12.125 | VV | 19186  | 288012  | 3.44%                       | 0.110%     |
|     |        |        |        |    |        |         |                             |            |
| 231 | 12.142 | 12.125 | 12.152 | VV | 12654  | 138280  | 1.65%                       | 0.053%     |
| 232 | 12.169 | 12.152 | 12.210 | VV | 23535  | 333701  | 3.99%                       | 0.128%     |
| 233 | 12.222 | 12.210 | 12.234 | VV | 882    | 9462    | 0.11%                       | 0.004%     |
| 234 | 12.256 | 12.234 | 12.278 | VV | 2887   | 40072   | 0.48%                       | 0.015%     |
| 235 | 12.327 | 12.278 | 12.335 | PV | 5948   | 94629   | 1.13%                       | 0.036%     |
|     |        |        |        |    |        |         |                             |            |
| 236 | 12.354 | 12.335 | 12.385 | VV | 22337  | 335275  | 4.01%                       | 0.129%     |
| 237 | 12.410 | 12.385 | 12.444 | VV | 14142  | 264528  | 3.16%                       | 0.101%     |
| 238 | 12.467 | 12.444 | 12.512 | VV | 22862  | 325618  | 3.89%                       | 0.125%     |
| 239 | 12.528 | 12.512 | 12.536 | VV | 1648   | 19857   | 0.24%                       | 0.008%     |
| 240 | 12.571 | 12.536 | 12.627 | VV | 141741 | 1945894 | 23.26%                      | 0.746%     |
|     |        |        |        |    |        |         |                             |            |
| 241 | 12.643 | 12.627 | 12.654 | VV | 2716   | 33803   | 0.40%                       | 0.013%     |
| 242 | 12.668 | 12.654 | 12.686 | VV | 3061   | 45683   | 0.55%                       | 0.018%     |
| 243 | 12.698 | 12.686 | 12.703 | VV | 2382   | 21331   | 0.25%                       | 0.008%     |
| 244 | 12.715 | 12.703 | 12.729 | VV | 2710   | 36958   | 0.44%                       | 0.014%     |
| 245 | 12.737 | 12.729 | 12.756 | VV | 2392   | 23052   | 0.28%                       | 0.009%     |
|     |        |        |        |    |        |         |                             |            |
| 246 | 12.784 | 12.756 | 12.792 | PV | 4215   | 52200   | 0.62%                       | 0.020%     |



|     |        |        |        |    |        |         |        |        |  |
|-----|--------|--------|--------|----|--------|---------|--------|--------|--|
|     |        |        |        |    | rters  |         |        |        |  |
| 300 | 15.358 | 15.325 | 15.413 | VV | 25402  | 518802  | 6.20%  | 0.199% |  |
| 301 | 15.446 | 15.413 | 15.465 | VV | 10509  | 195249  |        |        |  |
| 302 | 15.482 | 15.465 | 15.487 | VV | 6465   | 73123   |        |        |  |
| 303 | 15.505 | 15.487 | 15.524 | VV | 13326  | 202633  |        |        |  |
| 304 | 15.535 | 15.524 | 15.566 | VV | 8599   | 151340  |        |        |  |
| 305 | 15.582 | 15.566 | 15.609 | VV | 5364   | 112958  |        |        |  |
| 306 | 15.642 | 15.609 | 15.672 | VV | 80902  | 1163380 | 13.91% | 0.446% |  |
| 307 | 15.684 | 15.672 | 15.706 | VV | 7230   | 98094   | 1.17%  | 0.038% |  |
| 308 | 15.741 | 15.706 | 15.757 | VV | 3075   | 66854   | 0.80%  | 0.026% |  |
| 309 | 15.785 | 15.757 | 15.796 | VV | 18962  | 247342  | 2.96%  | 0.095% |  |
| 310 | 15.808 | 15.796 | 15.827 | VV | 18963  | 301446  | 3.60%  | 0.116% |  |
| 311 | 15.833 | 15.827 | 15.847 | VV | 12690  | 145221  | 1.74%  | 0.056% |  |
| 312 | 15.870 | 15.847 | 15.893 | VV | 23539  | 383905  | 4.59%  | 0.147% |  |
| 313 | 15.910 | 15.893 | 15.939 | VV | 10569  | 150715  | 1.80%  | 0.058% |  |
| 314 | 15.955 | 15.939 | 15.965 | VV | 4504   | 46050   | 0.55%  | 0.018% |  |
| 315 | 16.005 | 15.965 | 16.040 | VV | 88033  | 1495818 | 17.88% | 0.573% |  |
| 316 | 16.052 | 16.040 | 16.087 | VV | 18162  | 319775  | 3.82%  | 0.123% |  |
| 317 | 16.111 | 16.087 | 16.131 | VV | 5724   | 105037  | 1.26%  | 0.040% |  |
| 318 | 16.160 | 16.131 | 16.179 | VV | 8243   | 149900  | 1.79%  | 0.057% |  |
| 319 | 16.196 | 16.179 | 16.220 | VV | 6270   | 86143   | 1.03%  | 0.033% |  |
| 320 | 16.244 | 16.220 | 16.259 | VV | 7762   | 118408  | 1.42%  | 0.045% |  |
| 321 | 16.291 | 16.259 | 16.327 | VV | 153523 | 2163897 | 25.86% | 0.830% |  |
| 322 | 16.351 | 16.327 | 16.390 | VV | 11672  | 171558  | 2.05%  | 0.066% |  |
| 323 | 16.412 | 16.390 | 16.444 | VV | 4750   | 79998   | 0.96%  | 0.031% |  |
| 324 | 16.500 | 16.444 | 16.529 | PV | 11990  | 295498  | 3.53%  | 0.113% |  |
| 325 | 16.547 | 16.529 | 16.565 | VV | 7094   | 108126  | 1.29%  | 0.041% |  |
| 326 | 16.584 | 16.565 | 16.598 | VV | 6922   | 118172  | 1.41%  | 0.045% |  |
| 327 | 16.602 | 16.598 | 16.627 | VV | 5827   | 86178   | 1.03%  | 0.033% |  |
| 328 | 16.660 | 16.627 | 16.718 | VV | 123787 | 2054698 | 24.56% | 0.788% |  |
| 329 | 16.764 | 16.718 | 16.785 | VV | 136944 | 2296682 | 27.45% | 0.880% |  |
| 330 | 16.790 | 16.785 | 16.815 | VV | 58934  | 581658  | 6.95%  | 0.223% |  |
| 331 | 16.849 | 16.815 | 16.871 | VV | 11250  | 305187  | 3.65%  | 0.117% |  |
| 332 | 16.893 | 16.871 | 16.914 | VV | 26217  | 403963  | 4.83%  | 0.155% |  |
| 333 | 16.932 | 16.914 | 16.961 | VV | 9576   | 231539  | 2.77%  | 0.089% |  |
| 334 | 16.991 | 16.961 | 17.035 | VV | 78554  | 1428196 | 17.07% | 0.547% |  |
| 335 | 17.085 | 17.035 | 17.113 | VV | 83978  | 1539174 | 18.40% | 0.590% |  |
| 336 | 17.144 | 17.113 | 17.187 | VV | 115177 | 1764434 | 21.09% | 0.676% |  |
| 337 | 17.244 | 17.187 | 17.275 | VV | 181936 | 2955580 | 35.33% | 1.133% |  |
| 338 | 17.294 | 17.275 | 17.304 | VV | 23135  | 328373  | 3.92%  | 0.126% |  |
| 339 | 17.321 | 17.304 | 17.342 | VV | 36683  | 596204  | 7.13%  | 0.229% |  |
| 340 | 17.385 | 17.342 | 17.420 | VV | 16023  | 659906  | 7.89%  | 0.253% |  |
| 341 | 17.449 | 17.420 | 17.453 | VV | 16424  | 291555  | 3.48%  | 0.112% |  |
| 342 | 17.458 | 17.453 | 17.466 | VV | 16853  | 121772  | 1.46%  | 0.047% |  |
| 343 | 17.476 | 17.466 | 17.488 | VV | 17502  | 215959  | 2.58%  | 0.083% |  |
| 344 | 17.519 | 17.488 | 17.545 | VV | 25707  | 722432  | 8.64%  | 0.277% |  |
| 345 | 17.554 | 17.545 | 17.573 | VV | 17008  | 264445  | 3.16%  | 0.101% |  |
| 346 | 17.608 | 17.573 | 17.656 | VV | 124675 | 2451008 | 29.30% | 0.940% |  |
| 347 | 17.697 | 17.656 | 17.722 | VV | 130109 | 2327880 | 27.82% | 0.892% |  |
| 348 | 17.733 | 17.722 | 17.749 | VV | 22987  | 331545  | 3.96%  | 0.127% |  |
| 349 | 17.765 | 17.749 | 17.778 | VV | 22396  | 356497  | 4.26%  | 0.137% |  |
| 350 | 17.807 | 17.778 | 17.833 | VV | 25084  | 729386  | 8.72%  | 0.280% |  |
| 351 | 17.866 | 17.833 | 17.887 | VV | 27420  | 707995  | 8.46%  | 0.271% |  |

Page 7

Instrument :

FID\_F

ClientSampleId :

WASTEMS

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

|     |        |        |        |    |        | Instrument : FID_F          |         |        |
|-----|--------|--------|--------|----|--------|-----------------------------|---------|--------|
|     |        |        |        |    |        | ClientSampleId : WASTEMS    |         |        |
| 352 | 17.912 | 17.887 | 17.942 | VV | 29928  | 783196                      | 9.36%   | 0.300% |
| 353 | 17.965 | 17.942 | 17.980 | VV | 25550  | 525796                      | 6.13%   | 0.200% |
| 354 | 17.985 | 17.980 | 18.007 | VV | 22747  | 341625                      | 4.24%   | 0.140% |
| 355 | 18.054 | 18.007 | 18.082 | VV | 34525  | 1211509                     | 14.31%  | 0.470% |
|     |        |        |        |    |        | Manual IntegrationsAPPROVED |         |        |
| 356 | 18.137 | 18.082 | 18.163 | VV | 187760 | 3839500                     | 45.78%  | 1.510% |
| 357 | 18.178 | 18.163 | 18.193 | VV | 53040  | 827706                      | 9.36%   | 0.300% |
| 358 | 18.225 | 18.193 | 18.265 | VV | 71219  | 2040074                     | 24.38%  | 0.782% |
| 359 | 18.295 | 18.265 | 18.336 | VV | 38405  | 1494436                     | 17.86%  | 0.573% |
| 360 | 18.363 | 18.336 | 18.393 | VV | 63546  | 1502768                     | 17.96%  | 0.576% |
|     |        |        |        |    |        |                             |         |        |
| 361 | 18.430 | 18.393 | 18.445 | VV | 50945  | 1217876                     | 14.56%  | 0.467% |
| 362 | 18.460 | 18.445 | 18.470 | VV | 52692  | 733341                      | 8.77%   | 0.281% |
| 363 | 18.494 | 18.470 | 18.508 | VV | 137060 | 2217118                     | 26.50%  | 0.850% |
| 364 | 18.528 | 18.508 | 18.546 | VV | 219656 | 3830415                     | 45.78%  | 1.468% |
| 365 | 18.562 | 18.546 | 18.594 | VV | 177059 | 3171716                     | 37.91%  | 1.216% |
|     |        |        |        |    |        |                             |         |        |
| 366 | 18.608 | 18.594 | 18.626 | VV | 39795  | 727434                      | 8.69%   | 0.279% |
| 367 | 18.658 | 18.626 | 18.674 | VV | 69374  | 1491333                     | 17.83%  | 0.572% |
| 368 | 18.691 | 18.674 | 18.746 | VV | 58634  | 1910420                     | 22.83%  | 0.732% |
| 369 | 18.778 | 18.746 | 18.807 | VV | 99888  | 2108316                     | 25.20%  | 0.808% |
| 370 | 18.856 | 18.807 | 18.891 | VV | 89318  | 2918471                     | 34.88%  | 1.119% |
|     |        |        |        |    |        |                             |         |        |
| 371 | 18.912 | 18.891 | 18.931 | VV | 65861  | 1333366                     | 15.94%  | 0.511% |
| 372 | 18.974 | 18.931 | 19.032 | VV | 226216 | 5777950                     | 69.06%  | 2.215% |
| 373 | 19.078 | 19.032 | 19.119 | VV | 132273 | 3767521                     | 45.03%  | 1.444% |
| 374 | 19.129 | 19.119 | 19.157 | VV | 49702  | 1071176                     | 12.80%  | 0.411% |
| 375 | 19.178 | 19.157 | 19.206 | VV | 47865  | 1309325                     | 15.65%  | 0.502% |
|     |        |        |        |    |        |                             |         |        |
| 376 | 19.251 | 19.206 | 19.266 | VV | 60246  | 1826760                     | 21.83%  | 0.700% |
| 377 | 19.329 | 19.266 | 19.358 | VV | 368592 | 8366204                     | 100.00% | 3.207% |
| 378 | 19.374 | 19.358 | 19.420 | VV | 149249 | 3848752                     | 46.00%  | 1.475% |
| 379 | 19.452 | 19.420 | 19.480 | VV | 97813  | 2842090                     | 33.97%  | 1.090% |
| 380 | 19.502 | 19.480 | 19.549 | VV | 120174 | 3364981                     | 40.22%  | 1.290% |
|     |        |        |        |    |        |                             |         |        |
| 381 | 19.610 | 19.549 | 19.646 | VV | 132543 | 4617535                     | 55.19%  | 1.770% |
| 382 | 19.667 | 19.646 | 19.704 | VV | 87496  | 2411467                     | 28.82%  | 0.924% |
| 383 | 19.723 | 19.704 | 19.730 | VV | 62038  | 919580                      | 10.99%  | 0.353% |
| 384 | 19.763 | 19.730 | 19.799 | VV | 248098 | 5143713                     | 61.48%  | 1.972% |
| 385 | 19.824 | 19.799 | 19.851 | VV | 145938 | 2968077                     | 35.48%  | 1.138% |
|     |        |        |        |    |        |                             |         |        |
| 386 | 19.872 | 19.851 | 19.906 | VV | 98249  | 2502130                     | 29.91%  | 0.959% |
| 387 | 19.944 | 19.906 | 19.968 | VV | 86663  | 2561873                     | 30.62%  | 0.982% |
| 388 | 19.972 | 19.968 | 19.990 | VV | 62514  | 792772                      | 9.48%   | 0.304% |
| 389 | 20.020 | 19.990 | 20.054 | VV | 90532  | 2925045                     | 34.96%  | 1.121% |
| 390 | 20.063 | 20.054 | 20.081 | VV | 69583  | 1063424                     | 12.71%  | 0.408% |
|     |        |        |        |    |        |                             |         |        |
| 391 | 20.106 | 20.081 | 20.155 | VV | 136617 | 4281057                     | 51.17%  | 1.641% |
| 392 | 20.169 | 20.155 | 20.196 | VV | 84588  | 1892035                     | 22.62%  | 0.725% |
| 393 | 20.207 | 20.196 | 20.218 | VV | 68417  | 897126                      | 10.72%  | 0.344% |
| 394 | 20.235 | 20.218 | 20.242 | VV | 73566  | 1002650                     | 11.98%  | 0.384% |
| 395 | 20.251 | 20.242 | 20.289 | VV | 74106  | 2025603                     | 24.21%  | 0.777% |
|     |        |        |        |    |        |                             |         |        |
| 396 | 20.326 | 20.289 | 20.352 | VV | 94324  | 3042271                     | 36.36%  | 1.166% |
| 397 | 20.405 | 20.352 | 20.411 | VV | 87091  | 2784344                     | 33.28%  | 1.067% |
| 398 | 20.432 | 20.411 | 20.450 | VV | 92687  | 2064122                     | 24.67%  | 0.791% |
| 399 | 20.461 | 20.450 | 20.474 | VV | 82120  | 1145216                     | 13.69%  | 0.439% |
| 400 | 20.506 | 20.474 | 20.529 | VV | 245886 | 4973016                     | 59.44%  | 1.906% |
|     |        |        |        |    |        |                             |         |        |
| 401 | 20.543 | 20.529 | 20.578 | VV | 137553 | 2893043                     | 34.58%  | 1.109% |
| 402 | 20.582 | 20.578 | 20.586 | VV | 61509  | 310902                      | 3.72%   | 0.119% |
| 403 | 20.623 | 20.586 | 20.649 | VV | 80768  | 2617051                     | 31.28%  | 1.003% |
| 404 | 20.672 | 20.649 | 20.696 | VV | 69835  | 1880473                     | 22.48%  | 0.721% |



## Report of Analysis

|                    |                                                  |                 |          |
|--------------------|--------------------------------------------------|-----------------|----------|
| Client:            | AECOM                                            | Date Collected: | 10/27/25 |
| Project:           | AE1-CTY 3.2.Z-PR-DOCK-Des-ODC - 60693795-1719206 | Date Received:  | 10/27/25 |
| Client Sample ID:  | WASTEMSD                                         | SDG No.:        | Q3434    |
| Lab Sample ID:     | Q3474-01MSD                                      | Matrix:         | SOIL     |
| Analytical Method: | 8015D TPH                                        | % Solid:        | 87.2     |
| Sample Wt/Vol:     | 30.06 g                                          | Final Vol:      | 1 mL     |
| Prep Method:       | SW3541                                           | Test:           | TPH GC   |
|                    | Prep Date                                        | 10/29/25        |          |

| CAS Number        | Parameter              | Conc. | Qua. | DF | MDL      | LOQ / CRQL | Units   | Date Ana.      | BatchID  |
|-------------------|------------------------|-------|------|----|----------|------------|---------|----------------|----------|
| <b>TARGETS</b>    |                        |       |      |    |          |            |         |                |          |
| PHC               | Petroleum Hydrocarbons | 92000 | E    | 1  | 439      | 3240       | ug/kg   | 10/30/25 14:50 | PB170324 |
| <b>SURROGATES</b> |                        |       |      |    |          |            |         |                |          |
| 16416-32-3        | TETRACOSANE-d50        | 11.3  |      |    | 37 - 130 | 56%        | SPK: 20 |                |          |

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

Q3434-TPH GC

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

\* = Values outside of QC limits

D = Dilution

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

() = Laboratory InHouse Limit

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
 Data File : FF016639.D  
 Signal(s) : FID2B.ch  
 Acq On : 30 Oct 2025 14:50  
 Operator : YP\AJ  
 Sample : Q3474-01MSD  
 Misc :  
 ALS Vial : 36 Sample Multiplier: 1

Instrument :  
 FID\_F  
 ClientSampleId :  
 WASTEMSD

### Manual Integrations APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
 Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e  
 Quant Time: Oct 31 02:22:14 2025  
 Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
 Quant Title :  
 QLast Update : Wed Oct 29 12:48:52 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... | 15.060 | 1178413  | 11.279 ug/ml  |
| Target Compounds              |        |          |               |
| 1) N-OCTANE                   | 2.058  | 1716913  | 15.468 ug/ml  |
| 2) N-DECANE                   | 4.576  | 2086963  | 18.861 ug/ml  |
| 3) N-DODECANE                 | 6.753  | 2150957  | 19.363 ug/ml  |
| 4) N-TETRADECANE              | 8.586  | 2170718  | 19.431 ug/ml  |
| 5) N-HEXADECANE               | 10.196 | 2371313  | 21.105 ug/ml  |
| 6) N-OCTADECANE               | 11.642 | 2513495  | 21.478 ug/ml  |
| 7) N-EICOSANE                 | 12.956 | 2408331  | 19.723 ug/ml  |
| 8) N-DOCOSANE                 | 14.158 | 2496707  | 20.945 ug/ml  |
| 10) N-TETRACOSANE             | 15.264 | 2231611  | 18.834 ug/ml  |
| 11) N-HEXACOSANE              | 16.291 | 2132184  | 18.560 ug/ml  |
| 12) N-OCTACOSANE              | 17.246 | 2339955  | 20.534 ug/ml  |
| 13) N-TRIACONTANE             | 18.139 | 2809210  | 25.002 ug/ml  |
| 14) N-DOTRIACONTANE           | 18.975 | 3401691  | 31.733 ug/mlm |
| 15) N-TETRATRIACONTANE        | 19.765 | 2788638  | 28.380 ug/ml  |
| 16) N-HEXATRIACONTANE         | 20.511 | 2588666  | 30.274 ug/ml  |
| 17) N-OCTATRIACONTANE         | 21.270 | 2521406  | 32.851 ug/ml  |
| 18) N-TETRACONTANE            | 22.218 | 2910513  | 42.646 ug/mlm |
| -----                         |        |          |               |

(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF103025\  
Data File : FF016639.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 14:50  
Operator : YP\AJ  
Sample : Q3474-01MSD  
Misc :  
ALS Vial : 36 Sample Multiplier: 1

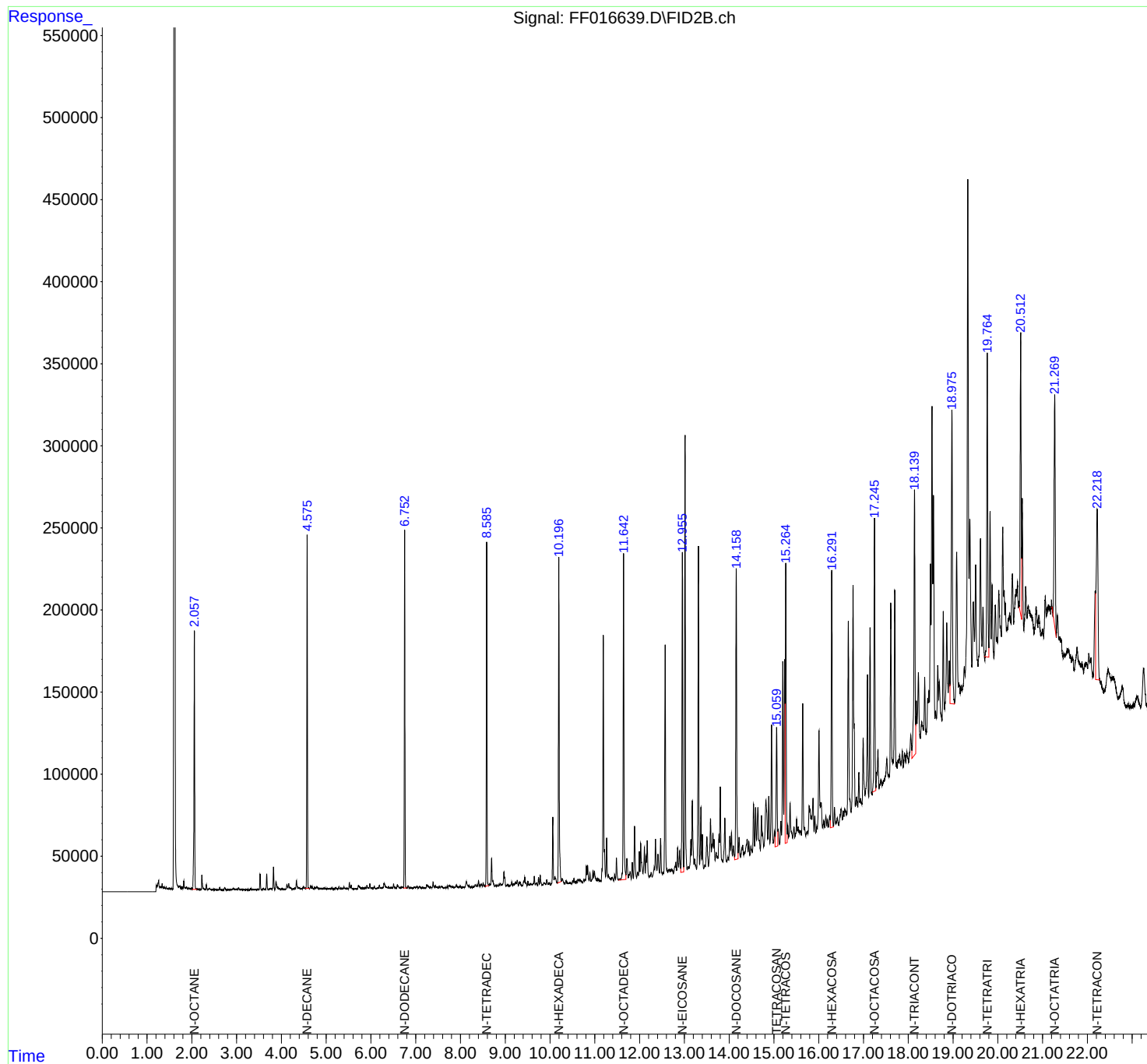
Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

