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# Cover Page

**Order ID :** P5194

**Project ID :** 1454 to 1460 Haddon Avenue, Camden, NJ

**Client :** JPCL Engineering

| Lab Sample Number | Client Sample Number |
|---|---|
| P5194-01 | UST-1 |
| P5194-02 | UST-2 |
| P5194-03 | WP-1 |
| P5194-04 | WP-2 |
| P5194-05 | WP-3 |
| P5194-06 | WP-4 |

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: 12/12/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

# DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

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

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# APPENDIX A

## QA REVIEW GENERAL DOCUMENTATION

**Project #:** **P5194**

| | 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:** **SHREENA PATEL** **Date:** **12/12/2024**

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | P5194 | **OrderDate:** | 12/6/2024 3:08:24 PM |
| **Client:** | JPCL Engineering | **Project:** | 1454 to 1460 Haddon Avenue, Camden, NJ |
| **Contact:** | Paul Rotondi | **Location:** | L41,VOA Ref. #2 Soil |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **P5194-01** | **UST-1** | **SOIL** | | | **12/05/24** | | | **12/06/24** |
| | | | Diesel Range Organics | 8015D | | 12/11/24 | 12/11/24 | |
| | | | EPH | NJEPH | | 12/11/24 | 12/11/24 | |
| **P5194-02** | **UST-2** | **SOIL** | | | **12/05/24** | | | **12/06/24** |
| | | | Diesel Range Organics | 8015D | | 12/11/24 | 12/11/24 | |
| | | | EPH | NJEPH | | 12/11/24 | 12/12/24 | |

# QC
# SUMMARY

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# SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: JPCL01

Lab Code: CHEM CASE No.: P5194 SAS No.: P5194 SDG No.: P5194

Run Number: FC121124AL

| Client SAMPLE NO. | 1-chlorooctadecane (SURR) | | | TOT OUT |
|---|---|---|---|---|
| UST-1 | 126 | | | 0 |
| UST-1MS | 86 | | | 0 |
| UST-1MSD | 91 | | | 0 |
| UST-2 | 91 | | | 0 |
| PB165557BL | 98 | | | 0 |
| PB165557BS | 105 | | | 0 |
| PB165557BSD | 104 | | | 0 |

| | QC LIMITS |
|---|---|
| 1-chlorooctadecane (SURR) | (40-140) |

# Column to be used to flag recovery values
* Values outside of contract required QC Limits
D Surrogate diluted out

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## SOIL EPH SURROGATE RECOVERY

Lab Name: CHEMTECH Contract: JPCL01

Lab Code: CHEM CASE No.: P5194 SAS No.: P5194 SDG No.: P5194

Run Number: FD121124AR

| Client SAMPLE NO. | 2-Bromonaphthalene (SURR) | 2-Flurobiphenyl (SURR) | ortho-Terphenyl (SURR) | TOT OUT |
|---|---|---|---|---|
| UST-1 | 93 | 98 | 48 | 0 |
| UST-1MS | 102 | 110 | 47 | 0 |
| UST-1MSD | 103 | 110 | 47 | 0 |
| UST-2 | 112 | 118 | 58 | 0 |
| PB165557BL | 94 | 101 | 91 | 0 |
| PB165557BS | 96 | 98 | 91 | 0 |
| PB165557BSD | 99 | 100 | 93 | 0 |

| | QC LIMITS |
|---|---|
| 2-Bromonaphthalene (SURR) | (40-140) |
| 2-Flurobiphenyl (SURR) | (40-140) |
| ortho-Terphenyl (SURR) | (40-140) |

# Column to be used to flag recovery values
* Values outside of contract required QC Limits
D Surrogate diluted out

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# SOIL EPH SURROGATE RECOVERY

| | QC LIMITS |
|---|---|
| 2-Bromonaphthalene (SURR) | (40-140) |
| 2-Flurobiphenyl (SURR) | (40-140) |
| ortho-Terphenyl (SURR) | (40-140) |

# Column to be used to flag recovery values
* Values outside of contract required QC Limits
D Surrogate diluted out

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## SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** P5194-01MS **Datafile:** FC067989.D

**Client ID :** UST-1MS

| COMPOUND | SPIKE ADDED mg/kg | SAMPLE CONCENTRATION mg/kg | MS/MSD CONCENTRATION mg/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 11.3 | 0 | 4.91 | 43 | | (40-140) |
| Aliphatic C12-C16 | 7.6 | 0.37 | 4.59 | 56 | | (40-140) |
| Aliphatic C16-C21 | 11.3 | 8.48 | 11.8 | 29 | * | (40-140) |
| Aliphatic C21-C28 | 15.1 | 3.37 | 13.0 | 64 | | (40-140) |
| Aliphatic C28-C40 | 22.7 | 17.2 | 53.0 | 157 | * | (40-140) |

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## SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** P5194-01MSD **Datafile:** FC067990.D

**Client ID :** UST-1MSD

| COMPOUND | SPIKE ADDED mg/kg | SAMPLE CONCENTRATION mg/kg | MS/MSD CONCENTRATION mg/kg | % REC | Qual | RPD \| | QC LIMITS | QC Limit Of RPD |
|---|---|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 11.3 | 0 | 4.88 | 43 | | 0.7 \| | (40-140) | 25 |
| Aliphatic C12-C16 | 7.6 | 0.37 | 4.54 | 55 | | 1.26 \| | (40-140) | 25 |
| Aliphatic C16-C21 | 11.3 | 8.48 | 11.4 | 26 | * | 12.8 \| | (40-140) | 25 |
| Aliphatic C21-C28 | 15.1 | 3.37 | 12.4 | 60 | | 6.48 \| | (40-140) | 25 |
| Aliphatic C28-C40 | 22.7 | 17.2 | 59.4 | 185 | * | 16 \| | (40-140) | 25 |

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## SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** P5194-01MS **Datafile:** FD048878.D

**Client ID :** UST-1MS

| COMPOUND | SPIKE ADDED mg/kg | SAMPLE CONCENTRATION mg/kg | MS/MSD CONCENTRATION mg/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 7.6 | 0 | 4.91 | 65 | | (40-140) |
| Aromatic C12-C16 | 11.3 | 0 | 11.7 | 103 | | (40-140) |
| Aromatic C16-C21 | 18.9 | 1.24 | 15.3 | 74 | | (40-140) |
| Aromatic C21-C36 | 30.2 | 4.04 | 23.6 | 65 | | (40-140) |

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## SOLID EPH MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** P5194-01MSD **Datafile:** FD048879.D

**Client ID :** UST-1MSD

| COMPOUND | SPIKE ADDED mg/kg | SAMPLE CONCENTRATION mg/kg | MS/MSD CONCENTRATION mg/kg | % REC | Qual | RPD \| | QC LIMITS | QC Limit Of RPD |
|---|---|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 7.6 | 0 | 5.08 | 67 | | 3.33 \| | (40-140) | 25 |
| Aromatic C12-C16 | 11.3 | 0 | 11.8 | 103 | | 0 \| | (40-140) | 25 |
| Aromatic C16-C21 | 18.9 | 1.24 | 15.3 | 74 | | 0 \| | (40-140) | 25 |
| Aromatic C21-C36 | 30.3 | 4.04 | 23.8 | 65 | | 0.92 \| | (40-140) | 25 |

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## SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** PB165557BS **Datafile:** FC067985.D

**Client ID :** PB165557BS

| COMPOUND | SPIKE ADDED mg/kg | LCS/LCSD CONCENTRATION mg/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|
| Aliphatic C9-C12 | 10 | 5.54 | 56 | | (40-140) |
| Aliphatic C12-C16 | 6.7 | 5.53 | 83 | | (40-140) |
| Aliphatic C16-C21 | 10 | 9.92 | 99 | | (40-140) |
| Aliphatic C21-C28 | 13.3 | 13.5 | 101 | | (40-140) |
| Aliphatic C28-C40 | 20.0 | 23.1 | 115 | | (40-140) |

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## SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** PB165557BSD **Datafile:** FC067986.D

**Client ID :** PB165557BSD

| COMPOUND | SPIKE ADDED mg/kg | LCS/LCSD CONCENTRATION mg/kg | % REC | Qual | RPD \| | QC LIMITS | QC Limit Of RPD |
|---|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 10.0 | 5.49 | 55 | | 1.1\| | (40-140) | 50 |
| Aliphatic C12-C16 | 6.7 | 5.42 | 81 | | 2\| | (40-140) | 50 |
| Aliphatic C16-C21 | 10.0 | 9.70 | 97 | | 2.3\| | (40-140) | 50 |
| Aliphatic C21-C28 | 13.3 | 13.3 | 100 | | 1.2\| | (40-140) | 50 |
| Aliphatic C28-C40 | 20.0 | 22.8 | 114 | | 0.84\| | (40-140) | 50 |

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## SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** PB165557BS **Datafile:** FD048874.D

**Client ID :** PB165557BS

| COMPOUND | SPIKE ADDED mg/kg | LCS/LCSD CONCENTRATION mg/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|
| Aromatic C10-C12 | 6.7 | 4.02 | 60 | | (40-140) |
| Aromatic C12-C16 | 10 | 7.60 | 76 | | (40-140) |
| Aromatic C16-C21 | 16.7 | 16.0 | 96 | | (40-140) |
| Aromatic C21-C36 | 26.6 | 25.4 | 95 | | (40-140) |

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## SOLID EPH LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** JPCL Engineering

**Lab Code:** CHEM **Cas No:** P5194 **SAS No :** P5194 **SDG No:** P5194

**Sample No :** PB165557BSD **Datafile:** FD048875.D

**Client ID :** PB165557BSD

| COMPOUND | SPIKE ADDED mg/kg | LCS/LCSD CONCENTRATION mg/kg | % REC | Qual | RPD \| | QC LIMITS | QC Limit Of RPD |
|---|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 6.7 | 4.14 | 62 | | 2.8\| | (40-140) | 50 |
| Aromatic C12-C16 | 10.0 | 7.86 | 79 | | 3.3\| | (40-140) | 50 |
| Aromatic C16-C21 | 16.7 | 16.5 | 99 | | 3\| | (40-140) | 50 |
| Aromatic C21-C36 | 26.7 | 26.3 | 99 | | 3.5\| | (40-140) | 50 |

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4B

METHOD BLANK SUMMARY

EPA SAMPLE NO.

PB165557BL

Lab Name: CHEMTECH Contract: JPCL01

Lab Code: CHEM Case No.: P5194 SAS No.: P5194 SDG NO.: P5194

Instrument ID: FID_C Lab Sample ID: PB165557BL

Matrix: (soil/water) Solid Date Extracted: 12/11/2024 9:12:00

Level: (low/med) low

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

| EPA SAMPLE NO. | LAB SAMPLE ID |
|---|---|
| PB165557BS | PB165557BS |
| UST-1MSD | P5194-01MSD |
| PB165557BSD | PB165557BSD |
| UST-1 | P5194-01 |
| UST-1MS | P5194-01MS |
| UST-2 | P5194-02 |

COMMENTS:

Alliance
TECHNICAL GROUP

# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-1 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.09 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 21:57 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 0.43 | U | 1 | 0.43 | 1.13 | mg/kg | FC067987.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 0.37 | J | 1 | 0.27 | 0.75 | mg/kg | FC067987.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 8.48 | | 1 | 0.34 | 1.13 | mg/kg | FC067987.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 3.37 | | 1 | 0.91 | 1.51 | mg/kg | FC067987.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 17.2 | | 1 | 2.04 | 2.26 | mg/kg | FC067987.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.34 | U | 1 | 0.34 | 0.75 | mg/kg | FD048876.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.39 | U | 1 | 0.39 | 1.13 | mg/kg | FD048876.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 1.24 | J | 1 | 1.09 | 1.89 | mg/kg | FD048876.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 4.04 | | 1 | 2.26 | 3.02 | mg/kg | FD048876.D |
| Total AliphaticEPH | Total AliphaticEPH | 29.4 | | | 3.99 | 6.78 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 5.28 | J | | 4.08 | 6.79 | mg/kg | |
| Total EPH | Total EPH | 34.7 | | | 8.06 | 13.6 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-1 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.09 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067987.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | | 0.43 | U | 0.43 | 1.13 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | | 0.37 | J | 0.27 | 0.75 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | | 8.48 | | 0.34 | 1.13 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | | 3.37 | | 0.91 | 1.51 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | | 17.2 | | 2.04 | 2.26 | mg/kg |
| **SURROGATES** | | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | | 63.2 | | 40 - 140 | 126% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01 | Acq On: | 11 Dec 2024 21:57 |
| Client Sample ID: | UST-1 | Operator: | YP/AJ |
| Data file: | FC067987.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 14 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 369547 | 2.334 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 795444 | 4.963 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 17133674 | 112.453 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 6090451 | 44.657 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 24207343 | 228.447 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 48596459 | 392.855 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.915 | 12.915 | 8067094 | 63.22 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 24389116 | 164.407 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067987.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:57
Operator : YP/AJ
Sample : P5194-01
Misc :
ALS Vial : 14 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-1

Integration File: autoint1.e
Quant Time: Dec 12 03:33:42 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 12) S 1-chlorooctadecane (S... | 12.915 | 8067094 | 63.225 ug/ml |
| Spiked Amount 50.000 | | Recovery = 126.45% | |
| Target Compounds | | | |

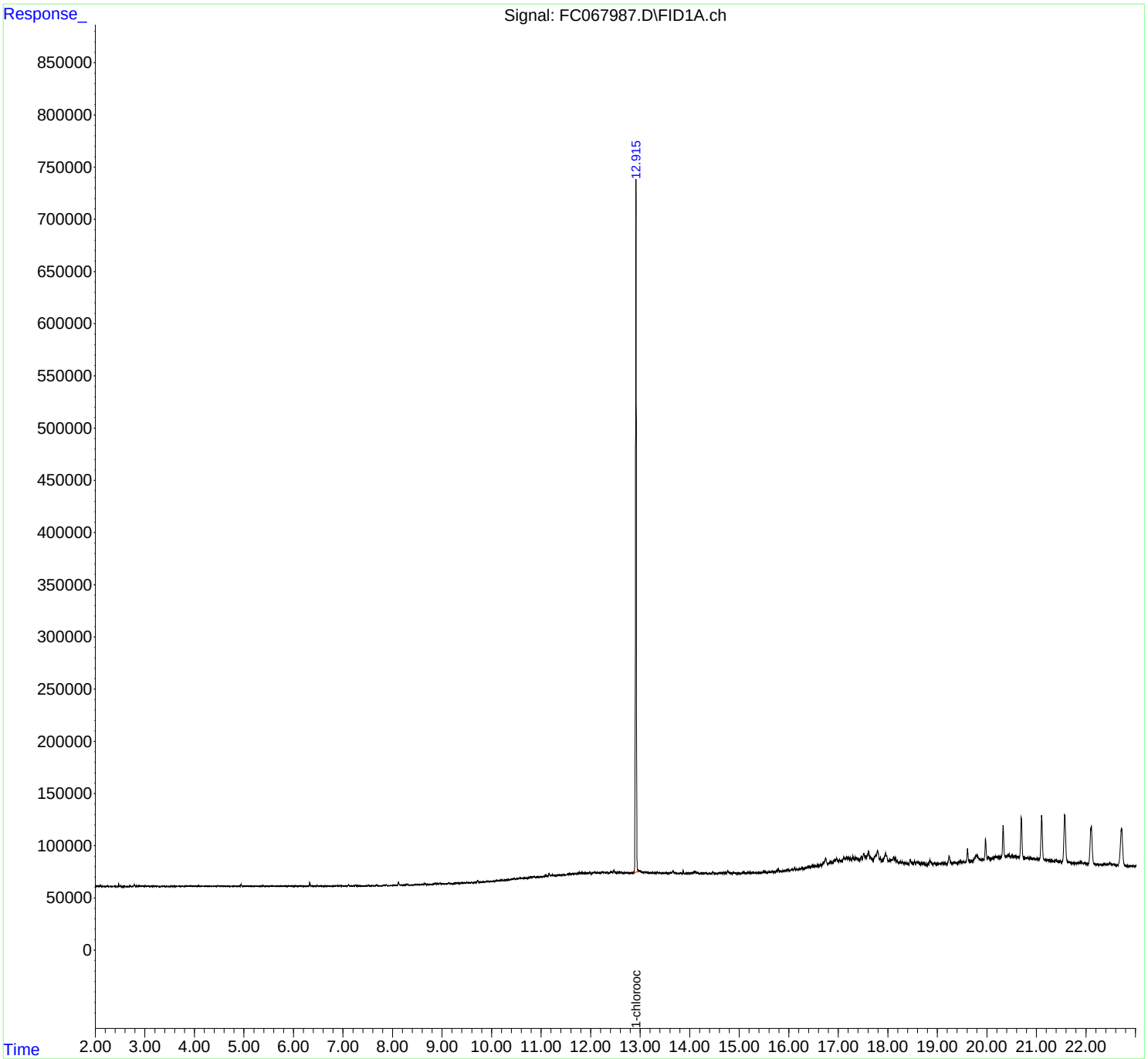
(f)=RT Delta > 1/2 Window (m)=manual int.

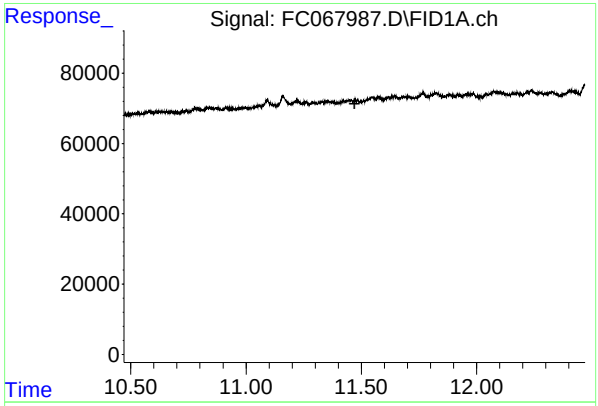
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067987.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:57
Operator : YP/AJ
Sample : P5194-01
Misc :
ALS Vial : 14 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-1

Integration File: autoint1.e
Quant Time: Dec 12 03:33:42 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

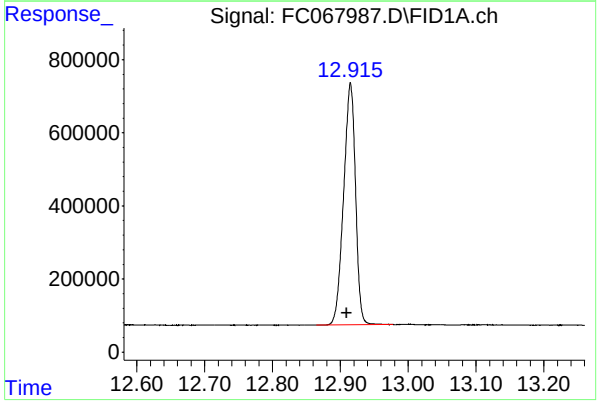





#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T. : 11.470 min
Response: 0
Conc: N.D.

**Instrument :**
FID_C
**ClientSampleId :**
UST-1




#12 1-chlorooctadecane (SURR)

R.T.: 12.915 min
Delta R.T.: 0.006 min
Response: 8067094
Conc: 63.22 ug/ml

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Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067987.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:57
Sample : P5194-01
Misc :
ALS Vial : 14 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.253 | 3.201 | 3.294 | BV | 329 | 3722 | 0.04% | 0.008% |
| 2 | 3.301 | 3.294 | 3.315 | PV | 42 | 726 | 0.01% | 0.001% |
| 3 | 3.336 | 3.315 | 3.358 | VV | 136 | 1799 | 0.02% | 0.004% |
| 4 | 3.390 | 3.358 | 3.481 | VV | 164 | 6578 | 0.08% | 0.014% |
| 5 | 3.547 | 3.481 | 3.559 | PV | 226 | 4395 | 0.05% | 0.009% |
| 6 | 3.575 | 3.559 | 3.608 | VV | 197 | 3225 | 0.04% | 0.007% |
| 7 | 3.624 | 3.608 | 3.644 | VV | 188 | 2968 | 0.03% | 0.006% |
| 8 | 3.668 | 3.644 | 3.719 | VV | 164 | 5146 | 0.06% | 0.011% |
| 9 | 3.743 | 3.719 | 3.800 | VV | 325 | 7764 | 0.09% | 0.016% |
| 10 | 3.828 | 3.800 | 3.862 | VV | 304 | 6430 | 0.07% | 0.013% |
| 11 | 3.916 | 3.862 | 3.928 | VV | 408 | 8045 | 0.09% | 0.017% |
| 12 | 3.943 | 3.928 | 3.968 | VV | 569 | 8453 | 0.10% | 0.017% |
| 13 | 3.978 | 3.968 | 3.997 | VV | 207 | 3225 | 0.04% | 0.007% |
| 14 | 4.013 | 3.997 | 4.028 | VV | 283 | 3408 | 0.04% | 0.007% |
| 15 | 4.082 | 4.028 | 4.144 | VV | 544 | 17507 | 0.20% | 0.036% |
| 16 | 4.178 | 4.144 | 4.198 | VV | 231 | 5319 | 0.06% | 0.011% |
| 17 | 4.201 | 4.198 | 4.293 | VV | 180 | 8876 | 0.10% | 0.018% |
| 18 | 4.315 | 4.293 | 4.338 | VV | 597 | 7755 | 0.09% | 0.016% |
| 19 | 4.354 | 4.338 | 4.364 | VV | 310 | 3109 | 0.04% | 0.006% |
| 20 | 4.371 | 4.364 | 4.379 | VV | 164 | 1333 | 0.02% | 0.003% |
| 21 | 4.415 | 4.379 | 4.446 | VV | 384 | 8319 | 0.10% | 0.017% |
| 22 | 4.480 | 4.446 | 4.504 | VV | 655 | 12429 | 0.14% | 0.026% |
| 23 | 4.537 | 4.504 | 4.552 | VV | 525 | 9910 | 0.11% | 0.020% |
| 24 | 4.566 | 4.552 | 4.588 | VV | 765 | 9094 | 0.10% | 0.019% |
| 25 | 4.631 | 4.618 | 4.644 | VV | 194 | 2582 | 0.03% | 0.005% |
| 26 | 4.662 | 4.644 | 4.671 | VV | 185 | 2168 | 0.02% | 0.004% |
| 27 | 4.678 | 4.671 | 4.756 | VV | 230 | 5831 | 0.07% | 0.012% |
| 28 | 4.761 | 4.756 | 4.771 | VV | 103 | 642 | 0.01% | 0.001% |
| 29 | 4.779 | 4.771 | 4.814 | VV | 115 | 1968 | 0.02% | 0.004% |
| 30 | 4.841 | 4.814 | 4.851 | VV | 130 | 1683 | 0.02% | 0.003% |
| 31 | 4.866 | 4.851 | 4.888 | VV | 201 | 2396 | 0.03% | 0.005% |
| 32 | 4.944 | 4.888 | 4.977 | VV | 1873 | 25648 | 0.29% | 0.053% |
| 33 | 5.000 | 4.977 | 5.018 | VV | 440 | 5316 | 0.06% | 0.011% |
| 34 | 5.053 | 5.018 | 5.104 | VV | 201 | 5537 | 0.06% | 0.011% |
| 35 | 5.117 | 5.104 | 5.128 | VV | 131 | 1240 | 0.01% | 0.003% |
| 36 | 5.141 | 5.128 | 5.151 | VV | 181 | 1959 | 0.02% | 0.004% |

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|---|---|---|---|---|---|---|---|---|
| 37 | 5.159 | 5.151 | 5.189 | VV | 186 | 2936 | 0.03% | 0.006% |
| 38 | 5.235 | 5.189 | 5.271 | VV | 155 | 4631 | 0.05% | 0.010% |
| 39 | 5.291 | 5.271 | 5.302 | PV | 98 | 958 | 0.01% | 0.002% |
| 40 | 5.311 | 5.302 | 5.324 | VV | 102 | 903 | 0.01% | 0.002% |
| 41 | 5.348 | 5.324 | 5.367 | VV | 392 | 6057 | 0.07% | 0.012% |
| 42 | 5.387 | 5.367 | 5.424 | VV | 684 | 9925 | 0.11% | 0.020% |
| 43 | 5.447 | 5.424 | 5.478 | VV | 303 | 4511 | 0.05% | 0.009% |
| 44 | 5.485 | 5.478 | 5.497 | VV | 146 | 1233 | 0.01% | 0.003% |
| 45 | 5.533 | 5.497 | 5.584 | VV | 455 | 11456 | 0.13% | 0.024% |
| 46 | 5.593 | 5.584 | 5.612 | VV | 236 | 2415 | 0.03% | 0.005% |
| 47 | 5.641 | 5.612 | 5.666 | VV | 292 | 6118 | 0.07% | 0.013% |
| 48 | 5.693 | 5.666 | 5.708 | PV | 197 | 3355 | 0.04% | 0.007% |
| 49 | 5.718 | 5.708 | 5.740 | VV | 179 | 2416 | 0.03% | 0.005% |
| 50 | 5.753 | 5.740 | 5.783 | VV | 149 | 2379 | 0.03% | 0.005% |
| 51 | 5.793 | 5.783 | 5.827 | VV | 168 | 2162 | 0.02% | 0.004% |
| 52 | 5.851 | 5.827 | 5.881 | VV | 203 | 3805 | 0.04% | 0.008% |
| 53 | 5.902 | 5.881 | 5.924 | VV | 320 | 6319 | 0.07% | 0.013% |
| 54 | 5.946 | 5.924 | 5.971 | VV | 234 | 5664 | 0.06% | 0.012% |
| 55 | 5.987 | 5.971 | 6.014 | VV | 473 | 7075 | 0.08% | 0.015% |
| 56 | 6.049 | 6.014 | 6.097 | VV | 492 | 10332 | 0.12% | 0.021% |
| 57 | 6.127 | 6.097 | 6.154 | VV | 259 | 5510 | 0.06% | 0.011% |
| 58 | 6.178 | 6.154 | 6.193 | VV | 165 | 2602 | 0.03% | 0.005% |
| 59 | 6.214 | 6.193 | 6.234 | VV | 253 | 3413 | 0.04% | 0.007% |
| 60 | 6.249 | 6.234 | 6.269 | VV | 50 | 1592 | 0.02% | 0.003% |
| 61 | 6.281 | 6.269 | 6.298 | VV | 122 | 1424 | 0.02% | 0.003% |
| 62 | 6.329 | 6.298 | 6.384 | VV | 3702 | 48152 | 0.55% | 0.099% |
| 63 | 6.411 | 6.384 | 6.431 | VV | 360 | 5699 | 0.07% | 0.012% |
| 64 | 6.477 | 6.431 | 6.531 | VV | 669 | 15169 | 0.17% | 0.031% |
| 65 | 6.551 | 6.531 | 6.578 | VV | 339 | 4334 | 0.05% | 0.009% |
| 66 | 6.591 | 6.578 | 6.687 | VV | 148 | 6087 | 0.07% | 0.013% |
| 67 | 6.715 | 6.687 | 6.751 | VV | 165 | 2979 | 0.03% | 0.006% |
| 68 | 6.770 | 6.751 | 6.801 | PV | 373 | 5223 | 0.06% | 0.011% |
| 69 | 6.880 | 6.801 | 6.912 | VV | 443 | 22388 | 0.26% | 0.046% |
| 70 | 6.947 | 6.912 | 7.014 | VV | 731 | 18963 | 0.22% | 0.039% |
| 71 | 7.030 | 7.014 | 7.071 | VV | 278 | 6353 | 0.07% | 0.013% |
| 72 | 7.110 | 7.071 | 7.144 | VV | 1488 | 19284 | 0.22% | 0.040% |
| 73 | 7.253 | 7.144 | 7.298 | VV | 1101 | 27296 | 0.31% | 0.056% |
| 74 | 7.312 | 7.298 | 7.328 | VV | 286 | 4095 | 0.05% | 0.008% |
| 75 | 7.341 | 7.328 | 7.388 | VV | 257 | 5200 | 0.06% | 0.011% |
| 76 | 7.421 | 7.388 | 7.448 | VV | 206 | 3431 | 0.04% | 0.007% |
| 77 | 7.511 | 7.448 | 7.554 | VV | 637 | 10678 | 0.12% | 0.022% |
| 78 | 7.595 | 7.554 | 7.644 | PV | 183 | 6489 | 0.07% | 0.013% |
| 79 | 7.673 | 7.644 | 7.747 | VV | 752 | 15703 | 0.18% | 0.032% |
| 80 | 7.817 | 7.747 | 7.840 | PV | 658 | 12080 | 0.14% | 0.025% |
| 81 | 7.873 | 7.840 | 7.924 | VV | 1275 | 19111 | 0.22% | 0.039% |
| 82 | 8.031 | 7.924 | 8.073 | VV | 585 | 17113 | 0.20% | 0.035% |
| 83 | 8.122 | 8.073 | 8.198 | VV | 3393 | 56816 | 0.65% | 0.117% |
| 84 | 8.277 | 8.198 | 8.334 | VV | 966 | 36568 | 0.42% | 0.075% |
| 85 | 8.352 | 8.334 | 8.363 | VV | 263 | 3564 | 0.04% | 0.007% |
| 86 | 8.388 | 8.363 | 8.413 | VV | 379 | 7580 | 0.09% | 0.016% |
| 87 | 8.473 | 8.413 | 8.491 | PV | 720 | 24802 | 0.28% | 0.051% |
| 88 | 8.508 | 8.491 | 8.558 | VV | 752 | 18539 | 0.21% | 0.038% |
| 89 | 8.640 | 8.558 | 8.716 | VV | 1005 | 49547 | 0.57% | 0.102% |

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|---|---|---|---|---|---|---|---|---|
| 90 | 8.768 | 8.716 | 8.788 | VV | 404 | 9065 | 0.10% | 0.019% |
| 91 | 8.872 | 8.788 | 8.888 | VV | 1044 | 33222 | 0.38% | 0.068% |
| 92 | 8.905 | 8.888 | 8.928 | VV | 670 | 14759 | 0.17% | 0.030% |
| 93 | 8.958 | 8.928 | 8.984 | VV | 1547 | 27615 | 0.32% | 0.057% |
| 94 | 9.005 | 8.984 | 9.058 | VV | 608 | 16855 | 0.19% | 0.035% |
| 95 | 9.074 | 9.058 | 9.094 | VV | 318 | 4558 | 0.05% | 0.009% |
| 96 | 9.131 | 9.094 | 9.213 | VV | 1224 | 36473 | 0.42% | 0.075% |
| 97 | 9.244 | 9.213 | 9.287 | VV | 633 | 20627 | 0.24% | 0.042% |
| 98 | 9.314 | 9.287 | 9.351 | VV | 823 | 21570 | 0.25% | 0.044% |
| 99 | 9.441 | 9.351 | 9.481 | VV | 874 | 43926 | 0.50% | 0.090% |
| 100 | 9.502 | 9.481 | 9.518 | VV | 1185 | 17221 | 0.20% | 0.035% |
| 101 | 9.532 | 9.518 | 9.571 | VV | 826 | 21648 | 0.25% | 0.045% |
| 102 | 9.594 | 9.571 | 9.623 | VV | 834 | 20131 | 0.23% | 0.041% |
| 103 | 9.720 | 9.623 | 9.768 | VV | 2686 | 88382 | 1.01% | 0.182% |
| 104 | 9.828 | 9.768 | 9.850 | VV | 1101 | 46509 | 0.53% | 0.096% |
| 105 | 9.911 | 9.850 | 9.958 | VV | 1494 | 72262 | 0.83% | 0.149% |
| 106 | 10.109 | 9.958 | 10.125 | VV | 1930 | 141629 | 1.62% | 0.291% |
| 107 | 10.145 | 10.125 | 10.162 | VV | 2030 | 40328 | 0.46% | 0.083% |
| 108 | 10.190 | 10.162 | 10.239 | VV | 2192 | 90509 | 1.04% | 0.186% |
| 109 | 10.316 | 10.239 | 10.374 | VV | 2486 | 171229 | 1.96% | 0.352% |
| 110 | 10.447 | 10.374 | 10.474 | VV | 3056 | 165566 | 1.89% | 0.341% |
| 111 | 10.532 | 10.474 | 10.551 | VV | 3224 | 135789 | 1.55% | 0.279% |
| 112 | 10.580 | 10.551 | 10.601 | VV | 3551 | 97312 | 1.11% | 0.200% |
| 113 | 10.674 | 10.601 | 10.705 | VV | 3484 | 202716 | 2.32% | 0.417% |
| 114 | 10.738 | 10.705 | 10.753 | VV | 3521 | 92986 | 1.06% | 0.191% |
| 115 | 10.779 | 10.753 | 10.811 | VV | 4249 | 130611 | 1.49% | 0.269% |
| 116 | 10.838 | 10.811 | 10.894 | VV | 4149 | 196310 | 2.25% | 0.404% |
| 117 | 10.917 | 10.894 | 10.958 | VV | 4053 | 143993 | 1.65% | 0.296% |
| 118 | 10.995 | 10.958 | 11.017 | VV | 4108 | 137653 | 1.58% | 0.283% |
| 119 | 11.092 | 11.017 | 11.131 | VV | 6000 | 310417 | 3.55% | 0.639% |
| 120 | 11.161 | 11.131 | 11.192 | VV | 6887 | 198257 | 2.27% | 0.408% |
| 121 | 11.220 | 11.192 | 11.241 | VV | 5548 | 150129 | 1.72% | 0.309% |
| 122 | 11.259 | 11.241 | 11.274 | VV | 5053 | 97748 | 1.12% | 0.201% |
| 123 | 11.293 | 11.274 | 11.311 | VV | 5042 | 105616 | 1.21% | 0.217% |
| 124 | 11.353 | 11.311 | 11.397 | VV | 5286 | 256564 | 2.94% | 0.528% |
| 125 | 11.449 | 11.397 | 11.501 | VV | 5381 | 316404 | 3.62% | 0.651% |
| 126 | 11.574 | 11.501 | 11.598 | VV | 6030 | 323251 | 3.70% | 0.665% |
| 127 | 11.643 | 11.598 | 11.663 | VV | 6182 | 229192 | 2.62% | 0.472% |
| 128 | 11.705 | 11.663 | 11.728 | VV | 5926 | 223820 | 2.56% | 0.461% |
| 129 | 11.766 | 11.728 | 11.794 | VV | 6878 | 242889 | 2.78% | 0.500% |
| 130 | 11.824 | 11.794 | 11.858 | VV | 6898 | 241189 | 2.76% | 0.496% |
| 131 | 11.882 | 11.858 | 11.908 | VV | 6294 | 177209 | 2.03% | 0.365% |
| 132 | 11.921 | 11.908 | 11.937 | VV | 5864 | 104286 | 1.19% | 0.215% |
| 133 | 11.983 | 11.937 | 12.021 | VV | 6295 | 299260 | 3.42% | 0.616% |
| 134 | 12.075 | 12.021 | 12.138 | VV | 6929 | 434209 | 4.97% | 0.893% |
| 135 | 12.177 | 12.138 | 12.197 | VV | 6261 | 214491 | 2.45% | 0.441% |
| 136 | 12.238 | 12.197 | 12.301 | VV | 6955 | 386362 | 4.42% | 0.795% |
| 137 | 12.327 | 12.301 | 12.361 | VV | 6299 | 211563 | 2.42% | 0.435% |
| 138 | 12.406 | 12.361 | 12.448 | VV | 6445 | 310044 | 3.55% | 0.638% |
| 139 | 12.468 | 12.448 | 12.548 | VV | 8127 | 370496 | 4.24% | 0.762% |
| 140 | 12.583 | 12.548 | 12.604 | VV | 5788 | 192054 | 2.20% | 0.395% |
| 141 | 12.619 | 12.604 | 12.651 | VV | 5689 | 149828 | 1.71% | 0.308% |

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|---|---|---|---|---|---|---|---|---|
| 142 | 12.720 | 12.651 | 12.768 | VV | 5491 | 353139 | 4.04% | 0.727% |
| 143 | 12.914 | 12.768 | 12.981 | VV | 667994 | 8739444 | 100.00% | 17.984% |
| 144 | 13.000 | 12.981 | 13.064 | VV | 6806 | 282878 | 3.24% | 0.582% |
| 145 | 13.082 | 13.064 | 13.185 | VV | 5331 | 347533 | 3.98% | 0.715% |
| 146 | 13.201 | 13.185 | 13.224 | VV | 4363 | 99016 | 1.13% | 0.204% |
| 147 | 13.240 | 13.224 | 13.284 | VV | 4574 | 147673 | 1.69% | 0.304% |
| 148 | 13.297 | 13.284 | 13.313 | VV | 4158 | 67673 | 0.77% | 0.139% |
| 149 | 13.343 | 13.313 | 13.361 | VV | 4470 | 121948 | 1.40% | 0.251% |
| 150 | 13.378 | 13.361 | 13.431 | VV | 4568 | 165471 | 1.89% | 0.341% |
| 151 | 13.464 | 13.431 | 13.482 | VV | 4026 | 109250 | 1.25% | 0.225% |
| 152 | 13.506 | 13.482 | 13.588 | VV | 3914 | 218385 | 2.50% | 0.449% |
| 153 | 13.610 | 13.588 | 13.633 | VV | 4251 | 101519 | 1.16% | 0.209% |
| 154 | 13.661 | 13.633 | 13.784 | VV | 5627 | 323636 | 3.70% | 0.666% |
| 155 | 13.819 | 13.784 | 13.843 | VV | 3370 | 104476 | 1.20% | 0.215% |
| 156 | 13.869 | 13.843 | 13.904 | VV | 4477 | 117147 | 1.34% | 0.241% |
| 157 | 13.923 | 13.904 | 13.944 | VV | 2909 | 61030 | 0.70% | 0.126% |
| 158 | 13.968 | 13.944 | 13.993 | VV | 2850 | 74998 | 0.86% | 0.154% |
| 159 | 14.106 | 13.993 | 14.141 | VV | 4303 | 259816 | 2.97% | 0.535% |
| 160 | 14.158 | 14.141 | 14.201 | VV | 3337 | 86714 | 0.99% | 0.178% |
| 161 | 14.225 | 14.201 | 14.261 | VV | 2515 | 78644 | 0.90% | 0.162% |
| 162 | 14.278 | 14.261 | 14.298 | VV | 2312 | 46382 | 0.53% | 0.095% |
| 163 | 14.331 | 14.298 | 14.374 | VV | 2804 | 94894 | 1.09% | 0.195% |
| 164 | 14.395 | 14.374 | 14.434 | VV | 2235 | 64037 | 0.73% | 0.132% |
| 165 | 14.468 | 14.434 | 14.521 | VV | 3311 | 105433 | 1.21% | 0.217% |
| 166 | 14.603 | 14.521 | 14.664 | VV | 1887 | 142840 | 1.63% | 0.294% |
| 167 | 14.688 | 14.664 | 14.711 | VV | 2460 | 51745 | 0.59% | 0.106% |
| 168 | 14.728 | 14.711 | 14.744 | VV | 1870 | 32459 | 0.37% | 0.067% |
| 169 | 14.769 | 14.744 | 14.863 | VV | 3891 | 138890 | 1.59% | 0.286% |
| 170 | 14.890 | 14.863 | 14.961 | VV | 2021 | 73882 | 0.85% | 0.152% |
| 171 | 15.000 | 14.961 | 15.030 | VV | 1298 | 39025 | 0.45% | 0.080% |
| 172 | 15.072 | 15.030 | 15.153 | VV | 1845 | 89406 | 1.02% | 0.184% |
| 173 | 15.182 | 15.153 | 15.208 | VV | 1721 | 39068 | 0.45% | 0.080% |
| 174 | 15.222 | 15.208 | 15.251 | VV | 1659 | 30511 | 0.35% | 0.063% |
| 175 | 15.282 | 15.251 | 15.381 | VV | 1755 | 75046 | 0.86% | 0.154% |
| 176 | 15.410 | 15.381 | 15.458 | VV | 1220 | 38667 | 0.44% | 0.080% |
| 177 | 15.498 | 15.458 | 15.561 | VV | 2477 | 80644 | 0.92% | 0.166% |
| 178 | 15.600 | 15.561 | 15.628 | VV | 1421 | 46388 | 0.53% | 0.095% |
| 179 | 15.666 | 15.628 | 15.694 | VV | 1609 | 53183 | 0.61% | 0.109% |
| 180 | 15.788 | 15.694 | 15.823 | VV | 3376 | 145899 | 1.67% | 0.300% |
| 181 | 15.882 | 15.823 | 15.908 | VV | 2087 | 83614 | 0.96% | 0.172% |
| 182 | 15.984 | 15.908 | 16.018 | VV | 3970 | 158813 | 1.82% | 0.327% |
| 183 | 16.067 | 16.018 | 16.094 | VV | 3093 | 117938 | 1.35% | 0.243% |
| 184 | 16.119 | 16.094 | 16.188 | VV | 3825 | 168839 | 1.93% | 0.347% |
| 185 | 16.217 | 16.188 | 16.237 | VV | 3376 | 90740 | 1.04% | 0.187% |
| 186 | 16.270 | 16.237 | 16.301 | VV | 4586 | 145463 | 1.66% | 0.299% |
| 187 | 16.420 | 16.301 | 16.448 | VV | 5456 | 393499 | 4.50% | 0.810% |
| 188 | 16.478 | 16.448 | 16.508 | VV | 5787 | 194191 | 2.22% | 0.400% |
| 189 | 16.533 | 16.508 | 16.558 | VV | 6054 | 161816 | 1.85% | 0.333% |
| 190 | 16.590 | 16.558 | 16.628 | VV | 6273 | 243878 | 2.79% | 0.502% |
| 191 | 16.746 | 16.628 | 16.791 | VV | 12654 | 805865 | 9.22% | 1.658% |
| 192 | 16.840 | 16.791 | 16.881 | VV | 9028 | 440575 | 5.04% | 0.907% |
| 193 | 16.965 | 16.881 | 17.001 | VV | 11960 | 729024 | 8.34% | 1.500% |
| 194 | 17.030 | 17.001 | 17.073 | VV | 10409 | 420156 | 4.81% | 0.865% |