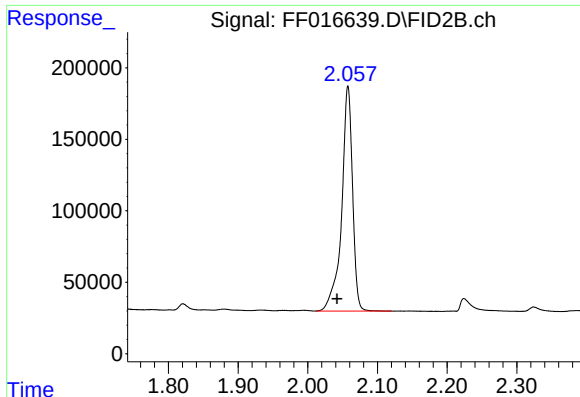
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025

Integration File: autoint1.e  
Quant Time: Oct 31 02:22:14 2025  
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Quant Title :  
QLast Update : Wed Oct 29 12:48:52 2025  
Response via : Initial Calibration  
Integrator: ChemStation

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





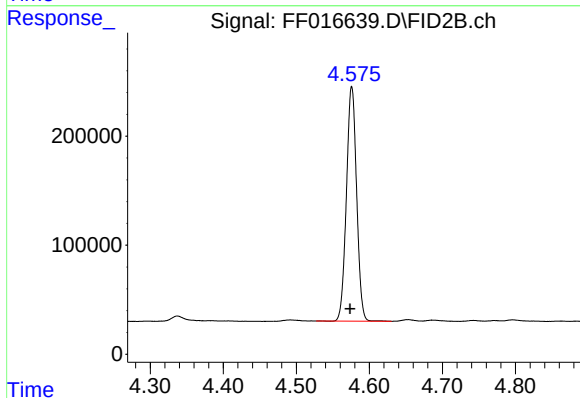
#1 N-OCTANE

R.T.: 2.058 min  
Delta R.T.: 0.016 min  
Response: 1716913  
Conc: 15.47 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

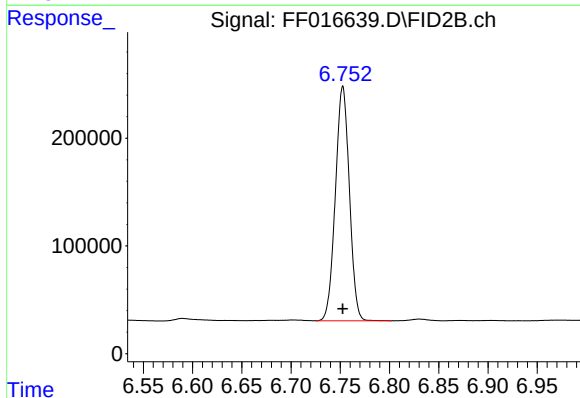
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



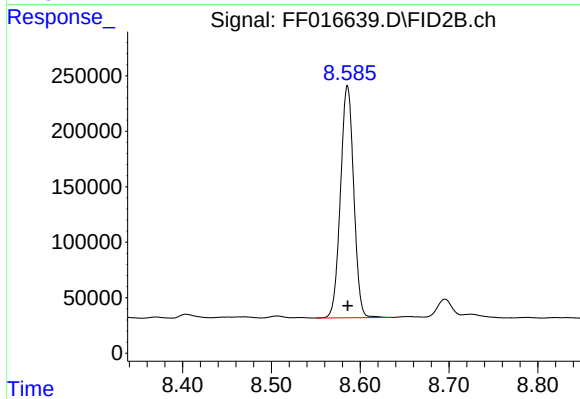
#2 N-DECANE

R.T.: 4.576 min  
Delta R.T.: 0.002 min  
Response: 2086963  
Conc: 18.86 ug/ml



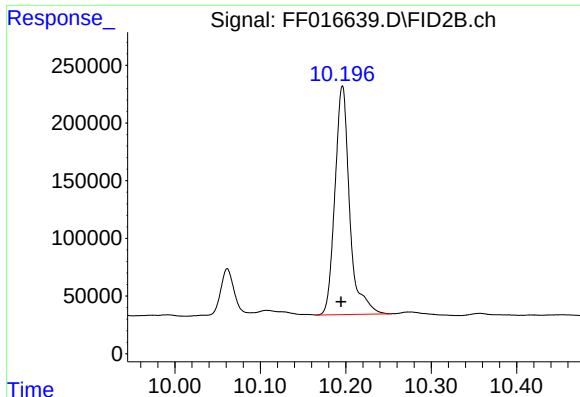
#3 N-DODECANE

R.T.: 6.753 min  
Delta R.T.: 0.000 min  
Response: 2150957  
Conc: 19.36 ug/ml



#4 N-TETRADECANE

R.T.: 8.586 min  
Delta R.T.: 0.000 min  
Response: 2170718  
Conc: 19.43 ug/ml



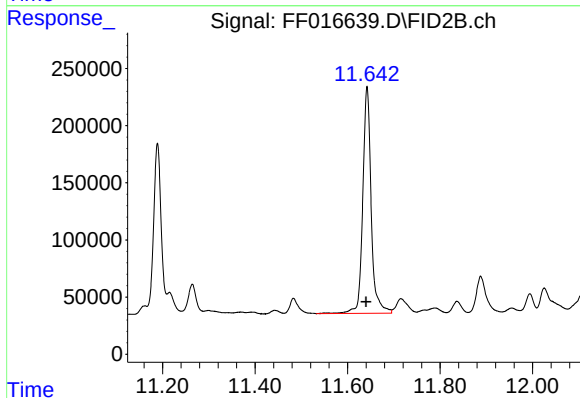
#5 N-HEXADECANE

R.T.: 10.196 min  
Delta R.T.: 0.002 min  
Response: 2371313  
Conc: 21.11 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

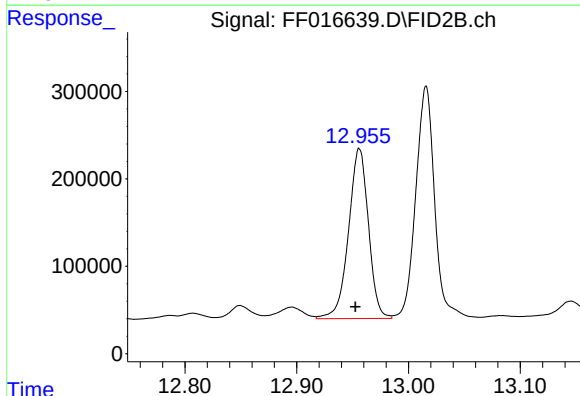
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



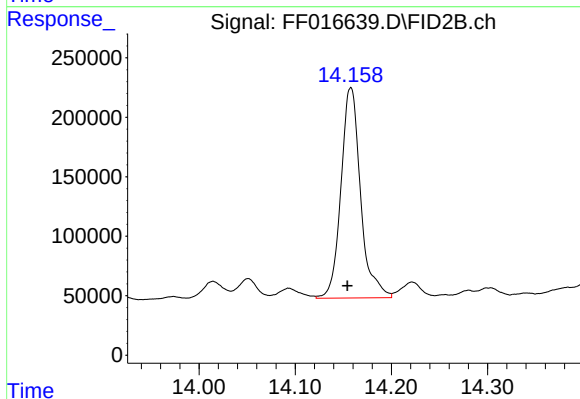
#6 N-OCTADECANE

R.T.: 11.642 min  
Delta R.T.: 0.002 min  
Response: 2513495  
Conc: 21.48 ug/ml



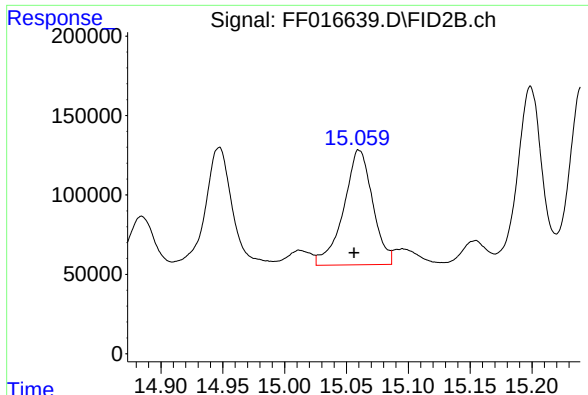
#7 N-EICOSANE

R.T.: 12.956 min  
Delta R.T.: 0.003 min  
Response: 2408331  
Conc: 19.72 ug/ml



#8 N-DOCOSANE

R.T.: 14.158 min  
Delta R.T.: 0.004 min  
Response: 2496707  
Conc: 20.94 ug/ml



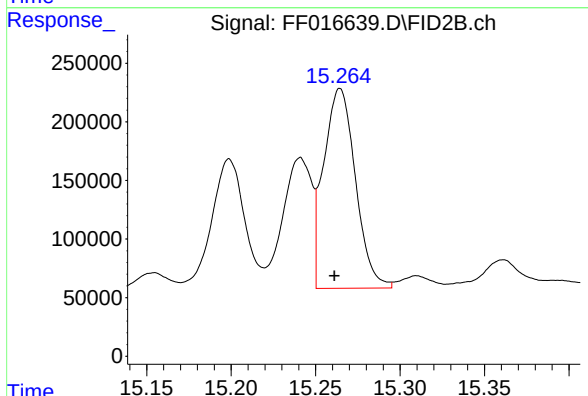
#9 TETRACOSANE-d50 (SURROGATE)

R.T.: 15.060 min  
Delta R.T.: 0.004 min  
Response: 1178413  
Conc: 11.28 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

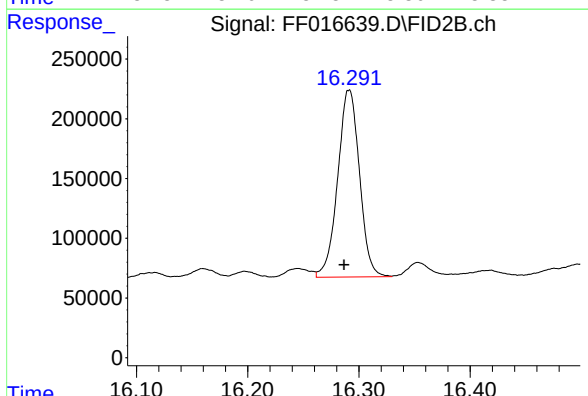
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



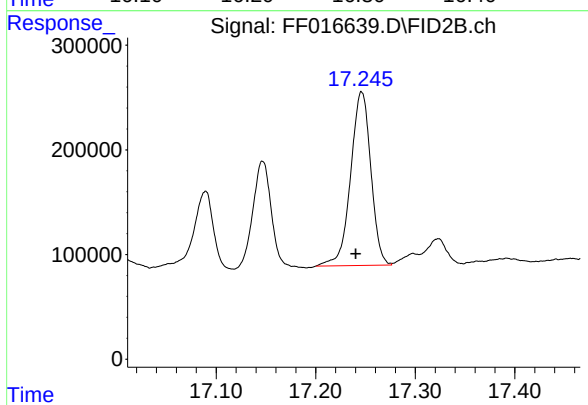
#10 N-TETRACOSANE

R.T.: 15.264 min  
Delta R.T.: 0.003 min  
Response: 2231611  
Conc: 18.83 ug/ml



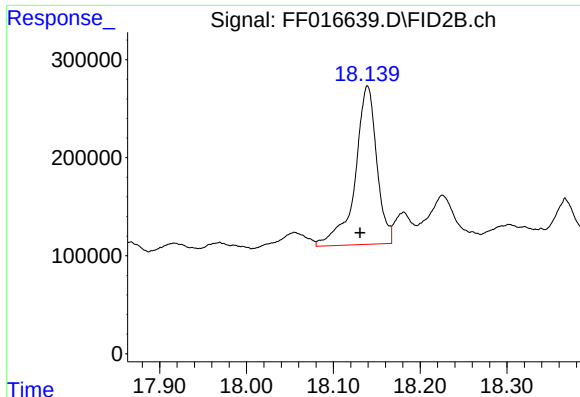
#11 N-HEXACOSANE

R.T.: 16.291 min  
Delta R.T.: 0.005 min  
Response: 2132184  
Conc: 18.56 ug/ml



#12 N-OCTACOSANE

R.T.: 17.246 min  
Delta R.T.: 0.006 min  
Response: 2339955  
Conc: 20.53 ug/ml



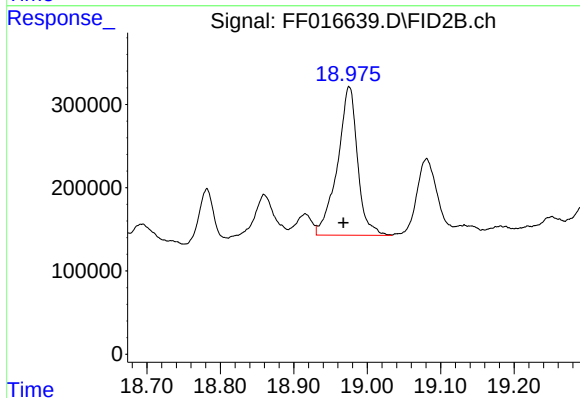
#13 N-TRIACONTANE

R.T.: 18.139 min  
Delta R.T.: 0.009 min  
Response: 2809210  
Conc: 25.00 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

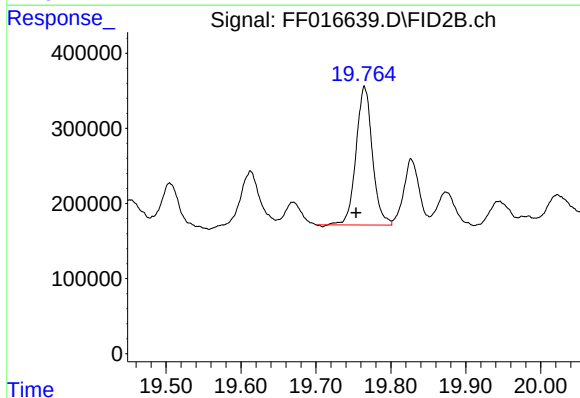
Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



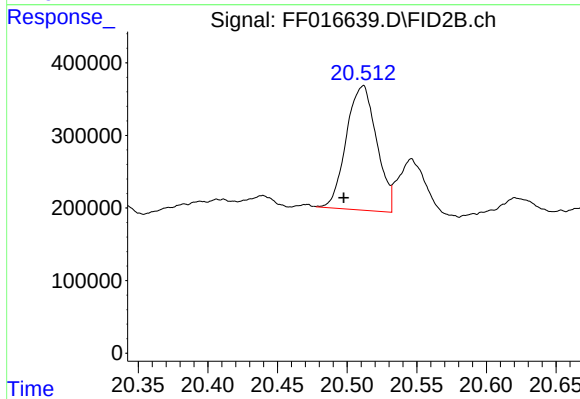
#14 N-DOTRIACONTANE

R.T.: 18.975 min  
Delta R.T.: 0.007 min  
Response: 3401691  
Conc: 31.73 ug/ml m



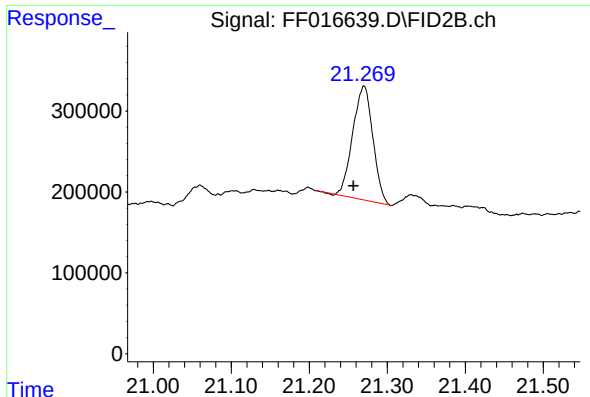
#15 N-TETRATRIACONTANE

R.T.: 19.765 min  
Delta R.T.: 0.011 min  
Response: 2788638  
Conc: 28.38 ug/ml



#16 N-HEXATRIACONTANE

R.T.: 20.511 min  
Delta R.T.: 0.014 min  
Response: 2588666  
Conc: 30.27 ug/ml



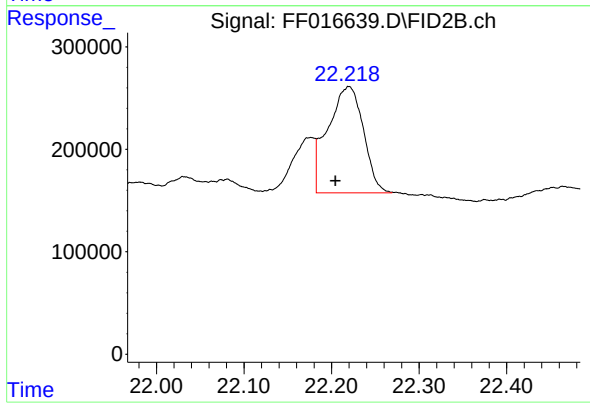
#17 N-OCTATRIACONTANE

R.T.: 21.270 min  
Delta R.T.: 0.014 min  
Response: 2521406  
Conc: 32.85 ug/ml

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

Manual Integrations  
APPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025



#18 N-TETRACONTANE

R.T.: 22.218 min  
Delta R.T.: 0.014 min  
Response: 2910513  
Conc: 42.65 ug/ml m

rteres

Instrument :

FID\_F

ClientSampleId :

WASTEMSD

Area Percent Report

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

Data Path : Z:\pestpcbsrv\HPCHEM1\FID\_F\Data\FF10302  
Data File : FF016639.D  
Signal(s) : FID2B.ch  
Acq On : 30 Oct 2025 14:50  
Sample : Q3474-01MSD  
Misc :  
ALS Vial : 36 Sample Multiplier: 1

Integration File: Sample.e

Method : Z:\pestpcbsrv\HPCHEM1\FID\_F\Method\FF102925.M  
Title :

Signal : FID2B.ch

| peak<br># | R.T.<br>min | Start<br>min | End<br>min | PK<br>TY | peak<br>height | peak<br>area | peak<br>% max. | % of<br>total |
|-----------|-------------|--------------|------------|----------|----------------|--------------|----------------|---------------|
| 1         | 1.932       | 1.906        | 1.950      | BV       | 377            | 3342         | 0.04%          | 0.001%        |
| 2         | 1.965       | 1.950        | 1.980      | PV       | 362            | 3672         | 0.05%          | 0.001%        |
| 3         | 1.995       | 1.980        | 2.010      | VV       | 512            | 5530         | 0.07%          | 0.002%        |
| 4         | 2.058       | 2.010        | 2.126      | PV       | 157643         | 1722440      | 21.14%         | 0.667%        |
| 5         | 2.130       | 2.126        | 2.138      | VV       | 186            | 1250         | 0.02%          | 0.000%        |
| 6         | 2.145       | 2.138        | 2.182      | VV       | 248            | 3474         | 0.04%          | 0.001%        |
| 7         | 2.224       | 2.182        | 2.305      | PV       | 9011           | 111773       | 1.37%          | 0.043%        |
| 8         | 2.324       | 2.305        | 2.363      | VV       | 3195           | 34458        | 0.42%          | 0.013%        |
| 9         | 2.399       | 2.363        | 2.446      | VV       | 920            | 18599        | 0.23%          | 0.007%        |
| 10        | 2.463       | 2.446        | 2.495      | PV       | 292            | 5311         | 0.07%          | 0.002%        |
| 11        | 2.500       | 2.495        | 2.523      | VV       | 260            | 2747         | 0.03%          | 0.001%        |
| 12        | 2.534       | 2.523        | 2.557      | VV       | 227            | 2658         | 0.03%          | 0.001%        |
| 13        | 2.575       | 2.557        | 2.591      | VV       | 171            | 1562         | 0.02%          | 0.001%        |
| 14        | 2.623       | 2.591        | 2.643      | VV       | 1684           | 18163        | 0.22%          | 0.007%        |
| 15        | 2.645       | 2.643        | 2.710      | VV       | 242            | 2951         | 0.04%          | 0.001%        |
| 16        | 2.733       | 2.710        | 2.780      | PV       | 1669           | 28132        | 0.35%          | 0.011%        |
| 17        | 2.798       | 2.780        | 2.819      | VV       | 406            | 6430         | 0.08%          | 0.002%        |
| 18        | 2.824       | 2.819        | 2.846      | VV       | 265            | 3567         | 0.04%          | 0.001%        |
| 19        | 2.867       | 2.846        | 2.872      | VV       | 298            | 3541         | 0.04%          | 0.001%        |
| 20        | 2.889       | 2.872        | 2.904      | VV       | 365            | 5240         | 0.06%          | 0.002%        |
| 21        | 2.922       | 2.904        | 2.942      | VV       | 1087           | 15177        | 0.19%          | 0.006%        |
| 22        | 2.955       | 2.942        | 2.985      | VV       | 706            | 12856        | 0.16%          | 0.005%        |
| 23        | 2.993       | 2.985        | 2.999      | VV       | 436            | 3214         | 0.04%          | 0.001%        |
| 24        | 3.006       | 2.999        | 3.022      | VV       | 539            | 5211         | 0.06%          | 0.002%        |
| 25        | 3.045       | 3.022        | 3.078      | VV       | 1417           | 21915        | 0.27%          | 0.008%        |
| 26        | 3.102       | 3.078        | 3.121      | VV       | 515            | 7474         | 0.09%          | 0.003%        |
| 27        | 3.128       | 3.121        | 3.139      | VV       | 234            | 1654         | 0.02%          | 0.001%        |
| 28        | 3.144       | 3.139        | 3.148      | VV       | 134            | 618          | 0.01%          | 0.000%        |
| 29        | 3.166       | 3.148        | 3.198      | VV       | 363            | 5782         | 0.07%          | 0.002%        |
| 30        | 3.222       | 3.198        | 3.253      | VV       | 289            | 6007         | 0.07%          | 0.002%        |
| 31        | 3.255       | 3.253        | 3.267      | VV       | 261            | 826          | 0.01%          | 0.000%        |
| 32        | 3.272       | 3.267        | 3.291      | VV       | 145            | 1128         | 0.01%          | 0.000%        |
| 33        | 3.321       | 3.291        | 3.353      | VV       | 796            | 12296        | 0.15%          | 0.005%        |
| 34        | 3.363       | 3.353        | 3.369      | VV       | 241            | 1774         | 0.02%          | 0.001%        |
| 35        | 3.373       | 3.369        | 3.384      | VV       | 231            | 1607         | 0.02%          | 0.001%        |
| 36        | 3.390       | 3.384        | 3.396      | VV       | 181            | 1059         | 0.01%          | 0.000%        |

Page 1

|    |       |       |       |    |        |         |        |        |
|----|-------|-------|-------|----|--------|---------|--------|--------|
| 37 | 3.418 | 3.396 | 3.423 | VV | 169    | 2342    | 0.03%  | 0.001% |
| 38 | 3.437 | 3.423 | 3.453 | VV | 250    | 3409    |        |        |
| 39 | 3.464 | 3.453 | 3.481 | VV | 273    | 3298    |        |        |
| 40 | 3.483 | 3.481 | 3.502 | VV | 248    | 2203    |        |        |
| 41 | 3.525 | 3.502 | 3.553 | VV | 9690   | 99272   |        |        |
| 42 | 3.560 | 3.553 | 3.579 | VV | 195    | 1773    |        |        |
| 43 | 3.599 | 3.579 | 3.623 | VV | 1149   | 14224   | 0.17%  | 0.006% |
| 44 | 3.636 | 3.623 | 3.649 | VV | 460    | 5241    | 0.06%  | 0.002% |
| 45 | 3.673 | 3.649 | 3.704 | VV | 9779   | 103543  | 1.27%  | 0.040% |
| 46 | 3.708 | 3.704 | 3.723 | VV | 351    | 3252    | 0.04%  | 0.001% |
| 47 | 3.731 | 3.723 | 3.736 | VV | 362    | 2291    | 0.03%  | 0.001% |
| 48 | 3.761 | 3.736 | 3.790 | VV | 821    | 15874   | 0.19%  | 0.006% |
| 49 | 3.824 | 3.790 | 3.856 | VV | 14008  | 155129  | 1.90%  | 0.060% |
| 50 | 3.880 | 3.856 | 3.984 | VV | 4957   | 118684  | 1.46%  | 0.046% |
| 51 | 4.003 | 3.984 | 4.029 | VV | 580    | 12378   | 0.15%  | 0.005% |
| 52 | 4.036 | 4.029 | 4.049 | VV | 358    | 3785    | 0.05%  | 0.001% |
| 53 | 4.052 | 4.049 | 4.085 | VV | 308    | 5777    | 0.07%  | 0.002% |
| 54 | 4.124 | 4.085 | 4.145 | VV | 3227   | 49491   | 0.61%  | 0.019% |
| 55 | 4.164 | 4.145 | 4.189 | VV | 3780   | 57297   | 0.70%  | 0.022% |
| 56 | 4.198 | 4.189 | 4.243 | VV | 1247   | 27966   | 0.34%  | 0.011% |
| 57 | 4.254 | 4.243 | 4.260 | VV | 433    | 4158    | 0.05%  | 0.002% |
| 58 | 4.272 | 4.260 | 4.283 | VV | 542    | 6417    | 0.08%  | 0.002% |
| 59 | 4.294 | 4.283 | 4.309 | VV | 725    | 9596    | 0.12%  | 0.004% |
| 60 | 4.337 | 4.309 | 4.375 | VV | 5442   | 88608   | 1.09%  | 0.034% |
| 61 | 4.380 | 4.375 | 4.400 | VV | 1137   | 14511   | 0.18%  | 0.006% |
| 62 | 4.407 | 4.400 | 4.425 | VV | 951    | 11278   | 0.14%  | 0.004% |
| 63 | 4.430 | 4.425 | 4.457 | VV | 581    | 10322   | 0.13%  | 0.004% |
| 64 | 4.492 | 4.457 | 4.525 | VV | 1779   | 41885   | 0.51%  | 0.016% |
| 65 | 4.531 | 4.525 | 4.548 | VV | 859    | 10628   | 0.13%  | 0.004% |
| 66 | 4.576 | 4.548 | 4.631 | VV | 215842 | 2119687 | 26.01% | 0.821% |
| 67 | 4.653 | 4.631 | 4.673 | VV | 2013   | 30675   | 0.38%  | 0.012% |
| 68 | 4.686 | 4.673 | 4.724 | VV | 1567   | 28407   | 0.35%  | 0.011% |
| 69 | 4.743 | 4.724 | 4.758 | VV | 1272   | 17595   | 0.22%  | 0.007% |
| 70 | 4.771 | 4.758 | 4.783 | VV | 1156   | 13692   | 0.17%  | 0.005% |
| 71 | 4.796 | 4.783 | 4.843 | VV | 1804   | 34660   | 0.43%  | 0.013% |
| 72 | 4.862 | 4.843 | 4.875 | VV | 677    | 9604    | 0.12%  | 0.004% |
| 73 | 4.884 | 4.875 | 4.907 | VV | 561    | 7566    | 0.09%  | 0.003% |
| 74 | 4.942 | 4.907 | 4.958 | VV | 744    | 14159   | 0.17%  | 0.005% |
| 75 | 4.966 | 4.958 | 4.976 | VV | 696    | 5431    | 0.07%  | 0.002% |
| 76 | 4.982 | 4.976 | 5.007 | VV | 530    | 8230    | 0.10%  | 0.003% |
| 77 | 5.046 | 5.007 | 5.067 | VV | 458    | 13107   | 0.16%  | 0.005% |
| 78 | 5.085 | 5.067 | 5.108 | VV | 495    | 8655    | 0.11%  | 0.003% |
| 79 | 5.128 | 5.108 | 5.149 | VV | 1173   | 15260   | 0.19%  | 0.006% |
| 80 | 5.157 | 5.149 | 5.179 | VV | 328    | 4122    | 0.05%  | 0.002% |
| 81 | 5.213 | 5.179 | 5.266 | VV | 826    | 21304   | 0.26%  | 0.008% |
| 82 | 5.284 | 5.266 | 5.306 | VV | 1530   | 19843   | 0.24%  | 0.008% |
| 83 | 5.313 | 5.306 | 5.319 | VV | 582    | 4226    | 0.05%  | 0.002% |
| 84 | 5.336 | 5.319 | 5.375 | VV | 691    | 15670   | 0.19%  | 0.006% |
| 85 | 5.398 | 5.375 | 5.443 | VV | 1355   | 28375   | 0.35%  | 0.011% |
| 86 | 5.460 | 5.443 | 5.500 | VV | 658    | 14258   | 0.17%  | 0.006% |
| 87 | 5.520 | 5.500 | 5.544 | VV | 4095   | 48017   | 0.59%  | 0.019% |
| 88 | 5.560 | 5.544 | 5.586 | VV | 2520   | 29599   | 0.36%  | 0.011% |
| 89 | 5.593 | 5.586 | 5.612 | VV | 361    | 2864    | 0.04%  | 0.001% |

Instrument :

FID\_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025

|        |       |       |       |    |        |         | Instrument :<br>FID_F        |        |
|--------|-------|-------|-------|----|--------|---------|------------------------------|--------|
|        |       |       |       |    |        |         | ClientSampleId :<br>WASTEMSD |        |
| rteres |       |       |       |    |        |         |                              |        |
| 90     | 5.649 | 5.612 | 5.693 | VV | 475    | 8765    | 0.11%                        | 0.003% |
| 91     | 5.720 | 5.693 | 5.744 | PV | 2245   | 38540   | Manual IntegrationsAPPROVED  |        |
| 92     | 5.754 | 5.744 | 5.774 | VV | 1360   | 17377   |                              |        |
| 93     | 5.786 | 5.774 | 5.802 | VV | 722    | 8735    |                              |        |
| 94     | 5.820 | 5.802 | 5.825 | VV | 675    | 6800    |                              |        |
| 95     | 5.833 | 5.825 | 5.857 | VV | 607    | 9100    |                              |        |
| 96     | 5.875 | 5.857 | 5.893 | VV | 1294   | 15207   | 0.19%                        | 0.006% |
| 97     | 5.913 | 5.893 | 5.957 | VV | 2171   | 36646   | 0.45%                        | 0.014% |
| 98     | 5.976 | 5.957 | 6.017 | VV | 3225   | 46041   | 0.57%                        | 0.018% |
| 99     | 6.031 | 6.017 | 6.053 | VV | 677    | 10180   | 0.12%                        | 0.004% |
| 100    | 6.075 | 6.053 | 6.112 | VV | 1473   | 23044   | 0.28%                        | 0.009% |
| 101    | 6.125 | 6.112 | 6.148 | VV | 447    | 7255    | 0.09%                        | 0.003% |
| 102    | 6.188 | 6.148 | 6.222 | VV | 2252   | 41655   | 0.51%                        | 0.016% |
| 103    | 6.226 | 6.222 | 6.238 | VV | 584    | 4513    | 0.06%                        | 0.002% |
| 104    | 6.252 | 6.238 | 6.266 | VV | 951    | 12038   | 0.15%                        | 0.005% |
| 105    | 6.300 | 6.266 | 6.368 | VV | 3166   | 96302   | 1.18%                        | 0.037% |
| 106    | 6.370 | 6.368 | 6.383 | VV | 740    | 5878    | 0.07%                        | 0.002% |
| 107    | 6.398 | 6.383 | 6.428 | VV | 1227   | 19286   | 0.24%                        | 0.007% |
| 108    | 6.437 | 6.428 | 6.452 | VV | 641    | 7302    | 0.09%                        | 0.003% |
| 109    | 6.466 | 6.452 | 6.482 | VV | 870    | 11248   | 0.14%                        | 0.004% |
| 110    | 6.506 | 6.482 | 6.526 | VV | 2846   | 37614   | 0.46%                        | 0.015% |
| 111    | 6.532 | 6.526 | 6.567 | VV | 962    | 14622   | 0.18%                        | 0.006% |
| 112    | 6.590 | 6.567 | 6.628 | VV | 2523   | 45459   | 0.56%                        | 0.018% |
| 113    | 6.638 | 6.628 | 6.655 | VV | 680    | 8864    | 0.11%                        | 0.003% |
| 114    | 6.701 | 6.655 | 6.726 | VV | 1051   | 28698   | 0.35%                        | 0.011% |
| 115    | 6.753 | 6.726 | 6.809 | VV | 218181 | 2166744 | 26.59%                       | 0.840% |
| 116    | 6.830 | 6.809 | 6.853 | VV | 1805   | 25199   | 0.31%                        | 0.010% |
| 117    | 6.873 | 6.853 | 6.892 | VV | 591    | 9585    | 0.12%                        | 0.004% |
| 118    | 6.904 | 6.892 | 6.928 | VV | 606    | 8610    | 0.11%                        | 0.003% |
| 119    | 6.932 | 6.928 | 6.940 | VV | 323    | 1867    | 0.02%                        | 0.001% |
| 120    | 6.976 | 6.940 | 7.001 | VV | 821    | 21135   | 0.26%                        | 0.008% |
| 121    | 7.029 | 7.001 | 7.058 | VV | 1097   | 21506   | 0.26%                        | 0.008% |
| 122    | 7.086 | 7.058 | 7.132 | VV | 1151   | 25422   | 0.31%                        | 0.010% |
| 123    | 7.154 | 7.132 | 7.181 | VV | 590    | 10180   | 0.12%                        | 0.004% |
| 124    | 7.188 | 7.181 | 7.218 | VV | 666    | 4434    | 0.05%                        | 0.002% |
| 125    | 7.245 | 7.218 | 7.264 | PV | 2313   | 30921   | 0.38%                        | 0.012% |
| 126    | 7.276 | 7.264 | 7.310 | VV | 1414   | 29411   | 0.36%                        | 0.011% |
| 127    | 7.324 | 7.310 | 7.333 | VV | 779    | 9511    | 0.12%                        | 0.004% |
| 128    | 7.336 | 7.333 | 7.357 | VV | 661    | 7412    | 0.09%                        | 0.003% |
| 129    | 7.389 | 7.357 | 7.407 | VV | 3837   | 48277   | 0.59%                        | 0.019% |
| 130    | 7.421 | 7.407 | 7.432 | VV | 1105   | 13899   | 0.17%                        | 0.005% |
| 131    | 7.443 | 7.432 | 7.467 | VV | 1250   | 19068   | 0.23%                        | 0.007% |
| 132    | 7.478 | 7.467 | 7.509 | VV | 803    | 14173   | 0.17%                        | 0.005% |
| 133    | 7.525 | 7.509 | 7.552 | VV | 1394   | 18414   | 0.23%                        | 0.007% |
| 134    | 7.570 | 7.552 | 7.585 | VV | 1407   | 16413   | 0.20%                        | 0.006% |
| 135    | 7.593 | 7.585 | 7.641 | VV | 569    | 9779    | 0.12%                        | 0.004% |
| 136    | 7.660 | 7.641 | 7.671 | PV | 269    | 3448    | 0.04%                        | 0.001% |
| 137    | 7.678 | 7.671 | 7.685 | VV | 199    | 1596    | 0.02%                        | 0.001% |
| 138    | 7.702 | 7.685 | 7.716 | VV | 1232   | 12267   | 0.15%                        | 0.005% |
| 139    | 7.738 | 7.716 | 7.757 | VV | 1570   | 28550   | 0.35%                        | 0.011% |
| 140    | 7.760 | 7.757 | 7.783 | VV | 1255   | 16681   | 0.20%                        | 0.006% |
| 141    | 7.788 | 7.783 | 7.810 | VV | 862    | 11059   | 0.14%                        | 0.004% |

|     |        |        |        |    |        |         |        |        |
|-----|--------|--------|--------|----|--------|---------|--------|--------|
| 142 | 7.827  | 7.810  | 7.871  | VV | 742    | 15311   | 0.19%  | 0.006% |
| 143 | 7.902  | 7.871  | 7.954  | VV | 1665   | 35818   |        |        |
| 144 | 7.959  | 7.954  | 7.974  | VV | 381    | 3629    |        |        |
| 145 | 7.993  | 7.974  | 8.024  | VV | 1094   | 14389   |        |        |
| 146 | 8.050  | 8.024  | 8.059  | VV | 504    | 6128    |        |        |
| 147 | 8.066  | 8.059  | 8.082  | VV | 457    | 4053    |        |        |
| 148 | 8.133  | 8.082  | 8.176  | VV | 3457   | 90655   | 1.11%  | 0.035% |
| 149 | 8.190  | 8.176  | 8.223  | VV | 1495   | 22909   | 0.28%  | 0.009% |
| 150 | 8.245  | 8.223  | 8.262  | VV | 528    | 6543    | 0.08%  | 0.003% |
| 151 | 8.279  | 8.262  | 8.297  | PV | 568    | 7140    | 0.09%  | 0.003% |
| 152 | 8.329  | 8.297  | 8.356  | VV | 1791   | 32431   | 0.40%  | 0.013% |
| 153 | 8.370  | 8.356  | 8.388  | VV | 1642   | 20268   | 0.25%  | 0.008% |
| 154 | 8.404  | 8.388  | 8.432  | VV | 4102   | 57412   | 0.70%  | 0.022% |
| 155 | 8.469  | 8.432  | 8.488  | VV | 1733   | 45277   | 0.56%  | 0.018% |
| 156 | 8.506  | 8.488  | 8.523  | VV | 2386   | 31615   | 0.39%  | 0.012% |
| 157 | 8.533  | 8.523  | 8.548  | VV | 1055   | 12181   | 0.15%  | 0.005% |
| 158 | 8.586  | 8.548  | 8.636  | VV | 209923 | 2211657 | 27.14% | 0.857% |
| 159 | 8.655  | 8.636  | 8.671  | VV | 1846   | 32107   | 0.39%  | 0.012% |
| 160 | 8.695  | 8.671  | 8.715  | VV | 17475  | 218431  | 2.68%  | 0.085% |
| 161 | 8.725  | 8.715  | 8.774  | VV | 3928   | 68456   | 0.84%  | 0.027% |
| 162 | 8.789  | 8.774  | 8.808  | VV | 937    | 13916   | 0.17%  | 0.005% |
| 163 | 8.820  | 8.808  | 8.828  | VV | 802    | 7914    | 0.10%  | 0.003% |
| 164 | 8.833  | 8.828  | 8.848  | VV | 752    | 6715    | 0.08%  | 0.003% |
| 165 | 8.863  | 8.848  | 8.878  | VV | 1788   | 19849   | 0.24%  | 0.008% |
| 166 | 8.894  | 8.878  | 8.922  | VV | 2173   | 39962   | 0.49%  | 0.015% |
| 167 | 8.971  | 8.922  | 8.984  | VV | 9077   | 139632  | 1.71%  | 0.054% |
| 168 | 8.990  | 8.984  | 9.019  | VV | 5756   | 53636   | 0.66%  | 0.021% |
| 169 | 9.037  | 9.019  | 9.046  | VV | 1050   | 11543   | 0.14%  | 0.004% |
| 170 | 9.057  | 9.046  | 9.077  | VV | 1620   | 19379   | 0.24%  | 0.008% |
| 171 | 9.085  | 9.077  | 9.099  | VV | 589    | 7014    | 0.09%  | 0.003% |
| 172 | 9.109  | 9.099  | 9.114  | VV | 637    | 4719    | 0.06%  | 0.002% |
| 173 | 9.146  | 9.114  | 9.164  | VV | 2720   | 44705   | 0.55%  | 0.017% |
| 174 | 9.184  | 9.164  | 9.196  | VV | 1495   | 20138   | 0.25%  | 0.008% |
| 175 | 9.230  | 9.196  | 9.247  | VV | 2739   | 55983   | 0.69%  | 0.022% |
| 176 | 9.268  | 9.247  | 9.294  | VV | 3646   | 61976   | 0.76%  | 0.024% |
| 177 | 9.310  | 9.294  | 9.319  | VV | 2119   | 21628   | 0.27%  | 0.008% |
| 178 | 9.332  | 9.319  | 9.375  | VV | 2625   | 41697   | 0.51%  | 0.016% |
| 179 | 9.412  | 9.375  | 9.422  | VV | 3032   | 40722   | 0.50%  | 0.016% |
| 180 | 9.437  | 9.422  | 9.455  | VV | 5563   | 71664   | 0.88%  | 0.028% |
| 181 | 9.462  | 9.455  | 9.487  | VV | 2043   | 25379   | 0.31%  | 0.010% |
| 182 | 9.506  | 9.487  | 9.544  | VV | 2861   | 41701   | 0.51%  | 0.016% |
| 183 | 9.560  | 9.544  | 9.577  | VV | 1670   | 20980   | 0.26%  | 0.008% |
| 184 | 9.593  | 9.577  | 9.610  | VV | 1051   | 16994   | 0.21%  | 0.007% |
| 185 | 9.648  | 9.610  | 9.668  | VV | 5872   | 85883   | 1.05%  | 0.033% |
| 186 | 9.695  | 9.668  | 9.722  | VV | 1765   | 34944   | 0.43%  | 0.014% |
| 187 | 9.744  | 9.722  | 9.765  | PV | 5115   | 61016   | 0.75%  | 0.024% |
| 188 | 9.781  | 9.765  | 9.823  | VV | 6387   | 92065   | 1.13%  | 0.036% |
| 189 | 9.834  | 9.823  | 9.840  | VV | 473    | 3488    | 0.04%  | 0.001% |
| 190 | 9.864  | 9.840  | 9.907  | VV | 1741   | 43262   | 0.53%  | 0.017% |
| 191 | 9.926  | 9.907  | 9.951  | VV | 3492   | 50647   | 0.62%  | 0.020% |
| 192 | 9.976  | 9.951  | 9.980  | VV | 1092   | 14862   | 0.18%  | 0.006% |
| 193 | 9.992  | 9.980  | 10.013 | VV | 1418   | 16823   | 0.21%  | 0.007% |
| 194 | 10.061 | 10.013 | 10.089 | VV | 41456  | 477453  | 5.86%  | 0.185% |

Instrument :

FID\_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025



| rteres |        |        |        |    |        |         |        |        |  |
|--------|--------|--------|--------|----|--------|---------|--------|--------|--|
| 247    | 12.526 | 12.510 | 12.538 | VV | 1591   | 20834   | 0.26%  | 0.008% |  |
| 248    | 12.572 | 12.538 | 12.630 | VV | 140318 | 1843669 | 22.58% | 0.934% |  |
| 249    | 12.646 | 12.630 | 12.655 | VV | 2757   | 32621   | 0.08%  | 0.003% |  |
| 250    | 12.669 | 12.655 | 12.686 | VV | 3117   | 45991   | 0.07%  | 0.002% |  |
| 251    | 12.699 | 12.686 | 12.705 | VV | 2528   | 23958   | 0.22%  | 0.007% |  |
| 252    | 12.720 | 12.705 | 12.734 | VV | 2709   | 40917   | 0.64%  | 0.020% |  |
| 253    | 12.740 | 12.734 | 12.755 | VV | 2194   | 18059   | 0.22%  | 0.007% |  |
| 254    | 12.787 | 12.755 | 12.794 | PV | 4316   | 52230   | 0.64%  | 0.020% |  |
| 255    | 12.807 | 12.794 | 12.828 | VV | 6822   | 90814   | 1.11%  | 0.035% |  |
| 256    | 12.849 | 12.828 | 12.871 | VV | 15503  | 207523  | 2.55%  | 0.080% |  |
| 257    | 12.896 | 12.871 | 12.917 | VV | 13467  | 211034  | 2.59%  | 0.082% |  |
| 258    | 12.956 | 12.917 | 12.985 | VV | 194495 | 2410006 | 29.58% | 0.934% |  |
| 259    | 13.016 | 12.985 | 13.064 | VV | 265817 | 3118150 | 38.27% | 1.208% |  |
| 260    | 13.083 | 13.064 | 13.099 | VV | 2736   | 43169   | 0.53%  | 0.017% |  |
| 261    | 13.145 | 13.099 | 13.159 | VV | 19173  | 299153  | 3.67%  | 0.116% |  |
| 262    | 13.177 | 13.159 | 13.214 | VV | 42589  | 678050  | 8.32%  | 0.263% |  |
| 263    | 13.228 | 13.214 | 13.248 | VV | 6780   | 99328   | 1.22%  | 0.038% |  |
| 264    | 13.252 | 13.248 | 13.273 | VV | 3141   | 30418   | 0.37%  | 0.012% |  |
| 265    | 13.314 | 13.273 | 13.340 | VV | 196956 | 2380954 | 29.22% | 0.923% |  |
| 266    | 13.369 | 13.340 | 13.388 | VV | 37615  | 497906  | 6.11%  | 0.193% |  |
| 267    | 13.402 | 13.388 | 13.436 | VV | 21050  | 244549  | 3.00%  | 0.095% |  |
| 268    | 13.457 | 13.436 | 13.469 | PV | 2115   | 25396   | 0.31%  | 0.010% |  |
| 269    | 13.503 | 13.469 | 13.538 | VV | 18861  | 358018  | 4.39%  | 0.139% |  |
| 270    | 13.584 | 13.538 | 13.603 | VV | 29268  | 510608  | 6.27%  | 0.198% |  |
| 271    | 13.617 | 13.603 | 13.624 | VV | 13537  | 145885  | 1.79%  | 0.057% |  |
| 272    | 13.638 | 13.624 | 13.654 | VV | 20221  | 279389  | 3.43%  | 0.108% |  |
| 273    | 13.664 | 13.654 | 13.686 | VV | 16119  | 198005  | 2.43%  | 0.077% |  |
| 274    | 13.712 | 13.686 | 13.728 | VV | 7372   | 143669  | 1.76%  | 0.056% |  |
| 275    | 13.737 | 13.728 | 13.748 | VV | 4989   | 55279   | 0.68%  | 0.021% |  |
| 276    | 13.774 | 13.748 | 13.784 | VV | 18067  | 250791  | 3.08%  | 0.097% |  |
| 277    | 13.802 | 13.784 | 13.856 | VV | 47120  | 660266  | 8.10%  | 0.256% |  |
| 278    | 13.903 | 13.856 | 13.941 | VV | 27185  | 451851  | 5.55%  | 0.175% |  |
| 279    | 13.974 | 13.941 | 13.987 | VV | 2833   | 39612   | 0.49%  | 0.015% |  |
| 280    | 14.015 | 13.987 | 14.033 | VV | 15320  | 236905  | 2.91%  | 0.092% |  |
| 281    | 14.051 | 14.033 | 14.074 | VV | 17179  | 243388  | 2.99%  | 0.094% |  |
| 282    | 14.093 | 14.074 | 14.122 | VV | 8709   | 142640  | 1.75%  | 0.055% |  |
| 283    | 14.158 | 14.122 | 14.201 | VV | 176892 | 2499302 | 30.67% | 0.969% |  |
| 284    | 14.222 | 14.201 | 14.246 | VV | 13036  | 189100  | 2.32%  | 0.073% |  |
| 285    | 14.256 | 14.246 | 14.261 | VV | 2195   | 16630   | 0.20%  | 0.006% |  |
| 286    | 14.281 | 14.261 | 14.286 | VV | 5730   | 58259   | 0.71%  | 0.023% |  |
| 287    | 14.303 | 14.286 | 14.324 | VV | 7481   | 113940  | 1.40%  | 0.044% |  |
| 288    | 14.340 | 14.324 | 14.350 | VV | 2828   | 36044   | 0.44%  | 0.014% |  |
| 289    | 14.403 | 14.350 | 14.422 | VV | 10460  | 262025  | 3.22%  | 0.102% |  |
| 290    | 14.440 | 14.422 | 14.461 | VV | 8625   | 106342  | 1.31%  | 0.041% |  |
| 291    | 14.485 | 14.461 | 14.517 | PV | 5490   | 94241   | 1.16%  | 0.037% |  |
| 292    | 14.545 | 14.517 | 14.568 | VV | 30656  | 434201  | 5.33%  | 0.168% |  |
| 293    | 14.589 | 14.568 | 14.612 | VV | 28121  | 413858  | 5.08%  | 0.160% |  |
| 294    | 14.642 | 14.612 | 14.697 | VV | 27556  | 644993  | 7.92%  | 0.250% |  |
| 295    | 14.721 | 14.697 | 14.740 | VV | 22013  | 318778  | 3.91%  | 0.124% |  |
| 296    | 14.746 | 14.740 | 14.773 | VV | 10276  | 133089  | 1.63%  | 0.052% |  |
| 297    | 14.821 | 14.773 | 14.862 | VV | 30501  | 858328  | 10.53% | 0.333% |  |
| 298    | 14.884 | 14.862 | 14.909 | VV | 32254  | 469586  | 5.76%  | 0.182% |  |
| 299    | 14.947 | 14.909 | 14.991 | VV | 75125  | 1157750 | 14.21% | 0.449% |  |