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|---|---|---|---|---|---|---|---|---|
| 195 | 17.115 | 17.073 | 17.139 | VV | 12278 | 448829 | 5.14% | 0.924% |
| 196 | 17.185 | 17.139 | 17.268 | VV | 12591 | 902609 | 10.33% | 1.857% |
| 197 | 17.295 | 17.268 | 17.318 | VV | 13702 | 352654 | 4.04% | 0.726% |
| 198 | 17.344 | 17.318 | 17.364 | VV | 12659 | 321626 | 3.68% | 0.662% |
| 199 | 17.375 | 17.364 | 17.428 | VV | 12003 | 410173 | 4.69% | 0.844% |
| 200 | 17.465 | 17.428 | 17.486 | VV | 13199 | 402747 | 4.61% | 0.829% |
| 201 | 17.513 | 17.486 | 17.571 | VV | 16147 | 675121 | 7.72% | 1.389% |
| 202 | 17.611 | 17.571 | 17.708 | VV | 17093 | 1035738 | 11.85% | 2.131% |
| 203 | 17.790 | 17.708 | 17.832 | VV | 18700 | 1010500 | 11.56% | 2.079% |
| 204 | 17.848 | 17.832 | 17.878 | VV | 11323 | 265106 | 3.03% | 0.546% |
| 205 | 17.956 | 17.878 | 18.024 | VV | 15484 | 946228 | 10.83% | 1.947% |
| 206 | 18.116 | 18.024 | 18.138 | VV | 11977 | 637451 | 7.29% | 1.312% |
| 207 | 18.155 | 18.138 | 18.238 | VV | 10310 | 457235 | 5.23% | 0.941% |
| 208 | 18.257 | 18.238 | 18.284 | VV | 6603 | 177312 | 2.03% | 0.365% |
| 209 | 18.297 | 18.284 | 18.354 | VV | 6856 | 236669 | 2.71% | 0.487% |
| 210 | 18.367 | 18.354 | 18.419 | VV | 5907 | 191716 | 2.19% | 0.395% |
| 211 | 18.451 | 18.419 | 18.514 | VV | 8846 | 335915 | 3.84% | 0.691% |
| 212 | 18.538 | 18.514 | 18.558 | VV | 6627 | 145725 | 1.67% | 0.300% |
| 213 | 18.589 | 18.558 | 18.661 | VV | 6620 | 326222 | 3.73% | 0.671% |
| 214 | 18.685 | 18.661 | 18.701 | VV | 4671 | 106714 | 1.22% | 0.220% |
| 215 | 18.716 | 18.701 | 18.794 | VV | 4547 | 218603 | 2.50% | 0.450% |
| 216 | 18.850 | 18.794 | 18.913 | VV | 7483 | 336815 | 3.85% | 0.693% |
| 217 | 18.940 | 18.913 | 18.988 | VV | 5271 | 172114 | 1.97% | 0.354% |
| 218 | 19.097 | 18.988 | 19.124 | VV | 4061 | 309341 | 3.54% | 0.637% |
| 219 | 19.149 | 19.124 | 19.184 | VV | 4027 | 134217 | 1.54% | 0.276% |
| 220 | 19.237 | 19.184 | 19.314 | VV | 10820 | 425897 | 4.87% | 0.876% |
| 221 | 19.347 | 19.314 | 19.401 | VV | 4731 | 212461 | 2.43% | 0.437% |
| 222 | 19.479 | 19.401 | 19.498 | VV | 5113 | 261357 | 2.99% | 0.538% |
| 223 | 19.522 | 19.498 | 19.561 | VV | 5190 | 177438 | 2.03% | 0.365% |
| 224 | 19.609 | 19.561 | 19.678 | VV | 17272 | 524506 | 6.00% | 1.079% |
| 225 | 19.800 | 19.678 | 19.899 | VV | 10492 | 978977 | 11.20% | 2.015% |
| 226 | 19.973 | 19.899 | 20.008 | VV | 26021 | 708761 | 8.11% | 1.458% |
| 227 | 20.031 | 20.008 | 20.088 | VV | 9502 | 362731 | 4.15% | 0.746% |
| 228 | 20.168 | 20.088 | 20.221 | VV | 9392 | 630622 | 7.22% | 1.298% |
| 229 | 20.328 | 20.221 | 20.381 | VV | 38058 | 1251793 | 14.32% | 2.576% |
| 230 | 20.445 | 20.381 | 20.472 | VV | 10310 | 488934 | 5.59% | 1.006% |
| 231 | 20.506 | 20.472 | 20.541 | VV | 9228 | 356422 | 4.08% | 0.733% |
| 232 | 20.558 | 20.541 | 20.648 | VV | 8566 | 502894 | 5.75% | 1.035% |
| 233 | 20.695 | 20.648 | 20.798 | VV | 45268 | 1320031 | 15.10% | 2.716% |
| 234 | 20.805 | 20.798 | 20.851 | VV | 6919 | 203195 | 2.33% | 0.418% |
| 235 | 20.870 | 20.851 | 20.930 | VV | 6408 | 276610 | 3.17% | 0.569% |
| 236 | 20.950 | 20.930 | 20.981 | VV | 6291 | 169922 | 1.94% | 0.350% |
| 237 | 21.027 | 20.981 | 21.053 | VV | 5437 | 222435 | 2.55% | 0.458% |
| 238 | 21.106 | 21.053 | 21.198 | VV | 46470 | 1214576 | 13.90% | 2.499% |
| 239 | 21.218 | 21.198 | 21.241 | VV | 4542 | 103577 | 1.19% | 0.213% |
| 240 | 21.259 | 21.241 | 21.368 | VV | 3790 | 226809 | 2.60% | 0.467% |
| 241 | 21.395 | 21.368 | 21.441 | VV | 3417 | 117806 | 1.35% | 0.242% |
| 242 | 21.461 | 21.441 | 21.501 | VV | 2316 | 72067 | 0.82% | 0.148% |
| 243 | 21.572 | 21.501 | 21.701 | VBA | 45708 | 1250387 | 14.31% | 2.573% |

Sum of corrected areas: 48596454

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-1 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.09 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048876.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.34 | U | 0.34 | 0.75 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.39 | U | 0.39 | 1.13 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 1.24 | J | 1.09 | 1.89 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 4.04 | | 2.26 | 3.02 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 46.7 | | 40 - 140 | 93% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 49.0 | | 40 - 140 | 98% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 24.2 | | 40 - 140 | 48% | SPK: 50 |

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

# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01 | Acq On: | 11 Dec 2024 21:57 |
| Client Sample ID: | UST-1 | Operator: | YP/AJ |
| Data file: | FD048876.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 64 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 574566 | 3.021 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 801429 | 4.311 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 2778914 | 16.393 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 7581988 | 53.549 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 11736897 | 77.274 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.248 | 11.248 | 4298913 | 24.2 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.364 | 7.364 | 7866656 | 46.7 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.213 | 8.213 | 5059178 | 48.97 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048876.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:57
Operator : YP/AJ
Sample : P5194-01
Misc :
ALS Vial : 64 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-1

Integration File: autoint1.e
Quant Time: Dec 12 04:29:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 4) S 2-Bromonaphthalene (S... | 7.364 | 7866656 | 46.704 ug/ml |
| Spiked Amount 50.000 | | Recovery = | 93.41% |
| 6) S 2-Flurobiphenyl (SURR) | 8.213 | 5059178 | 48.972 ug/ml |
| Spiked Amount 50.000 Range 0 - 131 | | Recovery = | 97.94% |
| 11) S ortho-Terphenyl (SURR) | 11.248 | 4298913 | 24.197 ug/ml |
| Spiked Amount 50.000 | | Recovery = | 48.39% |
| **Target Compounds** | | | |

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

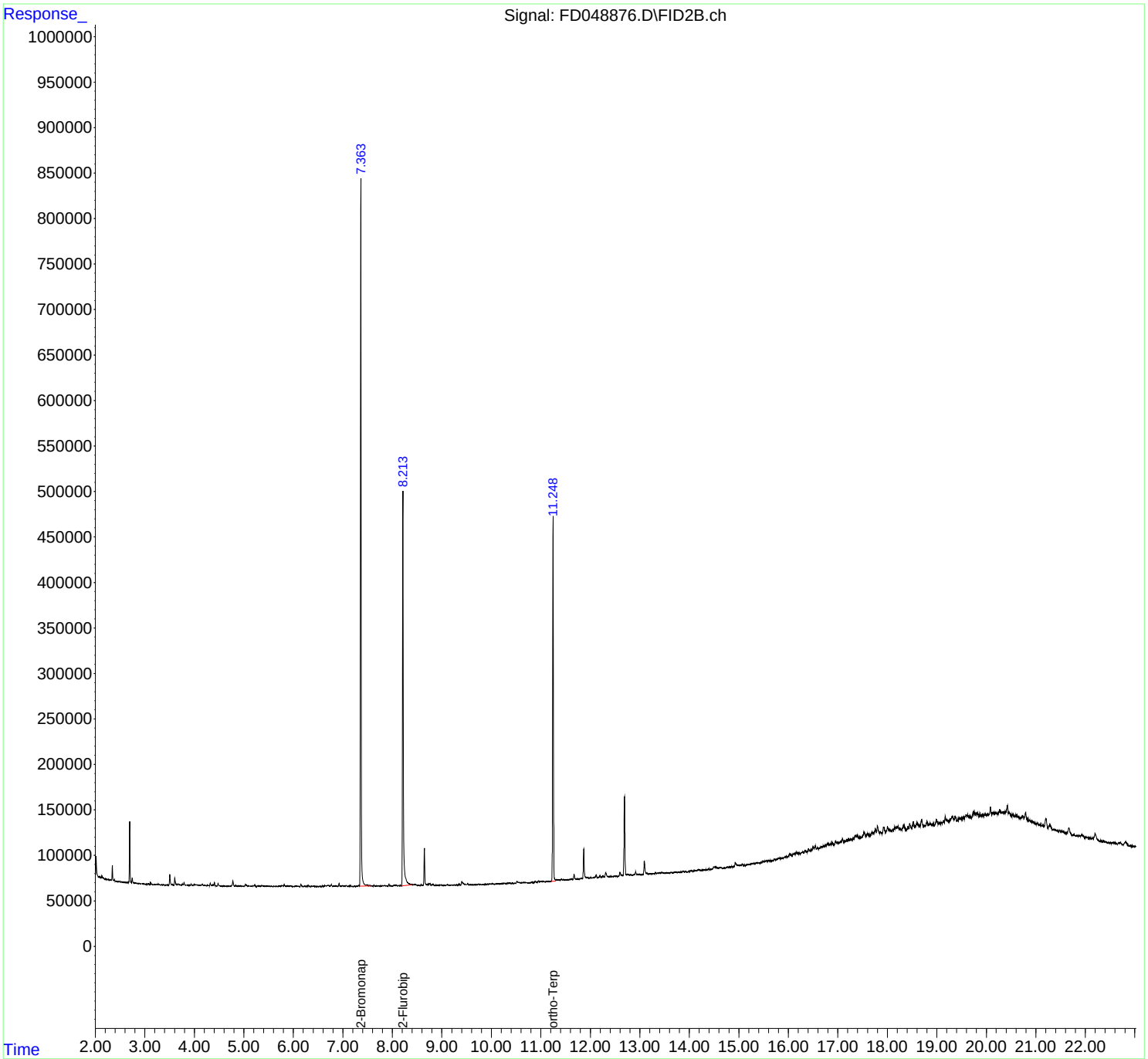
Quantitation Report (QT Reviewed)

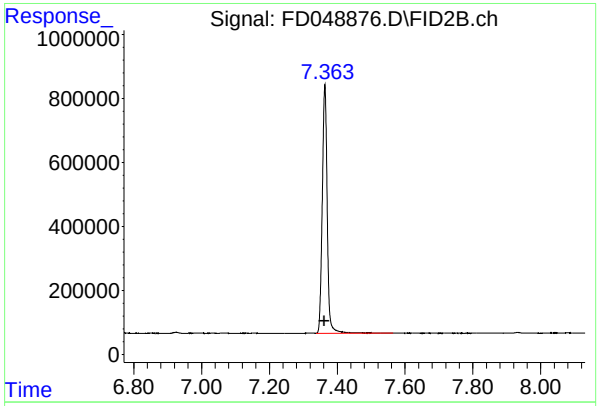
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048876.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:57
Operator : YP/AJ
Sample : P5194-01
Misc :
ALS Vial : 64 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-1

Integration File: autoint1.e
Quant Time: Dec 12 04:29:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

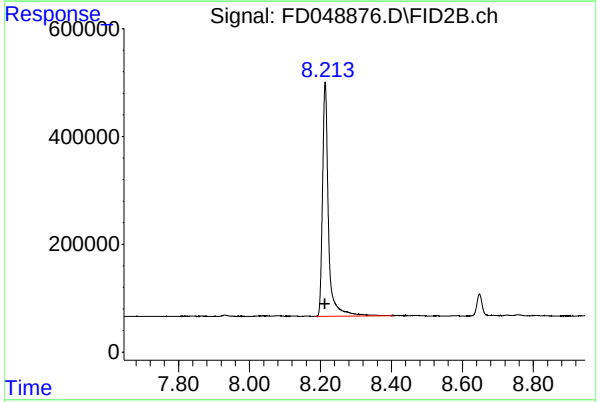





#4 2-Bromonaphthalene (SURR)

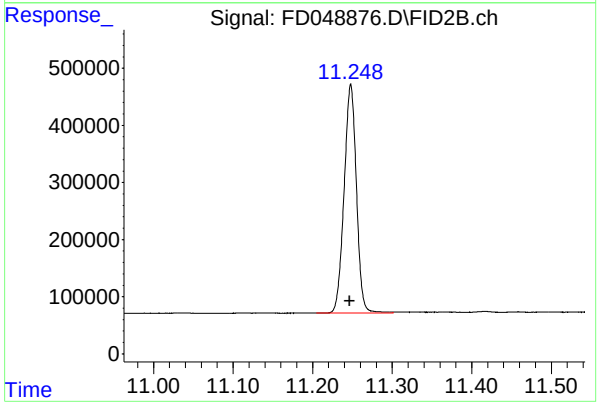
R.T.: 7.364 min
Delta R.T.: 0.000 min
Response: 7866656
Conc: 46.70 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
UST-1




#6 2-Flurobiphenyl (SURR)

R.T.: 8.213 min
Delta R.T.: 0.000 min
Response: 5059178
Conc: 48.97 ug/ml




#11 ortho-Terphenyl (SURR)

R.T.: 11.248 min
Delta R.T.: 0.001 min
Response: 4298913
Conc: 24.20 ug/ml

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Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048876.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:57
Sample : P5194-01
Misc :
ALS Vial : 64 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.114 | 4.092 | 4.122 | BV | 121 | 1022 | 0.01% | 0.003% |
| 2 | 4.161 | 4.141 | 4.192 | PV | 1766 | 19410 | 0.25% | 0.066% |
| 3 | 4.201 | 4.192 | 4.206 | VV | 212 | 1269 | 0.02% | 0.004% |
| 4 | 4.266 | 4.230 | 4.299 | VV | 567 | 9615 | 0.12% | 0.033% |
| 5 | 4.322 | 4.299 | 4.358 | VV | 3153 | 39780 | 0.51% | 0.135% |
| 6 | 4.376 | 4.358 | 4.392 | VV | 1951 | 20325 | 0.26% | 0.069% |
| 7 | 4.406 | 4.392 | 4.448 | VV | 3811 | 40057 | 0.51% | 0.136% |
| 8 | 4.479 | 4.458 | 4.512 | VV | 3060 | 36258 | 0.46% | 0.123% |
| 9 | 4.516 | 4.512 | 4.545 | VV | 409 | 4880 | 0.06% | 0.017% |
| 10 | 4.560 | 4.545 | 4.569 | PV | 197 | 1394 | 0.02% | 0.005% |
| 11 | 4.592 | 4.569 | 4.614 | VV | 570 | 7915 | 0.10% | 0.027% |
| 12 | 4.643 | 4.624 | 4.654 | PV | 192 | 1819 | 0.02% | 0.006% |
| 13 | 4.667 | 4.654 | 4.689 | VV | 261 | 3875 | 0.05% | 0.013% |
| 14 | 4.699 | 4.689 | 4.717 | VV | 491 | 5355 | 0.07% | 0.018% |
| 15 | 4.723 | 4.717 | 4.735 | VV | 281 | 1954 | 0.02% | 0.007% |
| 16 | 4.778 | 4.741 | 4.818 | VV | 6119 | 91565 | 1.16% | 0.311% |
| 17 | 4.833 | 4.818 | 4.861 | VV | 1504 | 17321 | 0.22% | 0.059% |
| 18 | 4.892 | 4.861 | 4.907 | VV | 650 | 11036 | 0.14% | 0.038% |
| 19 | 4.912 | 4.907 | 4.931 | VV | 562 | 6709 | 0.09% | 0.023% |
| 20 | 4.933 | 4.931 | 4.939 | VV | 455 | 2069 | 0.03% | 0.007% |
| 21 | 4.944 | 4.939 | 4.956 | VV | 440 | 3473 | 0.04% | 0.012% |
| 22 | 4.974 | 4.956 | 4.993 | VV | 507 | 7115 | 0.09% | 0.024% |
| 23 | 4.999 | 4.993 | 5.002 | VV | 454 | 1632 | 0.02% | 0.006% |
| 24 | 5.005 | 5.002 | 5.010 | VV | 409 | 1460 | 0.02% | 0.005% |
| 25 | 5.031 | 5.010 | 5.098 | VV | 1925 | 52584 | 0.67% | 0.179% |
| 26 | 5.104 | 5.098 | 5.115 | VV | 510 | 4195 | 0.05% | 0.014% |
| 27 | 5.144 | 5.115 | 5.164 | VV | 509 | 10282 | 0.13% | 0.035% |
| 28 | 5.184 | 5.164 | 5.203 | VV | 1222 | 13855 | 0.18% | 0.047% |
| 29 | 5.220 | 5.203 | 5.250 | VV | 2162 | 23970 | 0.30% | 0.081% |
| 30 | 5.253 | 5.250 | 5.261 | VV | 219 | 1019 | 0.01% | 0.003% |
| 31 | 5.278 | 5.261 | 5.296 | PV | 768 | 9214 | 0.12% | 0.031% |
| 32 | 5.309 | 5.296 | 5.328 | VV | 511 | 7489 | 0.10% | 0.025% |
| 33 | 5.330 | 5.328 | 5.346 | VV | 480 | 3326 | 0.04% | 0.011% |
| 34 | 5.361 | 5.346 | 5.416 | VV | 1030 | 26415 | 0.34% | 0.090% |
| 35 | 5.430 | 5.416 | 5.441 | VV | 418 | 4899 | 0.06% | 0.017% |
| 36 | 5.444 | 5.441 | 5.456 | VV | 388 | 2746 | 0.03% | 0.009% |

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|---|---|---|---|---|---|---|---|---|
| 37 | 5.469 | 5.456 | 5.498 | VV | 628 | 9592 | 0.12% | 0.033% |
| 38 | 5.511 | 5.498 | 5.537 | VV | 382 | 6631 | 0.08% | 0.023% |
| 39 | 5.540 | 5.537 | 5.553 | VV | 303 | 2289 | 0.03% | 0.008% |
| 40 | 5.558 | 5.553 | 5.581 | VV | 281 | 3503 | 0.04% | 0.012% |
| 41 | 5.593 | 5.581 | 5.610 | VV | 297 | 3797 | 0.05% | 0.013% |
| 42 | 5.615 | 5.610 | 5.622 | VV | 320 | 1203 | 0.02% | 0.004% |
| 43 | 5.673 | 5.622 | 5.685 | VV | 423 | 8618 | 0.11% | 0.029% |
| 44 | 5.722 | 5.685 | 5.737 | VV | 515 | 12328 | 0.16% | 0.042% |
| 45 | 5.775 | 5.737 | 5.798 | VV | 1168 | 29303 | 0.37% | 0.100% |
| 46 | 5.817 | 5.798 | 5.849 | VV | 1829 | 28141 | 0.36% | 0.096% |
| 47 | 5.880 | 5.849 | 5.921 | VV | 715 | 20597 | 0.26% | 0.070% |
| 48 | 5.947 | 5.921 | 5.977 | VV | 763 | 16878 | 0.21% | 0.057% |
| 49 | 6.005 | 5.984 | 6.025 | VV | 236 | 3035 | 0.04% | 0.010% |
| 50 | 6.044 | 6.025 | 6.073 | VV | 651 | 12325 | 0.16% | 0.042% |
| 51 | 6.082 | 6.073 | 6.130 | VV | 314 | 7548 | 0.10% | 0.026% |
| 52 | 6.154 | 6.130 | 6.185 | VV | 2592 | 31547 | 0.40% | 0.107% |
| 53 | 6.189 | 6.185 | 6.212 | VV | 388 | 3330 | 0.04% | 0.011% |
| 54 | 6.231 | 6.212 | 6.252 | VV | 742 | 9226 | 0.12% | 0.031% |
| 55 | 6.270 | 6.252 | 6.282 | VV | 673 | 6388 | 0.08% | 0.022% |
| 56 | 6.300 | 6.282 | 6.318 | VV | 1865 | 21625 | 0.28% | 0.074% |
| 57 | 6.326 | 6.318 | 6.353 | VV | 538 | 6891 | 0.09% | 0.023% |
| 58 | 6.373 | 6.353 | 6.390 | PV | 978 | 9862 | 0.13% | 0.034% |
| 59 | 6.408 | 6.390 | 6.435 | VV | 652 | 10518 | 0.13% | 0.036% |
| 60 | 6.440 | 6.435 | 6.455 | VV | 293 | 2177 | 0.03% | 0.007% |
| 61 | 6.464 | 6.455 | 6.475 | VV | 270 | 2210 | 0.03% | 0.008% |
| 62 | 6.478 | 6.475 | 6.492 | VV | 297 | 1732 | 0.02% | 0.006% |
| 63 | 6.524 | 6.492 | 6.533 | VV | 349 | 5684 | 0.07% | 0.019% |
| 64 | 6.536 | 6.533 | 6.546 | VV | 282 | 1537 | 0.02% | 0.005% |
| 65 | 6.560 | 6.546 | 6.574 | VV | 448 | 3842 | 0.05% | 0.013% |
| 66 | 6.587 | 6.574 | 6.607 | VV | 1023 | 11195 | 0.14% | 0.038% |
| 67 | 6.615 | 6.607 | 6.622 | VV | 365 | 2256 | 0.03% | 0.008% |
| 68 | 6.648 | 6.622 | 6.667 | VV | 1078 | 21802 | 0.28% | 0.074% |
| 69 | 6.692 | 6.667 | 6.695 | VV | 1183 | 16278 | 0.21% | 0.055% |
| 70 | 6.708 | 6.695 | 6.739 | VV | 1662 | 25702 | 0.33% | 0.087% |
| 71 | 6.767 | 6.739 | 6.803 | VV | 2244 | 37517 | 0.48% | 0.128% |
| 72 | 6.807 | 6.803 | 6.811 | VV | 575 | 2154 | 0.03% | 0.007% |
| 73 | 6.814 | 6.811 | 6.836 | VV | 557 | 7273 | 0.09% | 0.025% |
| 74 | 6.865 | 6.836 | 6.890 | VV | 754 | 17046 | 0.22% | 0.058% |
| 75 | 6.925 | 6.890 | 6.953 | VV | 3750 | 44225 | 0.56% | 0.150% |
| 76 | 6.984 | 6.953 | 6.988 | VV | 914 | 13010 | 0.17% | 0.044% |
| 77 | 6.995 | 6.988 | 7.015 | VV | 921 | 10923 | 0.14% | 0.037% |
| 78 | 7.019 | 7.015 | 7.025 | VV | 583 | 3048 | 0.04% | 0.010% |
| 79 | 7.031 | 7.025 | 7.050 | VV | 840 | 8952 | 0.11% | 0.030% |
| 80 | 7.067 | 7.050 | 7.091 | VV | 1019 | 17078 | 0.22% | 0.058% |
| 81 | 7.125 | 7.091 | 7.143 | VV | 652 | 13806 | 0.18% | 0.047% |
| 82 | 7.156 | 7.143 | 7.180 | VV | 902 | 10551 | 0.13% | 0.036% |
| 83 | 7.196 | 7.180 | 7.214 | VV | 282 | 3530 | 0.04% | 0.012% |
| 84 | 7.239 | 7.214 | 7.256 | VV | 404 | 5984 | 0.08% | 0.020% |
| 85 | 7.284 | 7.256 | 7.290 | PV | 404 | 5972 | 0.08% | 0.020% |
| 86 | 7.324 | 7.290 | 7.336 | VV | 1311 | 19286 | 0.25% | 0.066% |
| 87 | 7.364 | 7.336 | 7.457 | VV | 777980 | 7860559 | 100.00% | 26.724% |
| 88 | 7.468 | 7.457 | 7.484 | VV | 1667 | 24788 | 0.32% | 0.084% |
| 89 | 7.495 | 7.484 | 7.514 | VV | 1471 | 23597 | 0.30% | 0.080% |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 90 | 7.518 | 7.514 | 7.569 | VV | 1180 | 26326 | 0.33% | 0.090% |
| 91 | 7.587 | 7.569 | 7.610 | VV | 725 | 13077 | 0.17% | 0.044% |
| 92 | 7.632 | 7.610 | 7.657 | VV | 1104 | 16154 | 0.21% | 0.055% |
| 93 | 7.660 | 7.657 | 7.672 | VV | 440 | 3393 | 0.04% | 0.012% |
| 94 | 7.685 | 7.672 | 7.702 | VV | 514 | 7363 | 0.09% | 0.025% |
| 95 | 7.729 | 7.702 | 7.740 | VV | 486 | 8625 | 0.11% | 0.029% |
| 96 | 7.751 | 7.740 | 7.775 | VV | 382 | 6264 | 0.08% | 0.021% |
| 97 | 7.778 | 7.775 | 7.787 | VV | 291 | 1516 | 0.02% | 0.005% |
| 98 | 7.812 | 7.787 | 7.828 | VV | 604 | 10797 | 0.14% | 0.037% |
| 99 | 7.841 | 7.828 | 7.853 | VV | 942 | 10510 | 0.13% | 0.036% |
| 100 | 7.865 | 7.853 | 7.913 | VV | 706 | 15806 | 0.20% | 0.054% |
| 101 | 7.931 | 7.913 | 7.962 | VV | 2508 | 31975 | 0.41% | 0.109% |
| 102 | 7.968 | 7.962 | 7.973 | VV | 463 | 2847 | 0.04% | 0.010% |
| 103 | 7.980 | 7.973 | 7.996 | VV | 505 | 4215 | 0.05% | 0.014% |
| 104 | 8.041 | 7.996 | 8.065 | PV | 1112 | 29475 | 0.37% | 0.100% |
| 105 | 8.081 | 8.065 | 8.109 | VV | 1303 | 20278 | 0.26% | 0.069% |
| 106 | 8.122 | 8.109 | 8.144 | VV | 800 | 10453 | 0.13% | 0.036% |
| 107 | 8.162 | 8.144 | 8.188 | VV | 801 | 9522 | 0.12% | 0.032% |
| 108 | 8.213 | 8.188 | 8.381 | VV | 434330 | 5128368 | 65.24% | 17.435% |
| 109 | 8.387 | 8.381 | 8.405 | VV | 1771 | 21767 | 0.28% | 0.074% |
| 110 | 8.419 | 8.405 | 8.450 | VV | 1572 | 36544 | 0.46% | 0.124% |
| 111 | 8.469 | 8.450 | 8.510 | VV | 1623 | 40101 | 0.51% | 0.136% |
| 112 | 8.529 | 8.510 | 8.561 | VV | 818 | 17344 | 0.22% | 0.059% |
| 113 | 8.579 | 8.561 | 8.597 | VV | 1042 | 15633 | 0.20% | 0.053% |
| 114 | 8.600 | 8.597 | 8.608 | VV | 571 | 3654 | 0.05% | 0.012% |
| 115 | 8.614 | 8.608 | 8.623 | VV | 675 | 5082 | 0.06% | 0.017% |
| 116 | 8.648 | 8.623 | 8.673 | VV | 41323 | 431415 | 5.49% | 1.467% |
| 117 | 8.680 | 8.673 | 8.700 | VV | 1706 | 24071 | 0.31% | 0.082% |
| 118 | 8.705 | 8.700 | 8.712 | VV | 1321 | 8833 | 0.11% | 0.030% |
| 119 | 8.726 | 8.712 | 8.742 | VV | 2078 | 28275 | 0.36% | 0.096% |
| 120 | 8.758 | 8.742 | 8.790 | VV | 2814 | 44777 | 0.57% | 0.152% |
| 121 | 8.806 | 8.790 | 8.820 | VV | 1510 | 19994 | 0.25% | 0.068% |
| 122 | 8.826 | 8.820 | 8.860 | VV | 1024 | 16393 | 0.21% | 0.056% |
| 123 | 8.885 | 8.860 | 8.893 | VV | 570 | 7214 | 0.09% | 0.025% |
| 124 | 8.899 | 8.893 | 8.921 | VV | 475 | 6056 | 0.08% | 0.021% |
| 125 | 8.942 | 8.921 | 8.968 | VV | 631 | 13019 | 0.17% | 0.044% |
| 126 | 8.980 | 8.968 | 9.000 | VV | 829 | 8148 | 0.10% | 0.028% |
| 127 | 9.033 | 9.000 | 9.040 | PV | 468 | 6484 | 0.08% | 0.022% |
| 128 | 9.049 | 9.040 | 9.077 | VV | 516 | 6382 | 0.08% | 0.022% |
| 129 | 9.106 | 9.077 | 9.128 | PV | 787 | 12691 | 0.16% | 0.043% |
| 130 | 9.138 | 9.128 | 9.143 | VV | 389 | 2521 | 0.03% | 0.009% |
| 131 | 9.150 | 9.143 | 9.180 | VV | 514 | 7813 | 0.10% | 0.027% |
| 132 | 9.188 | 9.180 | 9.199 | VV | 558 | 5071 | 0.06% | 0.017% |
| 133 | 9.204 | 9.199 | 9.207 | VV | 406 | 1644 | 0.02% | 0.006% |
| 134 | 9.212 | 9.207 | 9.232 | VV | 512 | 4491 | 0.06% | 0.015% |
| 135 | 9.247 | 9.232 | 9.278 | VV | 731 | 10727 | 0.14% | 0.036% |
| 136 | 9.284 | 9.278 | 9.292 | VV | 317 | 2376 | 0.03% | 0.008% |
| 137 | 9.310 | 9.292 | 9.323 | VV | 469 | 6394 | 0.08% | 0.022% |
| 138 | 9.350 | 9.323 | 9.382 | VV | 1677 | 22637 | 0.29% | 0.077% |
| 139 | 9.404 | 9.382 | 9.470 | VV | 3945 | 95103 | 1.21% | 0.323% |
| 140 | 9.474 | 9.470 | 9.505 | VV | 934 | 14589 | 0.19% | 0.050% |
| 141 | 9.521 | 9.505 | 9.547 | VV | 1402 | 20044 | 0.25% | 0.068% |

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|---|---|---|---|---|---|---|---|---|
| 142 | 9.574 | 9.547 | 9.580 | VV | 351 | 4942 | 0.06% | 0.017% |
| 143 | 9.588 | 9.580 | 9.617 | VV | 395 | 7146 | 0.09% | 0.024% |
| 144 | 9.621 | 9.617 | 9.638 | VV | 260 | 2763 | 0.04% | 0.009% |
| 145 | 9.671 | 9.638 | 9.677 | VV | 336 | 4943 | 0.06% | 0.017% |
| 146 | 9.689 | 9.677 | 9.708 | VV | 473 | 5203 | 0.07% | 0.018% |
| 147 | 9.738 | 9.708 | 9.782 | PV | 1073 | 17190 | 0.22% | 0.058% |
| 148 | 9.794 | 9.782 | 9.808 | VV | 278 | 2342 | 0.03% | 0.008% |
| 149 | 9.835 | 9.808 | 9.847 | PV | 416 | 4889 | 0.06% | 0.017% |
| 150 | 9.864 | 9.847 | 9.883 | VV | 373 | 5304 | 0.07% | 0.018% |
| 151 | 9.886 | 9.883 | 9.893 | VV | 230 | 1002 | 0.01% | 0.003% |
| 152 | 9.912 | 9.893 | 9.925 | VV | 522 | 6106 | 0.08% | 0.021% |
| 153 | 9.947 | 9.925 | 9.976 | VV | 626 | 13725 | 0.17% | 0.047% |
| 154 | 9.981 | 9.976 | 9.995 | VV | 514 | 3594 | 0.05% | 0.012% |
| 155 | 10.021 | 9.995 | 10.052 | VV | 742 | 12392 | 0.16% | 0.042% |
| 156 | 10.077 | 10.052 | 10.084 | PV | 218 | 2043 | 0.03% | 0.007% |
| 157 | 10.108 | 10.084 | 10.127 | VV | 500 | 7742 | 0.10% | 0.026% |
| 158 | 10.150 | 10.127 | 10.170 | VV | 601 | 7590 | 0.10% | 0.026% |
| 159 | 10.200 | 10.170 | 10.213 | VV | 559 | 8785 | 0.11% | 0.030% |
| 160 | 10.253 | 10.213 | 10.298 | VV | 879 | 25650 | 0.33% | 0.087% |
| 161 | 10.312 | 10.298 | 10.318 | VV | 474 | 4326 | 0.06% | 0.015% |
| 162 | 10.335 | 10.318 | 10.350 | VV | 667 | 10230 | 0.13% | 0.035% |
| 163 | 10.379 | 10.350 | 10.408 | VV | 1099 | 19649 | 0.25% | 0.067% |
| 164 | 10.437 | 10.408 | 10.455 | VV | 464 | 7030 | 0.09% | 0.024% |
| 165 | 10.472 | 10.455 | 10.489 | PV | 251 | 3439 | 0.04% | 0.012% |
| 166 | 10.517 | 10.489 | 10.557 | VV | 2401 | 48573 | 0.62% | 0.165% |
| 167 | 10.564 | 10.557 | 10.607 | VV | 1025 | 21774 | 0.28% | 0.074% |
| 168 | 10.620 | 10.607 | 10.633 | VV | 672 | 8136 | 0.10% | 0.028% |
| 169 | 10.647 | 10.633 | 10.657 | VV | 786 | 9505 | 0.12% | 0.032% |
| 170 | 10.674 | 10.657 | 10.690 | VV | 852 | 12725 | 0.16% | 0.043% |
| 171 | 10.705 | 10.690 | 10.722 | VV | 547 | 6700 | 0.09% | 0.023% |
| 172 | 10.740 | 10.722 | 10.748 | PV | 319 | 2781 | 0.04% | 0.009% |
| 173 | 10.764 | 10.748 | 10.775 | VV | 182 | 1970 | 0.03% | 0.007% |
| 174 | 10.886 | 10.784 | 10.912 | PV | 1084 | 28415 | 0.36% | 0.097% |
| 175 | 10.921 | 10.912 | 10.926 | VV | 543 | 3636 | 0.05% | 0.012% |
| 176 | 10.952 | 10.926 | 10.977 | VV | 1664 | 26561 | 0.34% | 0.090% |
| 177 | 10.988 | 10.977 | 11.005 | VV | 740 | 9234 | 0.12% | 0.031% |
| 178 | 11.029 | 11.005 | 11.037 | VV | 778 | 11994 | 0.15% | 0.041% |
| 179 | 11.040 | 11.037 | 11.070 | VV | 762 | 8768 | 0.11% | 0.030% |
| 180 | 11.077 | 11.070 | 11.082 | VV | 235 | 1194 | 0.02% | 0.004% |
| 181 | 11.116 | 11.082 | 11.124 | VV | 539 | 7464 | 0.09% | 0.025% |
| 182 | 11.137 | 11.124 | 11.162 | VV | 541 | 7582 | 0.10% | 0.026% |
| 183 | 11.187 | 11.162 | 11.203 | PV | 390 | 4759 | 0.06% | 0.016% |
| 184 | 11.248 | 11.203 | 11.306 | VV | 400968 | 4311016 | 54.84% | 14.656% |
| 185 | 11.311 | 11.306 | 11.335 | VV | 1499 | 24768 | 0.32% | 0.084% |
| 186 | 11.340 | 11.335 | 11.357 | VV | 1298 | 15317 | 0.19% | 0.052% |
| 187 | 11.368 | 11.357 | 11.390 | VV | 1331 | 22038 | 0.28% | 0.075% |
| 188 | 11.416 | 11.390 | 11.438 | VV | 2237 | 35782 | 0.46% | 0.122% |
| 189 | 11.459 | 11.438 | 11.480 | VV | 1261 | 20923 | 0.27% | 0.071% |
| 190 | 11.489 | 11.480 | 11.517 | VV | 875 | 16126 | 0.21% | 0.055% |
| 191 | 11.530 | 11.517 | 11.553 | VV | 747 | 11392 | 0.14% | 0.039% |
| 192 | 11.584 | 11.553 | 11.597 | VV | 943 | 17834 | 0.23% | 0.061% |
| 193 | 11.619 | 11.597 | 11.646 | VV | 1342 | 28916 | 0.37% | 0.098% |
| 194 | 11.672 | 11.646 | 11.697 | VV | 6200 | 83162 | 1.06% | 0.283% |

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|---|---|---|---|---|---|---|---|---|
| 195 | 11.710 | 11.697 | 11.727 | VV | 1195 | 16911 | 0.22% | 0.057% |
| 196 | 11.745 | 11.727 | 11.752 | VV | 768 | 9728 | 0.12% | 0.033% |
| 197 | 11.772 | 11.752 | 11.792 | VV | 1033 | 17033 | 0.22% | 0.058% |
| 198 | 11.827 | 11.792 | 11.843 | VV | 1302 | 28742 | 0.37% | 0.098% |
| 199 | 11.868 | 11.843 | 11.914 | VV | 33395 | 439076 | 5.59% | 1.493% |
| 200 | 11.920 | 11.914 | 11.926 | VV | 2064 | 12892 | 0.16% | 0.044% |
| 201 | 11.929 | 11.926 | 11.940 | VV | 1718 | 13538 | 0.17% | 0.046% |
| 202 | 11.943 | 11.940 | 11.956 | VV | 1467 | 11567 | 0.15% | 0.039% |
| 203 | 11.962 | 11.956 | 11.976 | VV | 1223 | 11513 | 0.15% | 0.039% |
| 204 | 12.002 | 11.976 | 12.032 | VV | 1566 | 36398 | 0.46% | 0.124% |
| 205 | 12.038 | 12.032 | 12.043 | VV | 812 | 5287 | 0.07% | 0.018% |
| 206 | 12.052 | 12.043 | 12.057 | VV | 966 | 6457 | 0.08% | 0.022% |
| 207 | 12.066 | 12.057 | 12.071 | VV | 1188 | 8203 | 0.10% | 0.028% |
| 208 | 12.118 | 12.071 | 12.145 | VV | 4081 | 79795 | 1.02% | 0.271% |
| 209 | 12.192 | 12.145 | 12.214 | VV | 2417 | 54126 | 0.69% | 0.184% |
| 210 | 12.234 | 12.214 | 12.241 | VV | 1427 | 18271 | 0.23% | 0.062% |
| 211 | 12.254 | 12.241 | 12.288 | VV | 2495 | 41521 | 0.53% | 0.141% |
| 212 | 12.311 | 12.288 | 12.353 | VV | 5849 | 116211 | 1.48% | 0.395% |
| 213 | 12.358 | 12.353 | 12.373 | VV | 1074 | 11063 | 0.14% | 0.038% |
| 214 | 12.378 | 12.373 | 12.387 | VV | 998 | 6828 | 0.09% | 0.023% |
| 215 | 12.409 | 12.387 | 12.439 | VV | 1286 | 26955 | 0.34% | 0.092% |
| 216 | 12.464 | 12.439 | 12.473 | VV | 1083 | 18365 | 0.23% | 0.062% |
| 217 | 12.480 | 12.473 | 12.492 | VV | 934 | 9479 | 0.12% | 0.032% |
| 218 | 12.503 | 12.492 | 12.510 | VV | 984 | 9736 | 0.12% | 0.033% |
| 219 | 12.524 | 12.510 | 12.555 | VV | 1441 | 22526 | 0.29% | 0.077% |
| 220 | 12.597 | 12.555 | 12.653 | VV | 5167 | 115119 | 1.46% | 0.391% |
| 221 | 12.690 | 12.653 | 12.723 | VV | 87803 | 1065633 | 13.56% | 3.623% |
| 222 | 12.744 | 12.723 | 12.756 | VV | 2082 | 37906 | 0.48% | 0.129% |
| 223 | 12.764 | 12.756 | 12.769 | VV | 1792 | 13268 | 0.17% | 0.045% |
| 224 | 12.776 | 12.769 | 12.793 | VV | 1954 | 24667 | 0.31% | 0.084% |
| 225 | 12.817 | 12.793 | 12.843 | VV | 1560 | 36555 | 0.47% | 0.124% |
| 226 | 12.878 | 12.843 | 12.892 | VV | 1537 | 31882 | 0.41% | 0.108% |
| 227 | 12.917 | 12.892 | 12.961 | VV | 4127 | 83132 | 1.06% | 0.283% |
| 228 | 12.992 | 12.961 | 13.017 | VV | 1395 | 30217 | 0.38% | 0.103% |
| 229 | 13.021 | 13.017 | 13.028 | VV | 668 | 3612 | 0.05% | 0.012% |
| 230 | 13.054 | 13.028 | 13.063 | VV | 781 | 14761 | 0.19% | 0.050% |
| 231 | 13.068 | 13.063 | 13.070 | VV | 996 | 3273 | 0.04% | 0.011% |
| 232 | 13.091 | 13.070 | 13.137 | VV | 15720 | 243787 | 3.10% | 0.829% |
| 233 | 13.141 | 13.137 | 13.180 | VV | 1879 | 33386 | 0.42% | 0.114% |
| 234 | 13.192 | 13.180 | 13.198 | VV | 1058 | 10301 | 0.13% | 0.035% |
| 235 | 13.212 | 13.198 | 13.230 | VV | 1233 | 18958 | 0.24% | 0.064% |
| 236 | 13.240 | 13.230 | 13.257 | VV | 1200 | 14354 | 0.18% | 0.049% |
| 237 | 13.269 | 13.257 | 13.274 | VV | 1287 | 10887 | 0.14% | 0.037% |
| 238 | 13.277 | 13.274 | 13.281 | VV | 1160 | 4506 | 0.06% | 0.015% |
| 239 | 13.284 | 13.281 | 13.300 | VV | 1132 | 9432 | 0.12% | 0.032% |
| 240 | 13.316 | 13.300 | 13.334 | VV | 2366 | 31190 | 0.40% | 0.106% |
| 241 | 13.348 | 13.334 | 13.354 | VV | 1358 | 13713 | 0.17% | 0.047% |
| 242 | 13.358 | 13.354 | 13.365 | VV | 1182 | 7258 | 0.09% | 0.025% |
| 243 | 13.370 | 13.365 | 13.373 | VV | 1055 | 5032 | 0.06% | 0.017% |
| 244 | 13.393 | 13.373 | 13.417 | VV | 1889 | 32696 | 0.42% | 0.111% |
| 245 | 13.422 | 13.417 | 13.427 | VV | 1021 | 5252 | 0.07% | 0.018% |
| 246 | 13.442 | 13.427 | 13.462 | VV | 1962 | 30356 | 0.39% | 0.103% |