Instrument :

FID\_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

|        |        |        |        |    |        |         | Instrument :<br>FID_F        |        |
|--------|--------|--------|--------|----|--------|---------|------------------------------|--------|
|        |        |        |        |    |        |         | ClientSampleId :<br>WASTEMSD |        |
| rteres |        |        |        |    |        |         |                              |        |
| 300    | 15.012 | 14.991 | 15.026 | VV | 9663   | 135977  | 1.67%                        | 0.053% |
|        |        |        |        |    |        |         | Manual IntegrationsAPPROVED  |        |
| 301    | 15.060 | 15.026 | 15.088 | VV | 72093  | 1183265 | 14.63%                       | 0.052% |
| 302    | 15.096 | 15.088 | 15.128 | VV | 9768   | 133010  | 1.33%                        | 0.052% |
| 303    | 15.154 | 15.128 | 15.170 | VV | 14393  | 195011  | 2.19%                        | 0.053% |
| 304    | 15.199 | 15.170 | 15.220 | VV | 111341 | 1511495 | 18.63%                       | 0.036% |
| 305    | 15.241 | 15.220 | 15.250 | VV | 111981 | 1341979 | 16.63%                       | 0.057% |
| 306    | 15.264 | 15.250 | 15.295 | VV | 170688 | 2231241 | 27.38%                       | 0.865% |
| 307    | 15.310 | 15.295 | 15.328 | VV | 10291  | 133010  | 1.63%                        | 0.052% |
| 308    | 15.361 | 15.328 | 15.388 | VV | 23392  | 394974  | 4.85%                        | 0.153% |
| 309    | 15.391 | 15.388 | 15.417 | VV | 5729   | 73414   | 0.90%                        | 0.028% |
| 310    | 15.446 | 15.417 | 15.467 | VV | 8428   | 147907  | 1.82%                        | 0.057% |
| 311    | 15.482 | 15.467 | 15.488 | VV | 4026   | 38409   | 0.47%                        | 0.015% |
| 312    | 15.507 | 15.488 | 15.524 | VV | 12424  | 174855  | 2.15%                        | 0.068% |
| 313    | 15.538 | 15.524 | 15.568 | VV | 7347   | 137058  | 1.68%                        | 0.053% |
| 314    | 15.581 | 15.568 | 15.610 | VV | 4562   | 93118   | 1.14%                        | 0.036% |
| 315    | 15.643 | 15.610 | 15.677 | VV | 81546  | 1117813 | 13.72%                       | 0.433% |
| 316    | 15.684 | 15.677 | 15.710 | VV | 5416   | 67235   | 0.83%                        | 0.026% |
| 317    | 15.726 | 15.710 | 15.730 | VV | 1620   | 13679   | 0.17%                        | 0.005% |
| 318    | 15.746 | 15.730 | 15.763 | VV | 2458   | 36719   | 0.45%                        | 0.014% |
| 319    | 15.787 | 15.763 | 15.798 | VV | 17872  | 232673  | 2.86%                        | 0.090% |
| 320    | 15.808 | 15.798 | 15.824 | VV | 15695  | 219489  | 2.69%                        | 0.085% |
| 321    | 15.830 | 15.824 | 15.836 | VV | 10179  | 71883   | 0.88%                        | 0.028% |
| 322    | 15.839 | 15.836 | 15.849 | VV | 10628  | 79294   | 0.97%                        | 0.031% |
| 323    | 15.874 | 15.849 | 15.896 | VV | 21819  | 368717  | 4.52%                        | 0.143% |
| 324    | 15.914 | 15.896 | 15.937 | VV | 10368  | 129405  | 1.59%                        | 0.050% |
| 325    | 15.959 | 15.937 | 15.967 | VV | 3541   | 34261   | 0.42%                        | 0.013% |
| 326    | 16.007 | 15.967 | 16.034 | VV | 61492  | 1041984 | 12.79%                       | 0.404% |
| 327    | 16.038 | 16.034 | 16.047 | VV | 16196  | 125302  | 1.54%                        | 0.049% |
| 328    | 16.058 | 16.047 | 16.084 | VV | 17255  | 237848  | 2.92%                        | 0.092% |
| 329    | 16.117 | 16.084 | 16.131 | VV | 5526   | 97742   | 1.20%                        | 0.038% |
| 330    | 16.160 | 16.131 | 16.182 | VV | 8335   | 139923  | 1.72%                        | 0.054% |
| 331    | 16.197 | 16.182 | 16.222 | VV | 5701   | 78407   | 0.96%                        | 0.030% |
| 332    | 16.245 | 16.222 | 16.262 | VV | 7636   | 117145  | 1.44%                        | 0.045% |
| 333    | 16.291 | 16.262 | 16.329 | VV | 156182 | 2132366 | 26.17%                       | 0.826% |
| 334    | 16.353 | 16.329 | 16.379 | VV | 11702  | 159849  | 1.96%                        | 0.062% |
| 335    | 16.419 | 16.379 | 16.449 | VV | 4513   | 93185   | 1.14%                        | 0.036% |
| 336    | 16.502 | 16.449 | 16.532 | PV | 9104   | 249280  | 3.06%                        | 0.097% |
| 337    | 16.551 | 16.532 | 16.565 | VV | 6824   | 96614   | 1.19%                        | 0.037% |
| 338    | 16.583 | 16.565 | 16.598 | VV | 8073   | 126674  | 1.55%                        | 0.049% |
| 339    | 16.602 | 16.598 | 16.625 | VV | 6600   | 83071   | 1.02%                        | 0.032% |
| 340    | 16.662 | 16.625 | 16.723 | VV | 120895 | 2008652 | 24.65%                       | 0.778% |
| 341    | 16.768 | 16.723 | 16.787 | VV | 140962 | 2199094 | 26.99%                       | 0.852% |
| 342    | 16.792 | 16.787 | 16.818 | VV | 57197  | 603310  | 7.40%                        | 0.234% |
| 343    | 16.845 | 16.818 | 16.872 | VV | 11416  | 284160  | 3.49%                        | 0.110% |

| rteres |        |        |        |    |        |         |         |        |  |
|--------|--------|--------|--------|----|--------|---------|---------|--------|--|
| 352    | 17.363 | 17.348 | 17.369 | VV | 12332  | 147751  | 1.81%   | 0.057% |  |
| 353    | 17.392 | 17.369 | 17.417 | VV | 14796  | 373319  |         |        |  |
| 354    | 17.456 | 17.417 | 17.464 | VV | 13654  | 354981  |         |        |  |
| 355    | 17.521 | 17.464 | 17.547 | VV | 25908  | 911302  |         |        |  |
| 356    | 17.551 | 17.547 | 17.559 | VV | 15658  | 111830  |         |        |  |
| 357    | 17.563 | 17.559 | 17.579 | VV | 15287  | 172735  |         |        |  |
| 358    | 17.609 | 17.579 | 17.640 | VV | 118890 | 2046875 | 25.12%  | 0.793% |  |
| 359    | 17.646 | 17.640 | 17.658 | VV | 23263  | 249123  | 3.06%   | 0.097% |  |
| 360    | 17.699 | 17.658 | 17.725 | VV | 126209 | 2244272 | 27.54%  | 0.870% |  |
| 361    | 17.736 | 17.725 | 17.752 | VV | 20848  | 313887  | 3.85%   | 0.122% |  |
| 362    | 17.769 | 17.752 | 17.772 | VV | 21509  | 227471  | 2.79%   | 0.088% |  |
| 363    | 17.778 | 17.772 | 17.787 | VV | 21739  | 180848  | 2.22%   | 0.070% |  |
| 364    | 17.809 | 17.787 | 17.838 | VV | 24462  | 637111  | 7.82%   | 0.247% |  |
| 365    | 17.867 | 17.838 | 17.887 | VV | 25894  | 632739  | 7.76%   | 0.245% |  |
| 366    | 17.917 | 17.887 | 17.945 | VV | 23931  | 701543  | 8.61%   | 0.272% |  |
| 367    | 17.969 | 17.945 | 18.006 | VV | 24206  | 757244  | 9.29%   | 0.293% |  |
| 368    | 18.055 | 18.006 | 18.080 | VV | 33117  | 1129447 | 13.86%  | 0.438% |  |
| 369    | 18.139 | 18.080 | 18.167 | VV | 181439 | 3812377 | 46.78%  | 1.477% |  |
| 370    | 18.181 | 18.167 | 18.197 | VV | 52227  | 805573  | 9.89%   | 0.312% |  |
| 371    | 18.226 | 18.197 | 18.270 | VV | 68761  | 2002751 | 24.58%  | 0.776% |  |
| 372    | 18.303 | 18.270 | 18.314 | VV | 37822  | 913787  | 11.21%  | 0.354% |  |
| 373    | 18.320 | 18.314 | 18.337 | VV | 35533  | 450672  | 5.53%   | 0.175% |  |
| 374    | 18.367 | 18.337 | 18.398 | VV | 63709  | 1538009 | 18.87%  | 0.596% |  |
| 375    | 18.434 | 18.398 | 18.447 | VV | 50518  | 1168326 | 14.34%  | 0.453% |  |
| 376    | 18.462 | 18.447 | 18.473 | VV | 54526  | 822384  | 10.09%  | 0.319% |  |
| 377    | 18.496 | 18.473 | 18.509 | VV | 131518 | 2131487 | 26.16%  | 0.826% |  |
| 378    | 18.530 | 18.509 | 18.548 | VV | 226915 | 3755298 | 46.08%  | 1.455% |  |
| 379    | 18.563 | 18.548 | 18.595 | VV | 172216 | 3055089 | 37.49%  | 1.184% |  |
| 380    | 18.610 | 18.595 | 18.631 | VV | 39900  | 801551  | 9.84%   | 0.311% |  |
| 381    | 18.659 | 18.631 | 18.677 | VV | 67072  | 1436704 | 17.63%  | 0.557% |  |
| 382    | 18.694 | 18.677 | 18.750 | VV | 56960  | 1932969 | 23.72%  | 0.749% |  |
| 383    | 18.782 | 18.750 | 18.811 | VV | 98666  | 2100263 | 25.77%  | 0.814% |  |
| 384    | 18.860 | 18.811 | 18.892 | VV | 90392  | 2871807 | 35.24%  | 1.113% |  |
| 385    | 18.916 | 18.892 | 18.933 | VV | 66570  | 1392899 | 17.09%  | 0.540% |  |
| 386    | 18.976 | 18.933 | 19.035 | VV | 217665 | 5814985 | 71.36%  | 2.253% |  |
| 387    | 19.081 | 19.035 | 19.118 | VV | 130602 | 3681569 | 45.18%  | 1.427% |  |
| 388    | 19.132 | 19.118 | 19.160 | VV | 50271  | 1213241 | 14.89%  | 0.470% |  |
| 389    | 19.182 | 19.160 | 19.205 | VV | 48341  | 1229356 | 15.09%  | 0.476% |  |
| 390    | 19.219 | 19.205 | 19.224 | VV | 47603  | 541895  | 6.65%   | 0.210% |  |
| 391    | 19.252 | 19.224 | 19.269 | VV | 58628  | 1434220 | 17.60%  | 0.556% |  |
| 392    | 19.330 | 19.269 | 19.359 | VV | 354117 | 8148740 | 100.00% | 3.158% |  |
| 393    | 19.376 | 19.359 | 19.425 | VV | 146744 | 3959482 | 48.59%  | 1.534% |  |
| 394    | 19.452 | 19.425 | 19.478 | VV | 95064  | 2538479 | 31.15%  | 0.984% |  |
| 395    | 19.505 | 19.478 | 19.558 | VV | 117311 | 3751689 | 46.04%  | 1.454% |  |
| 396    | 19.613 | 19.558 | 19.647 | VV | 131623 | 4409886 | 54.12%  | 1.709% |  |
| 397    | 19.669 | 19.647 | 19.709 | VV | 88978  | 2670411 | 32.77%  | 1.035% |  |
| 398    | 19.765 | 19.709 | 19.802 | VV | 242230 | 5995365 | 73.57%  | 2.323% |  |
| 399    | 19.827 | 19.802 | 19.852 | VV | 145149 | 2966266 | 36.40%  | 1.149% |  |
| 400    | 19.874 | 19.852 | 19.912 | VV | 99821  | 2725525 | 33.45%  | 1.056% |  |
| 401    | 19.945 | 19.912 | 19.970 | VV | 86622  | 2494101 | 30.61%  | 0.967% |  |
| 402    | 19.984 | 19.970 | 19.994 | VV | 66560  | 959140  | 11.77%  | 0.372% |  |
| 403    | 20.022 | 19.994 | 20.052 | VV | 94793  | 2775292 | 34.06%  | 1.075% |  |
| 404    | 20.058 | 20.052 | 20.081 | VV | 72573  | 1223539 | 15.02%  | 0.474% |  |

Instrument :

FID\_F

ClientSampleId :

WASTEMSD

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025

Supervised By :Yogesh Patel 10/31/2025

|     |        |        |        |    |        |         |                              |        |
|-----|--------|--------|--------|----|--------|---------|------------------------------|--------|
|     |        |        |        |    |        |         | Instrument :<br>FID_F        |        |
|     |        |        |        |    |        |         | ClientSampleId :<br>WASTEMSD |        |
| 405 | 20.111 | 20.081 | 20.134 | VV | 131979 | 3202053 | 39.30%                       | 1.241% |
| 406 | 20.142 | 20.134 | 20.156 | VV | 93047  | 1165575 | Manual IntegrationsAPPROVED  |        |
| 407 | 20.169 | 20.156 | 20.193 | VV | 84747  | 1735975 |                              |        |
| 408 | 20.208 | 20.193 | 20.218 | VV | 69068  | 1030609 |                              |        |
| 409 | 20.238 | 20.218 | 20.242 | VV | 74790  | 1009102 |                              |        |
| 410 | 20.265 | 20.242 | 20.297 | VV | 77191  | 2484553 |                              |        |
| 411 | 20.325 | 20.297 | 20.354 | VV | 100703 | 2917482 | 35.80%                       | 1.131% |
| 412 | 20.395 | 20.354 | 20.400 | VV | 86964  | 2196415 | 26.95%                       | 0.851% |
| 413 | 20.411 | 20.400 | 20.422 | VV | 89871  | 1136310 | 13.94%                       | 0.440% |
| 414 | 20.439 | 20.422 | 20.460 | VV | 94268  | 2013134 | 24.70%                       | 0.780% |
| 415 | 20.471 | 20.460 | 20.478 | VV | 81493  | 879852  | 10.80%                       | 0.341% |
| 416 | 20.511 | 20.478 | 20.532 | VV | 244880 | 4952337 | 60.77%                       | 1.919% |
| 417 | 20.546 | 20.532 | 20.581 | VV | 143367 | 2980779 | 36.58%                       | 1.155% |
| 418 | 20.621 | 20.581 | 20.648 | VV | 88878  | 3050013 | 37.43%                       | 1.182% |
| 419 | 20.654 | 20.648 | 20.657 | VV | 71345  | 381875  | 4.69%                        | 0.148% |
| 420 | 20.679 | 20.657 | 20.703 | VV | 76875  | 2006067 | 24.62%                       | 0.777% |
| 421 | 20.709 | 20.703 | 20.726 | VV | 73480  | 991422  | 12.17%                       | 0.384% |
| 422 | 20.730 | 20.726 | 20.737 | VV | 71134  | 464226  | 5.70%                        | 0.180% |
| 423 | 20.742 | 20.737 | 20.748 | VV | 69964  | 490951  | 6.02%                        | 0.190% |
| 424 | 20.755 | 20.748 | 20.760 | VV | 69707  | 490556  | 6.02%                        | 0.190% |
| 425 | 20.766 | 20.760 | 20.806 | VV | 69522  | 1777247 | 21.81%                       | 0.689% |
| 426 | 20.856 | 20.806 | 20.894 | VV | 73363  | 3408699 | 41.83%                       | 1.321% |
| 427 | 20.918 | 20.894 | 20.964 | VV | 67340  | 2569516 | 31.53%                       | 0.996% |
| 428 | 20.997 | 20.964 | 21.014 | VV | 58025  | 1682090 | 20.64%                       | 0.652% |
| 429 | 21.018 | 21.014 | 21.025 | VV | 54811  | 354754  | 4.35%                        | 0.137% |
| 430 | 21.060 | 21.025 | 21.080 | VV | 77258  | 2213318 | 27.16%                       | 0.858% |
| 431 | 21.102 | 21.080 | 21.115 | VV | 69592  | 1384099 | 16.99%                       | 0.536% |
| 432 | 21.129 | 21.115 | 21.141 | VV | 70842  | 1112995 | 13.66%                       | 0.431% |
| 433 | 21.148 | 21.141 | 21.179 | VV | 69545  | 1523342 | 18.69%                       | 0.590% |
| 434 | 21.198 | 21.179 | 21.230 | VV | 72759  | 2095103 | 25.71%                       | 0.812% |
| 435 | 21.270 | 21.230 | 21.305 | VV | 196797 | 5054815 | 62.03%                       | 1.959% |
| 436 | 21.330 | 21.305 | 21.357 | VV | 61623  | 1714462 | 21.04%                       | 0.664% |
| 437 | 21.361 | 21.357 | 21.379 | VV | 48303  | 621011  | 7.62%                        | 0.241% |
| 438 | 21.384 | 21.379 | 21.395 | VV | 47811  | 459138  | 5.63%                        | 0.178% |
| 439 | 21.404 | 21.395 | 21.459 | VV | 46500  | 1567300 | 19.23%                       | 0.607% |
| 440 | 21.474 | 21.459 | 21.482 | VV | 36871  | 491698  | 6.03%                        | 0.191% |
| 441 | 21.489 | 21.482 | 21.498 | VV | 35933  | 338044  | 4.15%                        | 0.131% |
| 442 | 21.506 | 21.498 | 21.514 | VV | 35862  | 332366  | 4.08%                        | 0.129% |
| 443 | 21.535 | 21.514 | 21.540 | VV | 37036  | 557245  | 6.84%                        | 0.216% |
| 444 | 21.552 | 21.540 | 21.575 | VV | 38548  | 769270  | 9.44%                        | 0.298% |
| 445 | 21.589 | 21.575 | 21.611 | VV | 37192  | 774101  | 9.50%                        | 0.300% |
| 446 | 21.622 | 21.611 | 21.645 | VV | 34051  | 657291  | 8.07%                        | 0.255% |
| 447 | 21.671 | 21.645 | 21.700 | VV | 31565  | 948558  | 11.64%                       | 0.368% |
| 448 | 21.768 | 21.700 | 21.816 | VV | 36546  | 2033631 | 24.96%                       | 0.788% |
| 449 | 21.821 | 21.816 | 21.852 | VV | 26242  | 543328  | 6.67%                        | 0.211% |
| 450 | 21.857 | 21.852 | 21.863 | VV | 24455  | 159312  | 1.96%                        | 0.062% |
| 451 | 21.879 | 21.863 | 21.914 | VV | 26131  | 702660  | 8.62%                        | 0.272% |
| 452 | 21.949 | 21.914 | 21.955 | VV | 23851  | 540232  | 6.63%                        | 0.209% |
| 453 | 21.961 | 21.955 | 21.965 | VV | 23525  | 144835  | 1.78%                        | 0.056% |
| 454 | 21.981 | 21.965 | 22.007 | VV | 24209  | 565302  | 6.94%                        | 0.219% |
| 455 | 22.031 | 22.007 | 22.059 | VV | 28916  | 788860  | 9.68%                        | 0.306% |
| 456 | 22.064 | 22.059 | 22.068 | VV | 23908  | 125752  | 1.54%                        | 0.049% |

|     |        |        |        |     |        |         |    |
|-----|--------|--------|--------|-----|--------|---------|----|
|     |        |        |        |     | rters  |         |    |
| 457 | 22.081 | 22.068 | 22.122 | VV  | 25794  | 640952  |    |
| 458 | 22.177 | 22.122 | 22.183 | VV  | 65170  | 1410122 | 17 |
| 459 | 22.220 | 22.183 | 22.297 | VV  | 114295 | 3585874 | 44 |
| 460 | 22.303 | 22.297 | 22.365 | VV  | 7749   | 169666  | 2  |
| 461 | 22.375 | 22.365 | 22.384 | PV  | 1472   | 7486    | 6  |
| 462 | 22.393 | 22.384 | 22.400 | VBA | 905    | 63672   | 6  |

Sum of corrected areas: 258054681

Instrument :  
FID\_F  
ClientSampleId :  
WASTEMSD

7.87% 0.248%

Manual IntegrationsAPPROVED

Reviewed By :Rahul Chavli 10/31/2025  
Supervised By :Yogesh Patel 10/31/2025

FF102925.M Fri Oct 31 03:49:21 2025

### Manual Integration Report

| Sample ID   | ClientID ID | File ID    | Sequence ID | Parameter                | Supervised By | Supervised On         | Reason                                  |
|-------------|-------------|------------|-------------|--------------------------|---------------|-----------------------|-----------------------------------------|
| Q3474-01    |             | FF016637.D | FF103025    | TETRACOSANE-d50 (SURROGA | yogesh        | 10/31/2025 4:29:34 PM | Peak Integrated by Software incorrectly |
| Q3474-01MS  |             | FF016638.D | FF103025    | N-DOTRIACONTANE          | yogesh        | 10/31/2025 4:29:36 PM | Peak Integrated by Software incorrectly |
| Q3474-01MS  |             | FF016638.D | FF103025    | N-OCTATRIACONTANE        | yogesh        | 10/31/2025 4:29:36 PM | Peak Integrated by Software incorrectly |
| Q3474-01MS  |             | FF016638.D | FF103025    | N-TETRACONTANE           | yogesh        | 10/31/2025 4:29:36 PM | Peak Integrated by Software incorrectly |
| Q3474-01MSD |             | FF016639.D | FF103025    | N-DOTRIACONTANE          | yogesh        | 10/31/2025 4:29:38 PM | Peak Integrated by Software incorrectly |
| Q3474-01MSD |             | FF016639.D | FF103025    | N-TETRACONTANE           | yogesh        | 10/31/2025 4:29:38 PM | Peak Integrated by Software incorrectly |
|             |             |            |             |                          |               |                       |                                         |

Instrument ID: FID\_F

**Daily Analysis Runlog For Sequence/QC Batch ID # FF102925**

|                                                                                                    |                                         |                   |                               |
|----------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------|-------------------------------|
| Review By                                                                                          | yogesh                                  | Review On         | 10/29/2025 11:13:33 AM        |
| Supervise By                                                                                       | Sohil                                   | Supervise On      | 10/30/2025 3:49:06 PM         |
| SubDirectory                                                                                       | FF102925                                | HP Acquire Method | HP Processing Method FF102925 |
| <b>STD. NAME</b>                                                                                   | <b>STD REF.#</b>                        |                   |                               |
| Tune/Reschk<br>Initial Calibration Stds                                                            | PP24962,PP24964,PP24965,PP24966,PP24967 |                   |                               |
| CCC<br>Internal Standard/PEM<br>ICV/I.BLK<br>Surrogate Standard<br>MS/MSD Standard<br>LCS Standard | PP24963,PP24968                         |                   |                               |

| Sr# | SampleId     | Data File Name | Date-Time         | Operator | Status |
|-----|--------------|----------------|-------------------|----------|--------|
| 1   | MECL2        | FF016601.D     | 29 Oct 2025 09:11 | YP\AJ    | Ok     |
| 2   | I.BLK        | FF016602.D     | 29 Oct 2025 09:40 | YP\AJ    | Ok     |
| 3   | 100 TRPH STD | FF016603.D     | 29 Oct 2025 10:39 | YP\AJ    | Ok     |
| 4   | 50 TRPH STD  | FF016604.D     | 29 Oct 2025 11:08 | YP\AJ    | Ok     |
| 5   | 20 TRPH STD  | FF016605.D     | 29 Oct 2025 11:38 | YP\AJ    | Ok     |
| 6   | 10 TRPH STD  | FF016606.D     | 29 Oct 2025 12:07 | YP\AJ    | Ok     |
| 7   | 5 TRPH STD   | FF016607.D     | 29 Oct 2025 12:37 | YP\AJ    | Ok     |
| 8   | FF102925ICV  | FF016608.D     | 29 Oct 2025 13:06 | YP\AJ    | Ok     |

M : Manual Integration

Instrument ID: FID\_F

**Daily Analysis Runlog For Sequence/QC Batch ID # FF103025**

|                                                                                                    |                                         |                   |                               |
|----------------------------------------------------------------------------------------------------|-----------------------------------------|-------------------|-------------------------------|
| Review By                                                                                          | yogesh                                  | Review On         | 10/30/2025 11:10:45 AM        |
| Supervise By                                                                                       | rahul                                   | Supervise On      | 11/3/2025 8:11:05 AM          |
| SubDirectory                                                                                       | FF103025                                | HP Acquire Method | HP Processing Method FF102925 |
| <b>STD. NAME</b>                                                                                   | <b>STD REF.#</b>                        |                   |                               |
| Tune/Reschk<br>Initial Calibration Stds                                                            | PP24962,PP24964,PP24965,PP24966,PP24967 |                   |                               |
| CCC<br>Internal Standard/PEM<br>ICV/I.BLK<br>Surrogate Standard<br>MS/MSD Standard<br>LCS Standard | PP24964<br><br>PP24963,PP24968          |                   |                               |

| Sr# | SampleId        | Data File Name | Date-Time         | Operator | Status   |
|-----|-----------------|----------------|-------------------|----------|----------|
| 1   | MECL2           | FF016630.D     | 30 Oct 2025 09:55 | YP\AJ    | Ok       |
| 2   | I.BLK           | FF016631.D     | 30 Oct 2025 10:24 | YP\AJ    | Ok       |
| 3   | 50 PPM TRPH STD | FF016632.D     | 30 Oct 2025 11:23 | YP\AJ    | Ok       |
| 4   | RT MARKER       | FF016633.D     | 30 Oct 2025 11:53 | YP\AJ    | Ok       |
| 5   | PB170324BL      | FF016634.D     | 30 Oct 2025 12:22 | YP\AJ    | Ok       |
| 6   | PB170324BS      | FF016635.D     | 30 Oct 2025 12:52 | YP\AJ    | Ok       |
| 7   | Q3434-01        | FF016636.D     | 30 Oct 2025 13:21 | YP\AJ    | Ok       |
| 8   | Q3474-01        | FF016637.D     | 30 Oct 2025 13:51 | YP\AJ    | Dilution |
| 9   | Q3474-01MS      | FF016638.D     | 30 Oct 2025 14:21 | YP\AJ    | Ok,M     |
| 10  | Q3474-01MSD     | FF016639.D     | 30 Oct 2025 14:50 | YP\AJ    | Ok,M     |
| 11  | Q3474-01        | FF016640.D     | 30 Oct 2025 15:20 | YP\AJ    | Ok       |
| 12  | I.BLK           | FF016641.D     | 30 Oct 2025 15:49 | YP\AJ    | Ok       |
| 13  | 50 PPM TRPH STD | FF016642.D     | 30 Oct 2025 16:19 | YP\AJ    | Ok       |

M : Manual Integration

Instrument ID: FID\_F

**Daily Analysis Runlog For Sequence/QC Batch ID # FF102925**

|              |          |                   |                               |
|--------------|----------|-------------------|-------------------------------|
| Review By    | yogesh   | Review On         | 10/29/2025 11:13:33 AM        |
| Supervise By | Sohil    | Supervise On      | 10/30/2025 3:49:06 PM         |
| SubDirectory | FF102925 | HP Acquire Method | HP Processing Method FF102925 |

| STD. NAME                                                                                          | STD REF.#                               |
|----------------------------------------------------------------------------------------------------|-----------------------------------------|
| Tune/Reschk<br>Initial Calibration Stds                                                            | PP24962,PP24964,PP24965,PP24966,PP24967 |
| CCC<br>Internal Standard/PEM<br>ICV/I.BLK<br>Surrogate Standard<br>MS/MSD Standard<br>LCS Standard | PP24963,PP24968                         |

| Sr# | SampleID     | ClientID | Data File Name | Date-Time         | Comment | Operator | Status |
|-----|--------------|----------|----------------|-------------------|---------|----------|--------|
| 1   | MECL2        |          | FF016601.D     | 29 Oct 2025 09:11 |         | YP\AJ    | Ok     |
| 2   | I.BLK        |          | FF016602.D     | 29 Oct 2025 09:40 |         | YP\AJ    | Ok     |
| 3   | 100 TRPH STD |          | FF016603.D     | 29 Oct 2025 10:39 |         | YP\AJ    | Ok     |
| 4   | 50 TRPH STD  |          | FF016604.D     | 29 Oct 2025 11:08 |         | YP\AJ    | Ok     |
| 5   | 20 TRPH STD  |          | FF016605.D     | 29 Oct 2025 11:38 |         | YP\AJ    | Ok     |
| 6   | 10 TRPH STD  |          | FF016606.D     | 29 Oct 2025 12:07 |         | YP\AJ    | Ok     |
| 7   | 5 TRPH STD   |          | FF016607.D     | 29 Oct 2025 12:37 |         | YP\AJ    | Ok     |
| 8   | FF102925ICV  |          | FF016608.D     | 29 Oct 2025 13:06 |         | YP\AJ    | Ok     |

M : Manual Integration

Instrument ID: FID\_F

**Daily Analysis Runlog For Sequence/QC Batch ID # FF103025**

|                                         |                                         |                   |                               |
|-----------------------------------------|-----------------------------------------|-------------------|-------------------------------|
| Review By                               | yogesh                                  | Review On         | 10/30/2025 11:10:45 AM        |
| Supervise By                            | rahul                                   | Supervise On      | 11/3/2025 8:11:05 AM          |
| SubDirectory                            | FF103025                                | HP Acquire Method | HP Processing Method FF102925 |
| <b>STD. NAME</b>                        | <b>STD REF.#</b>                        |                   |                               |
| Tune/Reschk<br>Initial Calibration Stds | PP24962,PP24964,PP24965,PP24966,PP24967 |                   |                               |
| CCC                                     | PP24964                                 |                   |                               |
| Internal Standard/PEM                   | PP24963,PP24968                         |                   |                               |
| ICV/I.BLK                               |                                         |                   |                               |
| Surrogate Standard                      |                                         |                   |                               |
| MS/MSD Standard                         |                                         |                   |                               |
| LCS Standard                            |                                         |                   |                               |

| Sr# | SampleID        | ClientID | Data File Name | Date-Time         | Comment | Operator | Status   |
|-----|-----------------|----------|----------------|-------------------|---------|----------|----------|
| 1   | MECL2           |          | FF016630.D     | 30 Oct 2025 09:55 |         | YP\AJ    | Ok       |
| 2   | I.BLK           |          | FF016631.D     | 30 Oct 2025 10:24 |         | YP\AJ    | Ok       |
| 3   | 50 PPM TRPH STD |          | FF016632.D     | 30 Oct 2025 11:23 |         | YP\AJ    | Ok       |
| 4   | RT MARKER       |          | FF016633.D     | 30 Oct 2025 11:53 |         | YP\AJ    | Ok       |
| 5   | PB170324BL      |          | FF016634.D     | 30 Oct 2025 12:22 |         | YP\AJ    | Ok       |
| 6   | PB170324BS      |          | FF016635.D     | 30 Oct 2025 12:52 |         | YP\AJ    | Ok       |
| 7   | Q3434-01        |          | FF016636.D     | 30 Oct 2025 13:21 |         | YP\AJ    | Ok       |
| 8   | Q3474-01        |          | FF016637.D     | 30 Oct 2025 13:51 | Need 5X | YP\AJ    | Dilution |
| 9   | Q3474-01MS      |          | FF016638.D     | 30 Oct 2025 14:21 |         | YP\AJ    | Ok,M     |
| 10  | Q3474-01MSD     |          | FF016639.D     | 30 Oct 2025 14:50 |         | YP\AJ    | Ok,M     |
| 11  | Q3474-01        |          | FF016640.D     | 30 Oct 2025 15:20 |         | YP\AJ    | Ok       |
| 12  | I.BLK           |          | FF016641.D     | 30 Oct 2025 15:49 |         | YP\AJ    | Ok       |
| 13  | 50 PPM TRPH STD |          | FF016642.D     | 30 Oct 2025 16:19 |         | YP\AJ    | Ok       |

M : Manual Integration

# PERCENT SOLID

Supervisor: Iwona  
Analyst: jignesh  
Date: 10/23/2025

OVENTEMP IN Celsius(°C): 107  
Time IN: 17:15  
In Date: 10/22/2025  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 104  
Time OUT: 08:15  
Out Date: 10/23/2025  
Weight Check 1.0g: 1.00  
Weight Check 10g: 10.00  
BalanceID: M SC-4  
Thermometer ID: % SOLID-OVEN

QC:LB137614

| 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    |
|----------|----------------------------|--------|----------------|--------------|-------------------------|---------------------------|---------|-------------|
| Q3419-01 | PR-132-S16-015094-20251021 | 1      | 1.15           | 11.01        | 12.16                   | 7.14                      | 54.4    |             |
| Q3419-02 | Q3419-01MS                 | 2      | 1.15           | 11.01        | 12.16                   | 7.14                      | 54.4    |             |
| Q3419-03 | Q3419-01MSD                | 3      | 1.15           | 11.01        | 12.16                   | 7.14                      | 54.4    |             |
| Q3419-04 | PR-132-S16-119133-20251021 | 4      | 1.16           | 10.07        | 11.23                   | 6.37                      | 51.7    |             |
| Q3419-05 | PR-132-S16-094119-20251021 | 5      | 1.19           | 11.07        | 12.26                   | 6.38                      | 46.9    |             |
| Q3422-01 | PR132-S15-000008-20251017  | 6      | 1.18           | 11.02        | 12.2                    | 7.58                      | 58.1    |             |
| Q3424-01 | PR132-DP3-20251021         | 7      | 1.15           | 10.36        | 11.51                   | 5.91                      | 45.9    |             |
| Q3424-02 | PR132-S11-010080-20251021  | 8      | 1.12           | 10.72        | 11.84                   | 6.49                      | 50.1    |             |
| Q3424-03 | PR132-S14-00094-20251021   | 9      | 1.14           | 11.34        | 12.48                   | 6.82                      | 50.1    |             |
| Q3427-01 | TP-8                       | 10     | 1.11           | 10.77        | 11.88                   | 10.84                     | 90.3    |             |
| Q3427-02 | TP-8-EPH                   | 11     | 1.18           | 10.97        | 12.15                   | 10.98                     | 89.3    |             |
| Q3427-03 | TP-8-VOC                   | 12     | 1.19           | 10.26        | 11.45                   | 10.52                     | 90.9    |             |
| Q3429-01 | 40309                      | 13     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | WIPE SAMPLE |
| Q3429-02 | 40310                      | 14     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | WIPE SAMPLE |
| Q3430-01 | BUR-25-0095                | 15     | 1.00           | 1.00         | 2.00                    | 2.00                      | 100.0   | WIPE SAMPLE |
| Q3431-01 | EO-02-10222025             | 16     | 1.11           | 10.55        | 11.66                   | 10.64                     | 90.3    |             |
| Q3431-02 | EO-02-10222025-E2          | 17     | 1.17           | 10.59        | 11.76                   | 10.59                     | 89.0    |             |
| Q3434-01 | PR132-WC1-20251022         | 18     | 1.13           | 10.43        | 11.56                   | 7.17                      | 57.9    |             |

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

# WORKLIST(Hardcopy Internal Chain)

UB 137614

WorkList Name : %1-102225

WorkList ID : 192597

Department : Wet-Chemistry

Date : 10-22-2025 09:03:13

| Sample   | Customer Sample            | Matrix | Test           | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method       |
|----------|----------------------------|--------|----------------|--------------|----------|-----------------------------|--------------|--------------|
| Q3419-01 | PR-132-S16-015094-20251021 | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3419-02 | Q3419-01MS                 | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3419-03 | Q3419-01MSD                | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3419-04 | PR-132-S16-119133-20251021 | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3419-05 | PR-132-S16-094119-20251021 | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3422-01 | PR132-S15-000008-20251017  | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3424-01 | PR132-DP3-20251021         | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D31                         | 10/21/2025   | Chemtech -SO |
| Q3424-02 | PR132-S11-010080-20251021  | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D31                         | 10/21/2025   | Chemtech -SO |
| Q3424-03 | PR132-S14-00094-20251021   | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D31                         | 10/21/2025   | Chemtech -SO |
| Q3427-01 | TP-8                       | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3427-02 | TP-8-EPH                   | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3427-03 | TP-8-VOC                   | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D41                         | 10/21/2025   | Chemtech -SO |
| Q3429-01 | 40309                      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D51                         | 10/22/2025   | Chemtech -SO |
| Q3429-02 | 40310                      | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D51                         | 10/22/2025   | Chemtech -SO |
| Q3430-01 | BUR-25-0095                | Solid  | Percent Solids | Cool 4 deg C | PSEG03   | D51                         | 10/22/2025   | Chemtech -SO |
| Q3431-01 | EO-02-10222025             | Solid  | Percent Solids | Cool 4 deg C | PSEG05   | D41                         | 10/22/2025   | Chemtech -SO |
| Q3431-02 | EO-02-10222025-E2          | Solid  | Percent Solids | Cool 4 deg C | PSEG05   | D41                         | 10/22/2025   | Chemtech -SO |
| Q3434-01 | PR132-WC1-20251022         | Solid  | Percent Solids | Cool 4 deg C | AECO02   | D41                         | 10/22/2025   | Chemtech -SO |

Date/Time 10/22/25 15:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Q3434-TPH GC

Date/Time 10/22/25 17:25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

SOP ID: M3541-ASE Extraction-15

Clean Up SOP #: N/A

Matrix: Solid

Weigh By: EH

Balance check: EH

Balance ID: EX-SC-2

pH Strip Lot#: N/A

Extraction By: RJ

Filter By: RJ

pH Meter ID: N/A

Hood ID: 3,7

Extraction Start Date: 10/29/2025

Extraction Start Time: 10:55

Extraction End Date: 10/29/2025

Extraction End Time: 13:55

Concentration By: EH

Supervisor By: RUPESH

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

| Standard Name | MLS USED | Concentration ug/mL | STD REF. # FROM LOG |
|---------------|----------|---------------------|---------------------|
| Spike Sol 1   | 1.0ML    | 20 PPM              | PP25013             |
| Surrogate     | 1.0ML    | 20 PPM              | PP24596             |
| N/A           | N/A      | N/A                 | N/A                 |
| N/A           | N/A      | N/A                 | N/A                 |
| N/A           | N/A      | N/A                 | N/A                 |

| Chemical Used      | ML/SAMPLE USED | Lot Number |
|--------------------|----------------|------------|
| MeCl2/Acetone/1:1  | N/A            | EP2641     |
| Baked Na2SO4       | N/A            | EP2655     |
| Methylene Chloride | N/A            | E3980      |
| Sand               | N/A            | E3951      |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |
| N/A                | N/A            | N/A        |

Extraction Conformance/Non-Conformance Comments:

1.5 ML Vial lot# 2210443.

KD Bath ID: N/A

KD Bath Temperature: N/A

Envap ID: NEVAP-02

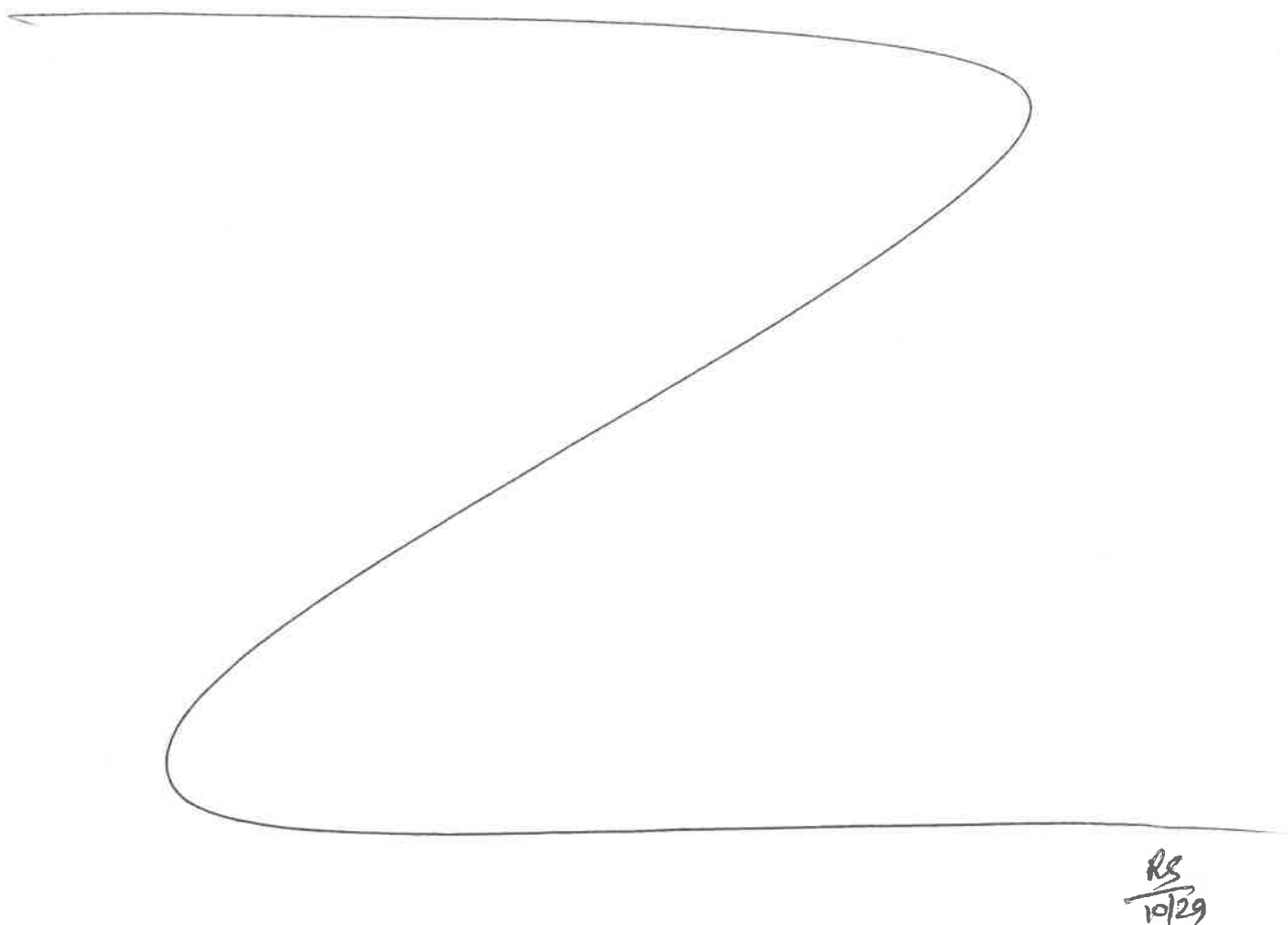
Envap Temperature: 40 °C

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|-------------|-----------------------------------------|----------------------|
| 10/29/25    | RS (Ext lab)                            | T.P. Pest/PCB        |
| 14:00       | Preparation Group                       | Analysis Group       |

Analytical Method: M3541-ASE Extraction-15

Concentration Date: 10/29/2025

| Sample ID       | Client Sample ID   | Test   | g/ mL | PH  | Surr/Spike By: |            | Final Vol.<br>(mL) | JarID | Comments | Prep<br>Pos |
|-----------------|--------------------|--------|-------|-----|----------------|------------|--------------------|-------|----------|-------------|
|                 |                    |        |       |     | AddedBy        | VerifiedBy |                    |       |          |             |
| PB170324BL      | PB170324BL         | TPH GC | 30.02 | N/A | ritesh         | Evelyn     | 1                  |       |          | U1-1        |
| PB170324BS      | PB170324BS         | TPH GC | 30.03 | N/A | ritesh         | Evelyn     | 1                  |       |          | 2           |
| Q3434-01        | PR132-WC1-20251022 | TPH GC | 30.06 | N/A | ritesh         | Evelyn     | 1                  | H     |          | 3           |
| Q3474-01        | WASTE              | TPH GC | 30.09 | N/A | ritesh         | Evelyn     | 1                  |       |          | 4           |
| Q3474-01MS      | WASTEMS            | TPH GC | 30.07 | N/A | ritesh         | Evelyn     | 1                  |       |          | 5           |
| Q3474-01MS<br>D | WASTEMSD           | TPH GC | 30.06 | N/A | ritesh         | Evelyn     | 1                  |       |          | 6           |



RS  
10/29

\* Extracts relinquished on the same date as received.