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|---|---|---|---|---|---|---|---|---|
| 247 | 13.471 | 13.462 | 13.492 | VV | 1378 | 17911 | 0.23% | 0.061% |
| 248 | 13.497 | 13.492 | 13.501 | VV | 716 | 3024 | 0.04% | 0.010% |
| 249 | 13.516 | 13.501 | 13.522 | VV | 1108 | 10814 | 0.14% | 0.037% |
| 250 | 13.526 | 13.522 | 13.536 | VV | 811 | 5473 | 0.07% | 0.019% |
| 251 | 13.547 | 13.536 | 13.557 | VV | 975 | 8021 | 0.10% | 0.027% |
| 252 | 13.575 | 13.557 | 13.598 | VV | 852 | 13136 | 0.17% | 0.045% |
| 253 | 13.626 | 13.598 | 13.642 | VV | 1237 | 18707 | 0.24% | 0.064% |
| 254 | 13.644 | 13.642 | 13.683 | VV | 877 | 13730 | 0.17% | 0.047% |
| 255 | 13.721 | 13.683 | 13.762 | VV | 1069 | 37439 | 0.48% | 0.127% |
| 256 | 13.775 | 13.762 | 13.785 | VV | 671 | 5950 | 0.08% | 0.020% |
| 257 | 13.816 | 13.785 | 13.823 | VV | 862 | 13139 | 0.17% | 0.045% |
| 258 | 13.830 | 13.823 | 13.836 | VV | 868 | 5374 | 0.07% | 0.018% |
| 259 | 13.839 | 13.836 | 13.848 | VV | 735 | 4241 | 0.05% | 0.014% |
| 260 | 13.864 | 13.848 | 13.870 | VV | 1451 | 14037 | 0.18% | 0.048% |
| 261 | 13.878 | 13.870 | 13.897 | VV | 1851 | 19688 | 0.25% | 0.067% |
| 262 | 13.918 | 13.897 | 13.925 | VV | 1059 | 13046 | 0.17% | 0.044% |
| 263 | 13.931 | 13.925 | 13.938 | VV | 670 | 4423 | 0.06% | 0.015% |
| 264 | 13.948 | 13.938 | 13.957 | VV | 697 | 5182 | 0.07% | 0.018% |
| 265 | 13.962 | 13.957 | 13.967 | VV | 463 | 2171 | 0.03% | 0.007% |
| 266 | 13.977 | 13.967 | 13.982 | PV | 393 | 2252 | 0.03% | 0.008% |
| 267 | 13.991 | 13.982 | 14.015 | VV | 808 | 11142 | 0.14% | 0.038% |
| 268 | 14.042 | 14.015 | 14.061 | VV | 1689 | 28503 | 0.36% | 0.097% |
| 269 | 14.121 | 14.061 | 14.133 | VV | 1033 | 29005 | 0.37% | 0.099% |
| 270 | 14.140 | 14.133 | 14.146 | VV | 658 | 5169 | 0.07% | 0.018% |
| 271 | 14.167 | 14.146 | 14.180 | VV | 1281 | 21051 | 0.27% | 0.072% |
| 272 | 14.199 | 14.180 | 14.227 | VV | 1447 | 27069 | 0.34% | 0.092% |
| 273 | 14.253 | 14.227 | 14.277 | VV | 875 | 15325 | 0.19% | 0.052% |
| 274 | 14.288 | 14.277 | 14.294 | VV | 835 | 6699 | 0.09% | 0.023% |
| 275 | 14.303 | 14.294 | 14.311 | VV | 923 | 7705 | 0.10% | 0.026% |
| 276 | 14.315 | 14.311 | 14.320 | VV | 635 | 2925 | 0.04% | 0.010% |
| 277 | 14.322 | 14.320 | 14.345 | VV | 697 | 7545 | 0.10% | 0.026% |
| 278 | 14.388 | 14.345 | 14.394 | PV | 1294 | 18195 | 0.23% | 0.062% |
| 279 | 14.398 | 14.394 | 14.422 | VV | 1291 | 7967 | 0.10% | 0.027% |
| 280 | 14.440 | 14.422 | 14.448 | VV | 738 | 6488 | 0.08% | 0.022% |
| 281 | 14.458 | 14.448 | 14.463 | VV | 539 | 3516 | 0.04% | 0.012% |
| 282 | 14.489 | 14.463 | 14.499 | VV | 2643 | 33728 | 0.43% | 0.115% |
| 283 | 14.516 | 14.499 | 14.535 | VV | 3089 | 52721 | 0.67% | 0.179% |
| 284 | 14.543 | 14.535 | 14.563 | VV | 2513 | 28451 | 0.36% | 0.097% |
| 285 | 14.588 | 14.563 | 14.596 | VV | 1312 | 20508 | 0.26% | 0.070% |
| 286 | 14.616 | 14.596 | 14.625 | VV | 1831 | 24246 | 0.31% | 0.082% |
| 287 | 14.633 | 14.625 | 14.675 | VV | 1313 | 22483 | 0.29% | 0.076% |
| 288 | 14.682 | 14.675 | 14.687 | PV | 496 | 2422 | 0.03% | 0.008% |
| 289 | 14.691 | 14.687 | 14.697 | VV | 547 | 2209 | 0.03% | 0.008% |
| 290 | 14.712 | 14.697 | 14.728 | VV | 845 | 8332 | 0.11% | 0.028% |
| 291 | 14.771 | 14.728 | 14.785 | VV | 1337 | 22098 | 0.28% | 0.075% |
| 292 | 14.794 | 14.785 | 14.804 | VV | 916 | 7001 | 0.09% | 0.024% |
| 293 | 14.809 | 14.804 | 14.813 | VV | 816 | 3023 | 0.04% | 0.010% |
| 294 | 14.837 | 14.813 | 14.843 | VV | 1103 | 13762 | 0.18% | 0.047% |
| 295 | 14.858 | 14.843 | 14.871 | VV | 1119 | 11545 | 0.15% | 0.039% |
| 296 | 14.879 | 14.871 | 14.890 | VV | 1054 | 9263 | 0.12% | 0.031% |
| 297 | 14.930 | 14.890 | 14.974 | VV | 4906 | 127724 | 1.62% | 0.434% |
| 298 | 14.980 | 14.974 | 14.986 | VV | 1588 | 10180 | 0.13% | 0.035% |
| 299 | 14.993 | 14.986 | 15.005 | VV | 1648 | 16816 | 0.21% | 0.057% |

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|---|---|---|---|---|---|---|---|---|
| 300 | 15.022 | 15.005 | 15.036 | VV | 1530 | 23925 | 0.30% | 0.081% |
| 301 | 15.068 | 15.036 | 15.095 | VV | 2889 | 55247 | 0.70% | 0.188% |
| 302 | 15.113 | 15.095 | 15.131 | VV | 1614 | 18967 | 0.24% | 0.064% |
| 303 | 15.154 | 15.131 | 15.168 | PV | 1239 | 18799 | 0.24% | 0.064% |
| 304 | 15.197 | 15.168 | 15.203 | VV | 1380 | 25283 | 0.32% | 0.086% |
| 305 | 15.210 | 15.203 | 15.222 | VV | 1183 | 10677 | 0.14% | 0.036% |
| 306 | 15.230 | 15.222 | 15.235 | VV | 1148 | 6953 | 0.09% | 0.024% |
| 307 | 15.245 | 15.235 | 15.253 | VV | 1398 | 12776 | 0.16% | 0.043% |
| 308 | 15.264 | 15.253 | 15.269 | VV | 1384 | 11612 | 0.15% | 0.039% |
| 309 | 15.278 | 15.269 | 15.301 | VV | 1782 | 24398 | 0.31% | 0.083% |
| 310 | 15.307 | 15.301 | 15.312 | VV | 1025 | 4878 | 0.06% | 0.017% |
| 311 | 15.324 | 15.312 | 15.330 | VV | 813 | 7556 | 0.10% | 0.026% |
| 312 | 15.353 | 15.330 | 15.378 | VV | 1748 | 35361 | 0.45% | 0.120% |
| 313 | 15.387 | 15.378 | 15.397 | VV | 1318 | 10704 | 0.14% | 0.036% |
| 314 | 15.407 | 15.397 | 15.429 | VV | 811 | 9427 | 0.12% | 0.032% |
| 315 | 15.448 | 15.429 | 15.464 | VV | 1262 | 11796 | 0.15% | 0.040% |
| 316 | 15.491 | 15.464 | 15.502 | PV | 2262 | 28591 | 0.36% | 0.097% |
| 317 | 15.507 | 15.502 | 15.515 | VV | 975 | 6745 | 0.09% | 0.023% |
| 318 | 15.525 | 15.515 | 15.535 | VV | 1612 | 13933 | 0.18% | 0.047% |
| 319 | 15.553 | 15.535 | 15.567 | VV | 1807 | 27232 | 0.35% | 0.093% |
| 320 | 15.575 | 15.567 | 15.593 | VV | 1681 | 18703 | 0.24% | 0.064% |
| 321 | 15.600 | 15.593 | 15.623 | VV | 1167 | 17640 | 0.22% | 0.060% |
| 322 | 15.640 | 15.623 | 15.672 | VV | 1156 | 18236 | 0.23% | 0.062% |
| 323 | 15.685 | 15.672 | 15.690 | PV | 731 | 3289 | 0.04% | 0.011% |
| 324 | 15.729 | 15.690 | 15.734 | VV | 1210 | 20571 | 0.26% | 0.070% |
| 325 | 15.738 | 15.734 | 15.746 | VV | 1057 | 5434 | 0.07% | 0.018% |
| 326 | 15.751 | 15.746 | 15.755 | VV | 610 | 2778 | 0.04% | 0.009% |
| 327 | 15.769 | 15.755 | 15.775 | VV | 1181 | 9102 | 0.12% | 0.031% |
| 328 | 15.796 | 15.775 | 15.808 | VV | 1826 | 26062 | 0.33% | 0.089% |
| 329 | 15.813 | 15.808 | 15.839 | VV | 1667 | 20779 | 0.26% | 0.071% |
| 330 | 15.852 | 15.839 | 15.868 | VV | 1228 | 13672 | 0.17% | 0.046% |
| 331 | 15.874 | 15.868 | 15.878 | VV | 814 | 3602 | 0.05% | 0.012% |
| 332 | 15.890 | 15.878 | 15.902 | VV | 939 | 8002 | 0.10% | 0.027% |
| 333 | 15.926 | 15.902 | 15.932 | VV | 1559 | 20105 | 0.26% | 0.068% |
| 334 | 15.936 | 15.932 | 15.944 | VV | 1107 | 6878 | 0.09% | 0.023% |
| 335 | 15.958 | 15.944 | 15.970 | VV | 1610 | 15615 | 0.20% | 0.053% |
| 336 | 15.990 | 15.970 | 15.997 | PV | 1430 | 12931 | 0.16% | 0.044% |
| 337 | 16.027 | 15.997 | 16.074 | VV | 4104 | 100385 | 1.28% | 0.341% |
| 338 | 16.100 | 16.074 | 16.105 | VV | 2356 | 32272 | 0.41% | 0.110% |
| 339 | 16.115 | 16.105 | 16.124 | VV | 2330 | 23915 | 0.30% | 0.081% |
| 340 | 16.165 | 16.124 | 16.180 | VV | 3440 | 82583 | 1.05% | 0.281% |
| 341 | 16.185 | 16.180 | 16.210 | VV | 2289 | 30321 | 0.39% | 0.103% |
| 342 | 16.220 | 16.210 | 16.240 | VV | 2333 | 27236 | 0.35% | 0.093% |
| 343 | 16.257 | 16.240 | 16.263 | VV | 1563 | 14918 | 0.19% | 0.051% |
| 344 | 16.284 | 16.263 | 16.308 | VV | 2346 | 46749 | 0.59% | 0.159% |
| 345 | 16.339 | 16.308 | 16.361 | VV | 3694 | 71695 | 0.91% | 0.244% |
| 346 | 16.372 | 16.361 | 16.383 | VV | 1993 | 16548 | 0.21% | 0.056% |
| 347 | 16.407 | 16.383 | 16.442 | VV | 4220 | 86769 | 1.10% | 0.295% |
| 348 | 16.462 | 16.442 | 16.478 | VV | 2760 | 45237 | 0.58% | 0.154% |
| 349 | 16.505 | 16.478 | 16.519 | VV | 4784 | 91323 | 1.16% | 0.310% |
| 350 | 16.544 | 16.519 | 16.565 | VV | 5499 | 107461 | 1.37% | 0.365% |
| 351 | 16.581 | 16.565 | 16.588 | VV | 3068 | 32189 | 0.41% | 0.109% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 352 | 16.599 | 16.588 | 16.615 | VV | 2948 | 37350 | 0.48% | 0.127% |
| 353 | 16.663 | 16.615 | 16.667 | VV | 3433 | 75115 | 0.96% | 0.255% |
| 354 | 16.691 | 16.667 | 16.695 | VV | 3425 | 46836 | 0.60% | 0.159% |
| 355 | 16.706 | 16.695 | 16.730 | VV | 3914 | 65571 | 0.83% | 0.223% |
| 356 | 16.745 | 16.730 | 16.763 | VV | 4114 | 64200 | 0.82% | 0.218% |
| 357 | 16.786 | 16.763 | 16.799 | VV | 4610 | 80195 | 1.02% | 0.273% |
| 358 | 16.804 | 16.799 | 16.838 | VV | 4366 | 86667 | 1.10% | 0.295% |
| 359 | 16.844 | 16.838 | 16.847 | VV | 3618 | 18042 | 0.23% | 0.061% |
| 360 | 16.853 | 16.847 | 16.860 | VV | 3944 | 28291 | 0.36% | 0.096% |
| 361 | 16.890 | 16.860 | 16.915 | VV | 4388 | 112761 | 1.43% | 0.383% |
| 362 | 16.921 | 16.915 | 16.925 | VV | 2230 | 11993 | 0.15% | 0.041% |
| 363 | 16.956 | 16.925 | 16.982 | VV | 5536 | 133499 | 1.70% | 0.454% |
| 364 | 17.000 | 16.982 | 17.015 | VV | 4074 | 63690 | 0.81% | 0.217% |
| 365 | 17.031 | 17.015 | 17.035 | VV | 3108 | 32923 | 0.42% | 0.112% |
| 366 | 17.057 | 17.035 | 17.063 | VV | 4433 | 57467 | 0.73% | 0.195% |
| 367 | 17.093 | 17.063 | 17.117 | VV | 6148 | 135441 | 1.72% | 0.460% |
| 368 | 17.120 | 17.117 | 17.125 | VV | 3284 | 12365 | 0.16% | 0.042% |
| 369 | 17.135 | 17.125 | 17.146 | VV | 3095 | 36537 | 0.46% | 0.124% |
| 370 | 17.152 | 17.146 | 17.162 | VV | 3356 | 27672 | 0.35% | 0.094% |
| 371 | 17.186 | 17.162 | 17.200 | VV | 4319 | 78627 | 1.00% | 0.267% |
| 372 | 17.206 | 17.200 | 17.222 | VV | 4120 | 45074 | 0.57% | 0.153% |
| 373 | 17.235 | 17.222 | 17.245 | VV | 3894 | 48994 | 0.62% | 0.167% |
| 374 | 17.259 | 17.245 | 17.267 | VV | 3504 | 42581 | 0.54% | 0.145% |
| 375 | 17.271 | 17.267 | 17.276 | VV | 3585 | 17481 | 0.22% | 0.059% |
| 376 | 17.286 | 17.276 | 17.290 | VV | 3219 | 24399 | 0.31% | 0.083% |
| 377 | 17.294 | 17.290 | 17.297 | VV | 3076 | 10168 | 0.13% | 0.035% |
| 378 | 17.315 | 17.297 | 17.327 | VV | 4465 | 63027 | 0.80% | 0.214% |
| 379 | 17.357 | 17.327 | 17.371 | VV | 6841 | 140724 | 1.79% | 0.478% |
| 380 | 17.388 | 17.371 | 17.403 | VV | 6979 | 110034 | 1.40% | 0.374% |
| 381 | 17.408 | 17.403 | 17.433 | VV | 4943 | 67250 | 0.86% | 0.229% |
| 382 | 17.448 | 17.433 | 17.465 | VV | 4350 | 59611 | 0.76% | 0.203% |
| 383 | 17.476 | 17.465 | 17.482 | VV | 3535 | 29811 | 0.38% | 0.101% |
| 384 | 17.489 | 17.482 | 17.493 | VV | 3373 | 20733 | 0.26% | 0.070% |
| 385 | 17.529 | 17.493 | 17.573 | VV | 8197 | 246367 | 3.13% | 0.838% |
| 386 | 17.597 | 17.573 | 17.613 | VV | 5369 | 99344 | 1.26% | 0.338% |
| 387 | 17.617 | 17.613 | 17.642 | VV | 4515 | 59244 | 0.75% | 0.201% |
| 388 | 17.694 | 17.642 | 17.712 | VV | 6271 | 166120 | 2.11% | 0.565% |
| 389 | 17.722 | 17.712 | 17.730 | VV | 4806 | 47797 | 0.61% | 0.162% |
| 390 | 17.759 | 17.730 | 17.778 | VV | 8971 | 180264 | 2.29% | 0.613% |
| 391 | 17.799 | 17.778 | 17.830 | VV | 11621 | 230972 | 2.94% | 0.785% |
| 392 | 17.841 | 17.830 | 17.846 | VV | 3535 | 30563 | 0.39% | 0.104% |
| 393 | 17.851 | 17.846 | 17.878 | VV | 4432 | 65768 | 0.84% | 0.224% |
| 394 | 17.887 | 17.878 | 17.897 | VV | 2956 | 28080 | 0.36% | 0.095% |
| 395 | 17.920 | 17.897 | 17.927 | VV | 8999 | 97726 | 1.24% | 0.332% |
| 396 | 17.931 | 17.927 | 17.970 | VV | 8139 | 113328 | 1.44% | 0.385% |
| 397 | 17.979 | 17.970 | 17.984 | VV | 4486 | 26333 | 0.34% | 0.090% |
| 398 | 18.002 | 17.984 | 18.026 | VV | 8381 | 136954 | 1.74% | 0.466% |
| 399 | 18.040 | 18.026 | 18.060 | VV | 4942 | 75268 | 0.96% | 0.256% |
| 400 | 18.073 | 18.060 | 18.094 | VV | 3175 | 46283 | 0.59% | 0.157% |
| 401 | 18.107 | 18.094 | 18.125 | VV | 3593 | 47604 | 0.61% | 0.162% |
| 402 | 18.142 | 18.125 | 18.155 | VV | 5711 | 70703 | 0.90% | 0.240% |
| 403 | 18.169 | 18.155 | 18.175 | VV | 4910 | 53045 | 0.67% | 0.180% |
| 404 | 18.182 | 18.175 | 18.190 | VV | 4949 | 38521 | 0.49% | 0.131% |

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 405 | 18.195 | 18.190 | 18.203 | VV | 4996 | 37627 | 0.48% | 0.128% |
| 406 | 18.215 | 18.203 | 18.220 | VV | 5270 | 44477 | 0.57% | 0.151% |
| 407 | 18.224 | 18.220 | 18.243 | VV | 4636 | 36104 | 0.46% | 0.123% |
| 408 | 18.247 | 18.243 | 18.261 | VV | 2494 | 22369 | 0.28% | 0.076% |
| 409 | 18.265 | 18.261 | 18.294 | VV | 2330 | 26898 | 0.34% | 0.091% |

Sum of corrected areas: 29414187

Aromatic EPH 121024.M Thu Dec 12 05:51:14 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-2 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-02 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 91.2 |
| Sample Wt/Vol: | 30.07 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/12/24 0:21 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 0.45 | J | 1 | 0.42 | 1.09 | mg/kg | FC067991.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 0.73 | | 1 | 0.26 | 0.73 | mg/kg | FC067991.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 8.59 | | 1 | 0.33 | 1.09 | mg/kg | FC067991.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 5.26 | | 1 | 0.88 | 1.46 | mg/kg | FC067991.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 42.4 | | 1 | 1.97 | 2.19 | mg/kg | FC067991.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.33 | U | 1 | 0.33 | 0.73 | mg/kg | FD048880.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.37 | U | 1 | 0.37 | 1.09 | mg/kg | FD048880.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 1.24 | J | 1 | 1.05 | 1.82 | mg/kg | FD048880.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 5.37 | | 1 | 2.19 | 2.92 | mg/kg | FD048880.D |
| Total AliphaticEPH | Total AliphaticEPH | 57.4 | | | 3.85 | 6.56 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 6.61 | | | 3.94 | 6.56 | mg/kg | |
| Total EPH | Total EPH | 64.0 | | | 7.79 | 13.1 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-2 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-02 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 91.2 |
| Sample Wt/Vol: | 30.07 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067991.D | 1 | 12/11/24 | 12/12/24 | PB165557 |

| CAS Number | Parameter | | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | | 0.45 | J | 0.42 | 1.09 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | | 0.73 | | 0.26 | 0.73 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | | 8.59 | | 0.33 | 1.09 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | | 5.26 | | 0.88 | 1.46 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | | 42.4 | | 1.97 | 2.19 | mg/kg |
| **SURROGATES** | | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | | 45.5 | | 40 - 140 | 91% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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

# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-02 | Acq On: | 12 Dec 2024 00:21 |
| Client Sample ID: | UST-2 | Operator: | YP/AJ |
| Data file: | FC067991.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 18 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 982183 | 6.204 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 1612440 | 10.06 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 17935838 | 117.718 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 9837034 | 72.127 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 61578956 | 581.127 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 91946451 | 787.238 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.915 | 12.915 | 5811393 | 45.55 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 30367495 | 206.109 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067991.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 00:21
Operator : YP/AJ
Sample : P5194-02
Misc :
ALS Vial : 18 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-2

Integration File: autoint1.e
Quant Time: Dec 12 03:35:05 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 12) S 1-chlorooctadecane (S... | 12.915 | 5811393 | 45.546 ug/ml |
| Spiked Amount 50.000 | | Recovery = 91.09% | |
| Target Compounds | | | |

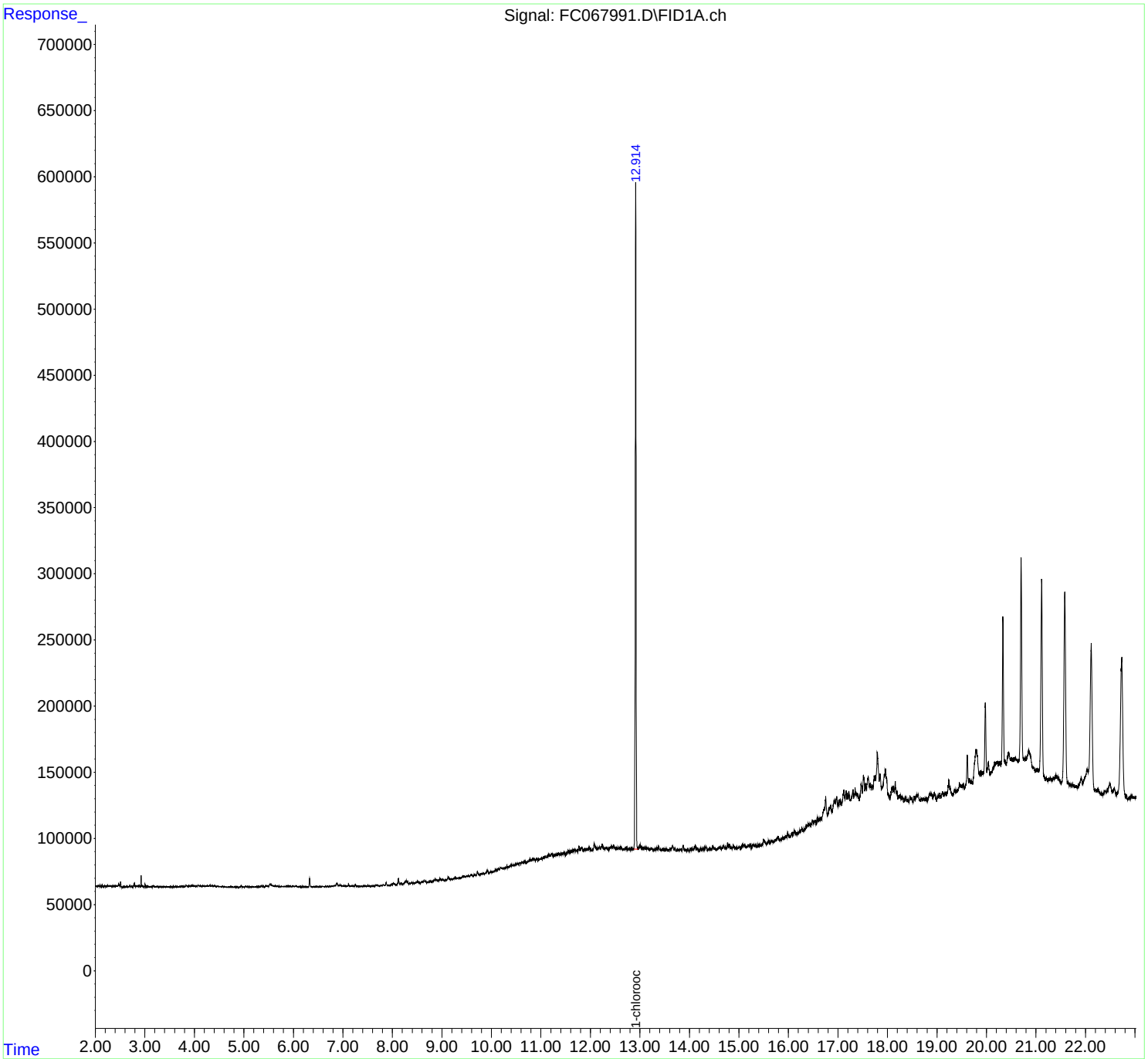
(f)=RT Delta > 1/2 Window (m)=manual int.

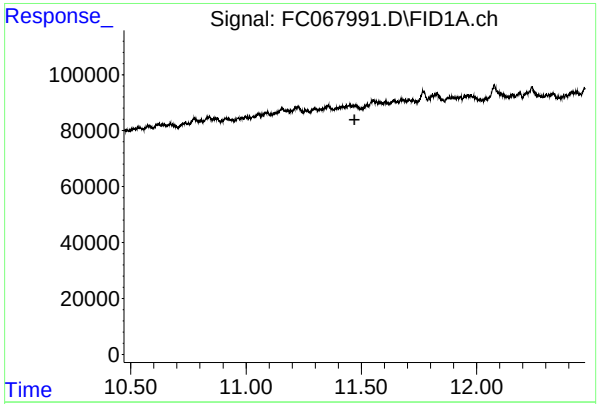
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067991.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 00:21
Operator : YP/AJ
Sample : P5194-02
Misc :
ALS Vial : 18 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-2

Integration File: autoint1.e
Quant Time: Dec 12 03:35:05 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

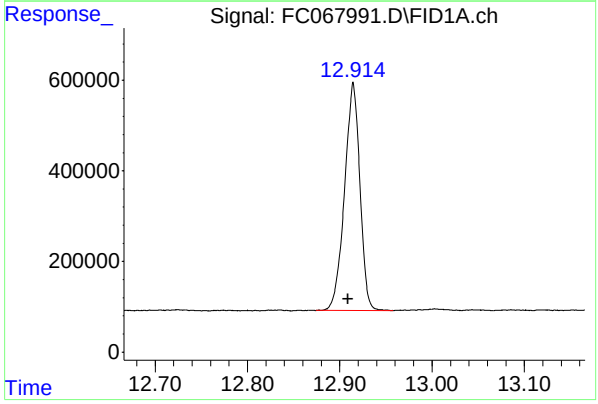





#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T. : 11.470 min
Response: 0
Conc: N.D.

**Instrument :**
FID_C
**ClientSampleId :**
UST-2




#12 1-chlorooctadecane (SURR)

R.T.: 12.915 min
Delta R.T.: 0.005 min
Response: 5811393
Conc: 45.55 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067991.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 00:21
Sample : P5194-02
Misc :
ALS Vial : 18 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.252 | 3.204 | 3.275 | BV | 442 | 4330 | 0.07% | 0.004% |
| 2 | 3.287 | 3.275 | 3.311 | VV | 140 | 920 | 0.01% | 0.001% |
| 3 | 3.345 | 3.311 | 3.353 | PV | 130 | 1467 | 0.02% | 0.001% |
| 4 | 3.365 | 3.353 | 3.386 | VV | 188 | 2232 | 0.03% | 0.002% |
| 5 | 3.400 | 3.386 | 3.423 | VV | 130 | 1601 | 0.03% | 0.002% |
| 6 | 3.444 | 3.423 | 3.475 | PV | 279 | 4668 | 0.07% | 0.005% |
| 7 | 3.485 | 3.475 | 3.495 | VV | 162 | 1456 | 0.02% | 0.001% |
| 8 | 3.531 | 3.495 | 3.559 | VV | 271 | 7068 | 0.11% | 0.007% |
| 9 | 3.569 | 3.559 | 3.588 | VV | 274 | 3252 | 0.05% | 0.003% |
| 10 | 3.621 | 3.588 | 3.681 | VV | 539 | 17557 | 0.28% | 0.018% |
| 11 | 3.716 | 3.681 | 3.724 | VV | 373 | 7208 | 0.11% | 0.007% |
| 12 | 3.740 | 3.724 | 3.757 | VV | 675 | 9320 | 0.15% | 0.009% |
| 13 | 3.767 | 3.757 | 3.778 | VV | 423 | 4619 | 0.07% | 0.005% |
| 14 | 3.787 | 3.778 | 3.806 | VV | 417 | 5757 | 0.09% | 0.006% |
| 15 | 3.832 | 3.806 | 3.868 | VV | 1459 | 31631 | 0.50% | 0.032% |
| 16 | 3.883 | 3.868 | 3.894 | VV | 789 | 11769 | 0.18% | 0.012% |
| 17 | 3.915 | 3.894 | 3.928 | VV | 1044 | 17380 | 0.27% | 0.018% |
| 18 | 3.943 | 3.928 | 3.984 | VV | 1253 | 31042 | 0.49% | 0.032% |
| 19 | 4.006 | 3.984 | 4.044 | VV | 854 | 28092 | 0.44% | 0.029% |
| 20 | 4.077 | 4.044 | 4.099 | VV | 1309 | 30439 | 0.48% | 0.031% |
| 21 | 4.113 | 4.099 | 4.129 | VV | 1200 | 18418 | 0.29% | 0.019% |
| 22 | 4.138 | 4.129 | 4.161 | VV | 854 | 15508 | 0.24% | 0.016% |
| 23 | 4.190 | 4.161 | 4.210 | VV | 922 | 24624 | 0.39% | 0.025% |
| 24 | 4.234 | 4.210 | 4.248 | VV | 927 | 18977 | 0.30% | 0.019% |
| 25 | 4.257 | 4.248 | 4.290 | VV | 945 | 22039 | 0.35% | 0.022% |
| 26 | 4.314 | 4.290 | 4.335 | VV | 1550 | 29228 | 0.46% | 0.030% |
| 27 | 4.352 | 4.335 | 4.371 | VV | 1112 | 21442 | 0.34% | 0.022% |
| 28 | 4.382 | 4.371 | 4.398 | VV | 1048 | 15224 | 0.24% | 0.015% |
| 29 | 4.411 | 4.398 | 4.439 | VV | 1356 | 22169 | 0.35% | 0.023% |
| 30 | 4.481 | 4.439 | 4.522 | VV | 861 | 31937 | 0.50% | 0.032% |
| 31 | 4.536 | 4.522 | 4.551 | VV | 620 | 9216 | 0.14% | 0.009% |
| 32 | 4.566 | 4.551 | 4.585 | VV | 919 | 10947 | 0.17% | 0.011% |
| 33 | 4.597 | 4.585 | 4.657 | VV | 384 | 9045 | 0.14% | 0.009% |
| 34 | 4.668 | 4.657 | 4.677 | VV | 190 | 1766 | 0.03% | 0.002% |
| 35 | 4.690 | 4.677 | 4.703 | VV | 240 | 2649 | 0.04% | 0.003% |
| 36 | 4.737 | 4.703 | 4.821 | VV | 279 | 10952 | 0.17% | 0.011% |

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|---|---|---|---|---|---|---|---|---|
| 37 | 4.862 | 4.821 | 4.884 | PV | 176 | 3661 | 0.06% | 0.004% |
| 38 | 4.945 | 4.884 | 4.972 | VV | 1587 | 21741 | 0.34% | 0.022% |
| 39 | 5.000 | 4.972 | 5.015 | PV | 348 | 4167 | 0.07% | 0.004% |
| 40 | 5.036 | 5.015 | 5.104 | VV | 753 | 19600 | 0.31% | 0.020% |
| 41 | 5.112 | 5.104 | 5.150 | VV | 250 | 3928 | 0.06% | 0.004% |
| 42 | 5.168 | 5.150 | 5.214 | VV | 567 | 10859 | 0.17% | 0.011% |
| 43 | 5.231 | 5.214 | 5.284 | VV | 416 | 10303 | 0.16% | 0.010% |
| 44 | 5.299 | 5.284 | 5.311 | VV | 290 | 3944 | 0.06% | 0.004% |
| 45 | 5.314 | 5.311 | 5.328 | VV | 281 | 2208 | 0.03% | 0.002% |
| 46 | 5.348 | 5.328 | 5.371 | VV | 1046 | 15590 | 0.24% | 0.016% |
| 47 | 5.386 | 5.371 | 5.414 | VV | 814 | 14419 | 0.23% | 0.015% |
| 48 | 5.457 | 5.414 | 5.498 | VV | 945 | 33918 | 0.53% | 0.034% |
| 49 | 5.531 | 5.498 | 5.613 | VV | 2106 | 89274 | 1.40% | 0.091% |
| 50 | 5.628 | 5.613 | 5.668 | VV | 929 | 25654 | 0.40% | 0.026% |
| 51 | 5.681 | 5.668 | 5.704 | VV | 618 | 12168 | 0.19% | 0.012% |
| 52 | 5.720 | 5.704 | 5.734 | VV | 553 | 9257 | 0.15% | 0.009% |
| 53 | 5.743 | 5.734 | 5.753 | VV | 549 | 5630 | 0.09% | 0.006% |
| 54 | 5.758 | 5.753 | 5.781 | VV | 475 | 7210 | 0.11% | 0.007% |
| 55 | 5.802 | 5.781 | 5.826 | VV | 524 | 12761 | 0.20% | 0.013% |
| 56 | 5.855 | 5.826 | 5.868 | VV | 645 | 13042 | 0.20% | 0.013% |
| 57 | 5.894 | 5.868 | 5.928 | VV | 905 | 23279 | 0.36% | 0.024% |
| 58 | 5.942 | 5.928 | 5.968 | VV | 583 | 12056 | 0.19% | 0.012% |
| 59 | 5.988 | 5.968 | 6.007 | VV | 846 | 14540 | 0.23% | 0.015% |
| 60 | 6.048 | 6.007 | 6.066 | VV | 880 | 20636 | 0.32% | 0.021% |
| 61 | 6.073 | 6.066 | 6.097 | VV | 521 | 7354 | 0.12% | 0.007% |
| 62 | 6.113 | 6.097 | 6.152 | VV | 377 | 8263 | 0.13% | 0.008% |
| 63 | 6.174 | 6.152 | 6.194 | VV | 508 | 6854 | 0.11% | 0.007% |
| 64 | 6.219 | 6.194 | 6.239 | VV | 400 | 6050 | 0.09% | 0.006% |
| 65 | 6.328 | 6.292 | 6.376 | PV | 6574 | 71468 | 1.12% | 0.073% |
| 66 | 6.409 | 6.376 | 6.429 | VV | 386 | 6400 | 0.10% | 0.007% |
| 67 | 6.444 | 6.429 | 6.458 | VV | 264 | 3047 | 0.05% | 0.003% |
| 68 | 6.477 | 6.458 | 6.497 | VV | 642 | 7607 | 0.12% | 0.008% |
| 69 | 6.511 | 6.497 | 6.538 | VV | 264 | 3422 | 0.05% | 0.003% |
| 70 | 6.549 | 6.538 | 6.563 | VV | 252 | 2337 | 0.04% | 0.002% |
| 71 | 6.584 | 6.563 | 6.625 | VV | 309 | 7903 | 0.12% | 0.008% |
| 72 | 6.644 | 6.625 | 6.671 | VV | 389 | 6341 | 0.10% | 0.006% |
| 73 | 6.720 | 6.671 | 6.737 | VV | 330 | 8844 | 0.14% | 0.009% |
| 74 | 6.771 | 6.737 | 6.781 | VV | 508 | 8878 | 0.14% | 0.009% |
| 75 | 6.880 | 6.781 | 6.915 | VV | 2278 | 88512 | 1.39% | 0.090% |
| 76 | 6.946 | 6.915 | 6.974 | VV | 1260 | 34213 | 0.54% | 0.035% |
| 77 | 6.988 | 6.974 | 7.004 | VV | 582 | 9802 | 0.15% | 0.010% |
| 78 | 7.025 | 7.004 | 7.090 | VV | 728 | 20382 | 0.32% | 0.021% |
| 79 | 7.113 | 7.090 | 7.139 | VV | 1445 | 21659 | 0.34% | 0.022% |
| 80 | 7.152 | 7.139 | 7.178 | VV | 429 | 7352 | 0.12% | 0.007% |
| 81 | 7.203 | 7.178 | 7.224 | VV | 422 | 8830 | 0.14% | 0.009% |
| 82 | 7.251 | 7.224 | 7.274 | VV | 1710 | 22228 | 0.35% | 0.023% |
| 83 | 7.284 | 7.274 | 7.294 | VV | 131 | 790 | 0.01% | 0.001% |
| 84 | 7.314 | 7.294 | 7.330 | VV | 247 | 3015 | 0.05% | 0.003% |
| 85 | 7.342 | 7.330 | 7.352 | VV | 150 | 1184 | 0.02% | 0.001% |
| 86 | 7.373 | 7.352 | 7.394 | VV | 257 | 3414 | 0.05% | 0.003% |
| 87 | 7.422 | 7.394 | 7.441 | VV | 269 | 4851 | 0.08% | 0.005% |
| 88 | 7.478 | 7.441 | 7.493 | VV | 269 | 4978 | 0.08% | 0.005% |
| 89 | 7.511 | 7.493 | 7.532 | VV | 420 | 5554 | 0.09% | 0.006% |