170324  
10:55

# WORKLIST(Hardcopy Internal Chain)

WorkList Name : Q3474T

WorkList ID : 192783

Department : Extraction

Date : 10-29-2025 10:18:17

| Sample   | Customer Sample    | Matrix | Test   | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|----------|--------------------|--------|--------|--------------|----------|-----------------------------|--------------|--------|
| Q3434-01 | PR132-WC1-20251022 | Solid  | TPH GC | Cool 4 deg C | AECO02   | D41                         | 10/22/2025   | 8015D  |
| Q3474-01 | WASTE              | Solid  | TPH GC | Cool 4 deg C | SCIA01   | J31                         | 10/27/2025   | 8015D  |

Date/Time

10/29/25 10:50

Raw Sample Received by:

RJ (Ext-66)

Raw Sample Relinquished by:

AL Sm

Date/Time

10/29/25 11:05

Raw Sample Received by:

AL Sm

Raw Sample Relinquished by:

RJ (Ext-66)

## Prep Standard - Chemical Standard Summary

**Order ID :** Q3434

**Test :** TPH GC

**Prepbatch ID :** PB170324,

**Sequence ID/Qc Batch ID:** FF103025,

**Standard ID :**

EP2641,EP2655,PP24596,PP24962,PP24963,PP24964,PP24965,PP24966,PP24967,PP24968,PP25013,

**Chemical ID :**

E3875,E3931,E3951,E3964,E3972,E3973,E3980,P11957,P11961,P13220,P13221,P13222,P13223,P13483,P13484,P13485,P13486,P13491,

## Extractions STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                    | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------------|------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 2017             | 1:1 ACETONE/METHYLENE CHLORIDE | <a href="#">EP2641</a> | 09/16/2025       | 03/16/2026             | Evelyn Huang       | None           | None             | Riteshkumar Patel    |
| 09/16/2025       |                                |                        |                  |                        |                    |                |                  |                      |

**FROM** 8000.00000ml of E3972 + 8000.00000ml of E3973 = Final Quantity: 16000.000 ml

| <u>Recipe ID</u> | <u>NAME</u>          | <u>NO.</u>             | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u>                | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------|------------------------|------------------|------------------------|--------------------|-------------------------------|------------------|----------------------|
| 3923             | Baked Sodium Sulfate | <a href="#">EP2655</a> | 10/24/2025       | 01/28/2026             | RUPESEKUMAR SHAH   | Extraction_SC ALE_2 (EX-SC-2) | None             | Riteshkumar Patel    |
| 10/24/2025       |                      |                        |                  |                        |                    |                               |                  |                      |

**FROM** 4000.00000gram of E3875 = Final Quantity: 4000.000 gram

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                         | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-------------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 147              | 20 PPM DRO Surrogate Spike Solution | <a href="#">PP24596</a> | 05/20/2025       | 11/20/2025             | Abdul Mirza        | None           | None             | Yogesh Patel         |
|                  |                                     |                         |                  |                        |                    |                |                  | 05/22/2025           |

**FROM** 1.00000ml of P13483 + 1.00000ml of P13484 + 1.00000ml of P13485 + 1.00000ml of P13486 + 196.00000ml of E3931 = Final Quantity: 200.000 ml

| <u>Recipe ID</u> | <u>NAME</u>              | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 433              | 100/100 PPM DRO (Restek) | <a href="#">PP24962</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                          |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 1.00000ml of P11957 + 1.00000ml of P11961 + 1.00000ml of P13491 = Final Quantity: 10.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>               | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|---------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3796             | 100/100 PPM DRO STD (CPI) | <a href="#">PP24963</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                           |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 1.00000ml of P13220 + 1.00000ml of P13221 + 1.00000ml of P13491 + 7.00000ml of E3964 = Final Quantity: 10.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 435              | 50 PPM ICC DRO STD (Restek) | <a href="#">PP24964</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 0.50000ml of E3973 + 0.50000ml of PP24962 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 437              | 20 PPM ICC DRO STD (Restek) | <a href="#">PP24965</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 0.80000ml of E3973 + 0.20000ml of PP24962 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>                 | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|-----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 438              | 10 PPM ICC DRO STD (Restek) | <a href="#">PP24966</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                             |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 0.90000ml of E3973 + 0.10000ml of PP24962 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u> | <u>NAME</u>                | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|----------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 439              | 5 PPM ICC DRO STD (Restek) | <a href="#">PP24967</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                            |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 0.90000ml of E3973 + 0.10000ml of PP24964 = Final Quantity: 1.000 ml

| <u>Recipe ID</u> | <u>NAME</u>              | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|------------------|--------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3797             | 50 PPM DRO ICV STD (CPI) | <a href="#">PP24968</a> | 10/02/2025       | 04/02/2026             | Yogesh Patel       | None           | None             | Abdul Mirza          |
|                  |                          |                         |                  |                        |                    |                |                  | 10/10/2025           |

**FROM** 0.50000ml of E3973 + 0.50000ml of PP24963 = Final Quantity: 1.000 ml

## Pest/Pcb STANDARD PREPARATION LOG

| <u>Recipe ID</u>                                                                                        | <u>NAME</u>                     | <u>NO.</u>              | <u>Prep Date</u> | <u>Expiration Date</u> | <u>Prepared By</u> | <u>ScaleID</u> | <u>PipetteID</u> | <u>Supervised By</u> |
|---------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------|------------------|------------------------|--------------------|----------------|------------------|----------------------|
| 3795                                                                                                    | 20 PPM DRO SPIKE SOLUTION (CPI) | <a href="#">PP25013</a> | 10/28/2025       | 04/16/2026             | Abdul Mirza        | None           | None             | Yogesh Patel         |
| <b>FROM</b> 1.00000ml of P13222 + 1.00000ml of P13223 + 48.00000ml of E3980 = Final Quantity: 50.000 ml |                                 |                         |                  |                        |                    |                |                  |                      |

## CHEMICAL RECEIPT LOG BOOK

| Supplier                    | ItemCode / ItemName                                    | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|-----------------------------|--------------------------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| PCI Scientific Supply, Inc. | PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1 | 417203 | 01/28/2026      | 07/28/2025 / RUPESH     | 01/29/2025 / Rajesh         | E3875          |

| Supplier         | ItemCode / ItemName                                         | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|-------------------------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L) | 25A0262002 | 02/20/2026      | 05/02/2025 / RUPESH     | 03/09/2025 / RUPESH         | E3931          |

| Supplier         | ItemCode / ItemName                      | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-3382-05 / Sand, Purified (cs/4x2.5kg) | 25A2756718 | 12/31/2028      | 07/09/2025 / RUPESH     | 04/28/2020 / RUPESH         | E3951          |

| 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) | 25C1262005 | 04/16/2026      | 08/14/2025 / RUPESH     | 03/06/2025 / RUPESH         | E3964          |

| Supplier         | ItemCode / ItemName                        | Lot #      | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|------------------|--------------------------------------------|------------|-----------------|-------------------------|-----------------------------|----------------|
| Seidler Chemical | BA-9254-03 / Acetone, Ultra Resi (cs/4x4L) | 24H1462005 | 05/24/2027      | 09/16/2025 / Evelyn     | 09/04/2025 / Riteshkumar    | E3972          |

| 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) | 25C1262005 | 04/16/2026      | 09/15/2025 / Riteshkumar | 09/15/2025 / Riteshkumar    | E3973          |

## 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) | 25C1262005 | 04/16/2026      | 10/10/2025 / RUPESH     | 10/10/2025 / RUPESH         | E3980          |

| Supplier | ItemCode / ItemName           | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31266 / Florida TRPH Standard | A0186840 | 04/02/2026      | 10/02/2025 / yogesh     | 07/11/2022 / Yogesh         | P11957         |

| Supplier | ItemCode / ItemName           | Lot #    | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|----------|-------------------------------|----------|-----------------|-------------------------|-----------------------------|----------------|
| Restek   | 31266 / Florida TRPH Standard | A0186840 | 04/02/2026      | 10/02/2025 / yogesh     | 07/11/2022 / Yogesh         | P11961         |

| 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 | 10/02/2026      | 10/02/2025 / yogesh     | 01/31/2024 / Ankita         | P13220         |

| 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 | 10/02/2026      | 10/02/2025 / yogesh     | 01/31/2024 / Ankita         | P13221         |

| 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 | 04/28/2026      | 10/28/2025 / Abdul      | 01/31/2024 / Ankita         | P13222         |

## 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 | 04/28/2026      | 10/28/2025 / Abdul      | 01/31/2024 / Ankita         | P13223         |

| Supplier                 | ItemCode / ItemName                   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 72072 / n-Tetracosane-d50, 1000 ug/ml | 101122 | 11/20/2025      | 05/20/2025 / Abdul      | 07/24/2024 / yogesh         | P13483         |

| Supplier                 | ItemCode / ItemName                   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 72072 / n-Tetracosane-d50, 1000 ug/ml | 101122 | 11/20/2025      | 05/20/2025 / Abdul      | 07/24/2024 / yogesh         | P13484         |

| Supplier                 | ItemCode / ItemName                   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 72072 / n-Tetracosane-d50, 1000 ug/ml | 101122 | 11/20/2025      | 05/20/2025 / Abdul      | 07/24/2024 / yogesh         | P13485         |

| Supplier                 | ItemCode / ItemName                   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 72072 / n-Tetracosane-d50, 1000 ug/ml | 101122 | 11/20/2025      | 05/20/2025 / Abdul      | 07/24/2024 / yogesh         | P13486         |

| Supplier                 | ItemCode / ItemName                   | Lot #  | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|--------------------------|---------------------------------------|--------|-----------------|-------------------------|-----------------------------|----------------|
| Absolute Standards, Inc. | 72072 / n-Tetracosane-d50, 1000 ug/ml | 101122 | 04/02/2026      | 10/02/2025 / yogesh     | 07/24/2024 / yogesh         | P13491         |



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

MIRADOR 201, COL. MIRADOR  
MONTERREY, N.L. MÉXICO  
CP 64070  
TEL +52 81 13 52 67 67  
www.pqm.com.mx

# CERTIFICATE OF ANALYSIS

|                       |                                   |               |                                 |
|-----------------------|-----------------------------------|---------------|---------------------------------|
| PRODUCT :             | SODIUM SULFATE CRYSTALS ANHYDROUS |               |                                 |
| QUALITY :             | ACS (CODE RMB3375)                | FORMULA :     | Na <sub>2</sub> SO <sub>4</sub> |
| SPECIFICATION NUMBER: | 6399                              | RELEASE DATE: | MAY/23/2024                     |
| LOT NUMBER :          | 417203                            |               |                                 |

| TEST                                     | SPECIFICATIONS | LOT VALUES  |
|------------------------------------------|----------------|-------------|
| Assay (Na <sub>2</sub> SO <sub>4</sub> ) | Min. 99.0%     | 99.8 %      |
| pH of a 5% solution at 25°C              | 5.2 - 9.2      | 6.2         |
| Insoluble matter                         | Max. 0.01%     | 0.001 %     |
| Loss on ignition                         | Max. 0.5%      | 0.1 %       |
| Chloride (Cl)                            | Max. 0.001%    | <0.001 %    |
| Nitrogen compounds (as N)                | Max. 5 ppm     | <5 ppm      |
| Phosphate (PO <sub>4</sub> )             | Max. 0.001%    | <0.001 %    |
| Heavy metals (as Pb)                     | Max. 5 ppm     | <5 ppm      |
| Iron (Fe)                                | Max. 0.001%    | <0.001 %    |
| Calcium (Ca)                             | Max. 0.01%     | 0.001 %     |
| Magnesium (Mg)                           | Max. 0.005%    | 0.001 %     |
| Potassium (K)                            | Max. 0.008%    | 0.001 %     |
| Extraction-concentration suitability     | Passes test    | Passes test |
| Appearance                               | Passes test    | Passes test |
| Identification                           | Passes test    | Passes test |
| Solubility and foreign matter            | Passes test    | Passes test |
| Retained on US Standard No. 10 sieve     | Max. 1%        | 0.2 %       |
| Retained on US Standard No. 60 sieve     | Min. 94%       | 96.2 %      |
| Through US Standard No. 60 sieve         | Max. 5%        | 3.5 %       |
| Through US Standard No. 100 sieve        | Max. 10%       | 0.1 %       |

## COMMENTS

QC: PhC Irma Belmares

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

RE-02-01, Ed. 3

E 3875

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

avantor

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

## Certificate of Analysis

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

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

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

E3930



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

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|                      |                                |
|----------------------|--------------------------------|
| Material             | BDH9274-2.5KG                  |
| Material Description | BDH SAND STDD OTTAWA W+I 2.5KG |
| Grade                | NOT APPLICABLE                 |
| Batch                | 25A2756718                     |
| Reassay Date         | 12/31/2028                     |
| CAS Number           | 14808-60-7                     |
| Molecular Formula    | SiO <sub>2</sub>               |
| Molecular Mass       | 60.09                          |
| Date of Manufacture  | 12/05/2024                     |
| Storage              | Room Temperature               |

| Characteristics               | Specifications  | Measured Values |
|-------------------------------|-----------------|-----------------|
| Appearance                    | Beige granules. | Beige granules. |
| Moisture                      | <= 0.1 %        | 0.1 %           |
| Particle Size 30-40 mesh      | >= 80 %         | 99 %            |
| CUSTOMER PART # BDH9274-2.5KG |                 |                 |

*Received on 1/12/25.*

**E3951**

Internal ID #: 793

| Signature                                                                                                                                                                                                                                                                                                   | Additional Information                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>We certify that this batch conforms to the specifications listed above.</p> <p>This document has been electronically produced and is valid without a signature.</p> <p>Leona Edwardson, Quality Control Sr. Manager - Solon<br/> VWR Chemicals, LLC.<br/> 28600 Fountain Parkway, Solon OH 44139 USA</p> | <p>Analysis may have been rounded to significant digits in specification limits</p> <p>Product meets analytical specifications of the grades listed.</p> |

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



Material No.: 9266-A4  
Batch No.: 25C1262005  
Manufactured Date: 2025-01-15  
Expiration Date: 2026-04-16  
Revision No.: 0

## Certificate of Analysis

| Test                                                                                       | Specification  | Result     |
|--------------------------------------------------------------------------------------------|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)                       | $\leq 5$       | 1          |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)                       | $\leq 10$      | 1          |
| Assay ( $\text{CH}_2\text{Cl}_2$ ) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$  | 100.0 %    |
| Color (APHA)                                                                               | $\leq 10$      | 5          |
| Residue after Evaporation                                                                  | $\leq 1.0$ ppm | 0.1 ppm    |
| Titration Acid ( $\mu\text{eq/g}$ )                                                        | $\leq 0.3$     | $< 0.1$    |
| Chloride (Cl)                                                                              | $\leq 10$ ppm  | $< 5$ ppm  |
| Water (by KF, coulometric)                                                                 | $\leq 0.02\%$  | $< 0.01\%$ |

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

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

Received on .

E 3964

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™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

## Certificate of Analysis

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

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

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

E3972

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

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



Material No.: 9266-A4  
Batch No.: 25C1262005  
Manufactured Date: 2025-01-15  
Expiration Date: 2026-04-16  
Revision No.: 0

## Certificate of Analysis

| Test                                                                                       | Specification  | Result     |
|--------------------------------------------------------------------------------------------|----------------|------------|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)                       | $\leq 5$       | 1          |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)                        | $\leq 10$      | 1          |
| Assay ( $\text{CH}_2\text{Cl}_2$ ) (by GC, exclusive of preservative, corrected for water) | $\geq 99.8\%$  | 100.0 %    |
| Color (APHA)                                                                               | $\leq 10$      | 5          |
| Residue after Evaporation                                                                  | $\leq 1.0$ ppm | 0.1 ppm    |
| Titration Acid ( $\mu\text{eq/g}$ )                                                        | $\leq 0.3$     | $< 0.1$    |
| Chloride (Cl)                                                                              | $\leq 10$ ppm  | $< 5$ ppm  |
| Water (by KF, coulometric)                                                                 | $\leq 0.02\%$  | $< 0.01\%$ |

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

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

REC. on 10/10/25  
RJ

E3980

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



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

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis



**FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.**

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

Catalog No. : 31266 Lot No.: A0186840  
Description : Florida TRPH Standard  
Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : July 31, 2029 Storage: 25°C nominal  
Handling: Sonicate prior to use. Ship: Ambient

P11948  
L  
P11962 } 7.0  
07/11

### CERTIFIED VALUES

| Elution Order | Compound                                                           | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)                                                       |
|---------------|--------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------|
| 1             | n-Octane (C8)<br>CAS # 111-65-9 (Lot SHBN3807)<br>Purity 99%       | 505.0 µg/mL                 | +/- 2.9995 µg/mL Gravimetric<br>+/- 12.5465 µg/mL Unstressed<br>+/- 15.0390 µg/mL Stressed |
| 2             | n-Decane (C10)<br>CAS # 124-18-5 (Lot SHBN8619)<br>Purity 99%      | 503.0 µg/mL                 | +/- 2.9877 µg/mL Gravimetric<br>+/- 12.4968 µg/mL Unstressed<br>+/- 14.9795 µg/mL Stressed |
| 3             | n-Dodecane (C12)<br>CAS # 112-40-3 (Lot SHBN7174)<br>Purity 99%    | 503.5 µg/mL                 | +/- 2.9906 µg/mL Gravimetric<br>+/- 12.5092 µg/mL Unstressed<br>+/- 14.9944 µg/mL Stressed |
| 4             | n-Tetradecane (C14)<br>CAS # 629-59-4 (Lot STBK2282)<br>Purity 99% | 505.0 µg/mL                 | +/- 2.9995 µg/mL Gravimetric<br>+/- 12.5465 µg/mL Unstressed<br>+/- 15.0390 µg/mL Stressed |
| 5             | n-Hexadecane (C16)<br>CAS # 544-76-3 (Lot SHBM4146)<br>Purity 98%  | 504.7 µg/mL                 | +/- 2.9978 µg/mL Gravimetric<br>+/- 12.5390 µg/mL Unstressed<br>+/- 15.0301 µg/mL Stressed |
| 6             | n-Octadecane (C18)<br>CAS # 593-45-3 (Lot VZKOJ)<br>Purity 97%     | 504.4 µg/mL                 | +/- 2.9960 µg/mL Gravimetric<br>+/- 12.5316 µg/mL Unstressed<br>+/- 15.0212 µg/mL Stressed |
| 7             | n-Eicosane (C20)<br>CAS # 112-95-8 (Lot MKCF7888)<br>Purity 99%    | 503.5 µg/mL                 | +/- 2.9906 µg/mL Gravimetric<br>+/- 12.5092 µg/mL Unstressed<br>+/- 14.9944 µg/mL Stressed |

|                                                                      |                                                                          |                  |             |                                          |                         |                                       |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|-------------|------------------------------------------|-------------------------|---------------------------------------|
| 8                                                                    | n-Docosane (C22)<br><b>CAS #</b> 629-97-0<br><b>Purity</b> 99%           | (Lot MKCL8918)   | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9                                                                    | n-Tetracosane (C24)<br><b>CAS #</b> 646-31-1<br><b>Purity</b> 99%        | (Lot MKCN2863)   | 503.5 µg/mL | +/- 2.9906<br>+/- 12.5092<br>+/- 14.9944 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10                                                                   | n-Hexacosane (C26)<br><b>CAS #</b> 630-01-3<br><b>Purity</b> 99%         | (Lot MKCD4540)   | 504.0 µg/mL | +/- 2.9936<br>+/- 12.5216<br>+/- 15.0093 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11                                                                   | n-Octacosane (C28)<br><b>CAS #</b> 630-02-4<br><b>Purity</b> 99%         | (Lot BCCG0084)   | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12                                                                   | n-Triacontane (C30)<br><b>CAS #</b> 638-68-6<br><b>Purity</b> 99%        | (Lot MKCN9321)   | 505.0 µg/mL | +/- 2.9995<br>+/- 12.5465<br>+/- 15.0390 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13                                                                   | n-Dotriacontane (C32)<br><b>CAS #</b> 544-85-4<br><b>Purity</b> 99%      | (Lot BCBW0661)   | 505.0 µg/mL | +/- 2.9995<br>+/- 12.5465<br>+/- 15.0390 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14                                                                   | n-Tetratriacontane (C34)<br><b>CAS #</b> 14167-59-0<br><b>Purity</b> 99% | (Lot OML4N)      | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15                                                                   | n-Hexatriacontane (C36)<br><b>CAS #</b> 630-06-8<br><b>Purity</b> 99%    | (Lot U25B014)    | 504.0 µg/mL | +/- 2.9936<br>+/- 12.5216<br>+/- 15.0093 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16                                                                   | n-Octatriacontane (C38)<br><b>CAS #</b> 7194-85-6<br><b>Purity</b> 97%   | (Lot 0000127235) | 504.4 µg/mL | +/- 2.9960<br>+/- 12.5316<br>+/- 15.0212 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17                                                                   | n-Tetracontane (C40)<br><b>CAS #</b> 4181-95-7<br><b>Purity</b> 98%      | (Lot PADGI)      | 504.7 µg/mL | +/- 2.9978<br>+/- 12.5390<br>+/- 15.0301 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| <b>Solvent:</b> Hexane<br><b>CAS #</b> 110-54-3<br><b>Purity</b> 99% |                                                                          |                  |             |                                          |                         |                                       |

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

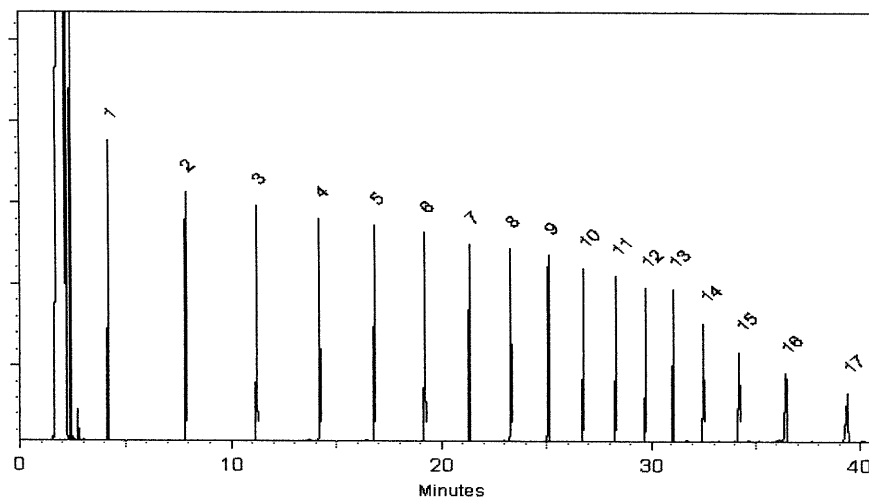
**Carrier Gas:**  
hydrogen-constant pressure 10 psi.

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

**Inj. Temp:**  
250°C

**Det. Temp:**  
330°C

**Det. Type:**  
FID



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

*Brittany Federinko*  
Brittany Federinko - Operations Tech I

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

*Christie Mills*  
Christie Mills - Operations Tech II - ARM QC

**Date Passed:** 01-Jul-2022

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at [www.restek.com/Contact-Us](http://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)<br>-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](http://www.restek.com/Contact-Us).
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

### Manufacturing Notes:

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

### Handling Notes:

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



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

www.restek.com

# CERTIFIED REFERENCE MATERIAL

## Certificate of Analysis



### FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 31266 Lot No.: A0186840  
Description : Florida TRPH Standard  
Florida TRPH Standard 500µg/mL, Hexane, 1mL/ampul  
Container Size : 2 mL Pkg Amt: > 1 mL  
Expiration Date : July 31, 2029 Storage: 25°C nominal  
Handling: Sonicate prior to use. Ship: Ambient

P11948  
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P11962 } 07/11

### CERTIFIED VALUES

| Elution Order | Compound                                                           | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2)                                                       |
|---------------|--------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------|
| 1             | n-Octane (C8)<br>CAS # 111-65-9 (Lot SHBN3807)<br>Purity 99%       | 505.0 µg/mL                 | +/- 2.9995 µg/mL Gravimetric<br>+/- 12.5465 µg/mL Unstressed<br>+/- 15.0390 µg/mL Stressed |
| 2             | n-Decane (C10)<br>CAS # 124-18-5 (Lot SHBN8619)<br>Purity 99%      | 503.0 µg/mL                 | +/- 2.9877 µg/mL Gravimetric<br>+/- 12.4968 µg/mL Unstressed<br>+/- 14.9795 µg/mL Stressed |
| 3             | n-Dodecane (C12)<br>CAS # 112-40-3 (Lot SHBN7174)<br>Purity 99%    | 503.5 µg/mL                 | +/- 2.9906 µg/mL Gravimetric<br>+/- 12.5092 µg/mL Unstressed<br>+/- 14.9944 µg/mL Stressed |
| 4             | n-Tetradecane (C14)<br>CAS # 629-59-4 (Lot STBK2282)<br>Purity 99% | 505.0 µg/mL                 | +/- 2.9995 µg/mL Gravimetric<br>+/- 12.5465 µg/mL Unstressed<br>+/- 15.0390 µg/mL Stressed |
| 5             | n-Hexadecane (C16)<br>CAS # 544-76-3 (Lot SHBM4146)<br>Purity 98%  | 504.7 µg/mL                 | +/- 2.9978 µg/mL Gravimetric<br>+/- 12.5390 µg/mL Unstressed<br>+/- 15.0301 µg/mL Stressed |
| 6             | n-Octadecane (C18)<br>CAS # 593-45-3 (Lot VZKOJ)<br>Purity 97%     | 504.4 µg/mL                 | +/- 2.9960 µg/mL Gravimetric<br>+/- 12.5316 µg/mL Unstressed<br>+/- 15.0212 µg/mL Stressed |
| 7             | n-Eicosane (C20)<br>CAS # 112-95-8 (Lot MKCF7888)<br>Purity 99%    | 503.5 µg/mL                 | +/- 2.9906 µg/mL Gravimetric<br>+/- 12.5092 µg/mL Unstressed<br>+/- 14.9944 µg/mL Stressed |

|                                                                      |                                                                          |                  |             |                                          |                         |                                       |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|------------------|-------------|------------------------------------------|-------------------------|---------------------------------------|
| 8                                                                    | n-Docosane (C22)<br><b>CAS #</b> 629-97-0<br><b>Purity</b> 99%           | (Lot MKCL8918)   | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9                                                                    | n-Tetracosane (C24)<br><b>CAS #</b> 646-31-1<br><b>Purity</b> 99%        | (Lot MKCN2863)   | 503.5 µg/mL | +/- 2.9906<br>+/- 12.5092<br>+/- 14.9944 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10                                                                   | n-Hexacosane (C26)<br><b>CAS #</b> 630-01-3<br><b>Purity</b> 99%         | (Lot MKCD4540)   | 504.0 µg/mL | +/- 2.9936<br>+/- 12.5216<br>+/- 15.0093 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11                                                                   | n-Octacosane (C28)<br><b>CAS #</b> 630-02-4<br><b>Purity</b> 99%         | (Lot BCCG0084)   | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12                                                                   | n-Triacontane (C30)<br><b>CAS #</b> 638-68-6<br><b>Purity</b> 99%        | (Lot MKCN9321)   | 505.0 µg/mL | +/- 2.9995<br>+/- 12.5465<br>+/- 15.0390 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13                                                                   | n-Dotriacontane (C32)<br><b>CAS #</b> 544-85-4<br><b>Purity</b> 99%      | (Lot BCBW0661)   | 505.0 µg/mL | +/- 2.9995<br>+/- 12.5465<br>+/- 15.0390 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14                                                                   | n-Tetratriacontane (C34)<br><b>CAS #</b> 14167-59-0<br><b>Purity</b> 99% | (Lot OML4N)      | 504.5 µg/mL | +/- 2.9966<br>+/- 12.5340<br>+/- 15.0241 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15                                                                   | n-Hexatriacontane (C36)<br><b>CAS #</b> 630-06-8<br><b>Purity</b> 99%    | (Lot U25B014)    | 504.0 µg/mL | +/- 2.9936<br>+/- 12.5216<br>+/- 15.0093 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16                                                                   | n-Octatriacontane (C38)<br><b>CAS #</b> 7194-85-6<br><b>Purity</b> 97%   | (Lot 0000127235) | 504.4 µg/mL | +/- 2.9960<br>+/- 12.5316<br>+/- 15.0212 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17                                                                   | n-Tetracontane (C40)<br><b>CAS #</b> 4181-95-7<br><b>Purity</b> 98%      | (Lot PADGI)      | 504.7 µg/mL | +/- 2.9978<br>+/- 12.5390<br>+/- 15.0301 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| <b>Solvent:</b> Hexane<br><b>CAS #</b> 110-54-3<br><b>Purity</b> 99% |                                                                          |                  |             |                                          |                         |                                       |

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

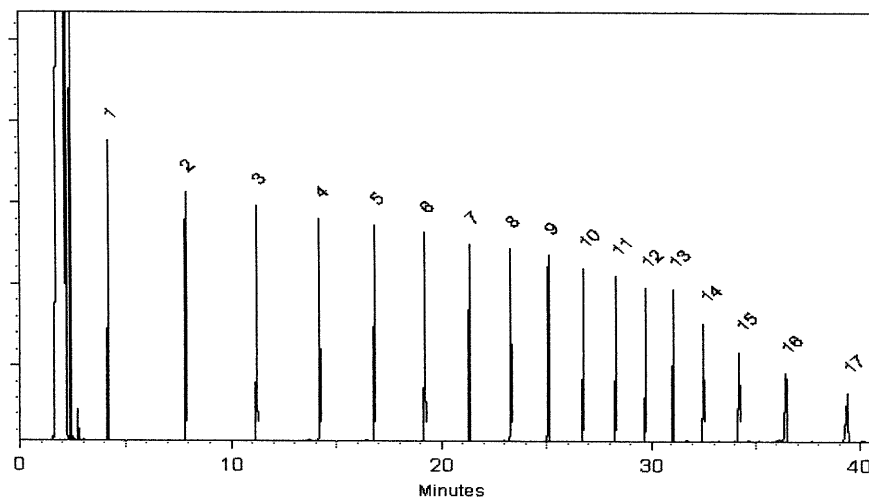
**Carrier Gas:**  
hydrogen-constant pressure 10 psi.

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

**Inj. Temp:**  
250°C

**Det. Temp:**  
330°C

**Det. Type:**  
FID



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

*Brittany Federinko*  
Brittany Federinko - Operations Tech I

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

*Christie Mills*  
Christie Mills - Operations Tech II - ARM QC

**Date Passed:** 01-Jul-2022

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at [www.restek.com/Contact-Us](http://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)<br>-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](http://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.



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

Page 1 of 1

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

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

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

Certified By: \_\_\_\_\_

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  
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\*Not a certified value



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Rev 0

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

| Compound               | CAS No.    | Purity (%) | Compound Lot No. | Concentration, mg/L |
|------------------------|------------|------------|------------------|---------------------|
| decane (C10)           | 124-18-5   | 99.7       | 415.7.2P         | 498.5 $\pm$ 6.92    |
| docosane (C22)         | 629-97-0   | 98.8       | 420.9.1P         | 499.4 $\pm$ 6.93    |
| dodecane (C12)         | 112-40-3   | 99.7       | 416.9.3P         | 502 $\pm$ 6.97      |
| dotriacontane (C32)    | 544-85-4   | 97         | 425.9.2.2P       | 499.6 $\pm$ 8.53    |
| eicosane (C20)         | 112-95-8   | 99.8       | 419.7.1P         | 501 $\pm$ 6.95      |
| hexacosane (C26)       | 630-01-3   | 99.3       | 422.7.2.1P       | 501 $\pm$ 6.95      |
| hexatriacontane (C36)  | 630-06-8   | 98         | 427.29.1.1P      | 499.3 $\pm$ 8.53    |
| n-hexadecane (C16)     | 544-76-3   | 99.45      | 368.271.1P       | 498.7 $\pm$ 6.91    |
| octacosane (C28)       | 630-02-4   | 99.1       | 423.24.1P        | 500.5 $\pm$ 6.95    |
| n-octadecane (C18)     | 593-45-3   | 99.5       | 418.29.1P        | 499.5 $\pm$ 6.92    |
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| n-tetradecane (C14)    | 629-59-4   | 99.3       | 417.9.1P         | 500 $\pm$ 6.94      |
| tetratriacontane (C34) | 14167-59-0 | 96.1       | 426.7.2.2P       | 499.7 $\pm$ 8.53    |
| triacontane (C30)      | 638-68-6   | 99.5       | 424.7.1.1P       | 500 $\pm$ 6.94      |

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

Certified By: \_\_\_\_\_

Andrea Schaible  
Chemist

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Rev 0

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

| Compound               | CAS No.    | Purity (%) | Compound Lot No. | Concentration, mg/L |
|------------------------|------------|------------|------------------|---------------------|
| decane (C10)           | 124-18-5   | 99.7       | 415.7.2P         | 498.5 $\pm$ 6.92    |
| docosane (C22)         | 629-97-0   | 98.8       | 420.9.1P         | 499.4 $\pm$ 6.93    |
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| dotriacontane (C32)    | 544-85-4   | 97         | 425.9.2.2P       | 499.6 $\pm$ 8.53    |
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| n-hexadecane (C16)     | 544-76-3   | 99.45      | 368.271.1P       | 498.7 $\pm$ 6.91    |
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| octatriacontane (C38)  | 7194-85-6  | 95         | 428.1.2P         | 500.2 $\pm$ 6.94    |
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| n-tetracosane (C24)    | 646-31-1   | 99.5       | 421.7.1P         | 499.5 $\pm$ 6.93    |
| n-tetradecane (C14)    | 629-59-4   | 99.3       | 417.9.1P         | 500 $\pm$ 6.94      |
| tetratriacontane (C34) | 14167-59-0 | 96.1       | 426.7.2.2P       | 499.7 $\pm$ 8.53    |
| triacontane (C30)      | 638-68-6   | 99.5       | 424.7.1.1P       | 500 $\pm$ 6.94      |

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

Certified By: \_\_\_\_\_

Andrea Schaible  
Chemist

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

| Compound               | CAS No.    | Purity (%) | Compound Lot No. | Concentration, mg/L |
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| docosane (C22)         | 629-97-0   | 98.8       | 420.9.1P         | 499.4 $\pm$ 6.93    |
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Let the standard warm to room temperature and sonicate before opening.

Certified By: \_\_\_\_\_

Andrea Schaible  
Chemist

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listed are determined gravimetrically.

\*Not a certified value

# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Certificate of Analysis



### Certified Reference Material (CRM)

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

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

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

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

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

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

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

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

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

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

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

**Minimum Sample Size:** 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Understanding the Certified Weight Report



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

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

**Certified Reference Material CRM**

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

**CERTIFIED WEIGHT REPORT**

Part # 10009R  
Lot # 070716  
Shelf Life 070716

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

Solvent(s): Methylene chloride  
Lot# 78782

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

070716  
070716

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

| Compound                  | SMW | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (µg) | Actual Weight (µg) | Actual Conc (µg/mL) | Expanded Uncertainty (µg/mL) | MSDS Information (Solvent Safety Info. On Attached pg.) | CAS#                | OSHA PEL (TWA) | LD50 |
|---------------------------|-----|-------------------|----------------------|------------|-----------------|--------------------|--------------------|---------------------|------------------------------|---------------------------------------------------------|---------------------|----------------|------|
| 1. 1,4-Dichlorobenzene-d4 | 118 | PR-1848M07287CB1  | 4000                 | 98         | 0.2             | 2.04093            | 2.04335            | 4004.7              | 15.4                         | 2055-02-1                                               | N/A                 | en-ra 500mg/kg |      |
| 2. Naphthalene-d8         | 223 | PR-2339M031612HP1 | 4000                 | 99         | 0.2             | 2.02032            | 2.02084            | 4001.0              | 15.2                         | 1148-65-2                                               | 10 ppm (50mg/m3)(H) | en-ra 400mg/kg |      |
| 3. Acenaphthene-d10       | 2   | PR-25444          | 4000                 | 99         | 0.2             | 2.02032            | 2.02245            | 4004.2              | 15.2                         | 15067-28-2                                              | N/A                 | en-ra 500mg/kg |      |
| 4. Phenanthrene-d10       | 248 | PR-2305M081711PM1 | 4000                 | 98         | 0.2             | 2.04093            | 2.04135            | 4000.8              | 15.4                         | 1517-25-2                                               | N/A                 | N/A            |      |
| 5. Chrysene-d12           | 92  | I-19280           | 4000                 | 98         | 0.2             | 2.04093            | 2.04150            | 4001.3              | 15.4                         | 1719-03-5                                               | N/A                 | N/A            |      |
| 6. Perylene-d12           | 247 | PR-24113          | 4000                 | 98         | 0.2             | 2.04093            | 2.04155            | 4001.2              | 15.4                         | 1503-58-3                                               | N/A                 | N/A            |      |

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

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

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

Peak No. Name FID RT (min)

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

Qualitative Quantitative

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

Formulator  
Reviewer

Actual  
Concentration  
Uncertainty  
Values

Health &  
Safety

3rd Party  
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2

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



CERTIFIED WEIGHT REPORT

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

Solvent(s): **Methylene chloride**  
Lot#: **105345**

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

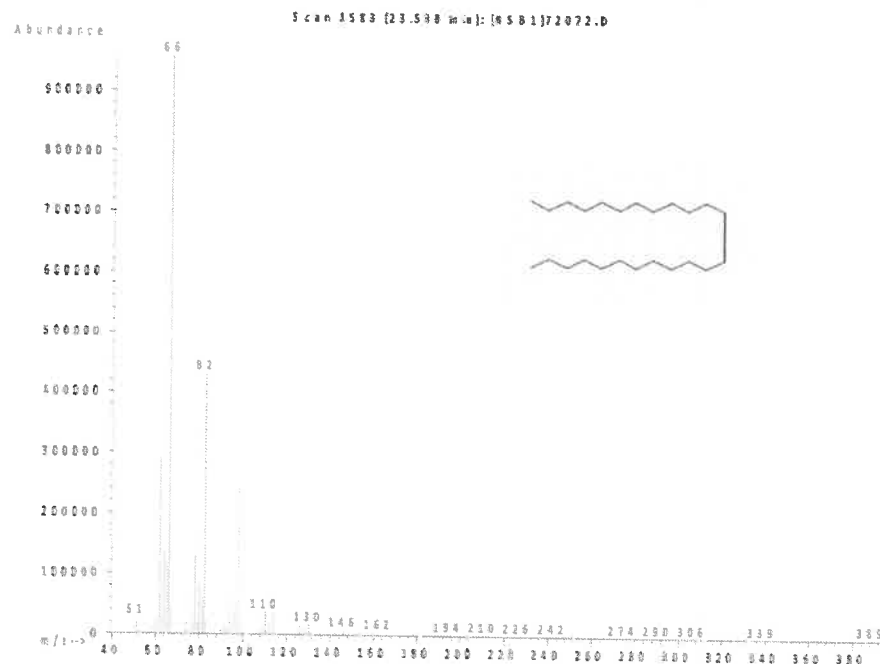
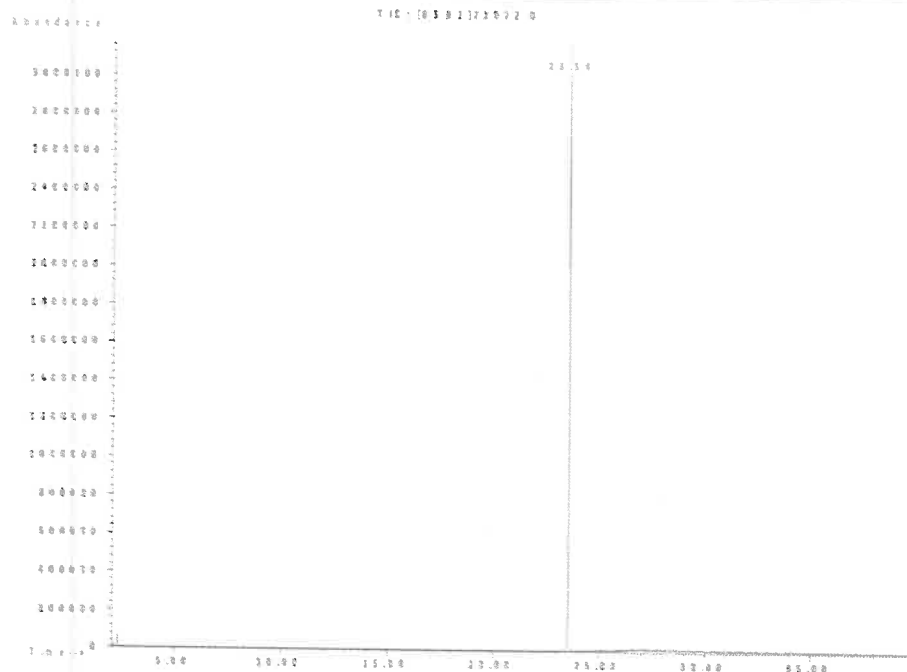
P13477 } x.p.  
↓  
P13496 } 07/24/24

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

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

| Compound             | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Assay (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |                |      |
|----------------------|------|------------|----------------------|------------|--------------------|-----------|------------------|------------------|---------------------|------------------------------------|--------------------------------------------------------|----------------|------|
|                      |      |            |                      |            |                    |           |                  |                  |                     |                                    | 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  $\pm 0.5\%$  of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

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

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

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

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

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

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

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

**Minimum Sample Size:** 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Understanding the Certified Weight Report



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

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

**Certified Reference Material CRM**

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

**CERTIFIED WEIGHT REPORT**

Part # 10009R  
Lot # 070716  
Shelf Life 070716

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

Solvent(s): Methylene chloride  
Lot# 78782

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

070716  
070716

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

| Compound                  | SMW | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (µg) | Actual Weight (µg) | Actual Conc (µg/mL) | Expanded Uncertainty (µg/mL) | CAS#       | OSHA PEL (TWA)      | LD50            |
|---------------------------|-----|-------------------|----------------------|------------|-----------------|--------------------|--------------------|---------------------|------------------------------|------------|---------------------|-----------------|
| 1. 1,4-Dichlorobenzene-d4 | 118 | PR-1848M07287CB1  | 4000                 | 98         | 0.2             | 2.04093            | 2.04335            | 4004.7              | 15.4                         | 2055-02-1  | N/A                 | or-rat 500mg/kg |
| 2. Naphthalene-d8         | 223 | PR-2339M031612HP1 | 4000                 | 99         | 0.2             | 2.02032            | 2.02084            | 4001.0              | 15.2                         | 1146-85-2  | 10 ppm (50mg/m3)(H) | or-rat 400mg/kg |
| 3. Acenaphthene-d10       | 2   | PR-25444          | 4000                 | 99         | 0.2             | 2.02032            | 2.02245            | 4004.2              | 15.2                         | 15067-26-2 | N/A                 | or-rat 500mg/kg |
| 4. Phenanthrene-d10       | 248 | PR-2305M081711PM1 | 4000                 | 98         | 0.2             | 2.04093            | 2.04135            | 4000.8              | 15.4                         | 1517-25-2  | N/A                 | N/A             |
| 5. Chrysene-d12           | 92  | I-19290           | 4000                 | 98         | 0.2             | 2.04093            | 2.04150            | 4001.3              | 15.4                         | 1719-03-5  | N/A                 | N/A             |
| 6. Perylene-d12           | 247 | PR-24113          | 4000                 | 98         | 0.2             | 2.04093            | 2.04155            | 4001.2              | 15.4                         | 1503-58-3  | N/A                 | N/A             |

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

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

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

Peak No. Name FID RT (min)

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

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Formulator  
Reviewer

Actual  
Concentration  
Uncertainty  
Values

Health &  
Safety

3rd Party  
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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



CERTIFIED WEIGHT REPORT

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

Solvent(s): **Methylene chloride**  
Lot#: **105345**

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

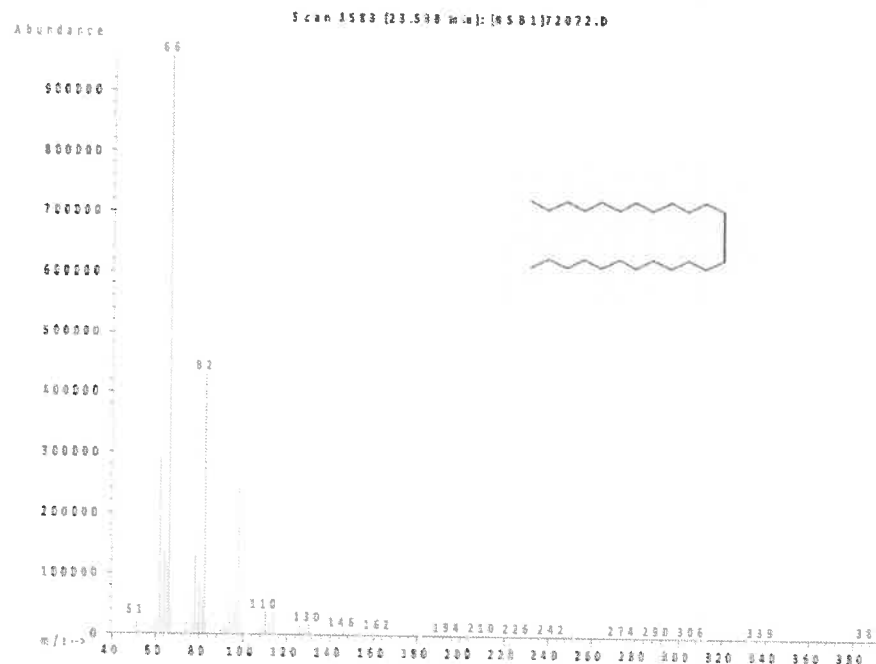
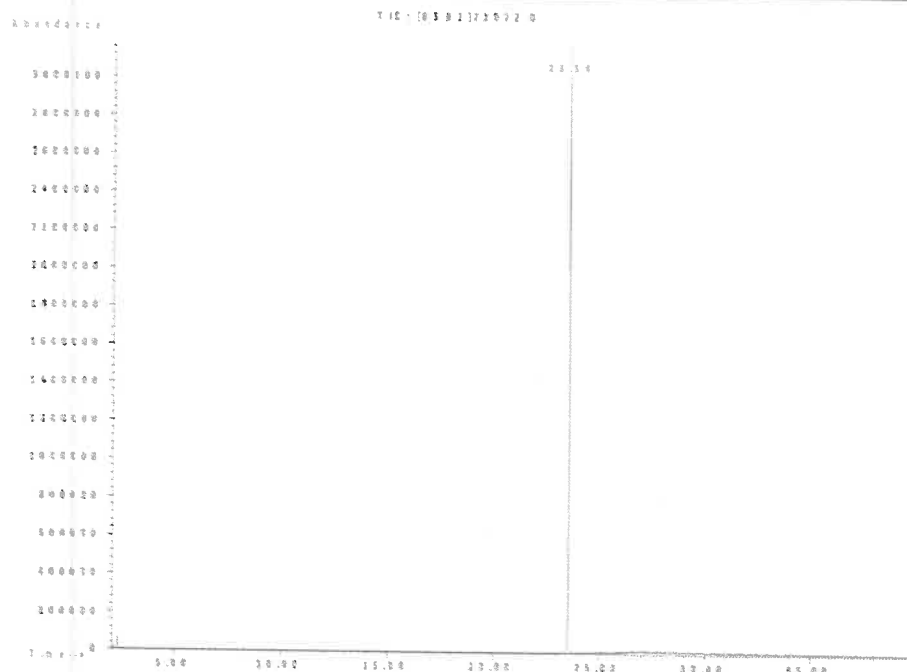
*P13477 } x.p.  
↓  
P13496 } 07/24/24*

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

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

| Compound             | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Assay (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |                |      |
|----------------------|------|------------|----------------------|------------|--------------------|-----------|------------------|------------------|---------------------|------------------------------------|--------------------------------------------------------|----------------|------|
|                      |      |            |                      |            |                    |           |                  |                  |                     |                                    | 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  $\pm 0.5\%$  of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

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

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

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

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

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

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

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

**Minimum Sample Size:** 0.5 uL for analytical applications.

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

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

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



# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Understanding the Certified Weight Report



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

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

**Certified Reference Material CRM**

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

**CERTIFIED WEIGHT REPORT**

Part # 10009R  
Lot # 070716  
Shelf Life

Part Number: 10009R  
Lot Number: 070716  
Description: CLP Priority Pollutant Internal Standards  
GC/MS Calibration - 6 components  
070721  
Expiration Date:  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 4000  
NIST Test ID#: 822-275872-11  
Weight(s) shown below were combined and diluted to (mL): 500.0

Solvent(s): Methylene chloride  
Lot# 78782

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

070716  
070716

MSDB Information  
(Solvent Safety info. On Attached pg.)

| Compound                  | SMW | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (µg) | Actual Weight (µg) | Actual Conc (µg/mL) | Expanded Uncertainty (µg/mL) | CAS#       | OSHA PEL (TWA)      | LD50            |
|---------------------------|-----|-------------------|----------------------|------------|-----------------|--------------------|--------------------|---------------------|------------------------------|------------|---------------------|-----------------|
| 1. 1,4-Dichlorobenzene-d4 | 118 | PR-1848M07287CB1  | 4000                 | 98         | 0.2             | 2.04093            | 2.04335            | 4004.7              | 15.4                         | 2055-02-1  | N/A                 | or-rat 500mg/kg |
| 2. Naphthalene-d8         | 223 | PR-2339M031612HP1 | 4000                 | 99         | 0.2             | 2.02032            | 2.02084            | 4001.0              | 15.2                         | 1148-65-2  | 10 ppm (50mg/m3/8h) | or-rat 400mg/kg |
| 3. Acenaphthene-d10       | 2   | PR-25444          | 4000                 | 99         | 0.2             | 2.02032            | 2.02245            | 4004.2              | 15.2                         | 15067-28-2 | N/A                 | or-rat 500mg/kg |
| 4. Phenanthrene-d10       | 248 | PR-2305M081711PM1 | 4000                 | 98         | 0.2             | 2.04093            | 2.04135            | 4000.8              | 15.4                         | 1517-25-2  | N/A                 | N/A             |
| 5. Chrysene-d12           | 92  | I-19280           | 4000                 | 98         | 0.2             | 2.04093            | 2.04150            | 4001.3              | 15.4                         | 1719-03-5  | N/A                 | N/A             |
| 6. Perylene-d12           | 247 | PR-24113          | 4000                 | 98         | 0.2             | 2.04093            | 2.04155            | 4001.2              | 15.4                         | 1503-58-3  | N/A                 | N/A             |

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

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

Peak No. Name FID RT (min)

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

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

Formulator  
Reviewer

Actual  
Concentration  
Uncertainty  
Values

Health &  
Safety

3rd Party  
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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