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|---|---|---|---|---|---|---|---|---|
| 90 | 7.607 | 7.532 | 7.618 | PV | 241 | 8157 | 0.13% | 0.008% |
| 91 | 7.676 | 7.618 | 7.704 | VV | 994 | 26399 | 0.41% | 0.027% |
| 92 | 7.711 | 7.704 | 7.719 | VV | 428 | 3486 | 0.05% | 0.004% |
| 93 | 7.723 | 7.719 | 7.745 | VV | 386 | 3798 | 0.06% | 0.004% |
| 94 | 7.769 | 7.745 | 7.781 | PV | 340 | 4734 | 0.07% | 0.005% |
| 95 | 7.817 | 7.781 | 7.836 | VV | 982 | 15112 | 0.24% | 0.015% |
| 96 | 7.874 | 7.836 | 7.903 | VV | 2499 | 33026 | 0.52% | 0.034% |
| 97 | 7.942 | 7.903 | 7.958 | VV | 481 | 6643 | 0.10% | 0.007% |
| 98 | 8.022 | 7.958 | 8.073 | VV | 1371 | 41093 | 0.64% | 0.042% |
| 99 | 8.121 | 8.073 | 8.145 | PV | 4936 | 65068 | 1.02% | 0.066% |
| 100 | 8.155 | 8.145 | 8.204 | VV | 948 | 23312 | 0.37% | 0.024% |
| 101 | 8.278 | 8.204 | 8.296 | VV | 2821 | 77607 | 1.22% | 0.079% |
| 102 | 8.310 | 8.296 | 8.331 | VV | 2360 | 28003 | 0.44% | 0.028% |
| 103 | 8.348 | 8.331 | 8.361 | VV | 677 | 8987 | 0.14% | 0.009% |
| 104 | 8.388 | 8.361 | 8.414 | VV | 1191 | 22166 | 0.35% | 0.023% |
| 105 | 8.429 | 8.414 | 8.446 | VV | 802 | 9053 | 0.14% | 0.009% |
| 106 | 8.485 | 8.446 | 8.494 | VV | 1147 | 21539 | 0.34% | 0.022% |
| 107 | 8.511 | 8.494 | 8.531 | VV | 1453 | 22557 | 0.35% | 0.023% |
| 108 | 8.540 | 8.531 | 8.560 | VV | 626 | 6476 | 0.10% | 0.007% |
| 109 | 8.585 | 8.560 | 8.594 | PV | 1077 | 13159 | 0.21% | 0.013% |
| 110 | 8.640 | 8.594 | 8.692 | VV | 1991 | 63400 | 0.99% | 0.064% |
| 111 | 8.705 | 8.692 | 8.718 | VV | 367 | 2905 | 0.05% | 0.003% |
| 112 | 8.741 | 8.718 | 8.754 | VV | 788 | 9720 | 0.15% | 0.010% |
| 113 | 8.768 | 8.754 | 8.784 | VV | 708 | 8071 | 0.13% | 0.008% |
| 114 | 8.809 | 8.784 | 8.824 | PV | 790 | 11209 | 0.18% | 0.011% |
| 115 | 8.868 | 8.824 | 8.888 | VV | 1741 | 45459 | 0.71% | 0.046% |
| 116 | 8.903 | 8.888 | 8.927 | VV | 1098 | 20710 | 0.32% | 0.021% |
| 117 | 8.960 | 8.927 | 8.981 | VV | 1954 | 37104 | 0.58% | 0.038% |
| 118 | 9.010 | 8.981 | 9.054 | VV | 1189 | 32222 | 0.50% | 0.033% |
| 119 | 9.075 | 9.054 | 9.090 | VV | 578 | 8203 | 0.13% | 0.008% |
| 120 | 9.125 | 9.090 | 9.216 | VV | 2187 | 69413 | 1.09% | 0.071% |
| 121 | 9.271 | 9.216 | 9.298 | VV | 1639 | 52739 | 0.83% | 0.054% |
| 122 | 9.326 | 9.298 | 9.356 | VV | 1320 | 35822 | 0.56% | 0.036% |
| 123 | 9.373 | 9.356 | 9.386 | VV | 1086 | 16137 | 0.25% | 0.016% |
| 124 | 9.414 | 9.386 | 9.423 | VV | 1805 | 29596 | 0.46% | 0.030% |
| 125 | 9.438 | 9.423 | 9.454 | VV | 2150 | 31979 | 0.50% | 0.033% |
| 126 | 9.467 | 9.454 | 9.484 | VV | 1471 | 25793 | 0.40% | 0.026% |
| 127 | 9.500 | 9.484 | 9.514 | VV | 2290 | 30778 | 0.48% | 0.031% |
| 128 | 9.533 | 9.514 | 9.554 | VV | 2106 | 41159 | 0.65% | 0.042% |
| 129 | 9.591 | 9.554 | 9.627 | VV | 2567 | 79708 | 1.25% | 0.081% |
| 130 | 9.655 | 9.627 | 9.692 | VV | 2572 | 71693 | 1.12% | 0.073% |
| 131 | 9.718 | 9.692 | 9.738 | VV | 4536 | 81523 | 1.28% | 0.083% |
| 132 | 9.750 | 9.738 | 9.770 | VV | 2125 | 37101 | 0.58% | 0.038% |
| 133 | 9.792 | 9.770 | 9.804 | VV | 2402 | 44478 | 0.70% | 0.045% |
| 134 | 9.830 | 9.804 | 9.847 | VV | 2792 | 58967 | 0.92% | 0.060% |
| 135 | 9.872 | 9.847 | 9.883 | VV | 2548 | 48595 | 0.76% | 0.049% |
| 136 | 9.915 | 9.883 | 9.954 | VV | 4103 | 134162 | 2.10% | 0.136% |
| 137 | 10.085 | 9.954 | 10.095 | VV | 4196 | 267877 | 4.20% | 0.272% |
| 138 | 10.115 | 10.095 | 10.131 | VV | 4254 | 86944 | 1.36% | 0.088% |
| 139 | 10.143 | 10.131 | 10.161 | VV | 5034 | 81672 | 1.28% | 0.083% |
| 140 | 10.197 | 10.161 | 10.238 | VV | 5294 | 218441 | 3.42% | 0.222% |
| 141 | 10.262 | 10.238 | 10.274 | VV | 4919 | 102890 | 1.61% | 0.105% |

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|---|---|---|---|---|---|---|---|---|
| 142 | 10.315 | 10.274 | 10.331 | VV | 6185 | 177821 | 2.79% | 0.181% |
| 143 | 10.353 | 10.331 | 10.371 | VV | 5501 | 126961 | 1.99% | 0.129% |
| 144 | 10.405 | 10.371 | 10.431 | VV | 6364 | 217399 | 3.41% | 0.221% |
| 145 | 10.455 | 10.431 | 10.465 | VV | 6560 | 129622 | 2.03% | 0.132% |
| 146 | 10.511 | 10.465 | 10.521 | VV | 6934 | 214532 | 3.36% | 0.218% |
| 147 | 10.541 | 10.521 | 10.558 | VV | 7168 | 151882 | 2.38% | 0.154% |
| 148 | 10.579 | 10.558 | 10.596 | VV | 7847 | 163755 | 2.57% | 0.167% |
| 149 | 10.621 | 10.596 | 10.630 | VV | 7912 | 158389 | 2.48% | 0.161% |
| 150 | 10.644 | 10.630 | 10.654 | VV | 7728 | 110047 | 1.72% | 0.112% |
| 151 | 10.672 | 10.654 | 10.705 | VV | 8179 | 224384 | 3.52% | 0.228% |
| 152 | 10.775 | 10.705 | 10.795 | VV | 9404 | 433232 | 6.79% | 0.441% |
| 153 | 10.803 | 10.795 | 10.812 | VV | 8564 | 90633 | 1.42% | 0.092% |
| 154 | 10.840 | 10.812 | 10.858 | VV | 9873 | 247379 | 3.88% | 0.252% |
| 155 | 10.869 | 10.858 | 10.891 | VV | 9116 | 174667 | 2.74% | 0.178% |
| 156 | 10.913 | 10.891 | 10.951 | VV | 9074 | 307547 | 4.82% | 0.313% |
| 157 | 10.966 | 10.951 | 10.991 | VV | 8819 | 204649 | 3.21% | 0.208% |
| 158 | 10.998 | 10.991 | 11.021 | VV | 9165 | 157761 | 2.47% | 0.160% |
| 159 | 11.056 | 11.021 | 11.064 | VV | 9937 | 245497 | 3.85% | 0.250% |
| 160 | 11.093 | 11.064 | 11.113 | VV | 10663 | 287666 | 4.51% | 0.293% |
| 161 | 11.156 | 11.113 | 11.189 | VV | 11464 | 477544 | 7.48% | 0.486% |
| 162 | 11.224 | 11.189 | 11.246 | VV | 11749 | 375167 | 5.88% | 0.382% |
| 163 | 11.257 | 11.246 | 11.276 | VV | 10608 | 184571 | 2.89% | 0.188% |
| 164 | 11.297 | 11.276 | 11.311 | VV | 10984 | 223219 | 3.50% | 0.227% |
| 165 | 11.355 | 11.311 | 11.380 | VV | 11897 | 450983 | 7.07% | 0.459% |
| 166 | 11.449 | 11.380 | 11.495 | VV | 11539 | 759469 | 11.90% | 0.772% |
| 167 | 11.551 | 11.495 | 11.594 | VV | 12642 | 682437 | 10.69% | 0.694% |
| 168 | 11.604 | 11.594 | 11.619 | VV | 12020 | 178476 | 2.80% | 0.182% |
| 169 | 11.643 | 11.619 | 11.660 | VV | 12639 | 296852 | 4.65% | 0.302% |
| 170 | 11.674 | 11.660 | 11.694 | VV | 12729 | 251935 | 3.95% | 0.256% |
| 171 | 11.722 | 11.694 | 11.744 | VV | 12473 | 361797 | 5.67% | 0.368% |
| 172 | 11.769 | 11.744 | 11.787 | VV | 15233 | 348440 | 5.46% | 0.354% |
| 173 | 11.827 | 11.787 | 11.860 | VV | 14420 | 567810 | 8.90% | 0.577% |
| 174 | 11.881 | 11.860 | 11.939 | VV | 12739 | 578152 | 9.06% | 0.588% |
| 175 | 11.962 | 11.939 | 12.031 | VV | 13176 | 671105 | 10.52% | 0.683% |
| 176 | 12.076 | 12.031 | 12.141 | VV | 16294 | 848537 | 13.30% | 0.863% |
| 177 | 12.155 | 12.141 | 12.167 | VV | 12665 | 193062 | 3.03% | 0.196% |
| 178 | 12.187 | 12.167 | 12.199 | VV | 13310 | 236317 | 3.70% | 0.240% |
| 179 | 12.240 | 12.199 | 12.288 | VV | 15018 | 669137 | 10.49% | 0.681% |
| 180 | 12.331 | 12.288 | 12.361 | VV | 12290 | 503137 | 7.88% | 0.512% |
| 181 | 12.433 | 12.361 | 12.454 | VV | 12654 | 649110 | 10.17% | 0.660% |
| 182 | 12.468 | 12.454 | 12.518 | VV | 13658 | 445186 | 6.98% | 0.453% |
| 183 | 12.537 | 12.518 | 12.554 | VV | 11579 | 236298 | 3.70% | 0.240% |
| 184 | 12.618 | 12.554 | 12.649 | VV | 11680 | 598116 | 9.37% | 0.608% |
| 185 | 12.725 | 12.649 | 12.757 | VV | 11162 | 627824 | 9.84% | 0.639% |
| 186 | 12.774 | 12.757 | 12.804 | VV | 9638 | 256170 | 4.01% | 0.261% |
| 187 | 12.808 | 12.804 | 12.814 | VV | 9150 | 50765 | 0.80% | 0.052% |
| 188 | 12.834 | 12.814 | 12.848 | VV | 10116 | 187498 | 2.94% | 0.191% |
| 189 | 12.915 | 12.848 | 12.958 | VV | 506693 | 6381106 | 100.00% | 6.490% |
| 190 | 13.003 | 12.958 | 13.031 | VV | 11594 | 422637 | 6.62% | 0.430% |
| 191 | 13.045 | 13.031 | 13.066 | VV | 9463 | 179660 | 2.82% | 0.183% |
| 192 | 13.086 | 13.066 | 13.111 | VV | 9198 | 232040 | 3.64% | 0.236% |
| 193 | 13.119 | 13.111 | 13.141 | VV | 8895 | 153090 | 2.40% | 0.156% |
| 194 | 13.152 | 13.141 | 13.188 | VV | 8658 | 215926 | 3.38% | 0.220% |

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|---|---|---|---|---|---|---|---|---|
| 195 | 13.239 | 13.188 | 13.293 | VV | 8383 | 447011 | 7.01% | 0.455% |
| 196 | 13.302 | 13.293 | 13.311 | VV | 6854 | 68614 | 1.08% | 0.070% |
| 197 | 13.346 | 13.311 | 13.359 | VV | 8047 | 210263 | 3.30% | 0.214% |
| 198 | 13.380 | 13.359 | 13.431 | VV | 8919 | 291832 | 4.57% | 0.297% |
| 199 | 13.444 | 13.431 | 13.454 | VV | 6320 | 81863 | 1.28% | 0.083% |
| 200 | 13.499 | 13.454 | 13.519 | VV | 6758 | 229042 | 3.59% | 0.233% |
| 201 | 13.540 | 13.519 | 13.557 | VV | 6051 | 125516 | 1.97% | 0.128% |
| 202 | 13.610 | 13.557 | 13.627 | VV | 6689 | 229225 | 3.59% | 0.233% |
| 203 | 13.658 | 13.627 | 13.691 | VV | 8156 | 250629 | 3.93% | 0.255% |
| 204 | 13.708 | 13.691 | 13.734 | VV | 6141 | 131156 | 2.06% | 0.133% |
| 205 | 13.758 | 13.734 | 13.786 | VV | 5087 | 140473 | 2.20% | 0.143% |
| 206 | 13.807 | 13.786 | 13.847 | VV | 5205 | 167202 | 2.62% | 0.170% |
| 207 | 13.872 | 13.847 | 13.907 | VV | 7461 | 190207 | 2.98% | 0.193% |
| 208 | 13.918 | 13.907 | 13.951 | VV | 4433 | 97490 | 1.53% | 0.099% |
| 209 | 13.969 | 13.951 | 13.998 | VV | 4768 | 104907 | 1.64% | 0.107% |
| 210 | 14.016 | 13.998 | 14.081 | VV | 4810 | 194445 | 3.05% | 0.198% |
| 211 | 14.112 | 14.081 | 14.141 | VV | 6232 | 172516 | 2.70% | 0.175% |
| 212 | 14.165 | 14.141 | 14.204 | VV | 4370 | 119218 | 1.87% | 0.121% |
| 213 | 14.225 | 14.204 | 14.297 | VV | 3812 | 171090 | 2.68% | 0.174% |
| 214 | 14.309 | 14.297 | 14.323 | VV | 4090 | 56290 | 0.88% | 0.057% |
| 215 | 14.334 | 14.323 | 14.365 | VV | 4824 | 86562 | 1.36% | 0.088% |
| 216 | 14.404 | 14.365 | 14.431 | VV | 3238 | 99947 | 1.57% | 0.102% |
| 217 | 14.472 | 14.431 | 14.494 | VV | 4688 | 122899 | 1.93% | 0.125% |
| 218 | 14.509 | 14.494 | 14.535 | VV | 3231 | 63055 | 0.99% | 0.064% |
| 219 | 14.544 | 14.535 | 14.556 | VV | 2231 | 24867 | 0.39% | 0.025% |
| 220 | 14.569 | 14.556 | 14.589 | VV | 2939 | 49109 | 0.77% | 0.050% |
| 221 | 14.614 | 14.589 | 14.636 | VV | 3286 | 79684 | 1.25% | 0.081% |
| 222 | 14.691 | 14.636 | 14.710 | VV | 4012 | 122279 | 1.92% | 0.124% |
| 223 | 14.721 | 14.710 | 14.744 | VV | 2892 | 46088 | 0.72% | 0.047% |
| 224 | 14.771 | 14.744 | 14.789 | VV | 5506 | 95886 | 1.50% | 0.098% |
| 225 | 14.806 | 14.789 | 14.834 | VV | 4441 | 86303 | 1.35% | 0.088% |
| 226 | 14.844 | 14.834 | 14.871 | VV | 2137 | 39482 | 0.62% | 0.040% |
| 227 | 14.890 | 14.871 | 14.981 | VV | 3175 | 124539 | 1.95% | 0.127% |
| 228 | 15.007 | 14.981 | 15.041 | VV | 1912 | 48143 | 0.75% | 0.049% |
| 229 | 15.075 | 15.041 | 15.094 | PV | 3114 | 67945 | 1.06% | 0.069% |
| 230 | 15.100 | 15.094 | 15.151 | VV | 2873 | 67468 | 1.06% | 0.069% |
| 231 | 15.196 | 15.151 | 15.210 | VV | 2296 | 60535 | 0.95% | 0.062% |
| 232 | 15.226 | 15.210 | 15.248 | VV | 3066 | 44220 | 0.69% | 0.045% |
| 233 | 15.289 | 15.248 | 15.364 | PV | 2325 | 86582 | 1.36% | 0.088% |
| 234 | 15.384 | 15.364 | 15.407 | VV | 1581 | 17888 | 0.28% | 0.018% |
| 235 | 15.425 | 15.407 | 15.446 | PV | 1410 | 17400 | 0.27% | 0.018% |
| 236 | 15.503 | 15.446 | 15.564 | VV | 4475 | 132001 | 2.07% | 0.134% |
| 237 | 15.595 | 15.564 | 15.628 | VV | 3256 | 67408 | 1.06% | 0.069% |
| 238 | 15.790 | 15.628 | 15.819 | VV | 4901 | 270868 | 4.24% | 0.275% |
| 239 | 15.908 | 15.819 | 15.924 | VV | 3607 | 145732 | 2.28% | 0.148% |
| 240 | 15.951 | 15.924 | 15.966 | VV | 3754 | 79006 | 1.24% | 0.080% |
| 241 | 15.984 | 15.966 | 16.032 | VV | 6698 | 148040 | 2.32% | 0.151% |
| 242 | 16.073 | 16.032 | 16.091 | VV | 4873 | 136952 | 2.15% | 0.139% |
| 243 | 16.121 | 16.091 | 16.155 | VV | 6538 | 190881 | 2.99% | 0.194% |
| 244 | 16.169 | 16.155 | 16.198 | VV | 4120 | 97394 | 1.53% | 0.099% |
| 245 | 16.229 | 16.198 | 16.241 | VV | 6257 | 124449 | 1.95% | 0.127% |
| 246 | 16.268 | 16.241 | 16.298 | VV | 7256 | 202711 | 3.18% | 0.206% |

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|---|---|---|---|---|---|---|---|---|
| 247 | 16.361 | 16.298 | 16.376 | VV | 9259 | 306427 | 4.80% | 0.312% |
| 248 | 16.407 | 16.376 | 16.456 | VV | 9922 | 409577 | 6.42% | 0.417% |
| 249 | 16.485 | 16.456 | 16.514 | VV | 11517 | 346871 | 5.44% | 0.353% |
| 250 | 16.532 | 16.514 | 16.568 | VV | 11397 | 311905 | 4.89% | 0.317% |
| 251 | 16.587 | 16.568 | 16.621 | VV | 13267 | 347250 | 5.44% | 0.353% |
| 252 | 16.751 | 16.621 | 16.791 | VV | 27293 | 1589692 | 24.91% | 1.617% |
| 253 | 16.853 | 16.791 | 16.883 | VV | 19003 | 926732 | 14.52% | 0.942% |
| 254 | 16.922 | 16.883 | 16.944 | VV | 22353 | 725852 | 11.38% | 0.738% |
| 255 | 16.973 | 16.944 | 17.004 | VV | 24866 | 788419 | 12.36% | 0.802% |
| 256 | 17.028 | 17.004 | 17.043 | VV | 22846 | 492345 | 7.72% | 0.501% |
| 257 | 17.053 | 17.043 | 17.073 | VV | 22039 | 367990 | 5.77% | 0.374% |
| 258 | 17.120 | 17.073 | 17.144 | VV | 28905 | 1029789 | 16.14% | 1.047% |
| 259 | 17.163 | 17.144 | 17.174 | VV | 28337 | 465666 | 7.30% | 0.474% |
| 260 | 17.191 | 17.174 | 17.202 | VV | 26598 | 398314 | 6.24% | 0.405% |
| 261 | 17.220 | 17.202 | 17.244 | VV | 26993 | 602606 | 9.44% | 0.613% |
| 262 | 17.302 | 17.244 | 17.319 | VV | 27141 | 1035520 | 16.23% | 1.053% |
| 263 | 17.347 | 17.319 | 17.425 | VV | 28949 | 1529132 | 23.96% | 1.555% |
| 264 | 17.468 | 17.425 | 17.490 | VV | 30806 | 985783 | 15.45% | 1.003% |
| 265 | 17.515 | 17.490 | 17.541 | VV | 37169 | 957397 | 15.00% | 0.974% |
| 266 | 17.560 | 17.541 | 17.576 | VV | 29845 | 591131 | 9.26% | 0.601% |
| 267 | 17.613 | 17.576 | 17.634 | VV | 35317 | 1098982 | 17.22% | 1.118% |
| 268 | 17.651 | 17.634 | 17.672 | VV | 30167 | 641591 | 10.05% | 0.653% |
| 269 | 17.685 | 17.672 | 17.701 | VV | 28838 | 476492 | 7.47% | 0.485% |
| 270 | 17.734 | 17.701 | 17.751 | VV | 34790 | 927530 | 14.54% | 0.943% |
| 271 | 17.795 | 17.751 | 17.833 | VV | 52044 | 1950334 | 30.56% | 1.984% |
| 272 | 17.851 | 17.833 | 17.881 | VV | 36070 | 878633 | 13.77% | 0.894% |
| 273 | 17.959 | 17.881 | 18.054 | VV | 38453 | 2784857 | 43.64% | 2.832% |
| 274 | 18.091 | 18.054 | 18.105 | VV | 23710 | 641503 | 10.05% | 0.652% |
| 275 | 18.118 | 18.105 | 18.137 | VV | 24614 | 427313 | 6.70% | 0.435% |
| 276 | 18.156 | 18.137 | 18.211 | VV | 28146 | 918685 | 14.40% | 0.934% |
| 277 | 18.229 | 18.211 | 18.237 | VV | 16365 | 246014 | 3.86% | 0.250% |
| 278 | 18.247 | 18.237 | 18.350 | VV | 16853 | 959850 | 15.04% | 0.976% |
| 279 | 18.369 | 18.350 | 18.398 | VV | 13983 | 362112 | 5.67% | 0.368% |
| 280 | 18.416 | 18.398 | 18.430 | VV | 11841 | 225830 | 3.54% | 0.230% |
| 281 | 18.455 | 18.430 | 18.492 | VV | 14281 | 451844 | 7.08% | 0.460% |
| 282 | 18.497 | 18.492 | 18.518 | VV | 12448 | 167249 | 2.62% | 0.170% |
| 283 | 18.538 | 18.518 | 18.558 | VV | 13893 | 288324 | 4.52% | 0.293% |
| 284 | 18.591 | 18.558 | 18.604 | VV | 14058 | 355870 | 5.58% | 0.362% |
| 285 | 18.619 | 18.604 | 18.654 | VV | 14373 | 358920 | 5.62% | 0.365% |
| 286 | 18.661 | 18.654 | 18.670 | VV | 10259 | 93671 | 1.47% | 0.095% |
| 287 | 18.686 | 18.670 | 18.748 | VV | 11241 | 472699 | 7.41% | 0.481% |
| 288 | 18.790 | 18.748 | 18.804 | VV | 10942 | 319507 | 5.01% | 0.325% |
| 289 | 18.853 | 18.804 | 18.913 | VV | 13527 | 741877 | 11.63% | 0.754% |
| 290 | 18.942 | 18.913 | 18.995 | VV | 13269 | 504683 | 7.91% | 0.513% |
| 291 | 19.058 | 18.995 | 19.083 | VV | 11581 | 507376 | 7.95% | 0.516% |
| 292 | 19.113 | 19.083 | 19.141 | VV | 12199 | 373714 | 5.86% | 0.380% |
| 293 | 19.240 | 19.141 | 19.325 | VV | 20577 | 1327120 | 20.80% | 1.350% |
| 294 | 19.364 | 19.325 | 19.378 | VV | 12556 | 339988 | 5.33% | 0.346% |
| 295 | 19.451 | 19.378 | 19.505 | VV | 16368 | 973049 | 15.25% | 0.990% |
| 296 | 19.521 | 19.505 | 19.557 | VV | 14598 | 419572 | 6.58% | 0.427% |
| 297 | 19.612 | 19.557 | 19.639 | VV | 36111 | 996558 | 15.62% | 1.014% |
| 298 | 19.649 | 19.639 | 19.684 | VV | 17738 | 446843 | 7.00% | 0.454% |
| 299 | 19.702 | 19.684 | 19.721 | VV | 16216 | 331734 | 5.20% | 0.337% |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 300 | 19.784 | 19.721 | 19.864 | VV | 39203 | 2416885 | 37.88% | 2.458% |
| 301 | 19.976 | 19.864 | 20.008 | VV | 70601 | 2547545 | 39.92% | 2.591% |
| 302 | 20.038 | 20.008 | 20.068 | VV | 28106 | 839283 | 13.15% | 0.854% |
| 303 | 20.165 | 20.068 | 20.194 | VV | 25461 | 1662451 | 26.05% | 1.691% |
| 304 | 20.204 | 20.194 | 20.238 | VV | 26843 | 684480 | 10.73% | 0.696% |
| 305 | 20.332 | 20.238 | 20.398 | VV | 134462 | 4012507 | 62.88% | 4.081% |
| 306 | 20.450 | 20.398 | 20.484 | VV | 32215 | 1467218 | 22.99% | 1.492% |
| 307 | 20.497 | 20.484 | 20.519 | VV | 27601 | 557388 | 8.73% | 0.567% |
| 308 | 20.537 | 20.519 | 20.637 | VV | 27373 | 1795103 | 28.13% | 1.826% |
| 309 | 20.699 | 20.637 | 20.797 | VV | 175839 | 4943934 | 77.48% | 5.028% |
| 310 | 20.856 | 20.797 | 20.997 | VV | 30554 | 2613235 | 40.95% | 2.658% |
| 311 | 21.012 | 20.997 | 21.027 | VV | 15244 | 257820 | 4.04% | 0.262% |
| 312 | 21.035 | 21.027 | 21.060 | VV | 15101 | 268169 | 4.20% | 0.273% |
| 313 | 21.114 | 21.060 | 21.179 | VV | 156329 | 3613744 | 56.63% | 3.675% |
| 314 | 21.187 | 21.179 | 21.239 | VV | 6260 | 208527 | 3.27% | 0.212% |
| 315 | 21.261 | 21.239 | 21.272 | VV | 6440 | 105631 | 1.66% | 0.107% |
| 316 | 21.298 | 21.272 | 21.324 | VV | 5638 | 160469 | 2.51% | 0.163% |
| 317 | 21.329 | 21.324 | 21.334 | VV | 5163 | 26264 | 0.41% | 0.027% |
| 318 | 21.348 | 21.334 | 21.374 | VV | 6477 | 124677 | 1.95% | 0.127% |
| 319 | 21.400 | 21.374 | 21.471 | VV | 7539 | 322333 | 5.05% | 0.328% |
| 320 | 21.480 | 21.471 | 21.512 | VV | 3326 | 44293 | 0.69% | 0.045% |

Sum of corrected areas: 98327555

Aliphatic EPH 121024.M Thu Dec 12 04:06:23 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | 12/05/24 |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | 12/06/24 |
| Client Sample ID: | UST-2 | SDG No.: | P5194 |
| Lab Sample ID: | P5194-02 | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 91.2 |
| Sample Wt/Vol: | 30.07 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048880.D | 1 | 12/11/24 | 12/12/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.33 | U | 0.33 | 0.73 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.37 | U | 0.37 | 1.09 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 1.24 | J | 1.05 | 1.82 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 5.37 | | 2.19 | 2.92 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 55.9 | | 40 - 140 | 112% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 59.1 | | 40 - 140 | 118% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 28.8 | | 40 - 140 | 58% | SPK: 50 |

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

# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-02 | Acq On: | 12 Dec 2024 00:21 |
| Client Sample ID: | UST-2 | Operator: | YP/AJ |
| Data file: | FD048880.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 68 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 595027 | 3.128 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 946315 | 5.091 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 2872448 | 16.945 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 10434782 | 73.698 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 14848572 | 98.862 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.250 | 11.250 | 5108635 | 28.75 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.365 | 7.365 | 9421246 | 55.93 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.215 | 8.215 | 6110604 | 59.15 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048880.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 00:21
Operator : YP/AJ
Sample : P5194-02
Misc :
ALS Vial : 68 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-2

Integration File: autoint1.e
Quant Time: Dec 12 04:31:58 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 4) S 2-Bromonaphthalene (S... | 7.365 | 9421246 | 55.934 ug/ml |
| Spiked Amount 50.000 | | Recovery = 111.87% | |
| 6) S 2-Flurobiphenyl (SURR) | 8.215 | 6110604 | 59.149 ug/ml |
| Spiked Amount 50.000 Range 0 - 131 | | Recovery = 118.30% | |
| 11) S ortho-Terphenyl (SURR) | 11.250 | 5108635 | 28.755 ug/ml |
| Spiked Amount 50.000 | | Recovery = 57.51% | |
| **Target Compounds** | | | |

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

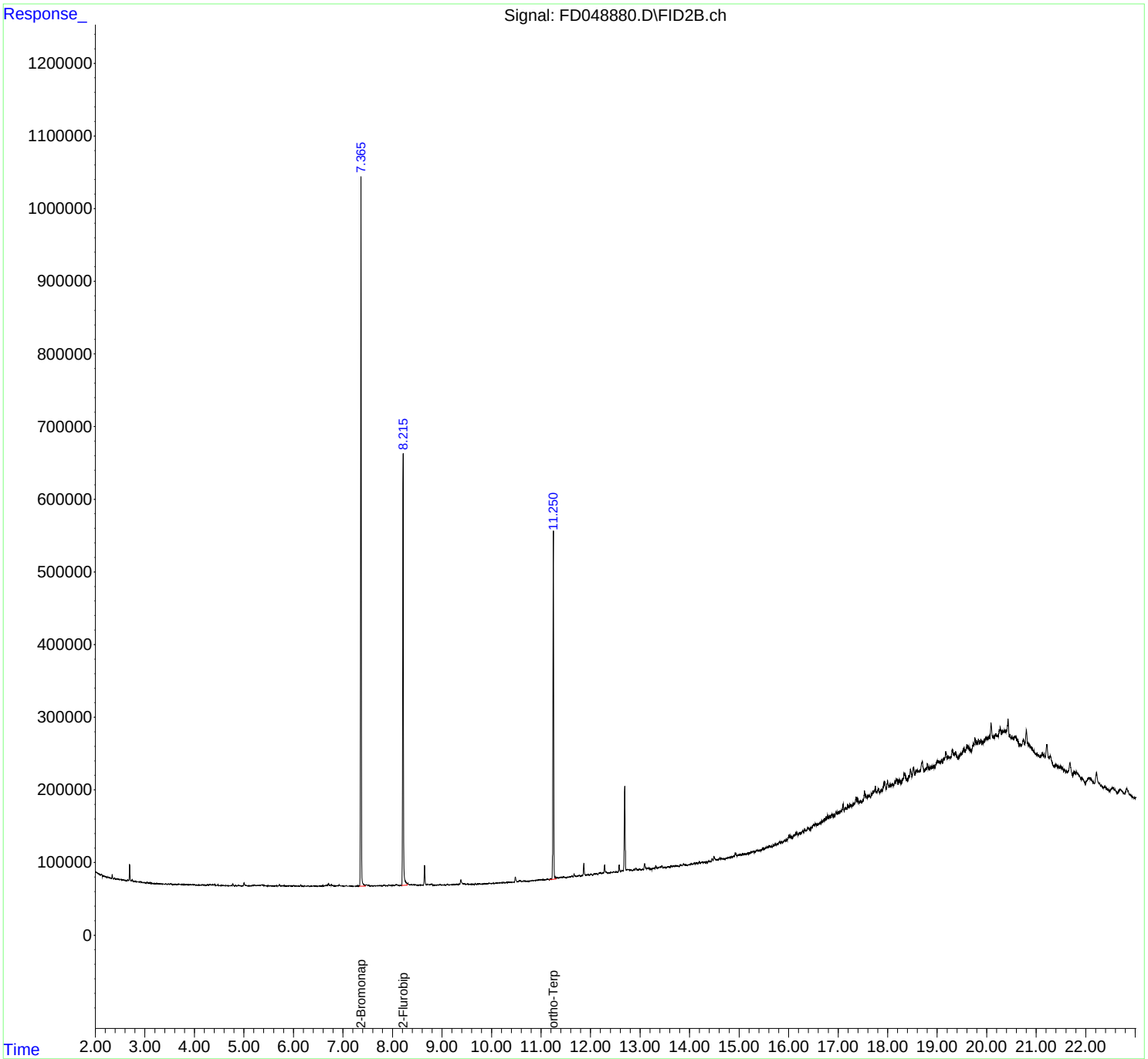
Quantitation Report (QT Reviewed)

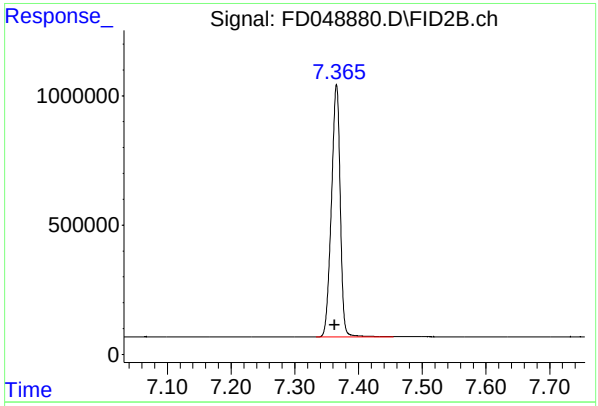
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048880.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 00:21
Operator : YP/AJ
Sample : P5194-02
Misc :
ALS Vial : 68 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-2

Integration File: autoint1.e
Quant Time: Dec 12 04:31:58 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

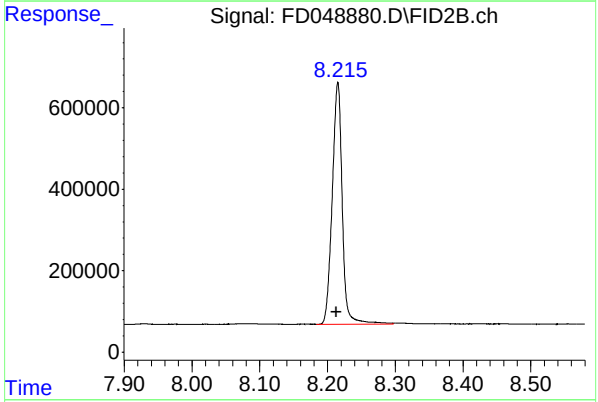





#4 2-Bromonaphthalene (SURR)

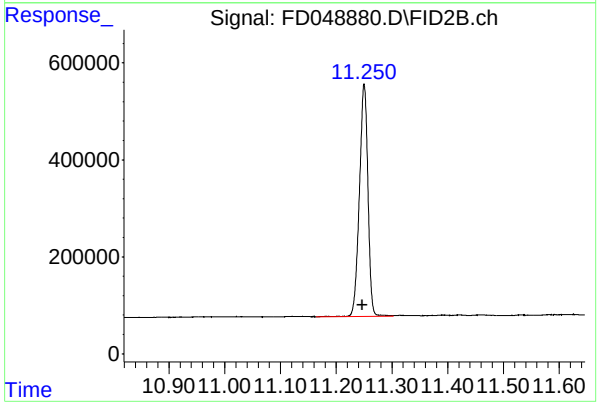
R.T.: 7.365 min
Delta R.T.: 0.003 min
Response: 9421246
Conc: 55.93 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
UST-2




#6 2-Flurobiphenyl (SURR)

R.T.: 8.215 min
Delta R.T.: 0.002 min
Response: 6110604
Conc: 59.15 ug/ml




#11 ortho-Terphenyl (SURR)

R.T.: 11.250 min
Delta R.T.: 0.003 min
Response: 5108635
Conc: 28.75 ug/ml

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Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048880.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 00:21
Sample : P5194-02
Misc :
ALS Vial : 68 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.154 | 4.140 | 4.179 | VV | 1081 | 10960 | 0.12% | 0.030% |
| 2 | 4.189 | 4.179 | 4.238 | VV | 419 | 6388 | 0.07% | 0.018% |
| 3 | 4.266 | 4.238 | 4.287 | VV | 928 | 14808 | 0.16% | 0.041% |
| 4 | 4.318 | 4.287 | 4.337 | VV | 1779 | 33450 | 0.35% | 0.093% |
| 5 | 4.373 | 4.337 | 4.388 | VV | 1518 | 27671 | 0.29% | 0.077% |
| 6 | 4.404 | 4.388 | 4.450 | VV | 1750 | 24741 | 0.26% | 0.069% |
| 7 | 4.474 | 4.450 | 4.494 | VV | 1592 | 16548 | 0.18% | 0.046% |
| 8 | 4.506 | 4.494 | 4.512 | VV | 457 | 3357 | 0.04% | 0.009% |
| 9 | 4.514 | 4.512 | 4.530 | VV | 426 | 2599 | 0.03% | 0.007% |
| 10 | 4.539 | 4.530 | 4.562 | VV | 255 | 3851 | 0.04% | 0.011% |
| 11 | 4.565 | 4.562 | 4.578 | VV | 330 | 2356 | 0.02% | 0.007% |
| 12 | 4.590 | 4.578 | 4.609 | VV | 479 | 5697 | 0.06% | 0.016% |
| 13 | 4.616 | 4.609 | 4.624 | VV | 285 | 1770 | 0.02% | 0.005% |
| 14 | 4.634 | 4.624 | 4.639 | VV | 247 | 1680 | 0.02% | 0.005% |
| 15 | 4.650 | 4.639 | 4.667 | PV | 271 | 2446 | 0.03% | 0.007% |
| 16 | 4.672 | 4.667 | 4.689 | VV | 202 | 1441 | 0.02% | 0.004% |
| 17 | 4.697 | 4.689 | 4.731 | VV | 235 | 3833 | 0.04% | 0.011% |
| 18 | 4.755 | 4.731 | 4.761 | PV | 618 | 5593 | 0.06% | 0.016% |
| 19 | 4.777 | 4.761 | 4.817 | VV | 2875 | 33265 | 0.35% | 0.092% |
| 20 | 4.832 | 4.817 | 4.852 | VV | 690 | 6661 | 0.07% | 0.018% |
| 21 | 4.862 | 4.852 | 4.868 | VV | 254 | 1705 | 0.02% | 0.005% |
| 22 | 4.885 | 4.868 | 4.953 | PV | 1001 | 25200 | 0.27% | 0.070% |
| 23 | 4.962 | 4.953 | 4.969 | VV | 425 | 2855 | 0.03% | 0.008% |
| 24 | 4.974 | 4.969 | 4.983 | VV | 368 | 2221 | 0.02% | 0.006% |
| 25 | 5.002 | 4.983 | 5.042 | VV | 4356 | 60314 | 0.64% | 0.167% |
| 26 | 5.046 | 5.042 | 5.072 | VV | 773 | 10712 | 0.11% | 0.030% |
| 27 | 5.075 | 5.072 | 5.089 | VV | 491 | 3619 | 0.04% | 0.010% |
| 28 | 5.100 | 5.089 | 5.111 | VV | 460 | 4390 | 0.05% | 0.012% |
| 29 | 5.117 | 5.111 | 5.127 | VV | 376 | 3223 | 0.03% | 0.009% |
| 30 | 5.139 | 5.127 | 5.144 | VV | 538 | 4475 | 0.05% | 0.012% |
| 31 | 5.148 | 5.144 | 5.161 | VV | 488 | 4393 | 0.05% | 0.012% |
| 32 | 5.176 | 5.161 | 5.196 | VV | 1211 | 16948 | 0.18% | 0.047% |
| 33 | 5.215 | 5.196 | 5.234 | VV | 1408 | 21466 | 0.23% | 0.060% |
| 34 | 5.246 | 5.234 | 5.264 | VV | 834 | 11476 | 0.12% | 0.032% |
| 35 | 5.287 | 5.264 | 5.315 | VV | 1115 | 27605 | 0.29% | 0.077% |
| 36 | 5.320 | 5.315 | 5.330 | VV | 901 | 6933 | 0.07% | 0.019% |