CERTIFIED WEIGHT REPORT

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

Solvent(s): **Methylene chloride**  
Lot#: **105345**

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

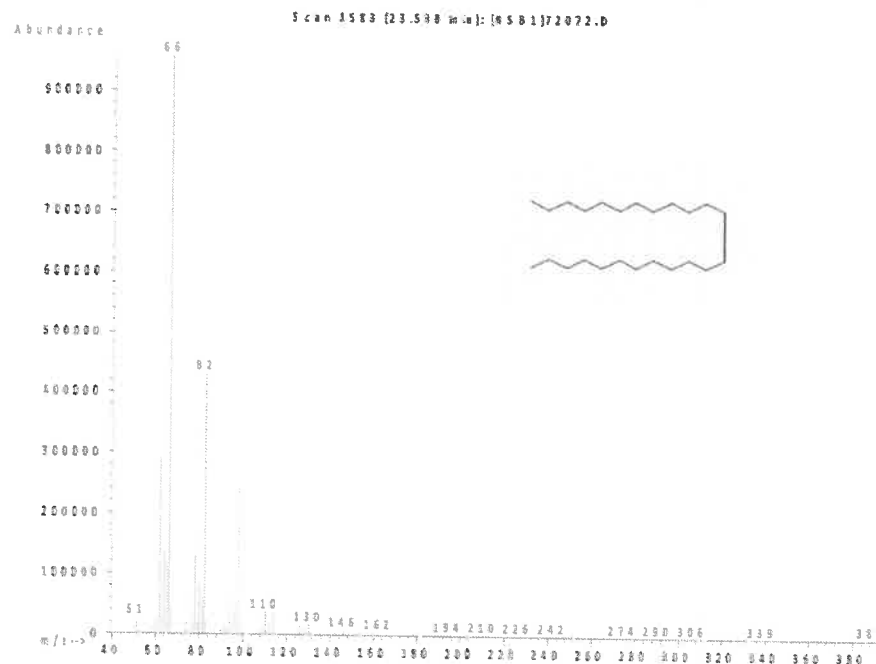
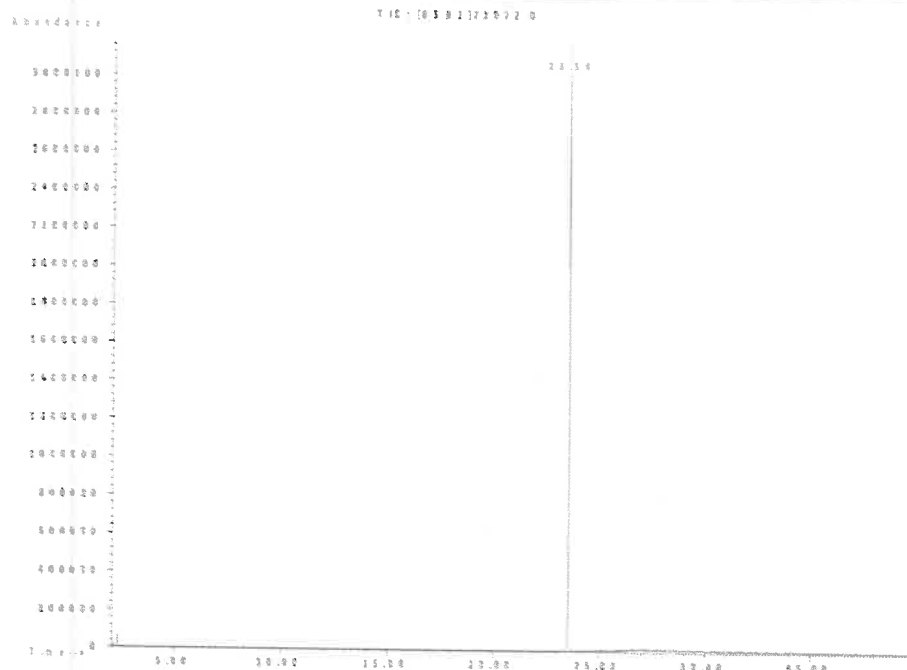
*P13477 } x.p.  
↓  
P13496 } 07/24/24*

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

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

| Compound             | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Assay (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |                |      |
|----------------------|------|------------|----------------------|------------|--------------------|-----------|------------------|------------------|---------------------|------------------------------------|--------------------------------------------------------|----------------|------|
|                      |      |            |                      |            |                    |           |                  |                  |                     |                                    | 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  $\pm 0.5\%$  of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

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

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

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

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

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

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

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

**Minimum Sample Size:** 0.5 uL for analytical applications.

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

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

Page 1 of 2



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



# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Understanding the Certified Weight Report



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

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

**Certified Reference Material CRM**

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

**CERTIFIED WEIGHT REPORT**

Part # 10009R  
Lot # 070716  
Shelf Life

Part Number: 10009R  
Lot Number: 070716  
Description: CLP Priority Pollutant Internal Standards  
GC/MS Calibration - 6 components  
070721  
Expiration Date:  
Recommended Storage: Ambient (20 °C)  
Nominal Concentration (µg/mL): 4000  
NIST Test ID#: 822-275872-11  
Weight(s) shown below were combined and diluted to (mL): 500.0

Solvent(s): Methylene chloride  
Lot# 78782

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

070716  
070716

MSDB Information  
(Solvent Safety info. On Attached pg.)

| Compound                  | SMW | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (µg) | Actual Weight (µg) | Actual Conc (µg/mL) | Expanded Uncertainty (µg/mL) | CAS#       | OSHA PEL (TWA)      | LD50           |
|---------------------------|-----|-------------------|----------------------|------------|-----------------|--------------------|--------------------|---------------------|------------------------------|------------|---------------------|----------------|
| 1. 1,4-Dichlorobenzene-d4 | 118 | PR-1848M07287CB1  | 4000                 | 98         | 0.2             | 2.04093            | 2.04335            | 4004.7              | 15.4                         | 2055-02-1  | N/A                 | or-nr 500mg/kg |
| 2. Naphthalene-d8         | 223 | PR-2339M031612HP1 | 4000                 | 99         | 0.2             | 2.02032            | 2.02084            | 4001.0              | 15.2                         | 1146-85-2  | 10 ppm (50mg/m3)(H) | or-nr 400mg/kg |
| 3. Acenaphthene-d10       | 2   | PR-25444          | 4000                 | 99         | 0.2             | 2.02032            | 2.02245            | 4004.2              | 15.2                         | 15067-26-2 | N/A                 | or-nr 500mg/kg |
| 4. Phenanthrene-d10       | 248 | PR-2305M081711PM1 | 4000                 | 98         | 0.2             | 2.04093            | 2.04135            | 4000.8              | 15.4                         | 1517-25-2  | N/A                 | N/A            |
| 5. Chrysene-d12           | 92  | I-19290           | 4000                 | 98         | 0.2             | 2.04093            | 2.04159            | 4001.3              | 15.4                         | 1719-03-5  | N/A                 | N/A            |
| 6. Perylene-d12           | 247 | PR-24113          | 4000                 | 98         | 0.2             | 2.04093            | 2.04155            | 4001.2              | 15.4                         | 1503-58-3  | N/A                 | N/A            |

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

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

Peak No. Name FID RT (min)

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

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

Formulator  
Reviewer

Actual  
Concentration  
Uncertainty  
Values

Health &  
Safety

3rd Party  
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

Page 2 of 2

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



CERTIFIED WEIGHT REPORT

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

Solvent(s): **Methylene chloride**  
Lot#: **105345**

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

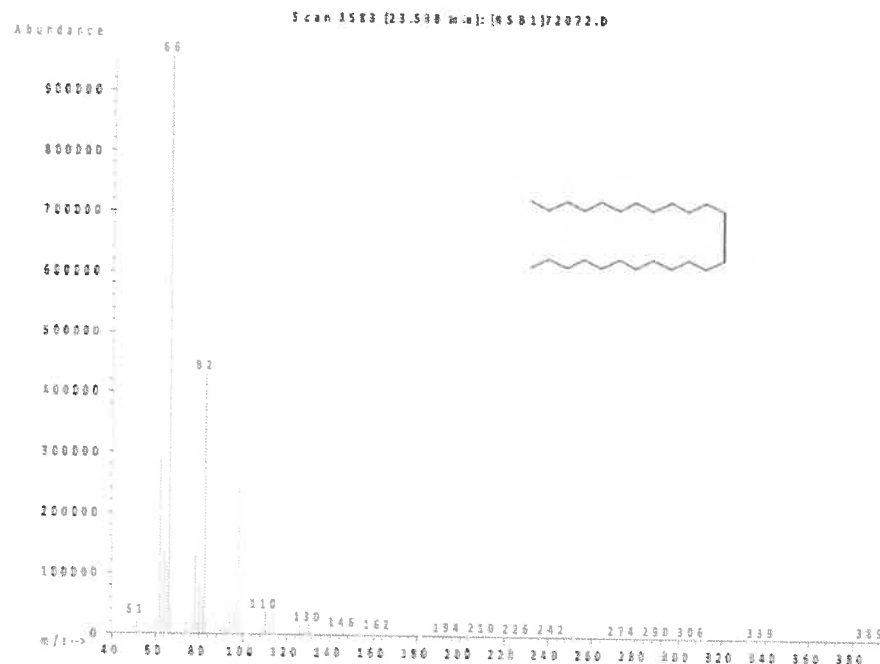
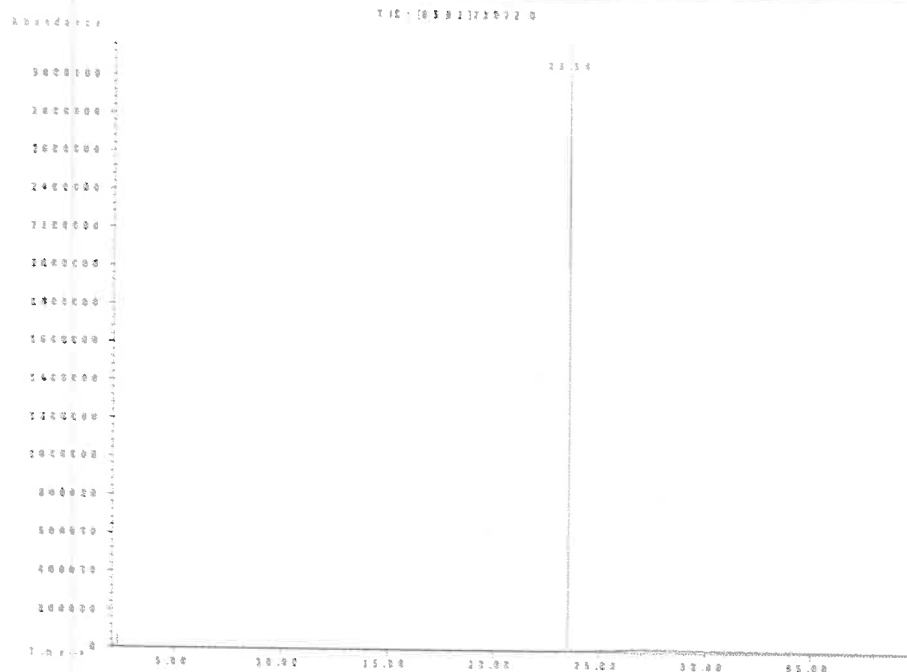
*P13477 } x.p.  
↓  
P13496 } 07/24/24*

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

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

| Compound             | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Assay (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |                |      |
|----------------------|------|------------|----------------------|------------|--------------------|-----------|------------------|------------------|---------------------|------------------------------------|--------------------------------------------------------|----------------|------|
|                      |      |            |                      |            |                    |           |                  |                  |                     |                                    | 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  $\pm 0.5\%$  of the stated value & are valid between 18 °C & 30 °C. The measured characterization of uncertainty can be found on the Certified Weight Report. All product weighings are performed on an analytical balance that is calibrated to NIST Traceable standard weights & certified by the manufacturer. The volumetric glassware used is Class "A" type & conforms to ASTM E-288 unless otherwise stated. The solvents & compounds used are of the highest practical purity & typically meet or exceed ACS Reagent Grade & ACS Standards Grade specifications. The expanded uncertainty field on Certified Wt. Report represents CRM uncertainty as described in ISO 17034.

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

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

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

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

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

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

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

**Minimum Sample Size:** 0.5 uL for analytical applications.

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

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

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



# ABSOLUTE STANDARDS, INC.

ISO - 17034



## Understanding the Certified Weight Report



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

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

**Certified Reference Material CRM**

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

**CERTIFIED WEIGHT REPORT**

Part # 10009R  
Lot # 070716  
Shelf Life 070716

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

Solvent(s): Methylene chloride  
Lot# 78782

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

| Compound                  | SMW | Lot Number        | Nominal Conc (µg/mL) | Purity (%) | Uncertainty (%) | Target Weight (µg) | Actual Weight (µg) | Actual Conc (µg/mL) | Expanded Uncertainty (µg/mL) | MSDS Information (Solvent Safety info. On Attached pg.) |
|---------------------------|-----|-------------------|----------------------|------------|-----------------|--------------------|--------------------|---------------------|------------------------------|---------------------------------------------------------|
| 1. 1,4-Dichlorobenzene-d4 | 118 | PR-1845M07287CB1  | 4000                 | 98         | 0.2             | 2.04093            | 2.04335            | 4004.7              | 15.4                         | 2055-02-1 N/A                                           |
| 2. Naphthalene-d8         | 222 | PR-2339M031612HP1 | 4000                 | 99         | 0.2             | 2.02032            | 2.02084            | 4001.0              | 15.2                         | 1148-05-2 10 ppm (50mg/m3) N/A                          |
| 3. Acenaphthene-d10       | 2   | PR-25444          | 4000                 | 99         | 0.2             | 2.02032            | 2.02245            | 4004.2              | 15.2                         | 15067-28-2 N/A                                          |
| 4. Phenanthrene-d10       | 248 | PR-2305M081711PM1 | 4000                 | 98         | 0.2             | 2.04093            | 2.04135            | 4000.8              | 15.4                         | 1517-25-2 N/A                                           |
| 5. Chrysene-d12           | 92  | I-19280           | 4000                 | 98         | 0.2             | 2.04093            | 2.04159            | 4001.3              | 15.4                         | 1719-03-5 N/A                                           |
| 6. Perylene-d12           | 247 | PR-24113          | 4000                 | 98         | 0.2             | 2.04093            | 2.04158            | 4001.2              | 15.4                         | 1503-08-3 N/A                                           |

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

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

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

| Peak No. | Name                   | FID RT (min) |
|----------|------------------------|--------------|
| 1        | 1,4-Dichlorobenzene-d4 | 6.34         |
| 2        | Naphthalene-d8         | 8.98         |
| 3        | Acenaphthene-d10       | 12.97        |
| 4        | Phenanthrene-d10       | 16.37        |
| 5        | Chrysene-d12           | 22.62        |
| 6        | Perylene-d12           | 25.75        |

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

Formulator  
Reviewer

Actual  
Concentration

Uncertainty  
Values

Health &  
Safety

3rd Party  
Comparison

For More Information, Contact:

StephenArpie@AbsoluteStandards.com

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





CERTIFIED WEIGHT REPORT

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

Solvent(s): **Methylene chloride**  
Lot#: **105345**

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

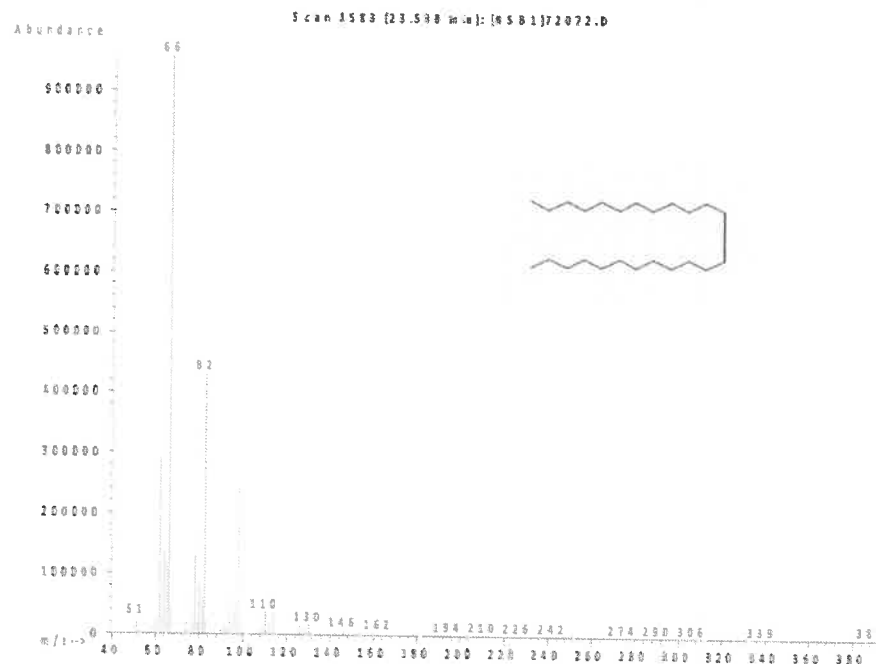
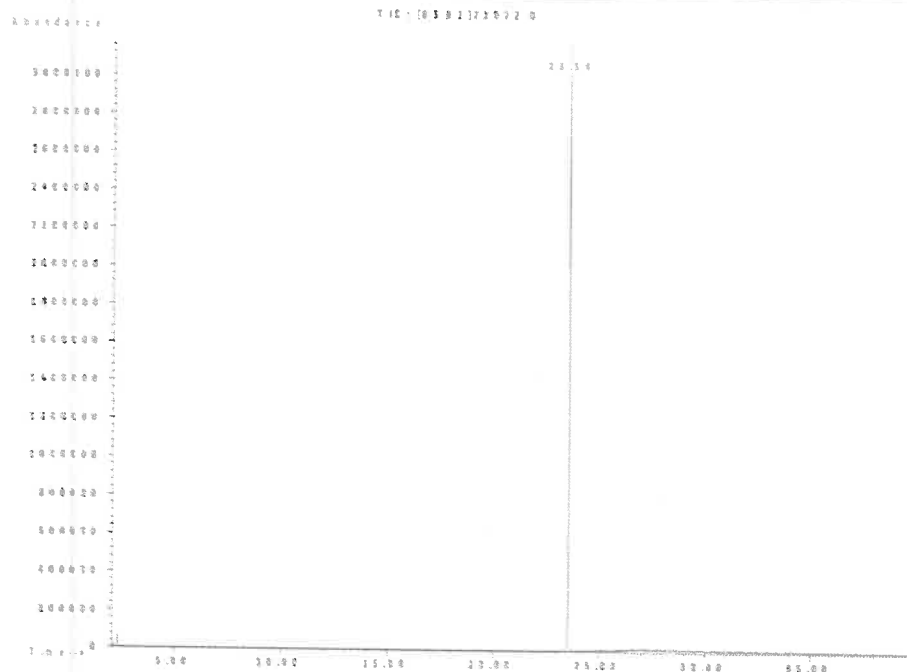
*P13477 } x.p.  
↓  
P13496 } 07/24/24*

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

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

| Compound             | RM#  | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Assay (%) | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) |                |      |
|----------------------|------|------------|----------------------|------------|--------------------|-----------|------------------|------------------|---------------------|------------------------------------|--------------------------------------------------------|----------------|------|
|                      |      |            |                      |            |                    |           |                  |                  |                     |                                    | 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

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CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: AECOM  
ADDRESS: 605 3rd Ave  
CITY: New York STATE: NY ZIP: 10138  
ATTENTION: Robert Forstner  
PHONE: 212-377-8721 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Port Richmond 132  
PROJECT NO.: 60693745 LOCATION: Staten Isl  
PROJECT MANAGER: Rob Forstner  
e-mail: Robert.Forstner@aecom.com  
PHONE: 11 FAX:

CLIENT BILLING INFORMATION

BILL TO: AECOM PO#: 11  
ADDRESS: 11  
CITY: STATE: ZIP:  
ATTENTION: Rob Forstner PHONE: 11

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS\*  
HARDCOPY (DATA PACKAGE): DAYS\*  
EDD: DAYS\*

\*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

1. SVOC 2. Pesticides 3. Hg Metals 4. Corrosivity Light 5. TPH 6. VOC 7. Flash Point 8. 9.

PRESERVATIVES

COMMENTS

| ALLIANCE<br>SAMPLE<br>ID | PROJECT<br>SAMPLE IDENTIFICATION | SAMPLE<br>MATRIX | SAMPLE<br>TYPE |      | SAMPLE<br>COLLECTION |       | # OF BOTTLES |   |   |   |   |   |   |   |   |   | COMMENTS |
|--------------------------|----------------------------------|------------------|----------------|------|----------------------|-------|--------------|---|---|---|---|---|---|---|---|---|----------|
|                          |                                  |                  | COMP           | GRAB | DATE                 | TIME  |              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |          |
| 1.                       | PR132-WC1-20281022               | S                |                | X    | 10/22                | 10:18 | 9            | X | X | X | X | X | X |   |   |   |          |
| 2.                       | PR132-WC2-20281022               | A                |                | X    | 10/22                | 10:30 | 7            | X | X | X | X | X | X | X |   |   |          |
| 3.                       | TB                               | A                |                |      | 10/22                |       | 3            |   |   |   |   |   |   |   |   |   |          |
| 4.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 5.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 6.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 7.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 8.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 9.                       |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |
| 10.                      |                                  |                  |                |      |                      |       |              |   |   |   |   |   |   |   |   |   |          |

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

|                          |              |                |                                              |                                                                                                                |        |
|--------------------------|--------------|----------------|----------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------|
| RELINQUISHED BY SAMPLER: | DATE/TIME:   | RECEIVED BY:   | Conditions of bottles or coolers at receipt: | <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP | 3.8 °C |
| 1. Jim Alderson          | 10/22/25 1pm | 1. [Signature] | Comments:                                    |                                                                                                                |        |
| RELINQUISHED BY SAMPLER: | DATE/TIME:   | RECEIVED BY:   |                                              |                                                                                                                |        |
| 2.                       |              | 2.             |                                              |                                                                                                                |        |
| RELINQUISHED BY SAMPLER: | DATE/TIME:   | RECEIVED BY:   |                                              |                                                                                                                |        |
| 3. [Signature]           | 10-22-25     | 3.             |                                              |                                                                                                                |        |

Page \_\_\_\_ of \_\_\_\_

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete

☐ YES ☐ NO

### Laboratory Certification

| Certified By    | License No.      |
|-----------------|------------------|
|                 |                  |
| Connecticut     | PH-0830          |
|                 |                  |
| DOD ELAP (ANAB) | L2219            |
|                 |                  |
| Maine           | 2024021          |
|                 |                  |
| Maryland        | 296              |
|                 |                  |
| New Hampshire   | 255425           |
|                 |                  |
| New Jersey      | 20012            |
|                 |                  |
| New York        | 11376            |
|                 |                  |
| Pennsylvania    | 68-00548         |
|                 |                  |
| Soil Permit     | 525-24-234-08441 |
|                 |                  |
| Texas           | TX-C25-00189     |
|                 |                  |
| Virginia        | 460312           |

## LOGIN REPORT/SAMPLE TRANSFER

|                                       |               |                                                 |                                       |
|---------------------------------------|---------------|-------------------------------------------------|---------------------------------------|
| <b>Order ID :</b> Q3434               | <b>AECO02</b> | <b>Order Date :</b> 10/22/2025 1:40:00 PM       | <b>Project Mgr :</b>                  |
| <b>Client Name :</b> AECOM            |               | <b>Project Name :</b> AE1-CTY 3.2.Z-PR-DOCK     | <b>Report Type :</b> NYS ASP <i>B</i> |
| <b>Client Contact :</b> Rob Forstner  |               | <b>Receive DateTime :</b> 10/22/2025 2:16:00 PM | <b>EDD Type :</b> EQUIS               |
| <b>Invoice Name :</b> AECOM           |               | <b>Purchase Order :</b>                         | <b>Hard Copy Date :</b>               |
| <b>Invoice Contact :</b> Rob Forstner |               |                                                 | <b>Date Signoff :</b>                 |

| LAB ID   | CLIENT ID          | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST          | TEST GROUP | METHOD | FAX DATE     | DUE DATES |
|----------|--------------------|--------|-------------|-------------|---------------|------------|--------|--------------|-----------|
| Q3434-01 | PR132-WC1-20251022 | Solid  | 10/22/2025  | 10:18       |               |            |        |              |           |
|          |                    |        |             |             | VOC-TCLVOA-10 |            | 8260D  | 10 Bus. Days |           |
| Q3434-02 | PR132-WC2-20251022 | Water  | 10/22/2025  | 10:30       |               |            |        |              |           |
|          |                    |        |             |             | VOC-TCLVOA-10 |            | 8260D  | 10 Bus. Days |           |
| Q3434-03 | TB                 | Water  | 10/22/2025  | 10:00       |               |            |        |              |           |
|          |                    |        |             |             | VOC-TCLVOA-10 |            | 8260D  | 10 Bus. Days |           |

Relinquished By :

Date / Time :

*[Signature]*  
*10-22-25 1505*

Received By :

Date / Time :

*[Signature]*  
*10/22/25 15:05*

Storage Area : VOA Refridgerator Room

*Reg #6*  
*22*  
*Reg #5*