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|---|---|---|---|---|---|---|---|---|
| 37 | 5.336 | 5.330 | 5.340 | VV | 780 | 4292 | 0.05% | 0.012% |
| 38 | 5.360 | 5.340 | 5.416 | VV | 2022 | 56403 | 0.60% | 0.156% |
| 39 | 5.423 | 5.416 | 5.434 | VV | 940 | 6920 | 0.07% | 0.019% |
| 40 | 5.447 | 5.434 | 5.470 | VV | 736 | 12822 | 0.14% | 0.036% |
| 41 | 5.475 | 5.470 | 5.484 | VV | 603 | 4186 | 0.04% | 0.012% |
| 42 | 5.501 | 5.484 | 5.544 | VV | 737 | 16047 | 0.17% | 0.044% |
| 43 | 5.550 | 5.544 | 5.575 | VV | 459 | 5143 | 0.05% | 0.014% |
| 44 | 5.592 | 5.585 | 5.608 | PV | 326 | 2399 | 0.03% | 0.007% |
| 45 | 5.625 | 5.608 | 5.632 | VV | 344 | 3183 | 0.03% | 0.009% |
| 46 | 5.657 | 5.632 | 5.679 | VV | 572 | 11031 | 0.12% | 0.031% |
| 47 | 5.682 | 5.679 | 5.693 | VV | 490 | 3369 | 0.04% | 0.009% |
| 48 | 5.716 | 5.693 | 5.754 | VV | 2066 | 38260 | 0.41% | 0.106% |
| 49 | 5.771 | 5.754 | 5.794 | VV | 817 | 14322 | 0.15% | 0.040% |
| 50 | 5.811 | 5.794 | 5.832 | VV | 1142 | 15682 | 0.17% | 0.043% |
| 51 | 5.836 | 5.832 | 5.841 | VV | 349 | 1896 | 0.02% | 0.005% |
| 52 | 5.854 | 5.841 | 5.864 | VV | 514 | 5060 | 0.05% | 0.014% |
| 53 | 5.889 | 5.864 | 5.900 | VV | 875 | 14583 | 0.15% | 0.040% |
| 54 | 5.906 | 5.900 | 5.920 | VV | 696 | 7198 | 0.08% | 0.020% |
| 55 | 5.928 | 5.920 | 5.934 | VV | 571 | 4329 | 0.05% | 0.012% |
| 56 | 5.938 | 5.934 | 5.977 | VV | 584 | 8811 | 0.09% | 0.024% |
| 57 | 6.004 | 5.977 | 6.034 | VV | 1359 | 21995 | 0.23% | 0.061% |
| 58 | 6.038 | 6.034 | 6.067 | VV | 465 | 5918 | 0.06% | 0.016% |
| 59 | 6.072 | 6.067 | 6.110 | VV | 364 | 4595 | 0.05% | 0.013% |
| 60 | 6.125 | 6.110 | 6.131 | VV | 344 | 1795 | 0.02% | 0.005% |
| 61 | 6.149 | 6.131 | 6.172 | VV | 2132 | 22065 | 0.23% | 0.061% |
| 62 | 6.178 | 6.172 | 6.191 | PV | 166 | 1134 | 0.01% | 0.003% |
| 63 | 6.204 | 6.191 | 6.209 | VV | 182 | 1475 | 0.02% | 0.004% |
| 64 | 6.228 | 6.209 | 6.251 | VV | 735 | 8009 | 0.08% | 0.022% |
| 65 | 6.261 | 6.251 | 6.274 | VV | 371 | 3473 | 0.04% | 0.010% |
| 66 | 6.295 | 6.274 | 6.315 | VV | 886 | 11078 | 0.12% | 0.031% |
| 67 | 6.323 | 6.315 | 6.354 | VV | 383 | 4846 | 0.05% | 0.013% |
| 68 | 6.369 | 6.354 | 6.383 | VV | 481 | 5203 | 0.06% | 0.014% |
| 69 | 6.390 | 6.383 | 6.395 | VV | 405 | 1957 | 0.02% | 0.005% |
| 70 | 6.411 | 6.395 | 6.439 | VV | 841 | 13934 | 0.15% | 0.039% |
| 71 | 6.458 | 6.439 | 6.494 | VV | 528 | 9776 | 0.10% | 0.027% |
| 72 | 6.495 | 6.494 | 6.505 | VV | 323 | 1639 | 0.02% | 0.005% |
| 73 | 6.513 | 6.505 | 6.519 | VV | 495 | 3195 | 0.03% | 0.009% |
| 74 | 6.538 | 6.519 | 6.560 | VV | 535 | 9978 | 0.11% | 0.028% |
| 75 | 6.566 | 6.560 | 6.570 | VV | 437 | 2016 | 0.02% | 0.006% |
| 76 | 6.588 | 6.570 | 6.603 | VV | 1054 | 12037 | 0.13% | 0.033% |
| 77 | 6.638 | 6.603 | 6.654 | VV | 1237 | 23293 | 0.25% | 0.065% |
| 78 | 6.707 | 6.654 | 6.739 | VV | 2727 | 85589 | 0.91% | 0.237% |
| 79 | 6.763 | 6.739 | 6.824 | VV | 2721 | 69471 | 0.74% | 0.193% |
| 80 | 6.842 | 6.824 | 6.849 | VV | 828 | 10375 | 0.11% | 0.029% |
| 81 | 6.853 | 6.849 | 6.880 | VV | 920 | 14819 | 0.16% | 0.041% |
| 82 | 6.890 | 6.880 | 6.909 | VV | 1015 | 14068 | 0.15% | 0.039% |
| 83 | 6.924 | 6.909 | 6.939 | VV | 2048 | 25647 | 0.27% | 0.071% |
| 84 | 6.946 | 6.939 | 6.971 | VV | 993 | 13803 | 0.15% | 0.038% |
| 85 | 6.987 | 6.971 | 6.994 | VV | 868 | 10022 | 0.11% | 0.028% |
| 86 | 7.000 | 6.994 | 7.018 | VV | 1038 | 7994 | 0.08% | 0.022% |
| 87 | 7.036 | 7.018 | 7.048 | VV | 605 | 6461 | 0.07% | 0.018% |
| 88 | 7.065 | 7.048 | 7.084 | VV | 1156 | 14589 | 0.15% | 0.040% |
| 89 | 7.087 | 7.084 | 7.149 | VV | 347 | 13151 | 0.14% | 0.036% |

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|---|---|---|---|---|---|---|---|---|
| 90 | 7.161 | 7.149 | 7.177 | VV | 497 | 5847 | 0.06% | 0.016% |
| 91 | 7.195 | 7.177 | 7.214 | PV | 221 | 3980 | 0.04% | 0.011% |
| 92 | 7.231 | 7.214 | 7.262 | PV | 340 | 6052 | 0.06% | 0.017% |
| 93 | 7.297 | 7.262 | 7.310 | VV | 692 | 10297 | 0.11% | 0.029% |
| 94 | 7.322 | 7.310 | 7.337 | VV | 663 | 7994 | 0.08% | 0.022% |
| 95 | 7.365 | 7.337 | 7.455 | VV | 978585 | 9434602 | 100.00% | 26.154% |
| 96 | 7.476 | 7.455 | 7.562 | VV | 1870 | 66903 | 0.71% | 0.185% |
| 97 | 7.570 | 7.562 | 7.579 | VV | 441 | 3653 | 0.04% | 0.010% |
| 98 | 7.592 | 7.579 | 7.612 | VV | 438 | 6269 | 0.07% | 0.017% |
| 99 | 7.630 | 7.612 | 7.655 | VV | 657 | 10025 | 0.11% | 0.028% |
| 100 | 7.684 | 7.655 | 7.696 | VV | 581 | 9703 | 0.10% | 0.027% |
| 101 | 7.750 | 7.696 | 7.766 | VV | 586 | 19354 | 0.21% | 0.054% |
| 102 | 7.779 | 7.766 | 7.791 | VV | 494 | 4003 | 0.04% | 0.011% |
| 103 | 7.839 | 7.791 | 7.862 | PV | 1228 | 33123 | 0.35% | 0.092% |
| 104 | 7.875 | 7.862 | 7.892 | VV | 609 | 7095 | 0.08% | 0.020% |
| 105 | 7.929 | 7.892 | 7.955 | VV | 1800 | 29938 | 0.32% | 0.083% |
| 106 | 7.974 | 7.955 | 7.998 | VV | 792 | 13128 | 0.14% | 0.036% |
| 107 | 8.021 | 7.998 | 8.036 | VV | 697 | 11009 | 0.12% | 0.031% |
| 108 | 8.083 | 8.036 | 8.148 | VV | 2056 | 64899 | 0.69% | 0.180% |
| 109 | 8.163 | 8.148 | 8.185 | VV | 701 | 11484 | 0.12% | 0.032% |
| 110 | 8.215 | 8.185 | 8.297 | VV | 595713 | 6144482 | 65.13% | 17.033% |
| 111 | 8.309 | 8.297 | 8.359 | VV | 3330 | 79001 | 0.84% | 0.219% |
| 112 | 8.376 | 8.359 | 8.399 | VV | 1466 | 29599 | 0.31% | 0.082% |
| 113 | 8.426 | 8.399 | 8.444 | VV | 1290 | 30627 | 0.32% | 0.085% |
| 114 | 8.460 | 8.444 | 8.514 | VV | 1281 | 31133 | 0.33% | 0.086% |
| 115 | 8.526 | 8.514 | 8.540 | VV | 608 | 6950 | 0.07% | 0.019% |
| 116 | 8.556 | 8.540 | 8.577 | VV | 939 | 12533 | 0.13% | 0.035% |
| 117 | 8.596 | 8.577 | 8.615 | VV | 802 | 13328 | 0.14% | 0.037% |
| 118 | 8.649 | 8.615 | 8.699 | VV | 27887 | 321704 | 3.41% | 0.892% |
| 119 | 8.713 | 8.699 | 8.737 | VV | 2054 | 30366 | 0.32% | 0.084% |
| 120 | 8.757 | 8.737 | 8.774 | VV | 1306 | 24391 | 0.26% | 0.068% |
| 121 | 8.789 | 8.774 | 8.820 | VV | 1835 | 28479 | 0.30% | 0.079% |
| 122 | 8.829 | 8.820 | 8.858 | VV | 542 | 6103 | 0.06% | 0.017% |
| 123 | 8.883 | 8.858 | 8.896 | PV | 650 | 9484 | 0.10% | 0.026% |
| 124 | 8.907 | 8.896 | 8.925 | VV | 545 | 7830 | 0.08% | 0.022% |
| 125 | 8.943 | 8.925 | 8.995 | VV | 892 | 20912 | 0.22% | 0.058% |
| 126 | 9.020 | 8.995 | 9.034 | VV | 315 | 6521 | 0.07% | 0.018% |
| 127 | 9.050 | 9.034 | 9.082 | VV | 562 | 7929 | 0.08% | 0.022% |
| 128 | 9.104 | 9.082 | 9.139 | VV | 1107 | 19985 | 0.21% | 0.055% |
| 129 | 9.183 | 9.139 | 9.201 | VV | 583 | 14980 | 0.16% | 0.042% |
| 130 | 9.212 | 9.201 | 9.231 | VV | 537 | 6862 | 0.07% | 0.019% |
| 131 | 9.247 | 9.231 | 9.272 | VV | 771 | 8474 | 0.09% | 0.023% |
| 132 | 9.300 | 9.272 | 9.329 | VV | 869 | 18668 | 0.20% | 0.052% |
| 133 | 9.346 | 9.329 | 9.361 | VV | 1281 | 17535 | 0.19% | 0.049% |
| 134 | 9.381 | 9.361 | 9.449 | VV | 6972 | 140050 | 1.48% | 0.388% |
| 135 | 9.456 | 9.449 | 9.474 | VV | 1159 | 12646 | 0.13% | 0.035% |
| 136 | 9.493 | 9.474 | 9.505 | VV | 663 | 10662 | 0.11% | 0.030% |
| 137 | 9.519 | 9.505 | 9.552 | VV | 1179 | 19017 | 0.20% | 0.053% |
| 138 | 9.566 | 9.552 | 9.589 | VV | 520 | 9832 | 0.10% | 0.027% |
| 139 | 9.604 | 9.589 | 9.642 | VV | 605 | 10667 | 0.11% | 0.030% |
| 140 | 9.683 | 9.642 | 9.712 | PV | 599 | 12672 | 0.13% | 0.035% |
| 141 | 9.730 | 9.712 | 9.755 | VV | 374 | 6504 | 0.07% | 0.018% |

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|---|---|---|---|---|---|---|---|---|
| 142 | 9.774 | 9.755 | 9.784 | VV | 169 | 2551 | 0.03% | 0.007% |
| 143 | 9.792 | 9.784 | 9.805 | PV | 267 | 2286 | 0.02% | 0.006% |
| 144 | 9.834 | 9.805 | 9.860 | VV | 542 | 9762 | 0.10% | 0.027% |
| 145 | 9.864 | 9.860 | 9.889 | VV | 485 | 3479 | 0.04% | 0.010% |
| 146 | 9.959 | 9.889 | 9.969 | VV | 566 | 17404 | 0.18% | 0.048% |
| 147 | 9.975 | 9.969 | 9.990 | VV | 482 | 4900 | 0.05% | 0.014% |
| 148 | 10.018 | 9.990 | 10.055 | VV | 542 | 12366 | 0.13% | 0.034% |
| 149 | 10.108 | 10.055 | 10.122 | PV | 771 | 19087 | 0.20% | 0.053% |
| 150 | 10.140 | 10.122 | 10.162 | VV | 631 | 10260 | 0.11% | 0.028% |
| 151 | 10.177 | 10.162 | 10.189 | VV | 405 | 5640 | 0.06% | 0.016% |
| 152 | 10.210 | 10.189 | 10.225 | VV | 858 | 11530 | 0.12% | 0.032% |
| 153 | 10.252 | 10.225 | 10.274 | VV | 657 | 10236 | 0.11% | 0.028% |
| 154 | 10.311 | 10.274 | 10.324 | PV | 688 | 12329 | 0.13% | 0.034% |
| 155 | 10.334 | 10.324 | 10.351 | VV | 455 | 6698 | 0.07% | 0.019% |
| 156 | 10.375 | 10.351 | 10.404 | VV | 619 | 11657 | 0.12% | 0.032% |
| 157 | 10.423 | 10.404 | 10.451 | VV | 338 | 6252 | 0.07% | 0.017% |
| 158 | 10.483 | 10.451 | 10.525 | VV | 7554 | 109020 | 1.16% | 0.302% |
| 159 | 10.567 | 10.525 | 10.605 | VV | 1598 | 49863 | 0.53% | 0.138% |
| 160 | 10.648 | 10.605 | 10.722 | VV | 1128 | 40990 | 0.43% | 0.114% |
| 161 | 10.742 | 10.722 | 10.750 | PV | 205 | 1896 | 0.02% | 0.005% |
| 162 | 10.766 | 10.750 | 10.779 | VV | 333 | 3308 | 0.04% | 0.009% |
| 163 | 10.792 | 10.779 | 10.805 | VV | 656 | 7736 | 0.08% | 0.021% |
| 164 | 10.816 | 10.805 | 10.830 | VV | 672 | 7807 | 0.08% | 0.022% |
| 165 | 10.843 | 10.830 | 10.865 | VV | 702 | 8979 | 0.10% | 0.025% |
| 166 | 10.885 | 10.865 | 10.903 | VV | 730 | 11913 | 0.13% | 0.033% |
| 167 | 10.922 | 10.903 | 10.937 | VV | 884 | 11731 | 0.12% | 0.033% |
| 168 | 10.953 | 10.937 | 10.975 | VV | 1156 | 20560 | 0.22% | 0.057% |
| 169 | 10.986 | 10.975 | 11.002 | VV | 975 | 12993 | 0.14% | 0.036% |
| 170 | 11.029 | 11.002 | 11.050 | VV | 968 | 20148 | 0.21% | 0.056% |
| 171 | 11.058 | 11.050 | 11.067 | VV | 518 | 3794 | 0.04% | 0.011% |
| 172 | 11.123 | 11.067 | 11.132 | VV | 1031 | 20819 | 0.22% | 0.058% |
| 173 | 11.140 | 11.132 | 11.164 | VV | 955 | 11493 | 0.12% | 0.032% |
| 174 | 11.185 | 11.164 | 11.193 | PV | 563 | 6979 | 0.07% | 0.019% |
| 175 | 11.204 | 11.193 | 11.217 | VV | 595 | 7373 | 0.08% | 0.020% |
| 176 | 11.250 | 11.217 | 11.304 | VV | 479426 | 5097135 | 54.03% | 14.130% |
| 177 | 11.315 | 11.304 | 11.354 | VV | 2090 | 44521 | 0.47% | 0.123% |
| 178 | 11.392 | 11.354 | 11.407 | VV | 2023 | 42540 | 0.45% | 0.118% |
| 179 | 11.422 | 11.407 | 11.439 | VV | 2058 | 27139 | 0.29% | 0.075% |
| 180 | 11.461 | 11.439 | 11.497 | VV | 1819 | 38540 | 0.41% | 0.107% |
| 181 | 11.531 | 11.497 | 11.550 | VV | 1150 | 20357 | 0.22% | 0.056% |
| 182 | 11.557 | 11.550 | 11.565 | VV | 756 | 6275 | 0.07% | 0.017% |
| 183 | 11.623 | 11.565 | 11.645 | VV | 1531 | 58872 | 0.62% | 0.163% |
| 184 | 11.669 | 11.645 | 11.718 | VV | 4424 | 78688 | 0.83% | 0.218% |
| 185 | 11.771 | 11.718 | 11.795 | VV | 2140 | 54527 | 0.58% | 0.151% |
| 186 | 11.830 | 11.795 | 11.839 | VV | 1283 | 20819 | 0.22% | 0.058% |
| 187 | 11.865 | 11.839 | 11.915 | VV | 17392 | 238538 | 2.53% | 0.661% |
| 188 | 11.943 | 11.915 | 11.972 | VV | 1856 | 44587 | 0.47% | 0.124% |
| 189 | 12.004 | 11.972 | 12.044 | VV | 2211 | 48516 | 0.51% | 0.134% |
| 190 | 12.072 | 12.044 | 12.096 | VV | 2159 | 39424 | 0.42% | 0.109% |
| 191 | 12.119 | 12.096 | 12.142 | VV | 2091 | 37458 | 0.40% | 0.104% |
| 192 | 12.176 | 12.142 | 12.190 | VV | 2617 | 46334 | 0.49% | 0.128% |
| 193 | 12.206 | 12.190 | 12.222 | VV | 2239 | 35872 | 0.38% | 0.099% |
| 194 | 12.253 | 12.222 | 12.264 | VV | 2452 | 45347 | 0.48% | 0.126% |

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|---|---|---|---|---|---|---|---|---|
| 195 | 12.285 | 12.264 | 12.341 | VV | 12544 | 202827 | 2.15% | 0.562% |
| 196 | 12.357 | 12.341 | 12.369 | VV | 1571 | 19843 | 0.21% | 0.055% |
| 197 | 12.382 | 12.369 | 12.395 | VV | 1238 | 16358 | 0.17% | 0.045% |
| 198 | 12.412 | 12.395 | 12.430 | VV | 2460 | 32376 | 0.34% | 0.090% |
| 199 | 12.465 | 12.430 | 12.490 | VV | 2265 | 50841 | 0.54% | 0.141% |
| 200 | 12.523 | 12.490 | 12.557 | VV | 1633 | 45998 | 0.49% | 0.128% |
| 201 | 12.578 | 12.557 | 12.610 | VV | 10698 | 145481 | 1.54% | 0.403% |
| 202 | 12.634 | 12.610 | 12.659 | VV | 2887 | 59687 | 0.63% | 0.165% |
| 203 | 12.692 | 12.659 | 12.722 | VV | 118092 | 1389229 | 14.72% | 3.851% |
| 204 | 12.747 | 12.722 | 12.764 | VV | 3417 | 73278 | 0.78% | 0.203% |
| 205 | 12.779 | 12.764 | 12.797 | VV | 3164 | 50892 | 0.54% | 0.141% |
| 206 | 12.814 | 12.797 | 12.859 | VV | 2480 | 63053 | 0.67% | 0.175% |
| 207 | 12.879 | 12.859 | 12.897 | VV | 2832 | 46363 | 0.49% | 0.129% |
| 208 | 12.917 | 12.897 | 12.965 | VV | 3995 | 91013 | 0.96% | 0.252% |
| 209 | 12.997 | 12.965 | 13.020 | VV | 2311 | 52104 | 0.55% | 0.144% |
| 210 | 13.047 | 13.020 | 13.068 | VV | 1752 | 31696 | 0.34% | 0.088% |
| 211 | 13.091 | 13.068 | 13.127 | VV | 9122 | 150049 | 1.59% | 0.416% |
| 212 | 13.157 | 13.127 | 13.174 | VV | 2632 | 58904 | 0.62% | 0.163% |
| 213 | 13.186 | 13.174 | 13.208 | VV | 2032 | 27307 | 0.29% | 0.076% |
| 214 | 13.245 | 13.208 | 13.264 | VV | 1359 | 28094 | 0.30% | 0.078% |
| 215 | 13.282 | 13.264 | 13.293 | VV | 1469 | 19619 | 0.21% | 0.054% |
| 216 | 13.319 | 13.293 | 13.339 | VV | 4571 | 58951 | 0.62% | 0.163% |
| 217 | 13.347 | 13.339 | 13.362 | VV | 1498 | 17247 | 0.18% | 0.048% |
| 218 | 13.396 | 13.362 | 13.410 | VV | 2391 | 50561 | 0.54% | 0.140% |
| 219 | 13.442 | 13.410 | 13.463 | VV | 3661 | 68609 | 0.73% | 0.190% |
| 220 | 13.480 | 13.463 | 13.498 | VV | 1924 | 22087 | 0.23% | 0.061% |
| 221 | 13.516 | 13.498 | 13.534 | VV | 1227 | 15179 | 0.16% | 0.042% |
| 222 | 13.574 | 13.534 | 13.596 | VV | 1922 | 41105 | 0.44% | 0.114% |
| 223 | 13.625 | 13.596 | 13.640 | VV | 2854 | 36461 | 0.39% | 0.101% |
| 224 | 13.656 | 13.640 | 13.682 | VV | 1523 | 33461 | 0.35% | 0.093% |
| 225 | 13.696 | 13.682 | 13.712 | VV | 1689 | 24905 | 0.26% | 0.069% |
| 226 | 13.745 | 13.712 | 13.758 | VV | 1762 | 39503 | 0.42% | 0.110% |
| 227 | 13.771 | 13.758 | 13.792 | VV | 1075 | 12318 | 0.13% | 0.034% |
| 228 | 13.811 | 13.792 | 13.847 | PV | 1929 | 37213 | 0.39% | 0.103% |
| 229 | 13.878 | 13.847 | 13.902 | VV | 3049 | 59643 | 0.63% | 0.165% |
| 230 | 13.918 | 13.902 | 13.960 | VV | 1597 | 28240 | 0.30% | 0.078% |
| 231 | 14.037 | 13.960 | 14.060 | VV | 2296 | 54485 | 0.58% | 0.151% |
| 232 | 14.095 | 14.060 | 14.117 | VV | 2373 | 46893 | 0.50% | 0.130% |
| 233 | 14.140 | 14.117 | 14.165 | VV | 2113 | 42436 | 0.45% | 0.118% |
| 234 | 14.200 | 14.165 | 14.225 | VV | 2510 | 49310 | 0.52% | 0.137% |
| 235 | 14.262 | 14.225 | 14.275 | VV | 2354 | 41986 | 0.45% | 0.116% |
| 236 | 14.292 | 14.275 | 14.317 | VV | 1537 | 27421 | 0.29% | 0.076% |
| 237 | 14.331 | 14.317 | 14.362 | VV | 1440 | 22916 | 0.24% | 0.064% |
| 238 | 14.387 | 14.362 | 14.410 | PV | 2377 | 38601 | 0.41% | 0.107% |
| 239 | 14.418 | 14.410 | 14.433 | VV | 1314 | 14229 | 0.15% | 0.039% |
| 240 | 14.457 | 14.433 | 14.474 | VV | 4283 | 64889 | 0.69% | 0.180% |
| 241 | 14.494 | 14.474 | 14.534 | VV | 6885 | 138826 | 1.47% | 0.385% |
| 242 | 14.546 | 14.534 | 14.557 | VV | 2569 | 25385 | 0.27% | 0.070% |
| 243 | 14.577 | 14.557 | 14.595 | VV | 2213 | 39164 | 0.42% | 0.109% |
| 244 | 14.614 | 14.595 | 14.632 | VV | 4136 | 60104 | 0.64% | 0.167% |
| 245 | 14.644 | 14.632 | 14.667 | VV | 2799 | 43233 | 0.46% | 0.120% |
| 246 | 14.700 | 14.667 | 14.719 | VV | 1741 | 41476 | 0.44% | 0.115% |

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|---|---|---|---|---|---|---|---|---|
| 247 | 14.775 | 14.719 | 14.793 | PV | 1943 | 66302 | 0.70% | 0.184% |
| 248 | 14.841 | 14.793 | 14.862 | VV | 2731 | 62969 | 0.67% | 0.175% |
| 249 | 14.890 | 14.862 | 14.899 | VV | 2336 | 36637 | 0.39% | 0.102% |
| 250 | 14.921 | 14.899 | 14.960 | VV | 5961 | 124504 | 1.32% | 0.345% |
| 251 | 14.997 | 14.960 | 15.007 | VV | 2730 | 54302 | 0.58% | 0.151% |
| 252 | 15.028 | 15.007 | 15.054 | VV | 2598 | 50805 | 0.54% | 0.141% |
| 253 | 15.071 | 15.054 | 15.097 | VV | 2571 | 42631 | 0.45% | 0.118% |
| 254 | 15.115 | 15.097 | 15.129 | VV | 1664 | 25748 | 0.27% | 0.071% |
| 255 | 15.135 | 15.129 | 15.156 | VV | 1452 | 16419 | 0.17% | 0.046% |
| 256 | 15.171 | 15.156 | 15.185 | PV | 1812 | 16509 | 0.17% | 0.046% |
| 257 | 15.200 | 15.185 | 15.214 | VV | 1790 | 20523 | 0.22% | 0.057% |
| 258 | 15.243 | 15.214 | 15.268 | PV | 2818 | 48348 | 0.51% | 0.134% |
| 259 | 15.284 | 15.268 | 15.305 | VV | 2074 | 36097 | 0.38% | 0.100% |
| 260 | 15.322 | 15.305 | 15.334 | VV | 1113 | 15814 | 0.17% | 0.044% |
| 261 | 15.354 | 15.334 | 15.382 | VV | 2658 | 48213 | 0.51% | 0.134% |
| 262 | 15.393 | 15.382 | 15.410 | VV | 1315 | 18357 | 0.19% | 0.051% |
| 263 | 15.419 | 15.410 | 15.429 | VV | 1251 | 10699 | 0.11% | 0.030% |
| 264 | 15.446 | 15.429 | 15.457 | VV | 1593 | 15148 | 0.16% | 0.042% |
| 265 | 15.497 | 15.457 | 15.512 | PV | 2197 | 55862 | 0.59% | 0.155% |
| 266 | 15.597 | 15.512 | 15.610 | VV | 2480 | 98665 | 1.05% | 0.274% |
| 267 | 15.621 | 15.610 | 15.635 | VV | 2575 | 27229 | 0.29% | 0.075% |
| 268 | 15.655 | 15.635 | 15.676 | VV | 1662 | 22215 | 0.24% | 0.062% |
| 269 | 15.736 | 15.676 | 15.757 | PV | 1996 | 62011 | 0.66% | 0.172% |
| 270 | 15.770 | 15.757 | 15.787 | VV | 2224 | 25876 | 0.27% | 0.072% |
| 271 | 15.819 | 15.787 | 15.845 | VV | 3486 | 66870 | 0.71% | 0.185% |
| 272 | 15.856 | 15.845 | 15.877 | VV | 1930 | 21663 | 0.23% | 0.060% |
| 273 | 15.929 | 15.877 | 15.947 | VV | 2555 | 51745 | 0.55% | 0.143% |
| 274 | 15.962 | 15.947 | 15.972 | PV | 2153 | 16587 | 0.18% | 0.046% |
| 275 | 16.009 | 15.972 | 16.025 | VV | 6873 | 117063 | 1.24% | 0.325% |
| 276 | 16.039 | 16.025 | 16.074 | VV | 4597 | 75535 | 0.80% | 0.209% |
| 277 | 16.170 | 16.074 | 16.190 | VV | 5365 | 213625 | 2.26% | 0.592% |
| 278 | 16.223 | 16.190 | 16.245 | VV | 3037 | 71960 | 0.76% | 0.199% |
| 279 | 16.284 | 16.245 | 16.304 | VV | 3884 | 89445 | 0.95% | 0.248% |
| 280 | 16.324 | 16.304 | 16.347 | VV | 4765 | 81961 | 0.87% | 0.227% |
| 281 | 16.386 | 16.347 | 16.431 | VV | 4967 | 145263 | 1.54% | 0.403% |
| 282 | 16.503 | 16.431 | 16.526 | PV | 6226 | 192891 | 2.04% | 0.535% |
| 283 | 16.544 | 16.526 | 16.564 | VV | 5358 | 94655 | 1.00% | 0.262% |
| 284 | 16.578 | 16.564 | 16.599 | VV | 3854 | 59172 | 0.63% | 0.164% |
| 285 | 16.622 | 16.599 | 16.630 | VV | 3189 | 50552 | 0.54% | 0.140% |
| 286 | 16.671 | 16.630 | 16.695 | VV | 5256 | 125761 | 1.33% | 0.349% |
| 287 | 16.723 | 16.695 | 16.735 | VV | 6450 | 108151 | 1.15% | 0.300% |
| 288 | 16.756 | 16.735 | 16.768 | VV | 8149 | 99883 | 1.06% | 0.277% |
| 289 | 16.788 | 16.768 | 16.809 | VV | 8614 | 129429 | 1.37% | 0.359% |
| 290 | 16.829 | 16.809 | 16.850 | VV | 6489 | 113358 | 1.20% | 0.314% |
| 291 | 16.865 | 16.850 | 16.896 | VV | 6373 | 134222 | 1.42% | 0.372% |
| 292 | 16.916 | 16.896 | 16.931 | VV | 4994 | 62409 | 0.66% | 0.173% |
| 293 | 16.964 | 16.931 | 16.979 | VV | 5890 | 129098 | 1.37% | 0.358% |
| 294 | 16.994 | 16.979 | 17.004 | VV | 5536 | 58394 | 0.62% | 0.162% |
| 295 | 17.028 | 17.004 | 17.038 | VV | 4624 | 79051 | 0.84% | 0.219% |
| 296 | 17.099 | 17.038 | 17.122 | VV | 12476 | 291085 | 3.09% | 0.807% |
| 297 | 17.141 | 17.122 | 17.152 | VV | 6767 | 80107 | 0.85% | 0.222% |
| 298 | 17.195 | 17.152 | 17.219 | VV | 8102 | 202446 | 2.15% | 0.561% |
| 299 | 17.235 | 17.219 | 17.255 | VV | 6766 | 121260 | 1.29% | 0.336% |

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 300 | 17.322 | 17.255 | 17.330 | VV | 5701 | 208325 | 2.21% | 0.577% |
| 301 | 17.361 | 17.330 | 17.382 | VV | 13123 | 263255 | 2.79% | 0.730% |
| 302 | 17.394 | 17.382 | 17.425 | VV | 10781 | 159384 | 1.69% | 0.442% |
| 303 | 17.454 | 17.425 | 17.475 | VV | 5652 | 91440 | 0.97% | 0.253% |
| 304 | 17.532 | 17.475 | 17.549 | VV | 14932 | 297080 | 3.15% | 0.824% |
| 305 | 17.559 | 17.549 | 17.584 | VV | 9047 | 135713 | 1.44% | 0.376% |
| 306 | 17.599 | 17.584 | 17.621 | VV | 7405 | 126238 | 1.34% | 0.350% |
| 307 | 17.632 | 17.621 | 17.657 | VV | 6448 | 84640 | 0.90% | 0.235% |
| 308 | 17.676 | 17.657 | 17.684 | VV | 6574 | 85658 | 0.91% | 0.237% |
| 309 | 17.750 | 17.684 | 17.770 | VV | 14632 | 417912 | 4.43% | 1.158% |
| 310 | 17.817 | 17.770 | 17.842 | VV | 7647 | 244286 | 2.59% | 0.677% |
| 311 | 17.869 | 17.842 | 17.890 | VV | 5220 | 103440 | 1.10% | 0.287% |
| 312 | 17.939 | 17.890 | 17.974 | VV | 13563 | 398423 | 4.22% | 1.104% |
| 313 | 17.997 | 17.974 | 18.025 | VV | 13679 | 240636 | 2.55% | 0.667% |
| 314 | 18.046 | 18.025 | 18.068 | VV | 5335 | 114390 | 1.21% | 0.317% |
| 315 | 18.092 | 18.068 | 18.123 | VV | 5282 | 119447 | 1.27% | 0.331% |
| 316 | 18.145 | 18.123 | 18.157 | VV | 7861 | 104196 | 1.10% | 0.289% |
| 317 | 18.191 | 18.157 | 18.212 | VV | 8583 | 201582 | 2.14% | 0.559% |
| 318 | 18.233 | 18.212 | 18.242 | VV | 6228 | 73589 | 0.78% | 0.204% |
| 319 | 18.250 | 18.242 | 18.270 | VV | 4445 | 50246 | 0.53% | 0.139% |

Sum of corrected areas: 36073849

Aromatic EPH 121024.M Thu Dec 12 05:59:25 2024

# CALIBRATION SUMMARY

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

# Inital Calibration Report for SequenceID : FC121024AL

**AreaCount**

| Parameter Range | FC067961.D | FC067962.D | FC067963.D | FC067964.D | FC067965.D | |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 43219570.000 | 22812652.000 | 9633573.000 | 4956995.000 | 2543550.000 | |
| Aliphatic C12-C16 | 29481914.000 | 15507863.000 | 6502424.000 | 3322573.000 | 1701990.000 | |
| Aliphatic C16-C21 | 42017389.000 | 21918249.000 | 9252854.000 | 4768030.000 | 2437274.000 | |
| Aliphatic C21-C28 | 50542953.000 | 26061820.000 | 10946904.000 | 5674955.000 | 2930879.000 | |
| Aliphatic C28-C40 | 58878618.000 | 30107117.000 | 12646225.000 | 6629218.000 | 3463888.000 | |
| Aliphatic EPH | 224140444.000 | 116407701.000 | 48981980.000 | 25351771.000 | 13077581.000 | |

**AVG Response Factor**

| Parameter Range | AVG RF | % RSD | | | | |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 158302.459333 | 6.484 | | | | |
| Aliphatic C12-C16 | 160275.29 | 5.671 | | | | |
| Aliphatic C16-C21 | 152362.6246664 | 6.046 | | | | |
| Aliphatic C21-C28 | 136384.1215 | 6.035 | | | | |
| Aliphatic C28-C40 | 105964.6389996 | 6.736 | | | | |
| Aliphatic EPH | 135215.008444 | 6.221 | | | | |

**Concentration**

| Parameter Range | FC067961.D | FC067962.D | FC067963.D | FC067964.D | FC067965.D | |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 300.000 | 150.000 | 60.000 | 30.000 | 15.000 | |
| Aliphatic C12-C16 | 200.000 | 100.000 | 40.000 | 20.000 | 10.000 | |
| Aliphatic C16-C21 | 300.000 | 150.000 | 60.000 | 30.000 | 15.000 | |
| Aliphatic C21-C28 | 400.000 | 200.000 | 80.000 | 40.000 | 20.000 | |
| Aliphatic C28-C40 | 600.000 | 300.000 | 120.000 | 60.000 | 30.000 | |
| Aliphatic EPH | 1800.000 | 900.000 | 360.000 | 180.000 | 90.000 | |

**Response Factor**

| Parameter Range | FC067961.D | FC067962.D | FC067963.D | FC067964.D | FC067965.D | |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 144065.233333 | 152084.346666 | 160559.550000 | 165233.166666 | 169570.000000 | |
| Aliphatic C12-C16 | 147409.570000 | 155078.630000 | 162560.600000 | 166128.650000 | 170199.000000 | |
| Aliphatic C16-C21 | 140057.963333 | 146121.660000 | 154214.233333 | 158934.333333 | 162484.933333 | |

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

# Inital Calibration Report for SequenceID : FC121024AL

| | | | | | | |
|---|---|---|---|---|---|---|
| Aliphatic C21-C28 | 126357.382500 | 130309.100000 | 136836.300000 | 141873.875000 | 146543.950000 | |
| Aliphatic C28-C40 | 98131.030000 | 100357.056666 | 105385.208333 | 110486.966666 | 115462.933333 | |
| Aliphatic EPH | 124522.468888 | 129341.890000 | 136061.055555 | 140843.172222 | 145306.455555 | |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067961.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 04:48
Operator : YP/AJ
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 26 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
Quant Time: Dec 10 07:48:09 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.480 | 15877514 | 91.282 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 182.56% |
| 12) S | 1-chlorooctadecane (S... | 12.918 | 11870508 | 92.116 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 184.23% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.255 | 14082462 | 89.470 ug/ml |
| 2) T | n-Decane (C10) | 4.319 | 14433547 | 89.814 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.896 | 16106430 | 90.999 ug/ml |
| 4) T | n-Dodecane (C12) | 6.335 | 14703561 | 89.888 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.952 | 15639596 | 91.538 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.128 | 14593971 | 90.424 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.727 | 14887943 | 90.932 ug/ml |
| 8) T | n-Octadecane (C18) | 11.170 | 14738386 | 90.361 ug/ml |
| 10) T | n-Eicosane (C20) | 12.476 | 13828766 | 90.965 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.087 | 13450237 | 91.179 ug/ml |
| 13) T | n-Docosane (C22) | 13.673 | 13209285 | 91.611 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.774 | 12875285 | 92.195 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.792 | 12442452 | 92.666 ug/ml |
| 16) T | n-Octacosane (C28) | 16.741 | 12015931 | 92.981 ug/ml |
| 17) T | n-Tricontane (C30) | 17.627 | 11946295 | 92.851 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.458 | 11369911 | 92.550 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.240 | 10037386 | 92.775 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.977 | 8849215 | 93.735 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.698 | 8396142 | 93.025 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.578 | 8279669 | 94.146 ug/ml |

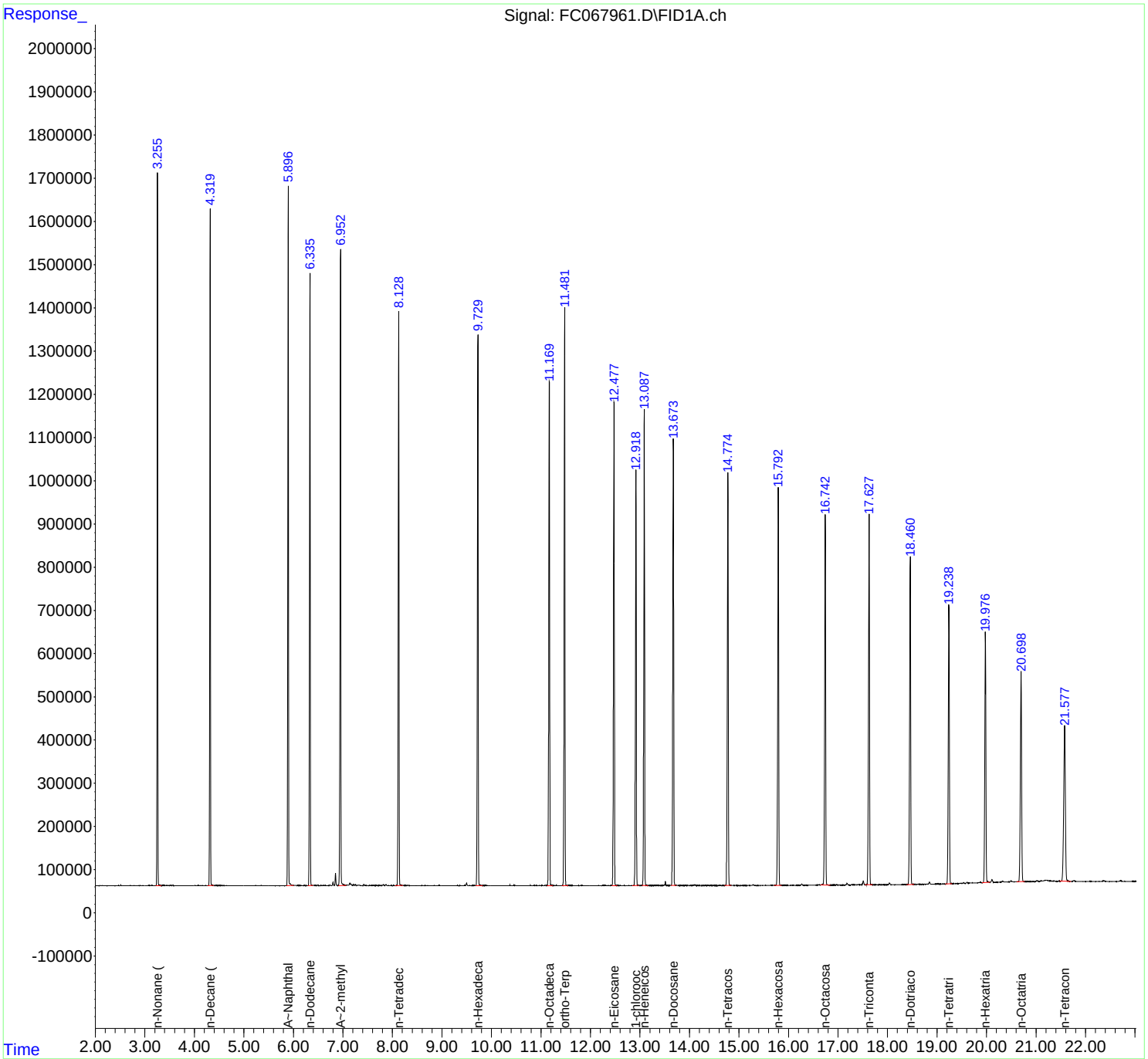
(f)=RT Delta > 1/2 Window (m)=manual int.

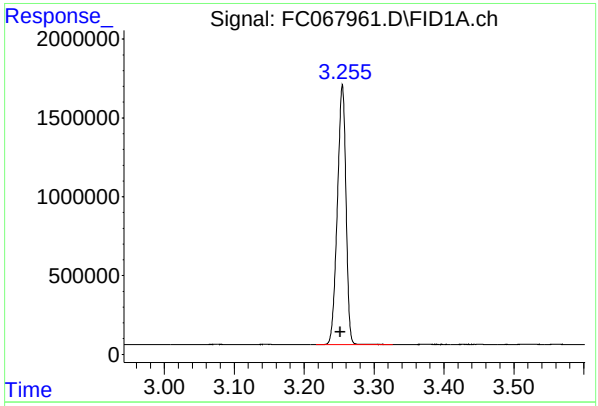
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067961.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 04:48
Operator : YP/AJ
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 26 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1

Integration File: autoint1.e
Quant Time: Dec 10 07:48:09 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

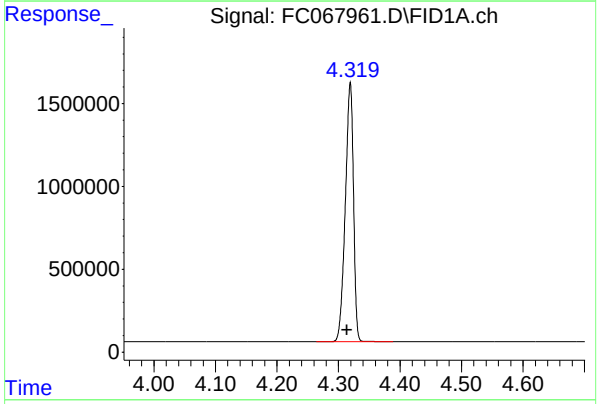





#1 n-Nonane (C9)

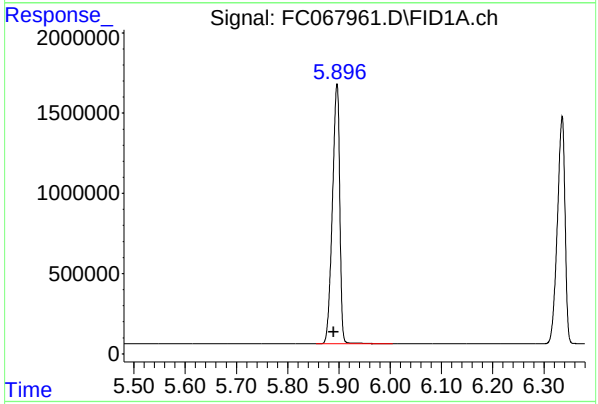
R.T.: 3.255 min
Delta R.T.: 0.003 min
Response: 14082462
Conc: 89.47 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1



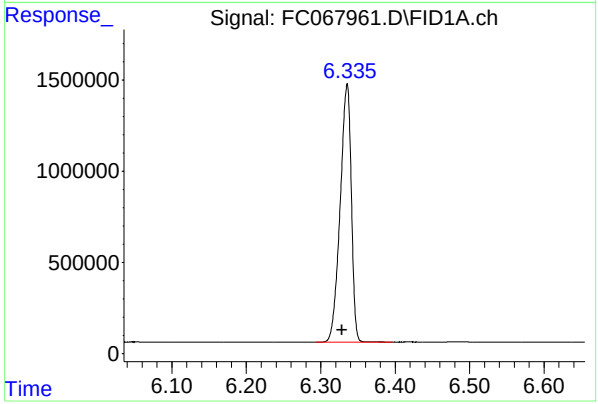

#2 n-Decane (C10)

R.T.: 4.319 min
Delta R.T.: 0.005 min
Response: 14433547
Conc: 89.81 ug/ml



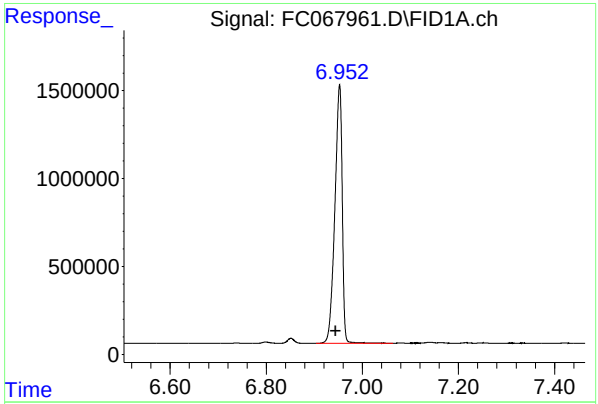

#3 A~Naphthalene (C11.7)

R.T.: 5.896 min
Delta R.T.: 0.006 min
Response: 16106430
Conc: 91.00 ug/ml




#4 n-Dodecane (C12)

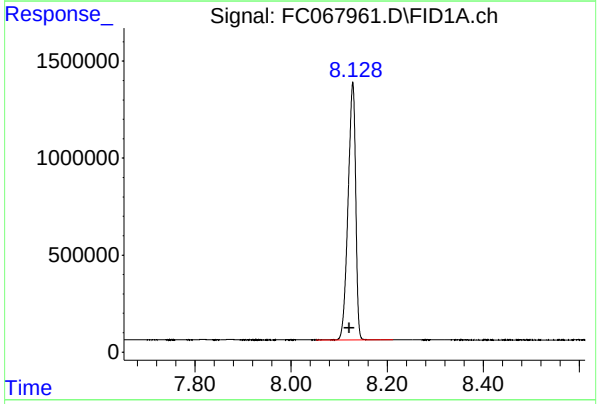
R.T.: 6.335 min
Delta R.T.: 0.006 min
Response: 14703561
Conc: 89.89 ug/ml




#5 A~2-methylnaphthalene (C12.89)

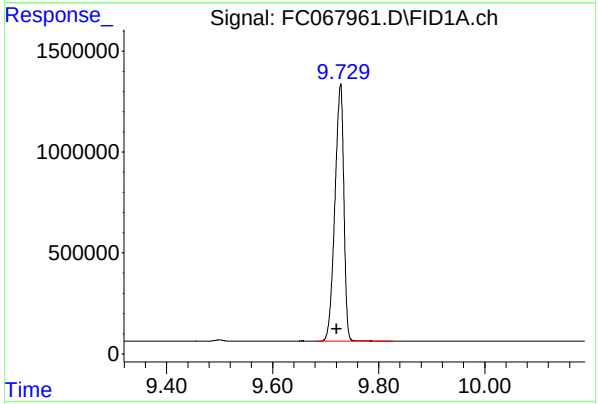
R.T.: 6.952 min
Delta R.T.: 0.008 min
Response: 15639596
Conc: 91.54 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1



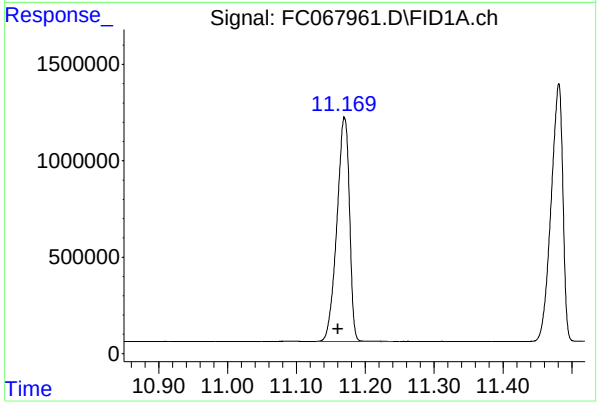

#6 n-Tetradecane (C14)

R.T.: 8.128 min
Delta R.T.: 0.006 min
Response: 14593971
Conc: 90.42 ug/ml



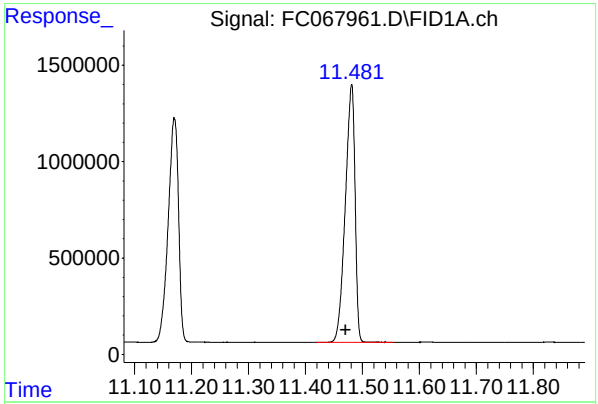

#7 n-Hexadecane (C16)

R.T.: 9.727 min
Delta R.T.: 0.007 min
Response: 14887943
Conc: 90.93 ug/ml




#8 n-Octadecane (C18)

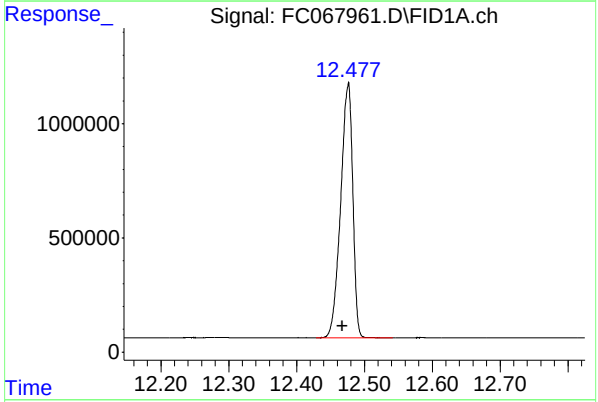
R.T.: 11.170 min
Delta R.T.: 0.009 min
Response: 14738386
Conc: 90.36 ug/ml




#9 ortho-Terphenyl (SURR)

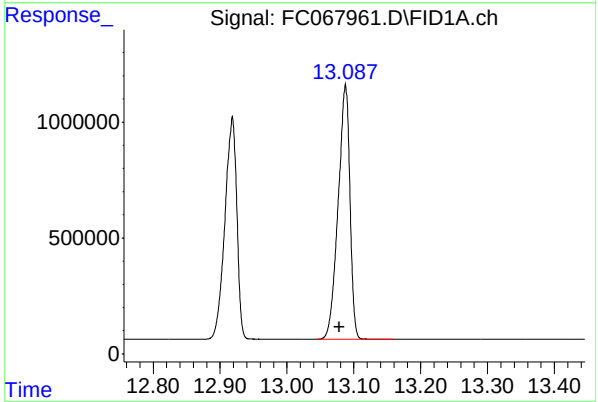
R.T.: 11.480 min
Delta R.T.: 0.010 min
Response: 15877514
Conc: 91.28 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1



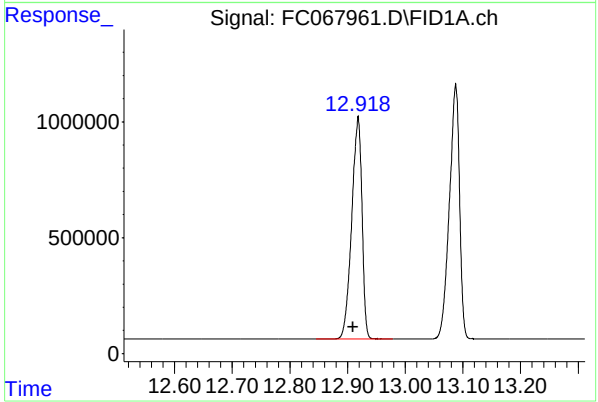

#10 n-Eicosane (C20)

R.T.: 12.476 min
Delta R.T.: 0.008 min
Response: 13828766
Conc: 90.97 ug/ml



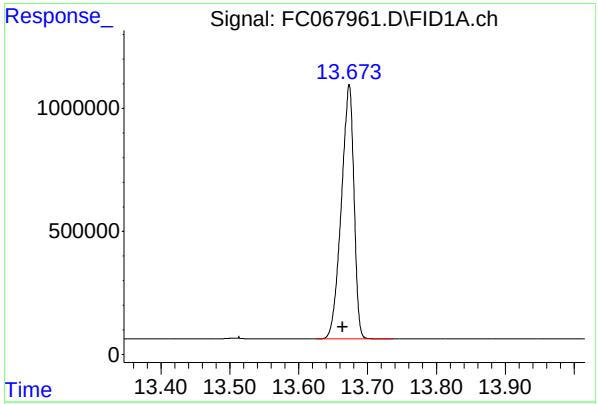

#11 n-Heneicosane (C21)

R.T.: 13.087 min
Delta R.T.: 0.009 min
Response: 13450237
Conc: 91.18 ug/ml




#12 1-chlorooctadecane (SURR)

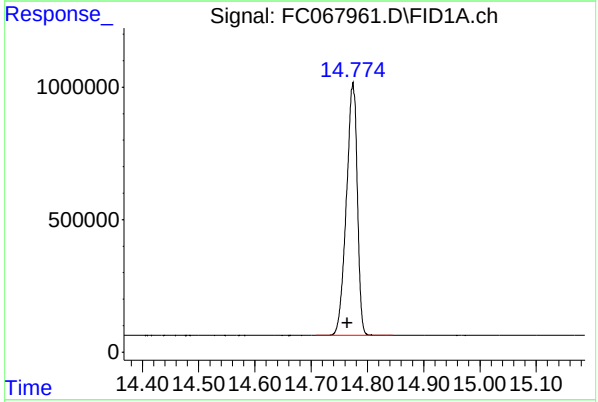
R.T.: 12.918 min
Delta R.T.: 0.009 min
Response: 11870508
Conc: 92.12 ug/ml




#13 n-Docosane (C22)

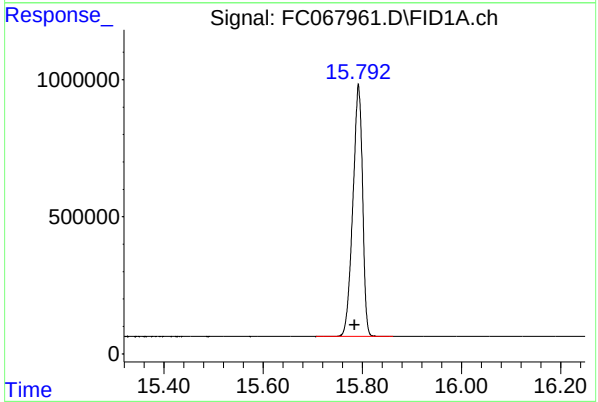
R.T.: 13.673 min
Delta R.T.: 0.009 min
Response: 13209285
Conc: 91.61 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1



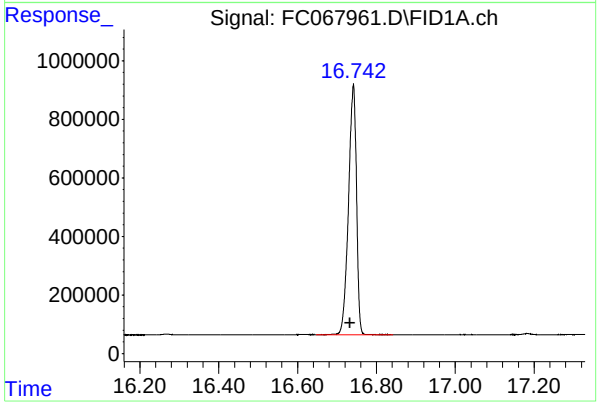

#14 n-Tetracosane (C24)

R.T.: 14.774 min
Delta R.T.: 0.009 min
Response: 12875285
Conc: 92.19 ug/ml



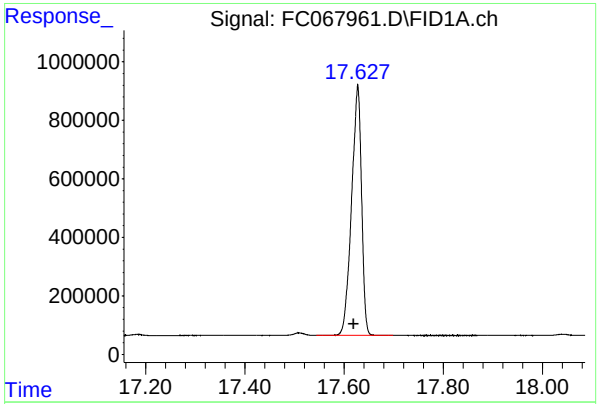

#15 n-Hexacosane (C26)

R.T.: 15.792 min
Delta R.T.: 0.008 min
Response: 12442452
Conc: 92.67 ug/ml




#16 n-Octacosane (C28)

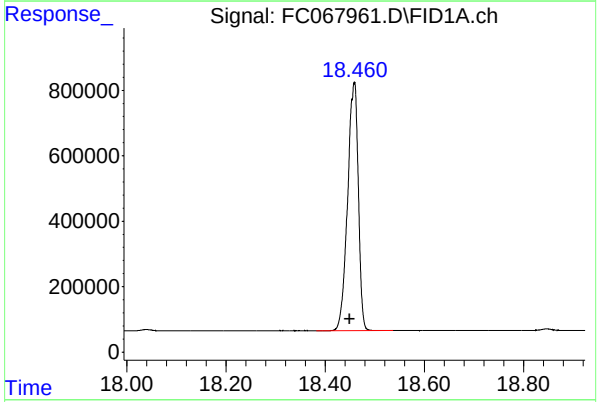
R.T.: 16.741 min
Delta R.T.: 0.008 min
Response: 12015931
Conc: 92.98 ug/ml




#17 n-Tricontane (C30)

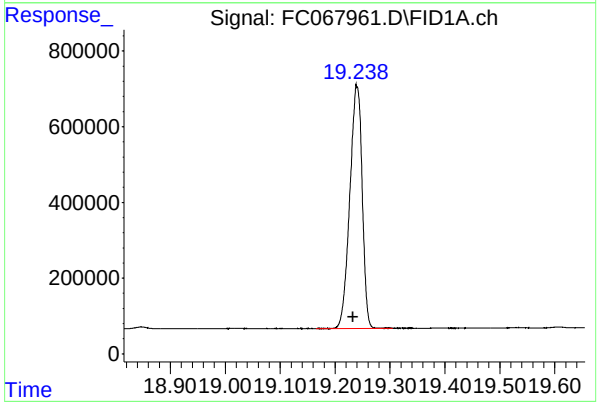
R.T.: 17.627 min
Delta R.T.: 0.009 min
Response: 11946295
Conc: 92.85 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1



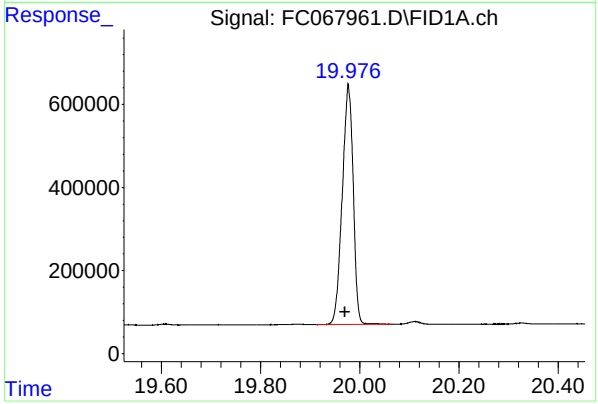

#18 n-Dotriacontane (C32)

R.T.: 18.458 min
Delta R.T.: 0.009 min
Response: 11369911
Conc: 92.55 ug/ml



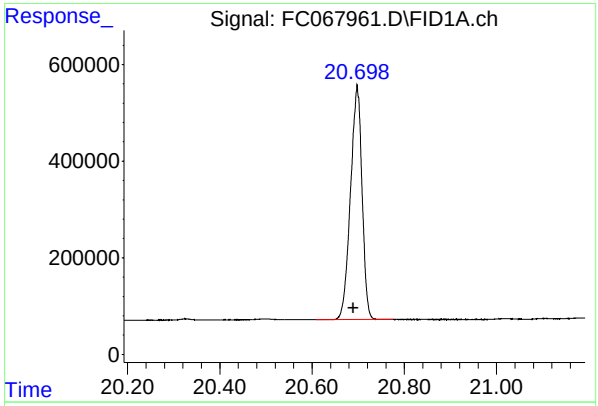

#19 n-Tetratriacontane (C34)

R.T.: 19.240 min
Delta R.T.: 0.008 min
Response: 10037386
Conc: 92.77 ug/ml




#20 n-Hexatriacontane (C36)

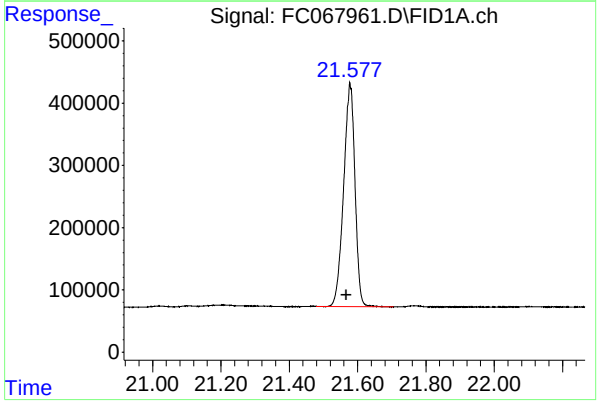
R.T.: 19.977 min
Delta R.T.: 0.007 min
Response: 8849215
Conc: 93.73 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.698 min
Delta R.T.: 0.009 min
Response: 8396142
Conc: 93.03 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
100 PPM ALIPHATIC HC STD1




#22 n-Tetracontane (C40)

R.T.: 21.578 min
Delta R.T.: 0.010 min
Response: 8279669
Conc: 94.15 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067961.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 04:48
Sample : 100 PPM ALIPHATIC HC STD1
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.255 | 3.217 | 3.327 | BB | 1657147 | 14082462 | 87.43% | 4.965% |
| 2 | 4.319 | 4.264 | 4.389 | BB | 1558462 | 14433547 | 89.61% | 5.089% |
| 3 | 5.896 | 5.855 | 6.005 | BB | 1616858 | 16106430 | 100.00% | 5.679% |
| 4 | 6.335 | 6.294 | 6.397 | BB | 1415988 | 14703561 | 91.29% | 5.184% |
| 5 | 6.952 | 6.904 | 7.064 | BV | 1467959 | 15639596 | 97.10% | 5.514% |
| 6 | 8.128 | 8.052 | 8.212 | BB | 1333411 | 14593971 | 90.61% | 5.145% |
| 7 | 9.728 | 9.682 | 9.827 | BB | 1268020 | 14887943 | 92.43% | 5.249% |
| 8 | 11.170 | 11.129 | 11.240 | BB | 1160772 | 14738386 | 91.51% | 5.196% |
| 9 | 11.480 | 11.419 | 11.554 | BB | 1336651 | 15877514 | 98.58% | 5.598% |
| 10 | 12.476 | 12.429 | 12.542 | BB | 1103665 | 13828766 | 85.86% | 4.876% |
| 11 | 12.918 | 12.845 | 12.979 | BB | 966125 | 11870508 | 73.70% | 4.185% |
| 12 | 13.087 | 13.044 | 13.159 | PB | 1093164 | 13450237 | 83.51% | 4.742% |
| 13 | 13.673 | 13.625 | 13.737 | BB | 1037894 | 13209285 | 82.01% | 4.657% |
| 14 | 14.774 | 14.709 | 14.845 | BB | 944198 | 12875285 | 79.94% | 4.539% |
| 15 | 15.792 | 15.707 | 15.862 | BB | 919565 | 12442452 | 77.25% | 4.387% |
| 16 | 16.741 | 16.647 | 16.842 | BB | 860086 | 12015931 | 74.60% | 4.236% |
| 17 | 17.627 | 17.544 | 17.699 | PB | 853098 | 11946295 | 74.17% | 4.212% |
| 18 | 18.458 | 18.382 | 18.537 | BB | 758668 | 11369911 | 70.59% | 4.009% |
| 19 | 19.240 | 19.165 | 19.305 | BB | 637048 | 10037386 | 62.32% | 3.539% |
| 20 | 19.977 | 19.912 | 20.067 | BB | 577272 | 8849215 | 54.94% | 3.120% |
| 21 | 20.698 | 20.609 | 20.775 | BB | 482723 | 8396142 | 52.13% | 2.960% |
| 22 | 21.578 | 21.479 | 21.704 | BB | 355825 | 8279669 | 51.41% | 2.919% |

Sum of corrected areas: 283634492

Aliphatic EPH 121024.M Tue Dec 10 08:33:34 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067962.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 05:24
Operator : YP/AJ
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 27 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
Quant Time: Dec 10 07:48:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.475 | 8263318 | 47.507 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 95.01% |
| 12) S | 1-chlorooctadecane (S... | 12.912 | 6148518 | 47.713 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 95.43% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.253 | 7439779 | 47.267 ug/ml |
| 2) T | n-Decane (C10) | 4.316 | 7616487 | 47.394 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.892 | 8456127 | 47.776 ug/ml |
| 4) T | n-Dodecane (C12) | 6.331 | 7756386 | 47.417 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.948 | 8196212 | 47.972 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.124 | 7677734 | 47.571 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.724 | 7830129 | 47.824 ug/ml |
| 8) T | n-Octadecane (C18) | 11.164 | 7726228 | 47.369 ug/ml |
| 10) T | n-Eicosane (C20) | 12.471 | 7209186 | 47.422 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.082 | 6982835 | 47.337 ug/ml |
| 13) T | n-Docosane (C22) | 13.667 | 6851009 | 47.514 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.768 | 6643747 | 47.573 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.788 | 6396052 | 47.635 ug/ml |
| 16) T | n-Octacosane (C28) | 16.737 | 6171012 | 47.752 ug/ml |
| 17) T | n-Tricontane (C30) | 17.622 | 6122300 | 47.585 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.454 | 5824606 | 47.412 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.237 | 5136813 | 47.479 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.974 | 4512465 | 47.798 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.694 | 4273980 | 47.354 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.574 | 4236953 | 48.177 ug/ml |

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

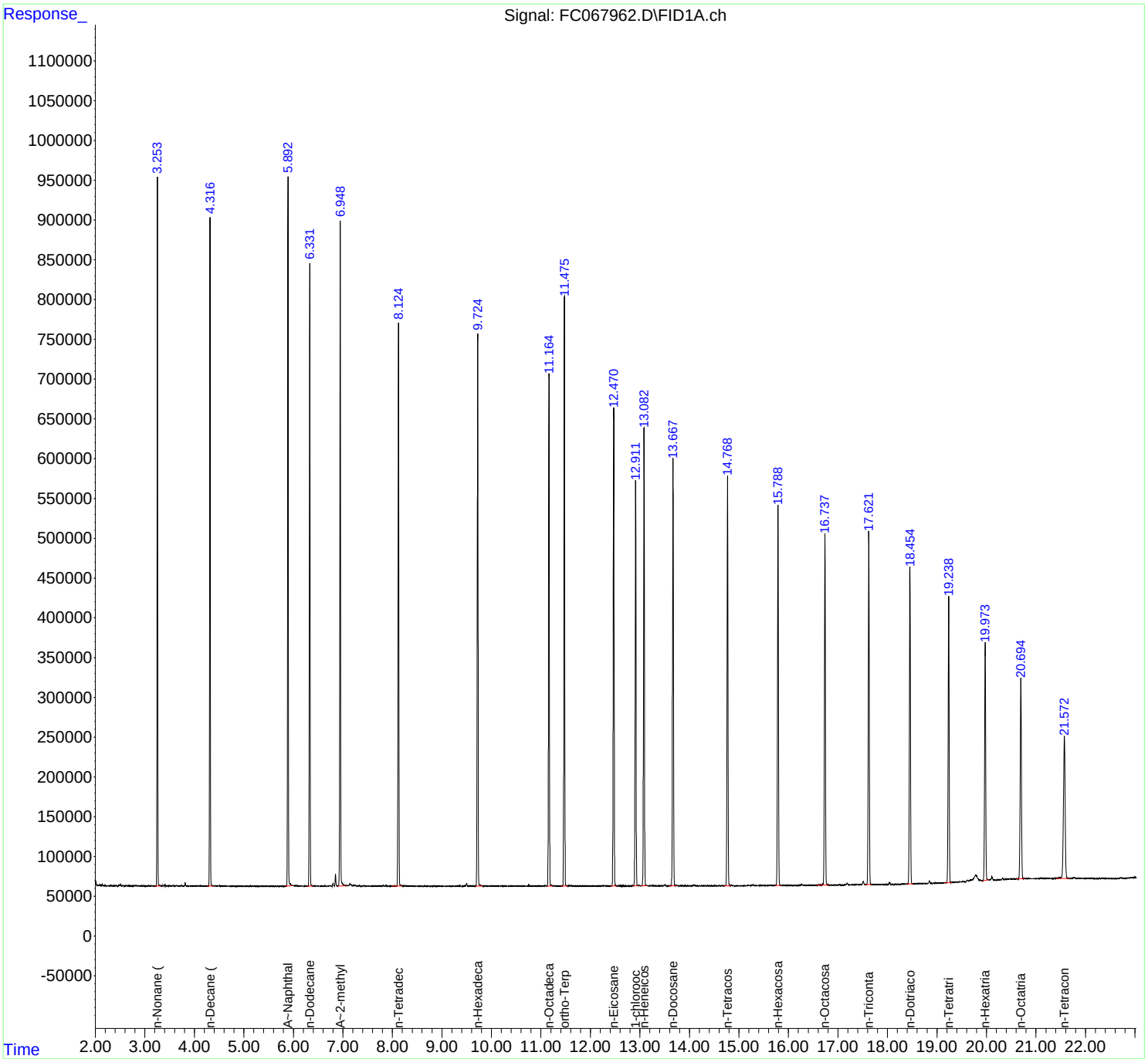
Quantitation Report (QT Reviewed)

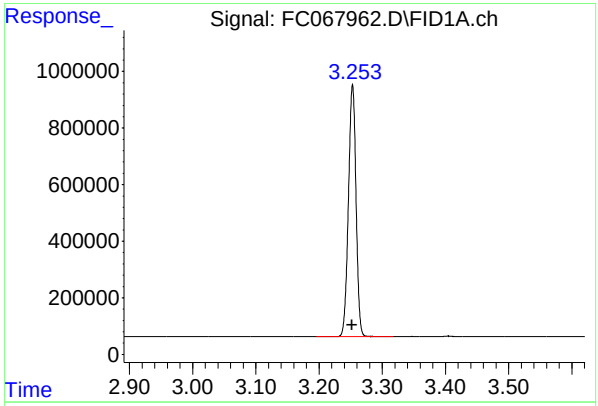
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067962.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 05:24
Operator : YP/AJ
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 27 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2

Integration File: autoint1.e
Quant Time: Dec 10 07:48:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

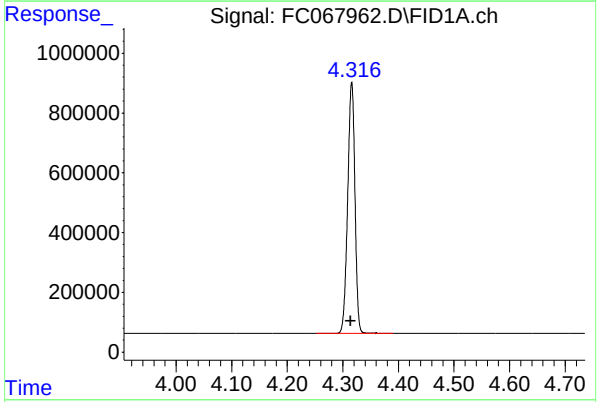





#1 n-Nonane (C9)

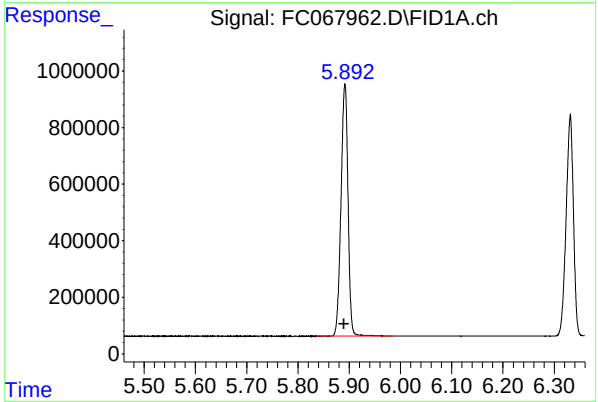
R.T.: 3.253 min
Delta R.T.: 0.000 min
Response: 7439779
Conc: 47.27 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2



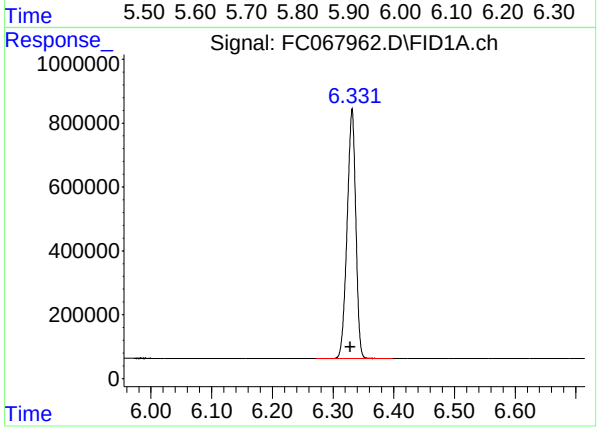

#2 n-Decane (C10)

R.T.: 4.316 min
Delta R.T.: 0.002 min
Response: 7616487
Conc: 47.39 ug/ml



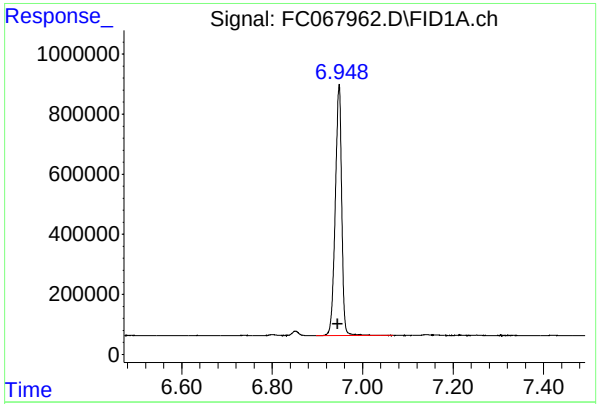

#3 A~Naphthalene (C11.7)

R.T.: 5.892 min
Delta R.T.: 0.002 min
Response: 8456127
Conc: 47.78 ug/ml




#4 n-Dodecane (C12)

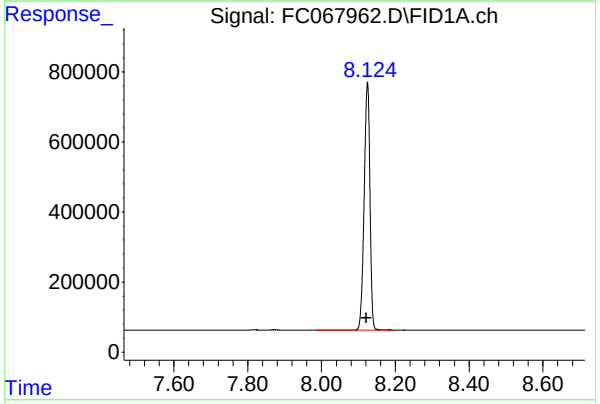
R.T.: 6.331 min
Delta R.T.: 0.003 min
Response: 7756386
Conc: 47.42 ug/ml




#5 A~2-methylnaphthalene (C12.89)

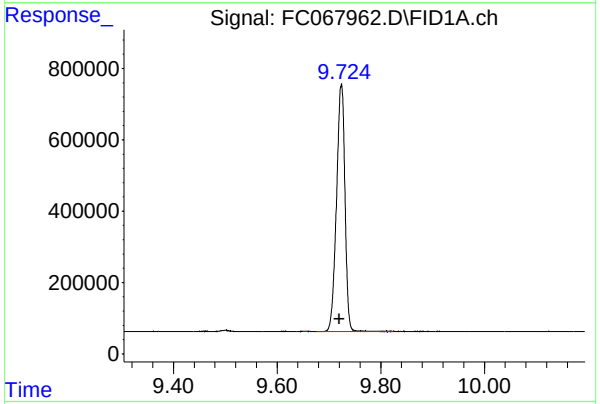
R.T.: 6.948 min
Delta R.T.: 0.003 min
Response: 8196212
Conc: 47.97 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2



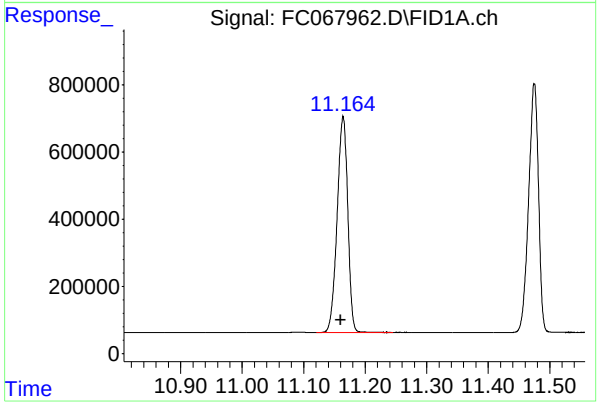

#6 n-Tetradecane (C14)

R.T.: 8.124 min
Delta R.T.: 0.003 min
Response: 7677734
Conc: 47.57 ug/ml



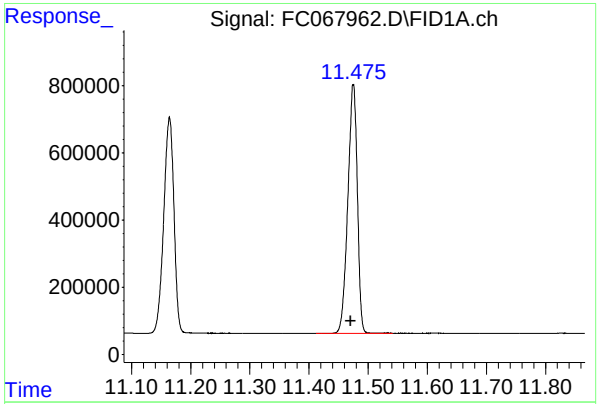

#7 n-Hexadecane (C16)

R.T.: 9.724 min
Delta R.T.: 0.003 min
Response: 7830129
Conc: 47.82 ug/ml




#8 n-Octadecane (C18)

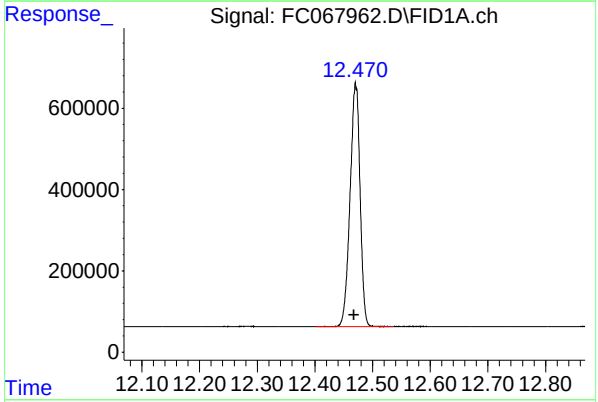
R.T.: 11.164 min
Delta R.T.: 0.004 min
Response: 7726228
Conc: 47.37 ug/ml




#9 ortho-Terphenyl (SURR)

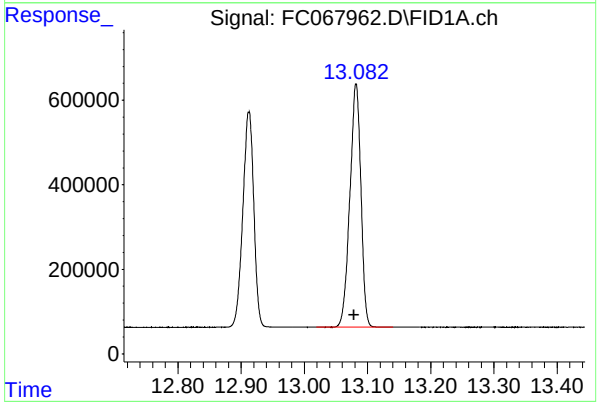
R.T.: 11.475 min
Delta R.T.: 0.005 min
Response: 8263318
Conc: 47.51 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2



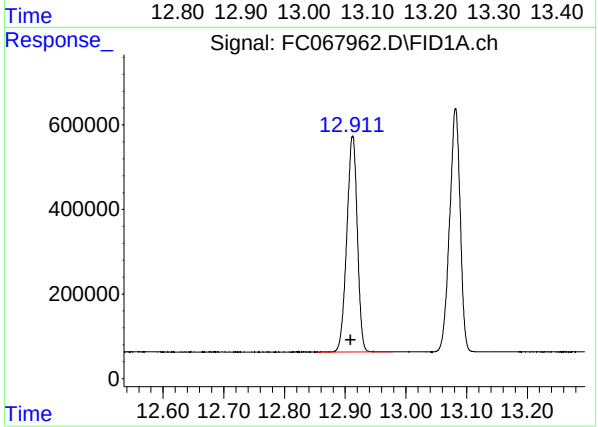

#10 n-Eicosane (C20)

R.T.: 12.471 min
Delta R.T.: 0.003 min
Response: 7209186
Conc: 47.42 ug/ml



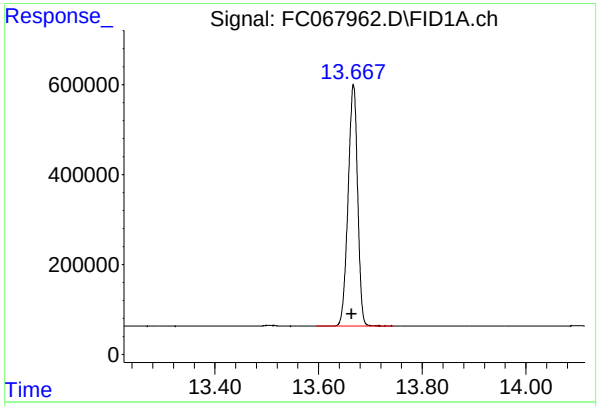

#11 n-Heneicosane (C21)

R.T.: 13.082 min
Delta R.T.: 0.003 min
Response: 6982835
Conc: 47.34 ug/ml




#12 1-chlorooctadecane (SURR)

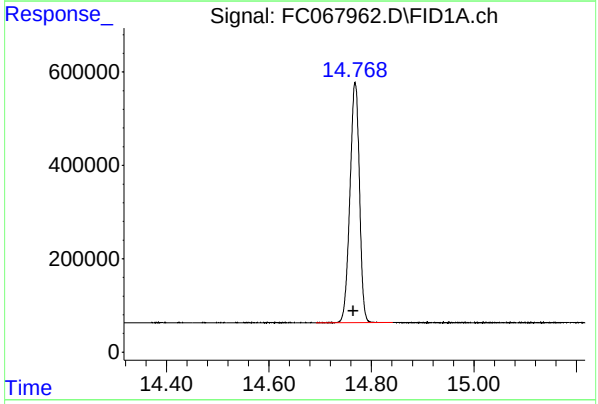
R.T.: 12.912 min
Delta R.T.: 0.003 min
Response: 6148518
Conc: 47.71 ug/ml




#13 n-Docosane (C22)

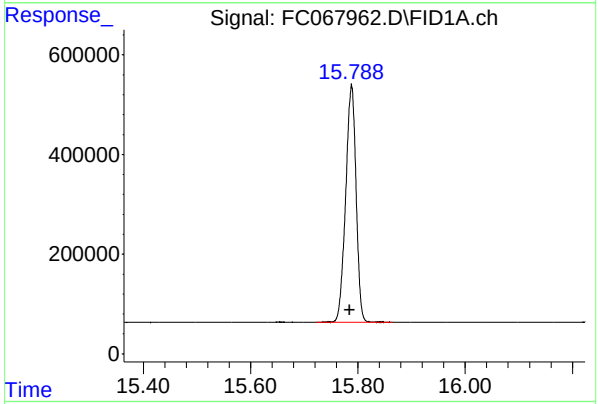
R.T.: 13.667 min
Delta R.T.: 0.003 min
Response: 6851009
Conc: 47.51 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2



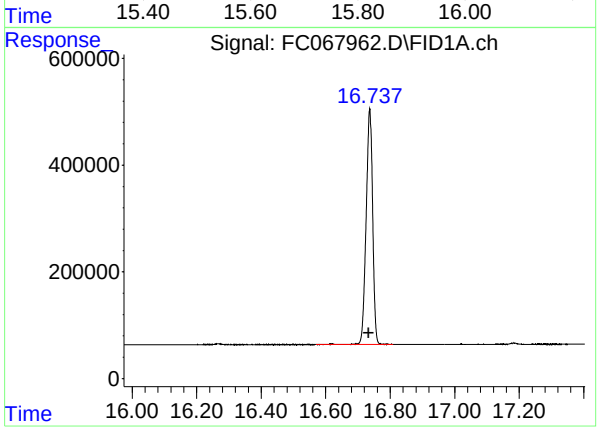

#14 n-Tetracosane (C24)

R.T.: 14.768 min
Delta R.T.: 0.004 min
Response: 6643747
Conc: 47.57 ug/ml



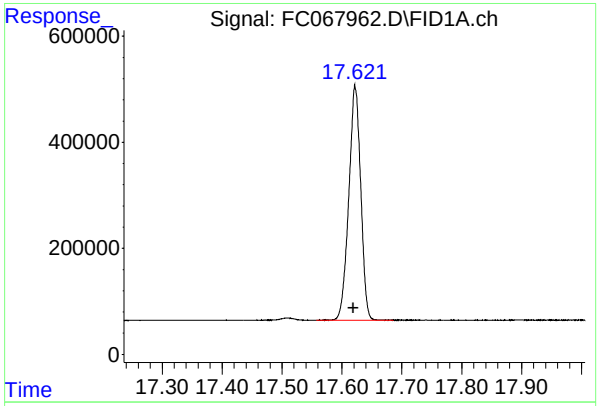

#15 n-Hexacosane (C26)

R.T.: 15.788 min
Delta R.T.: 0.003 min
Response: 6396052
Conc: 47.63 ug/ml




#16 n-Octacosane (C28)

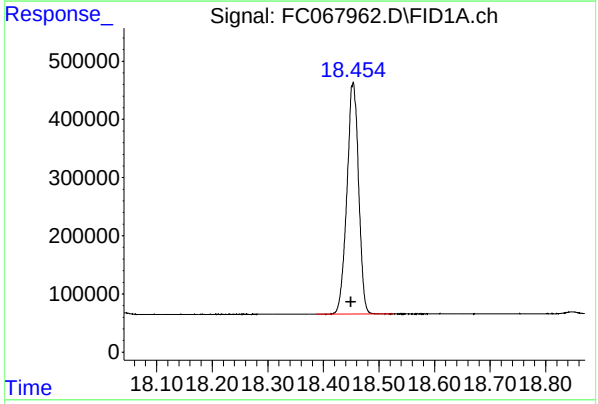
R.T.: 16.737 min
Delta R.T.: 0.004 min
Response: 6171012
Conc: 47.75 ug/ml




#17 n-Tricontane (C30)

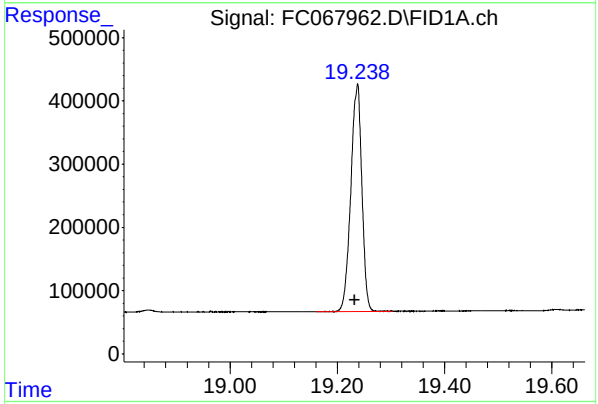
R.T.: 17.622 min
Delta R.T.: 0.003 min
Response: 6122300
Conc: 47.58 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2



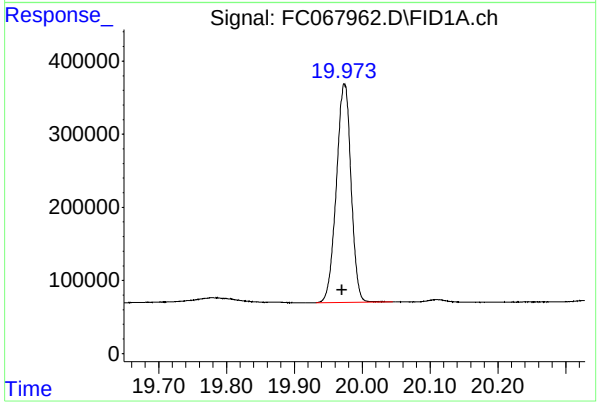

#18 n-Dotriacontane (C32)

R.T.: 18.454 min
Delta R.T.: 0.004 min
Response: 5824606
Conc: 47.41 ug/ml



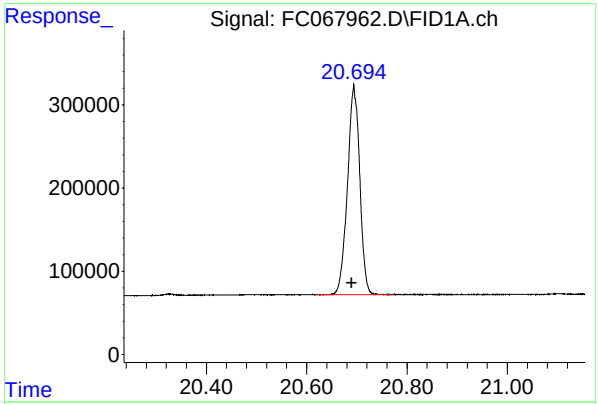

#19 n-Tetratriacontane (C34)

R.T.: 19.237 min
Delta R.T.: 0.004 min
Response: 5136813
Conc: 47.48 ug/ml




#20 n-Hexatriacontane (C36)

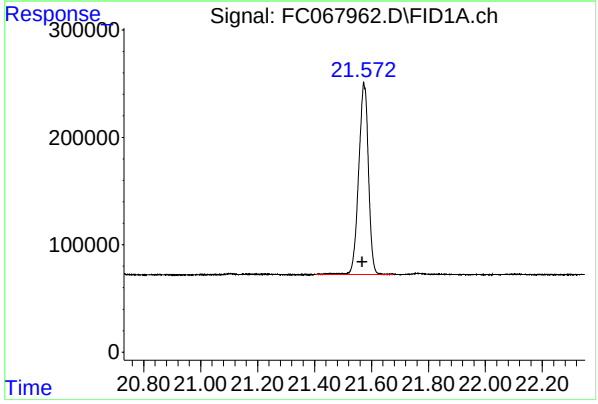
R.T.: 19.974 min
Delta R.T.: 0.004 min
Response: 4512465
Conc: 47.80 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.694 min
Delta R.T.: 0.005 min
Response: 4273980
Conc: 47.35 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
50 PPM ALIPHATIC HC STD2




#22 n-Tetracontane (C40)

R.T.: 21.574 min
Delta R.T.: 0.006 min
Response: 4236953
Conc: 48.18 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067962.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 05:24
Sample : 50 PPM ALIPHATIC HC STD2
Misc :
ALS Vial : 27 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.253 | 3.195 | 3.317 | BB | 891397 | 7439779 | 87.98% | 5.045% |
| 2 | 4.316 | 4.252 | 4.390 | BB | 840345 | 7616487 | 90.07% | 5.165% |
| 3 | 5.892 | 5.835 | 5.985 | BB | 894065 | 8456127 | 100.00% | 5.734% |
| 4 | 6.331 | 6.272 | 6.399 | BB | 786548 | 7756386 | 91.73% | 5.260% |
| 5 | 6.948 | 6.897 | 7.067 | BV | 826668 | 8196212 | 96.93% | 5.558% |
| 6 | 8.124 | 7.985 | 8.194 | BB | 704614 | 7677734 | 90.79% | 5.206% |
| 7 | 9.724 | 9.675 | 9.824 | BB | 691052 | 7830129 | 92.60% | 5.310% |
| 8 | 11.164 | 11.120 | 11.245 | BB | 641702 | 7726228 | 91.37% | 5.239% |
| 9 | 11.475 | 11.412 | 11.542 | BB | 741287 | 8263318 | 97.72% | 5.603% |
| 10 | 12.471 | 12.402 | 12.535 | BB | 596698 | 7209186 | 85.25% | 4.889% |
| 11 | 12.912 | 12.852 | 12.979 | BB | 509947 | 6148518 | 72.71% | 4.169% |
| 12 | 13.082 | 13.019 | 13.140 | BB | 575806 | 6982835 | 82.58% | 4.735% |
| 13 | 13.667 | 13.595 | 13.744 | BB | 537075 | 6851009 | 81.02% | 4.646% |
| 14 | 14.768 | 14.692 | 14.842 | BB | 514046 | 6643747 | 78.57% | 4.505% |
| 15 | 15.788 | 15.722 | 15.865 | BB | 477253 | 6396052 | 75.64% | 4.337% |
| 16 | 16.737 | 16.570 | 16.809 | BB | 441505 | 6171012 | 72.98% | 4.185% |
| 17 | 17.622 | 17.557 | 17.685 | BB | 440973 | 6122300 | 72.40% | 4.152% |
| 18 | 18.454 | 18.387 | 18.525 | BB | 397454 | 5824606 | 68.88% | 3.950% |
| 19 | 19.237 | 19.160 | 19.304 | BB | 357041 | 5136813 | 60.75% | 3.483% |
| 20 | 19.974 | 19.932 | 20.045 | BB | 299475 | 4512465 | 53.36% | 3.060% |
| 21 | 20.694 | 20.619 | 20.772 | BB | 250021 | 4273980 | 50.54% | 2.898% |
| 22 | 21.574 | 21.405 | 21.675 | BB | 177211 | 4236953 | 50.11% | 2.873% |

Sum of corrected areas: 147471874

Aliphatic EPH 121024.M Tue Dec 10 08:34:38 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067963.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:01
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 28 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
Quant Time: Dec 10 07:48:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 9) | S ortho-Terphenyl (SURR) | 11.470 | 3478796 | 20.000 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 40.00% |
| 12) | S 1-chlorooctadecane (S... | 12.909 | 2577301 | 20.000 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 40.00% |
| | Target Compounds | | | |
| 1) | T n-Nonane (C9) | 3.252 | 3147958 | 20.000 ug/ml |
| 2) | T n-Decane (C10) | 4.314 | 3214085 | 20.000 ug/ml |
| 3) | T A~Naphthalene (C11.7) | 5.890 | 3539917 | 20.000 ug/ml |
| 4) | T n-Dodecane (C12) | 6.329 | 3271530 | 20.000 ug/ml |
| 5) | T A~2-methylnaphthalene... | 6.944 | 3417082 | 20.000 ug/ml |
| 6) | T n-Tetradecane (C14) | 8.122 | 3227885 | 20.000 ug/ml |
| 7) | T n-Hexadecane (C16) | 9.720 | 3274539 | 20.000 ug/ml |
| 8) | T n-Octadecane (C18) | 11.160 | 3262121 | 20.000 ug/ml |
| 10) | T n-Eicosane (C20) | 12.467 | 3040444 | 20.000 ug/ml |
| 11) | T n-Heneicosane (C21) | 13.078 | 2950289 | 20.000 ug/ml |
| 13) | T n-Docosane (C22) | 13.664 | 2883779 | 20.000 ug/ml |
| 14) | T n-Tetracosane (C24) | 14.765 | 2793059 | 20.000 ug/ml |
| 15) | T n-Hexacosane (C26) | 15.785 | 2685455 | 20.000 ug/ml |
| 16) | T n-Octacosane (C28) | 16.733 | 2584611 | 20.000 ug/ml |
| 17) | T n-Tricontane (C30) | 17.619 | 2573207 | 20.000 ug/ml |
| 18) | T n-Dotriacontane (C32) | 18.450 | 2457034 | 20.000 ug/ml |
| 19) | T n-Tetratriacontane (C34) | 19.232 | 2163820 | 20.000 ug/ml |
| 20) | T n-Hexatriacontane (C36) | 19.970 | 1888135 | 20.000 ug/ml |
| 21) | T n-Octatriacontane (C38) | 20.689 | 1805134 | 20.000 ug/ml |
| 22) | T n-Tetracontane (C40) | 21.568 | 1758895 | 20.000 ug/ml |

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

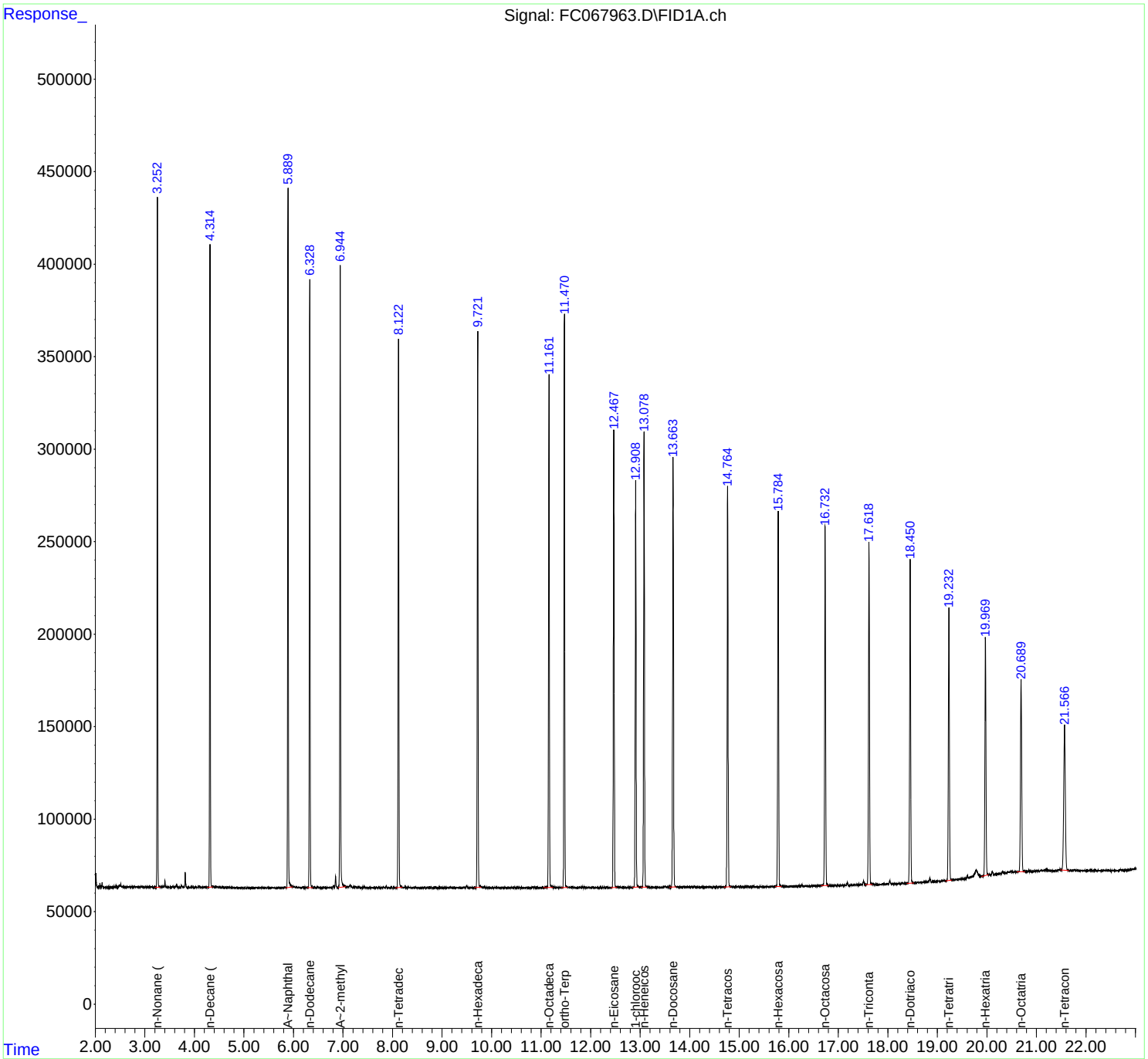
Quantitation Report (QT Reviewed)

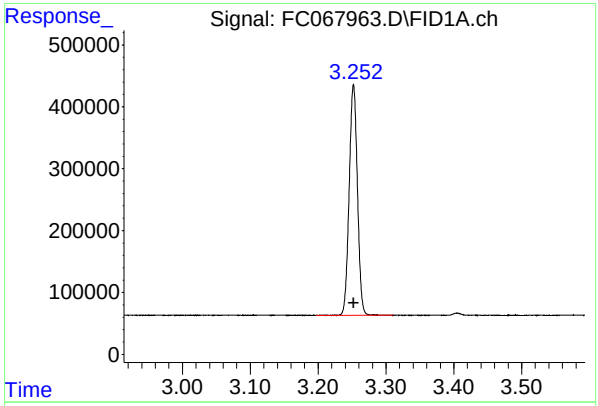
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067963.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:01
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 28 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3

Integration File: autoint1.e
Quant Time: Dec 10 07:48:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

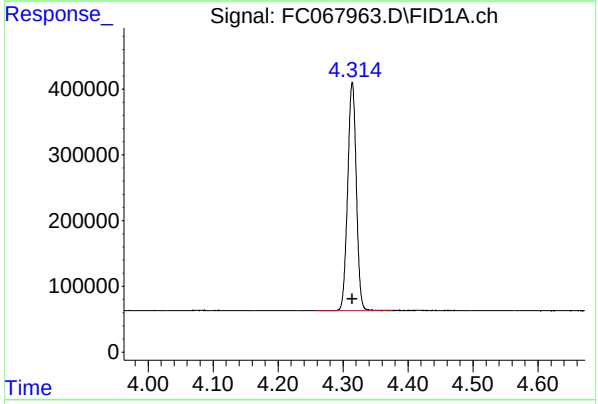





#1 n-Nonane (C9)

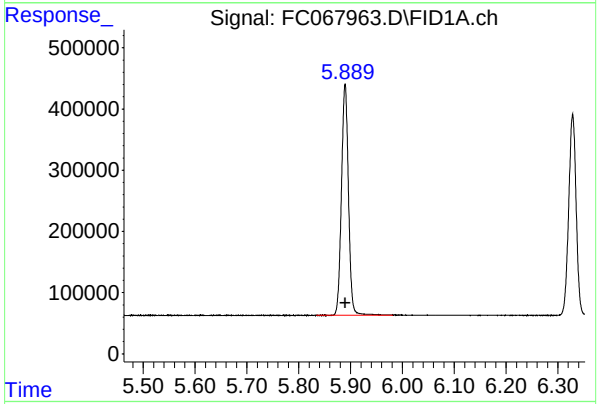
R.T.: 3.252 min
Delta R.T.: 0.000 min
Response: 3147958
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3



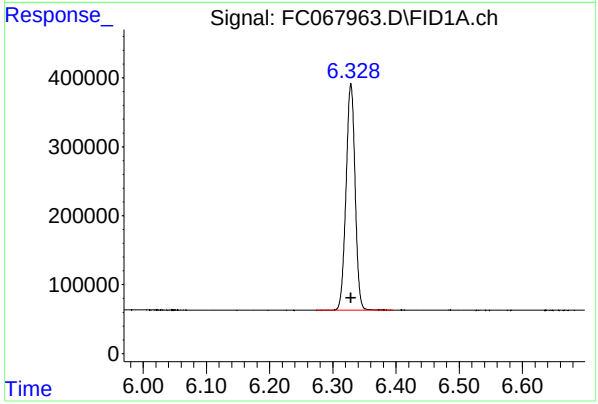

#2 n-Decane (C10)

R.T.: 4.314 min
Delta R.T.: 0.000 min
Response: 3214085
Conc: 20.00 ug/ml



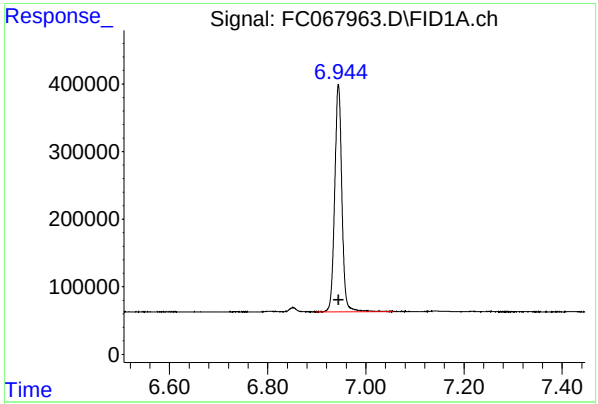

#3 A~Naphthalene (C11.7)

R.T.: 5.890 min
Delta R.T.: 0.000 min
Response: 3539917
Conc: 20.00 ug/ml




#4 n-Dodecane (C12)

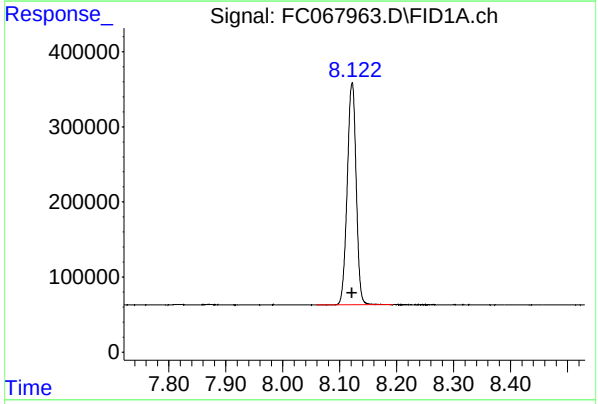
R.T.: 6.329 min
Delta R.T.: 0.000 min
Response: 3271530
Conc: 20.00 ug/ml




#5 A~2-methylnaphthalene (C12.89)

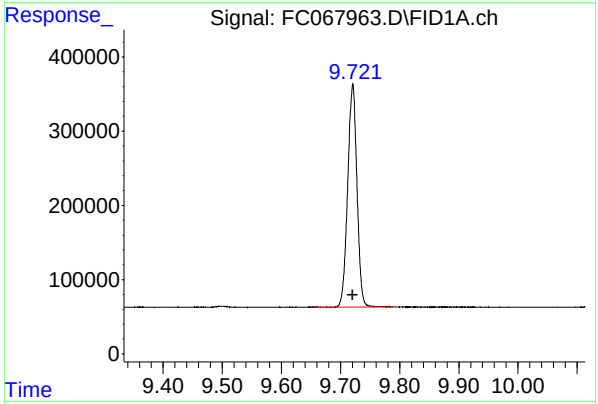
R.T.: 6.944 min
Delta R.T.: 0.000 min
Response: 3417082
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3



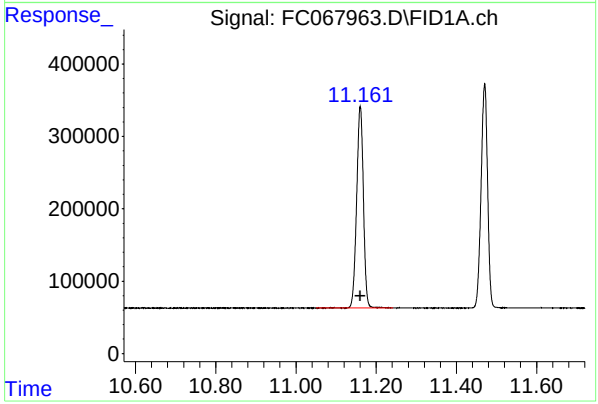

#6 n-Tetradecane (C14)

R.T.: 8.122 min
Delta R.T.: 0.000 min
Response: 3227885
Conc: 20.00 ug/ml



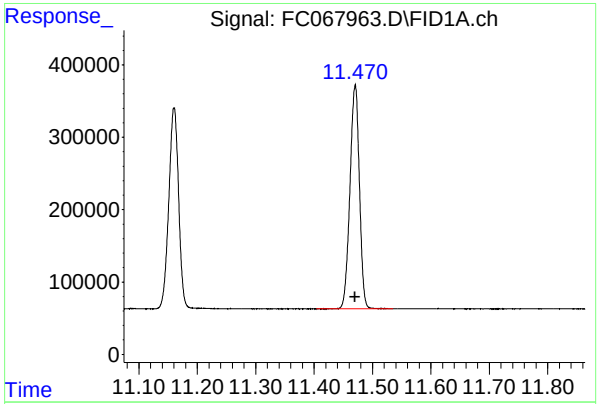

#7 n-Hexadecane (C16)

R.T.: 9.720 min
Delta R.T.: 0.000 min
Response: 3274539
Conc: 20.00 ug/ml




#8 n-Octadecane (C18)

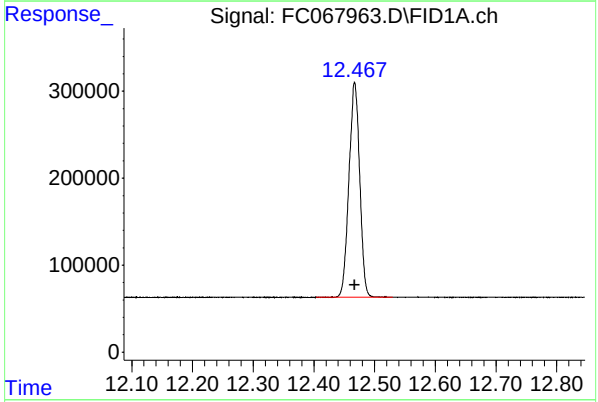
R.T.: 11.160 min
Delta R.T.: 0.000 min
Response: 3262121
Conc: 20.00 ug/ml




#9 ortho-Terphenyl (SURR)

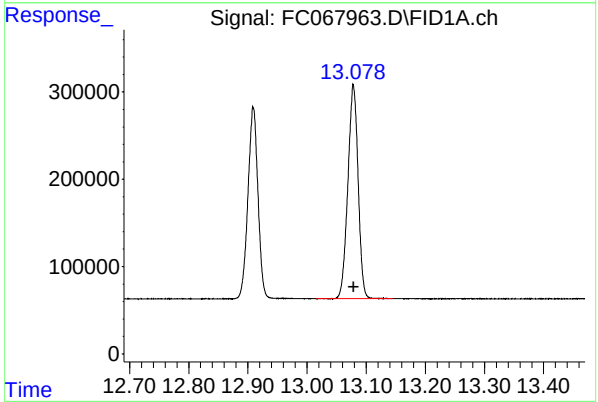
R.T.: 11.470 min
Delta R.T.: 0.000 min
Response: 3478796
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3



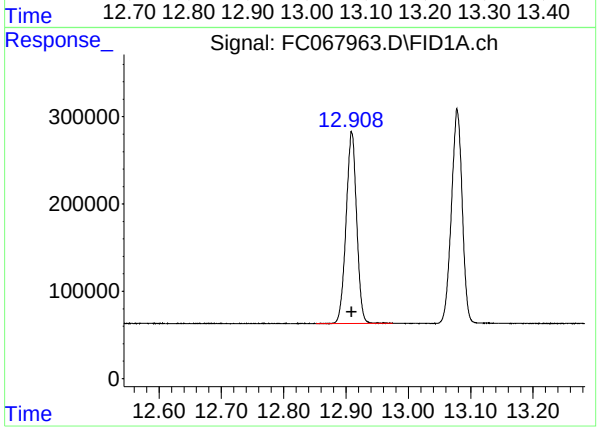

#10 n-Eicosane (C20)

R.T.: 12.467 min
Delta R.T.: 0.000 min
Response: 3040444
Conc: 20.00 ug/ml



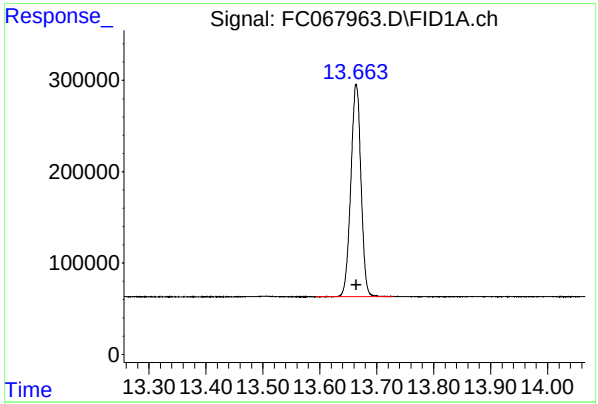

#11 n-Heneicosane (C21)

R.T.: 13.078 min
Delta R.T.: 0.000 min
Response: 2950289
Conc: 20.00 ug/ml




#12 1-chlorooctadecane (SURR)

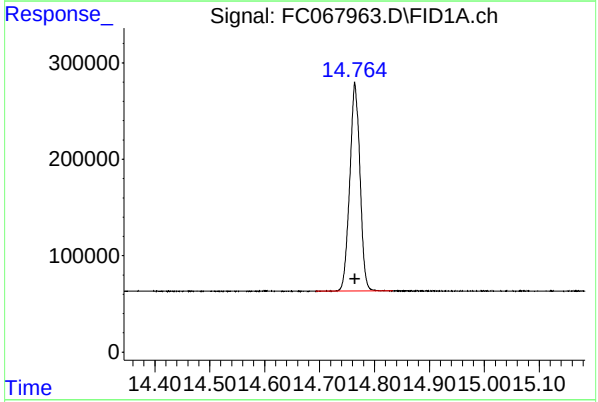
R.T.: 12.909 min
Delta R.T.: 0.000 min
Response: 2577301
Conc: 20.00 ug/ml




#13 n-Docosane (C22)

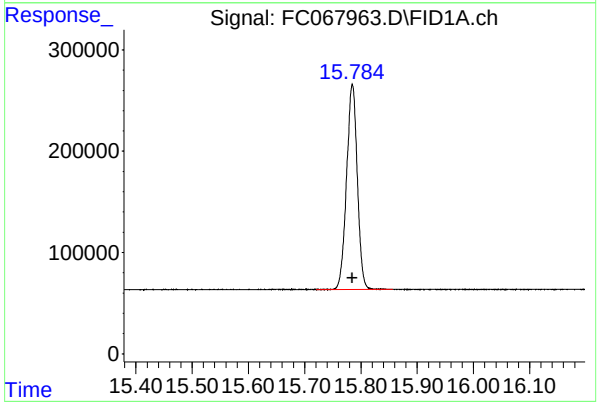
R.T.: 13.664 min
Delta R.T.: 0.000 min
Response: 2883779
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3



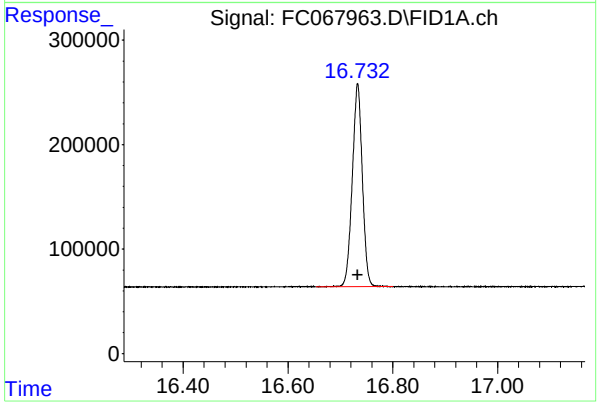

#14 n-Tetracosane (C24)

R.T.: 14.765 min
Delta R.T.: 0.000 min
Response: 2793059
Conc: 20.00 ug/ml



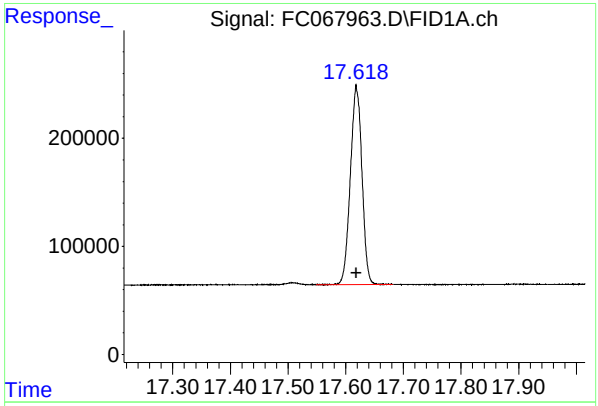

#15 n-Hexacosane (C26)

R.T.: 15.785 min
Delta R.T.: 0.000 min
Response: 2685455
Conc: 20.00 ug/ml




#16 n-Octacosane (C28)

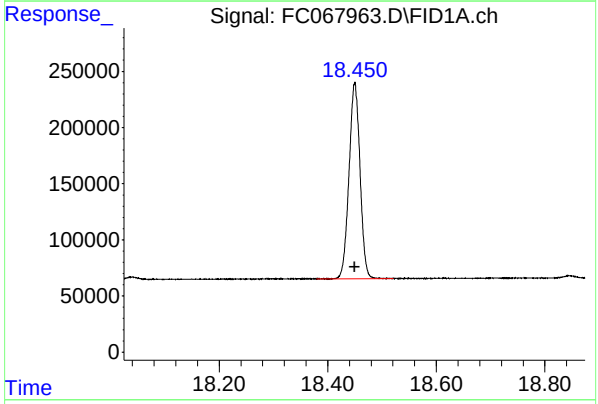
R.T.: 16.733 min
Delta R.T.: 0.000 min
Response: 2584611
Conc: 20.00 ug/ml




#17 n-Tricontane (C30)

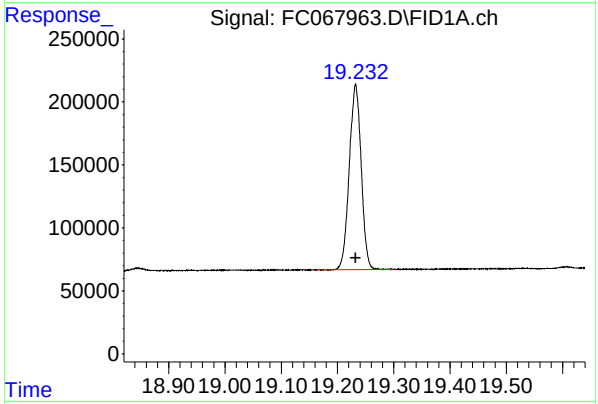
R.T.: 17.619 min
Delta R.T.: 0.000 min
Response: 2573207
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3



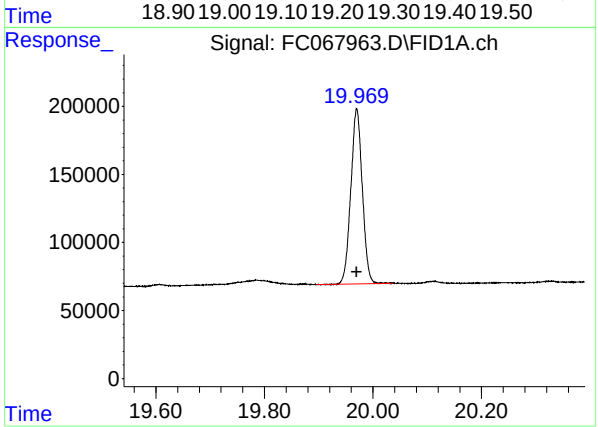

#18 n-Dotriacontane (C32)

R.T.: 18.450 min
Delta R.T.: 0.000 min
Response: 2457034
Conc: 20.00 ug/ml



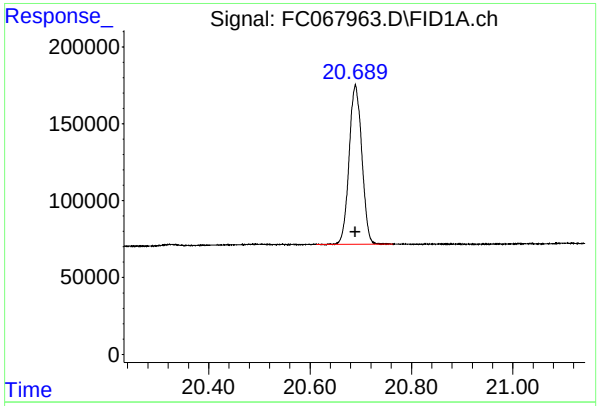

#19 n-Tetratriacontane (C34)

R.T.: 19.232 min
Delta R.T.: 0.000 min
Response: 2163820
Conc: 20.00 ug/ml




#20 n-Hexatriacontane (C36)

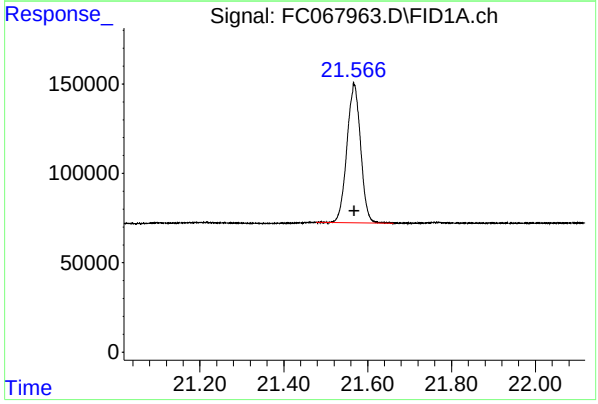
R.T.: 19.970 min
Delta R.T.: 0.000 min
Response: 1888135
Conc: 20.00 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.689 min
Delta R.T.: 0.000 min
Response: 1805134
Conc: 20.00 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD3




#22 n-Tetracontane (C40)

R.T.: 21.568 min
Delta R.T.: 0.000 min
Response: 1758895
Conc: 20.00 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067963.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:01
Sample : 20 PPM ALIPHATIC HC STD3
Misc :
ALS Vial : 28 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.252 | 3.197 | 3.310 | BB | 372980 | 3147958 | 88.93% | 5.078% |
| 2 | 4.314 | 4.258 | 4.377 | BB | 346432 | 3214085 | 90.80% | 5.184% |
| 3 | 5.890 | 5.833 | 5.982 | BB | 379779 | 3539917 | 100.00% | 5.710% |
| 4 | 6.329 | 6.274 | 6.395 | BB | 328341 | 3271530 | 92.42% | 5.277% |
| 5 | 6.944 | 6.899 | 7.055 | BB | 336484 | 3417082 | 96.53% | 5.512% |
| 6 | 8.122 | 8.059 | 8.194 | BB | 296030 | 3227885 | 91.19% | 5.207% |
| 7 | 9.720 | 9.659 | 9.789 | BB | 298772 | 3274539 | 92.50% | 5.282% |
| 8 | 11.160 | 11.050 | 11.242 | BB | 277483 | 3262121 | 92.15% | 5.262% |
| 9 | 11.470 | 11.404 | 11.535 | BB | 308458 | 3478796 | 98.27% | 5.611% |
| 10 | 12.467 | 12.404 | 12.530 | BB | 247040 | 3040444 | 85.89% | 4.904% |
| 11 | 12.909 | 12.852 | 12.975 | BB | 220519 | 2577301 | 72.81% | 4.157% |
| 12 | 13.078 | 13.015 | 13.145 | BB | 245019 | 2950289 | 83.34% | 4.759% |
| 13 | 13.664 | 13.594 | 13.729 | BB | 232655 | 2883779 | 81.46% | 4.652% |
| 14 | 14.765 | 14.694 | 14.834 | BB | 212771 | 2793059 | 78.90% | 4.505% |
| 15 | 15.785 | 15.720 | 15.857 | BB | 202434 | 2685455 | 75.86% | 4.332% |
| 16 | 16.733 | 16.654 | 16.800 | BB | 194383 | 2584611 | 73.01% | 4.169% |
| 17 | 17.619 | 17.549 | 17.682 | BB | 183051 | 2573207 | 72.69% | 4.151% |
| 18 | 18.450 | 18.379 | 18.520 | BB | 174902 | 2457034 | 69.41% | 3.963% |
| 19 | 19.232 | 19.162 | 19.299 | BB | 146887 | 2163820 | 61.13% | 3.490% |
| 20 | 19.970 | 19.895 | 20.037 | BB | 128704 | 1888135 | 53.34% | 3.046% |
| 21 | 20.689 | 20.612 | 20.764 | BB | 103862 | 1805134 | 50.99% | 2.912% |
| 22 | 21.568 | 21.477 | 21.660 | BB | 76658 | 1758895 | 49.69% | 2.837% |
| | | | Sum of corrected areas: | | | 61995077 | | |

Aliphatic EPH 121024.M Tue Dec 10 08:35:08 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067964.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:37
Operator : YP/AJ
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 29 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
Quant Time: Dec 10 07:48:44 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 9) | S ortho-Terphenyl (SURR) | 11.469 | 1802533 | 10.363 ug/ml |
| | Spiked Amount 50.000 | | Recovery = 20.73% | |
| 12) | S 1-chlorooctadecane (S... | 12.909 | 1327156 | 10.299 ug/ml |
| | Spiked Amount 50.000 | | Recovery = 20.60% | |
| | **Target Compounds** | | | |
| 1) | T n-Nonane (C9) | 3.252 | 1623015 | 10.312 ug/ml |
| 2) | T n-Decane (C10) | 4.314 | 1654011 | 10.292 ug/ml |
| 3) | T A~Naphthalene (C11.7) | 5.889 | 1815911 | 10.260 ug/ml |
| 4) | T n-Dodecane (C12) | 6.328 | 1679969 | 10.270 ug/ml |
| 5) | T A~2-methylnaphthalene... | 6.944 | 1727677 | 10.112 ug/ml |
| 6) | T n-Tetradecane (C14) | 8.121 | 1651716 | 10.234 ug/ml |
| 7) | T n-Hexadecane (C16) | 9.719 | 1670857 | 10.205 ug/ml |
| 8) | T n-Octadecane (C18) | 11.159 | 1670725 | 10.243 ug/ml |
| 10) | T n-Eicosane (C20) | 12.467 | 1572180 | 10.342 ug/ml |
| 11) | T n-Heneicosane (C21) | 13.078 | 1525125 | 10.339 ug/ml |
| 13) | T n-Docosane (C22) | 13.664 | 1490072 | 10.334 ug/ml |
| 14) | T n-Tetracosane (C24) | 14.764 | 1445384 | 10.350 ug/ml |
| 15) | T n-Hexacosane (C26) | 15.784 | 1390261 | 10.354 ug/ml |
| 16) | T n-Octacosane (C28) | 16.732 | 1349238 | 10.441 ug/ml |
| 17) | T n-Tricontane (C30) | 17.617 | 1353242 | 10.518 ug/ml |
| 18) | T n-Dotriacontane (C32) | 18.450 | 1296616 | 10.554 ug/ml |
| 19) | T n-Tetratriacontane (C34) | 19.231 | 1140985 | 10.546 ug/ml |
| 20) | T n-Hexatriacontane (C36) | 19.970 | 982778 | 10.410 ug/ml |
| 21) | T n-Octatriacontane (C38) | 20.690 | 943772 | 10.457 ug/ml |
| 22) | T n-Tetracontane (C40) | 21.567 | 911825 | 10.368 ug/ml |

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

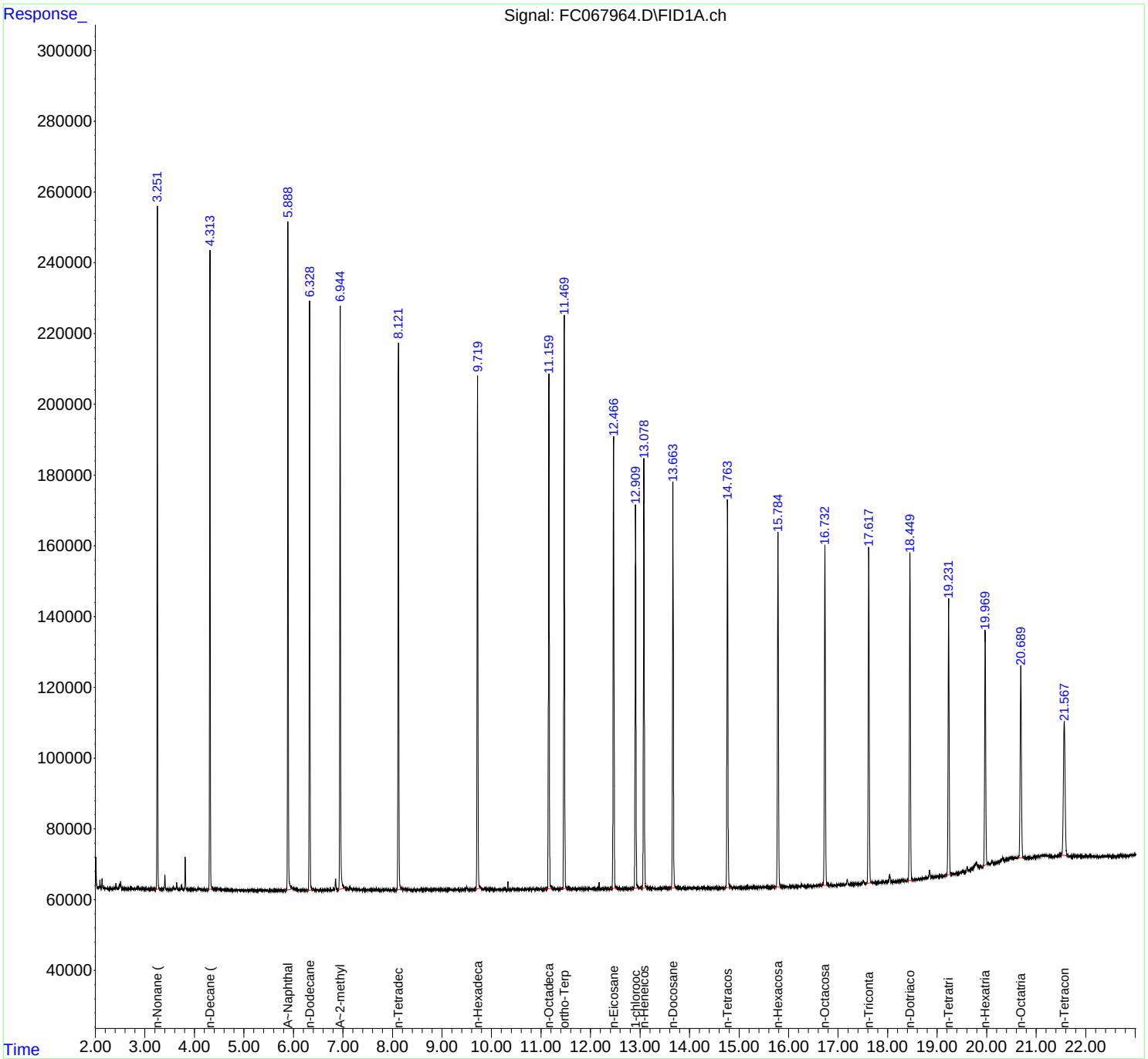
Quantitation Report (QT Reviewed)

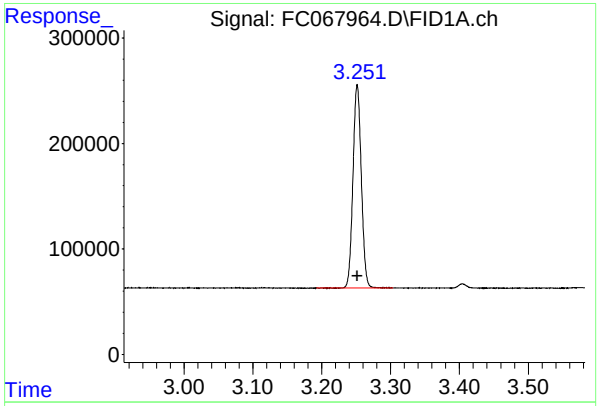
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067964.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:37
Operator : YP/AJ
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 29 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4

Integration File: autoint1.e
Quant Time: Dec 10 07:48:44 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

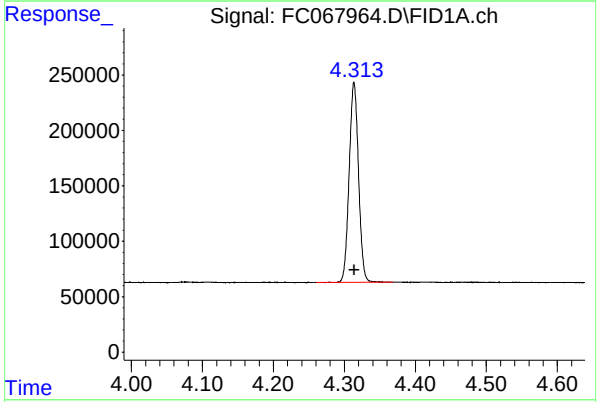





#1 n-Nonane (C9)

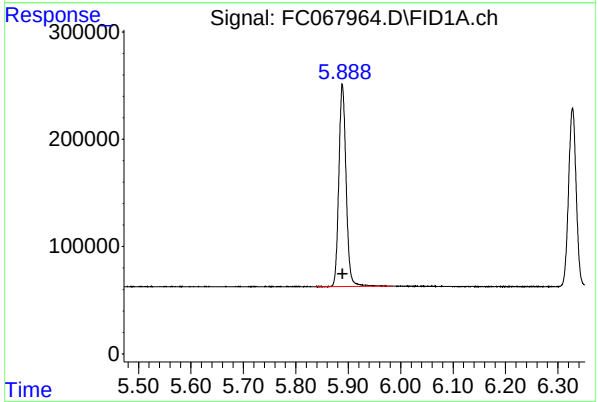
R.T.: 3.252 min
Delta R.T.: 0.000 min
Response: 1623015
Conc: 10.31 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4



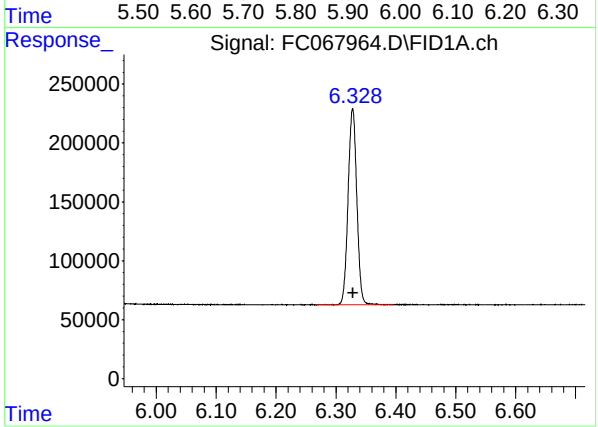

#2 n-Decane (C10)

R.T.: 4.314 min
Delta R.T.: 0.000 min
Response: 1654011
Conc: 10.29 ug/ml



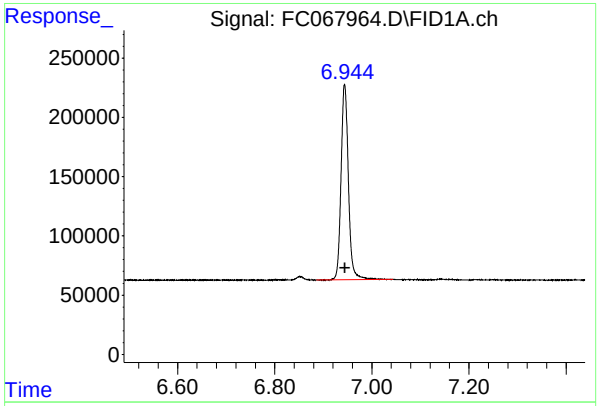

#3 A~Naphthalene (C11.7)

R.T.: 5.889 min
Delta R.T.: 0.000 min
Response: 1815911
Conc: 10.26 ug/ml




#4 n-Dodecane (C12)

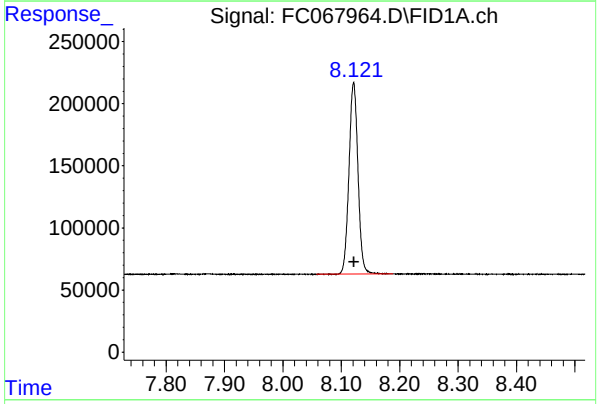
R.T.: 6.328 min
Delta R.T.: 0.000 min
Response: 1679969
Conc: 10.27 ug/ml




#5 A~2-methylnaphthalene (C12.89)

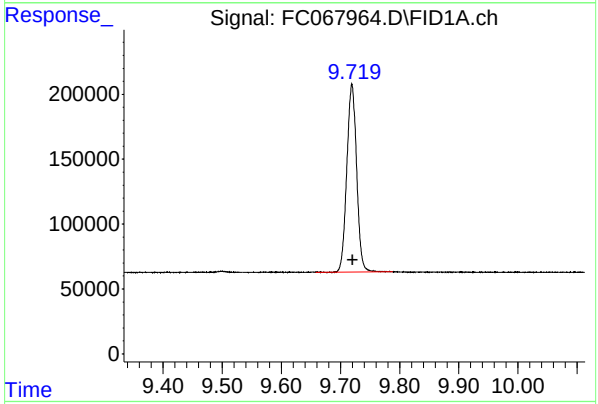
R.T.: 6.944 min
Delta R.T.: 0.000 min
Response: 1727677
Conc: 10.11 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4



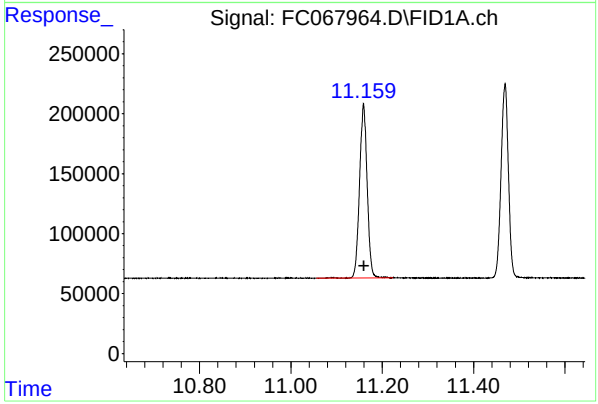

#6 n-Tetradecane (C14)

R.T.: 8.121 min
Delta R.T.: 0.000 min
Response: 1651716
Conc: 10.23 ug/ml



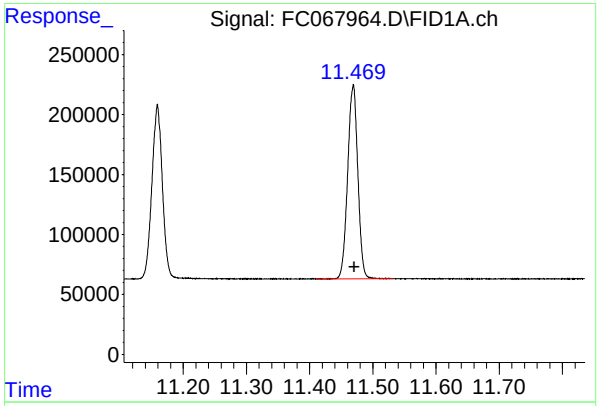

#7 n-Hexadecane (C16)

R.T.: 9.719 min
Delta R.T.: -0.001 min
Response: 1670857
Conc: 10.21 ug/ml




#8 n-Octadecane (C18)

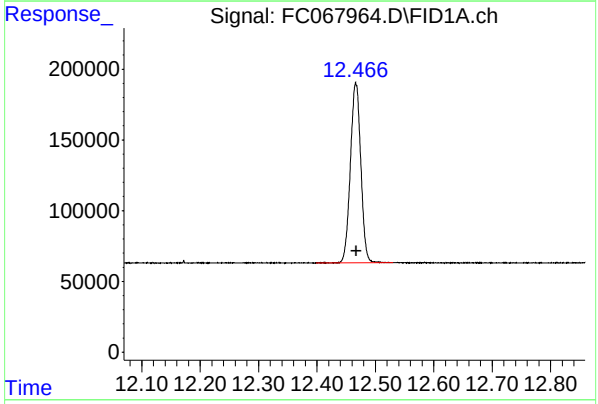
R.T.: 11.159 min
Delta R.T.: -0.001 min
Response: 1670725
Conc: 10.24 ug/ml




#9 ortho-Terphenyl (SURR)

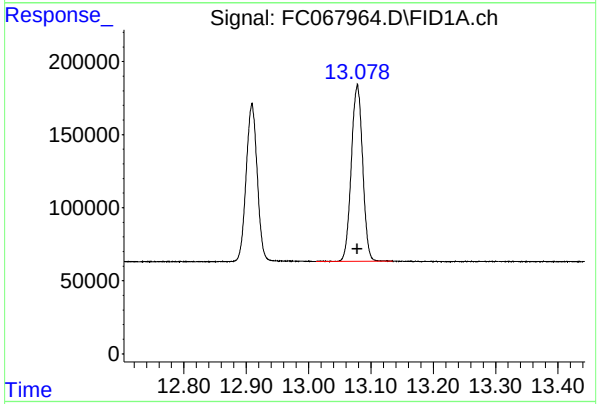
R.T.: 11.469 min
Delta R.T.: -0.002 mi
Response: 1802533
Conc: 10.36 ug/m

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4



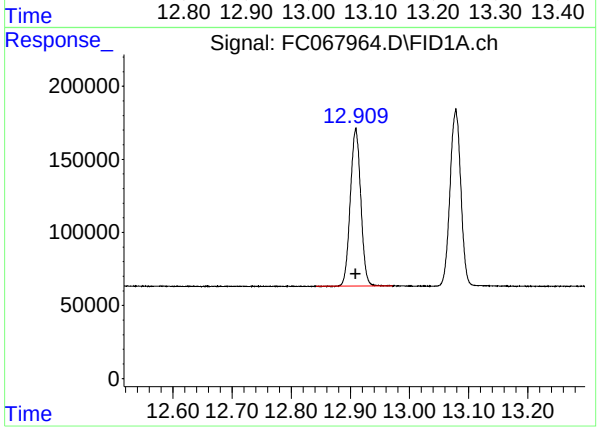

#10 n-Eicosane (C20)

R.T.: 12.467 min
Delta R.T.: 0.000 min
Response: 1572180
Conc: 10.34 ug/ml



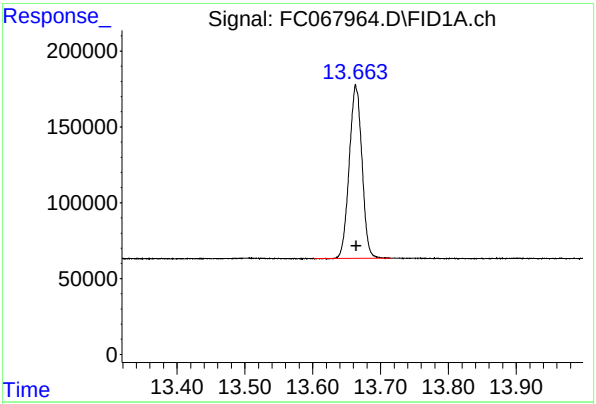

#11 n-Heneicosane (C21)

R.T.: 13.078 min
Delta R.T.: 0.000 min
Response: 1525125
Conc: 10.34 ug/ml




#12 1-chlorooctadecane (SURR)

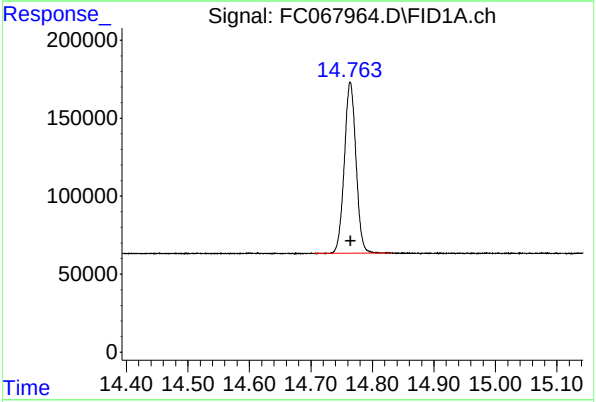
R.T.: 12.909 min
Delta R.T.: 0.000 min
Response: 1327156
Conc: 10.30 ug/ml




#13 n-Docosane (C22)

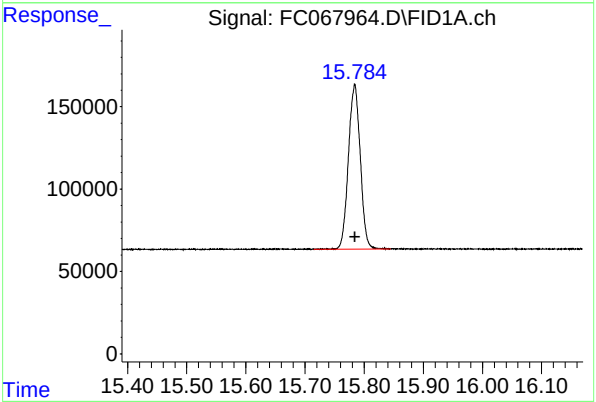
R.T.: 13.664 min
Delta R.T.: 0.000 min
Response: 1490072
Conc: 10.33 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4



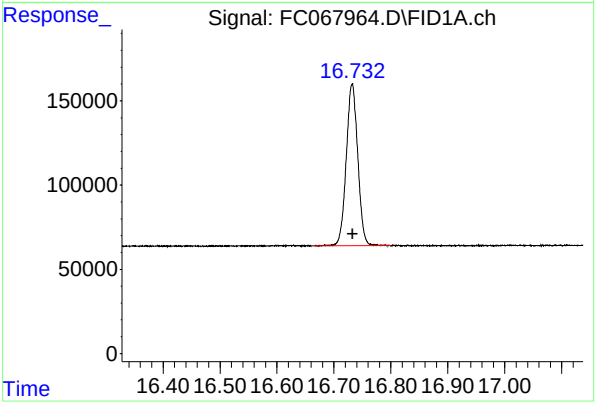

#14 n-Tetracosane (C24)

R.T.: 14.764 min
Delta R.T.: 0.000 min
Response: 1445384
Conc: 10.35 ug/ml



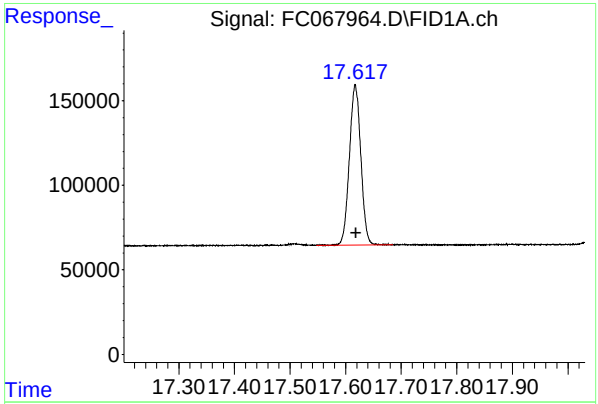

#15 n-Hexacosane (C26)

R.T.: 15.784 min
Delta R.T.: 0.000 min
Response: 1390261
Conc: 10.35 ug/ml




#16 n-Octacosane (C28)

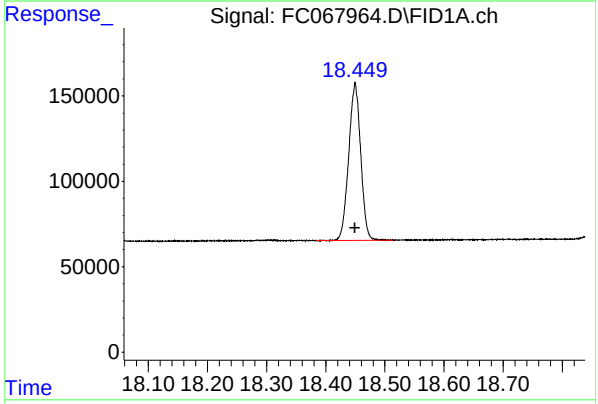
R.T.: 16.732 min
Delta R.T.: 0.000 min
Response: 1349238
Conc: 10.44 ug/ml




#17 n-Tricontane (C30)

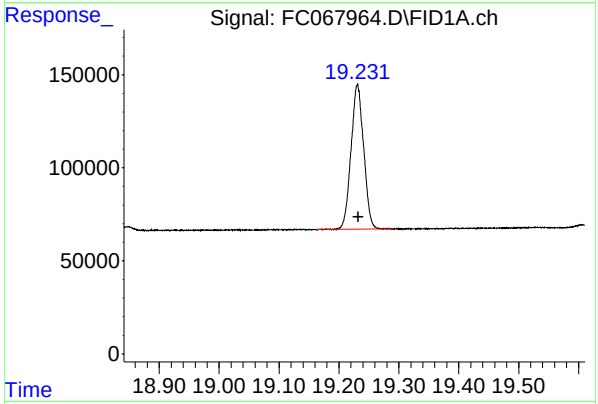
R.T.: 17.617 min
Delta R.T.: -0.001 min
Response: 1353242
Conc: 10.52 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4



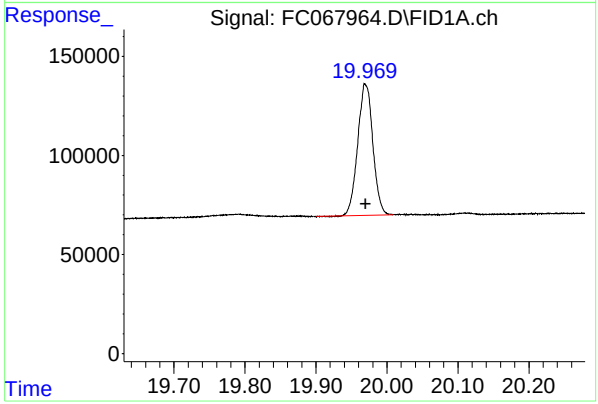

#18 n-Dotriacontane (C32)

R.T.: 18.450 min
Delta R.T.: 0.000 min
Response: 1296616
Conc: 10.55 ug/ml



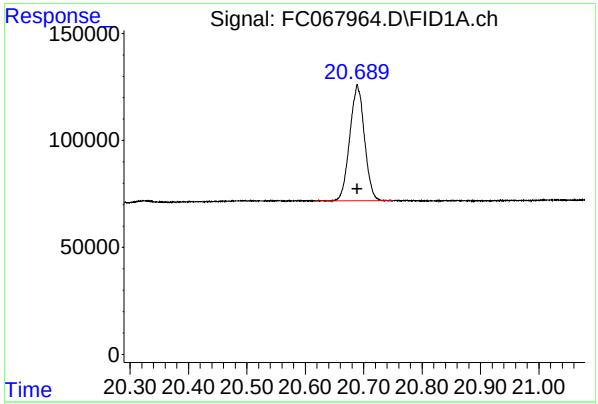

#19 n-Tetratriacontane (C34)

R.T.: 19.231 min
Delta R.T.: -0.001 min
Response: 1140985
Conc: 10.55 ug/ml




#20 n-Hexatriacontane (C36)

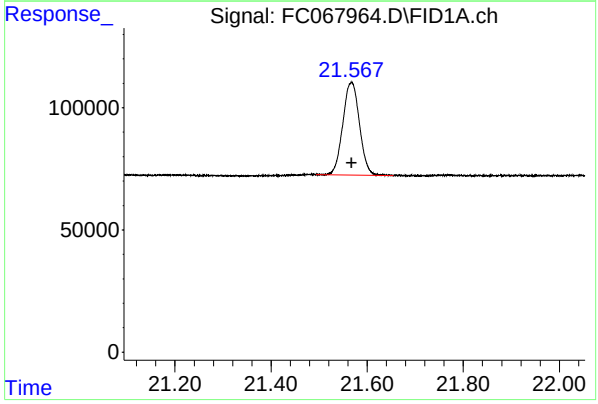
R.T.: 19.970 min
Delta R.T.: 0.000 min
Response: 982778
Conc: 10.41 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.690 min
Delta R.T.: 0.000 mi
Response: 943772
Conc: 10.46 ug/m

**Instrument :**
FID_C
**ClientSampleId :**
10 PPM ALIPHATIC HC STD4




#22 n-Tetracontane (C40)

R.T.: 21.567 min
Delta R.T.: 0.000 min
Response: 911825
Conc: 10.37 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067964.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 06:37
Sample : 10 PPM ALIPHATIC HC STD4
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.252 | 3.192 | 3.304 | BB | 192733 | 1623015 | 89.38% | 5.068% |
| 2 | 4.314 | 4.260 | 4.369 | BB | 180382 | 1654011 | 91.08% | 5.165% |
| 3 | 5.889 | 5.839 | 5.985 | BB | 188387 | 1815911 | 100.00% | 5.670% |
| 4 | 6.328 | 6.267 | 6.395 | BB | 166716 | 1679969 | 92.51% | 5.246% |
| 5 | 6.944 | 6.885 | 7.044 | BB | 165188 | 1727677 | 95.14% | 5.395% |
| 6 | 8.121 | 8.057 | 8.189 | BB | 154605 | 1651716 | 90.96% | 5.158% |
| 7 | 9.719 | 9.659 | 9.789 | BB | 144741 | 1670857 | 92.01% | 5.217% |
| 8 | 11.159 | 11.055 | 11.224 | BB | 144557 | 1670725 | 92.00% | 5.217% |
| 9 | 11.469 | 11.410 | 11.532 | BB | 160852 | 1802533 | 99.26% | 5.629% |
| 10 | 12.467 | 12.399 | 12.530 | BB | 126952 | 1572180 | 86.58% | 4.909% |
| 11 | 12.909 | 12.842 | 12.972 | BB | 107268 | 1327156 | 73.08% | 4.144% |
| 12 | 13.078 | 13.012 | 13.135 | BB | 121361 | 1525125 | 83.99% | 4.762% |
| 13 | 13.664 | 13.602 | 13.715 | BB | 113928 | 1490072 | 82.06% | 4.653% |
| 14 | 14.764 | 14.705 | 14.830 | BB | 110057 | 1445384 | 79.60% | 4.513% |
| 15 | 15.784 | 15.715 | 15.845 | BB | 99964 | 1390261 | 76.56% | 4.341% |
| 16 | 16.732 | 16.665 | 16.800 | BB | 95942 | 1349238 | 74.30% | 4.213% |
| 17 | 17.617 | 17.547 | 17.685 | BB | 94848 | 1353242 | 74.52% | 4.226% |
| 18 | 18.450 | 18.384 | 18.514 | BB | 92532 | 1296616 | 71.40% | 4.049% |
| 19 | 19.231 | 19.162 | 19.290 | BB | 77570 | 1140985 | 62.83% | 3.563% |
| 20 | 19.970 | 19.900 | 20.009 | BB | 65695 | 982778 | 54.12% | 3.069% |
| 21 | 20.690 | 20.619 | 20.750 | BB | 53456 | 943772 | 51.97% | 2.947% |
| 22 | 21.567 | 21.494 | 21.654 | BB | 37876 | 911825 | 50.21% | 2.847% |
| | | | Sum of corrected areas: | | | 32025047 | | |

Aliphatic EPH 121024.M Tue Dec 10 08:35:24 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067965.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:14
Operator : YP/AJ
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 30 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
Quant Time: Dec 10 07:49:25 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.468 | 931695 | 5.356 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 10.71% |
| 12) S | 1-chlorooctadecane (S... | 12.908 | 673575 | 5.227 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 10.45% |
| | **Target Compounds** | | | |
| 1) T | n-Nonane (C9) | 3.252 | 837588 | 5.321 ug/ml |
| 2) T | n-Decane (C10) | 4.314 | 849284 | 5.285 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.889 | 920617 | 5.201 ug/ml |
| 4) T | n-Dodecane (C12) | 6.328 | 856678 | 5.237 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.944 | 869061 | 5.087 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.120 | 844626 | 5.233 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.719 | 857364 | 5.237 ug/ml |
| 8) T | n-Octadecane (C18) | 11.159 | 853140 | 5.231 ug/ml |
| 10) T | n-Eicosane (C20) | 12.466 | 802158 | 5.277 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.077 | 781976 | 5.301 ug/ml |
| 13) T | n-Docosane (C22) | 13.662 | 767100 | 5.320 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.763 | 744614 | 5.332 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.783 | 715051 | 5.325 ug/ml |
| 16) T | n-Octacosane (C28) | 16.731 | 704114 | 5.449 ug/ml |
| 17) T | n-Tricontane (C30) | 17.618 | 709104 | 5.511 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.449 | 683639 | 5.565 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.231 | 601708 | 5.562 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.970 | 508095 | 5.382 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.690 | 491184 | 5.442 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.567 | 470158 | 5.346 ug/ml |

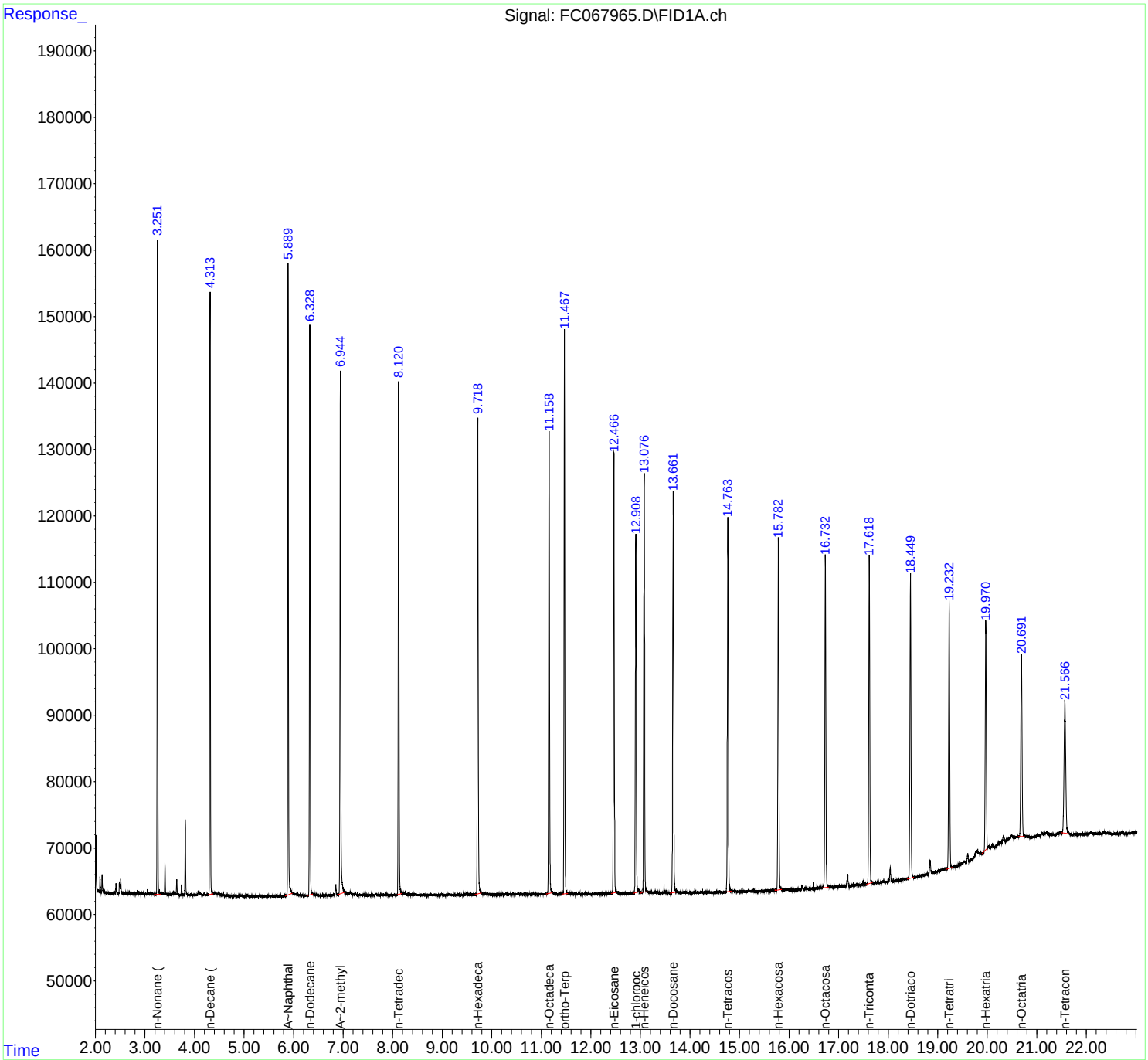
(f)=RT Delta > 1/2 Window (m)=manual int.

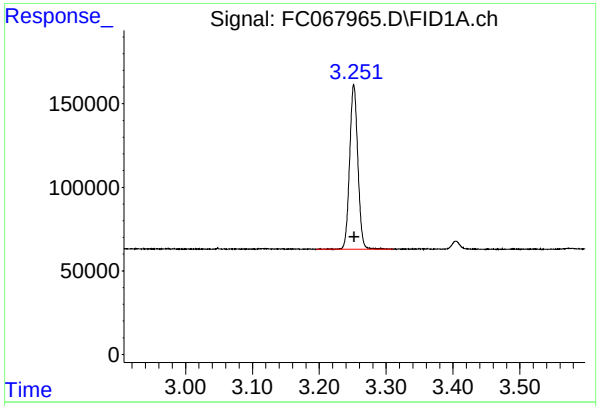
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067965.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:14
Operator : YP/AJ
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 30 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5

Integration File: autoint1.e
Quant Time: Dec 10 07:49:25 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:47:35 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

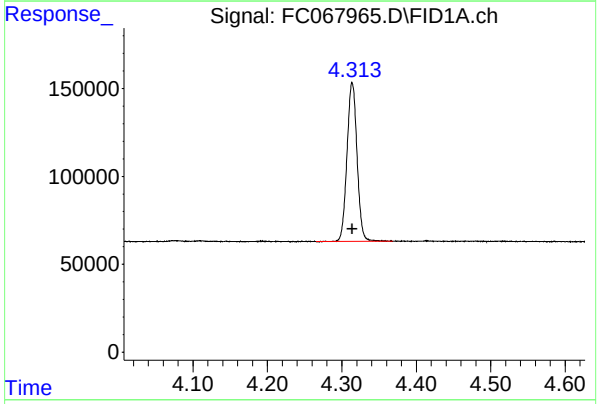





#1 n-Nonane (C9)

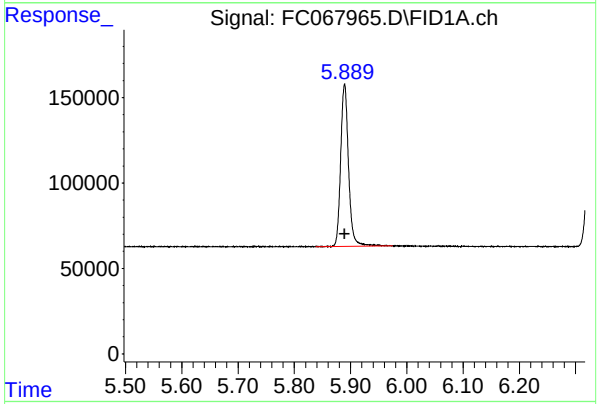
R.T.: 3.252 min
Delta R.T.: 0.000 min
Response: 837588
Conc: 5.32 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5



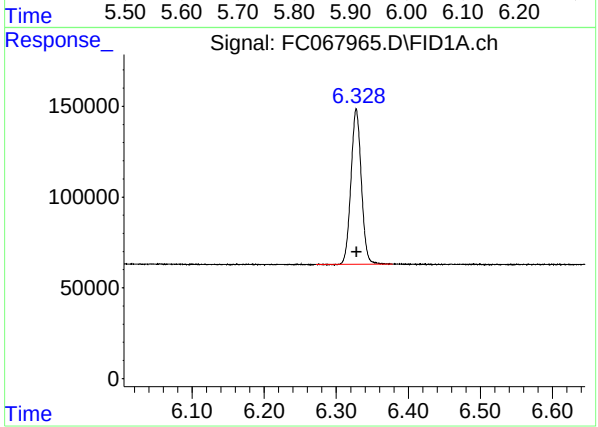

#2 n-Decane (C10)

R.T.: 4.314 min
Delta R.T.: 0.000 min
Response: 849284
Conc: 5.28 ug/ml



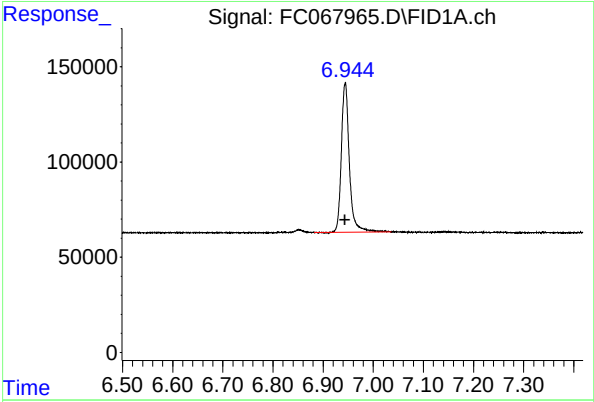

#3 A~Naphthalene (C11.7)

R.T.: 5.889 min
Delta R.T.: 0.000 min
Response: 920617
Conc: 5.20 ug/ml




#4 n-Dodecane (C12)

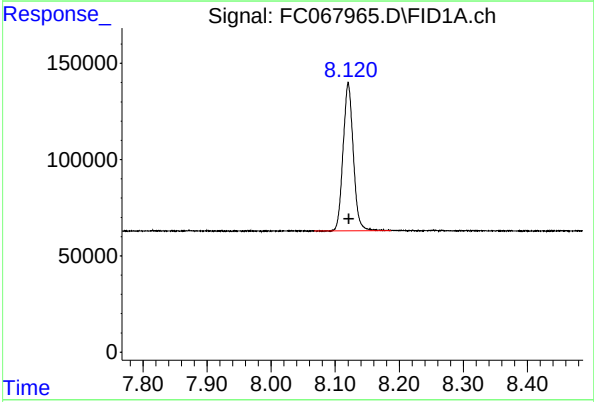
R.T.: 6.328 min
Delta R.T.: 0.000 min
Response: 856678
Conc: 5.24 ug/ml




#5 A~2-methylnaphthalene (C12.89)

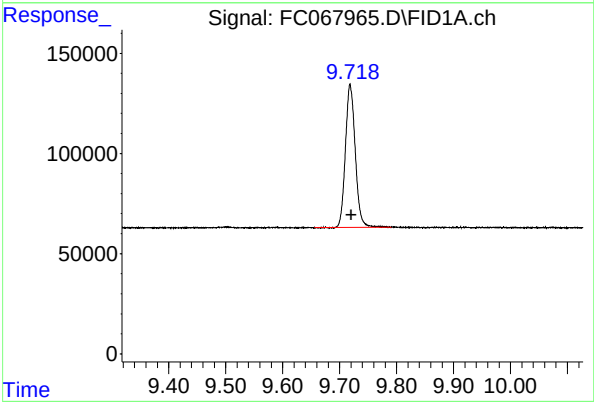
R.T.: 6.944 min
Delta R.T.: 0.000 min
Response: 869061
Conc: 5.09 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5



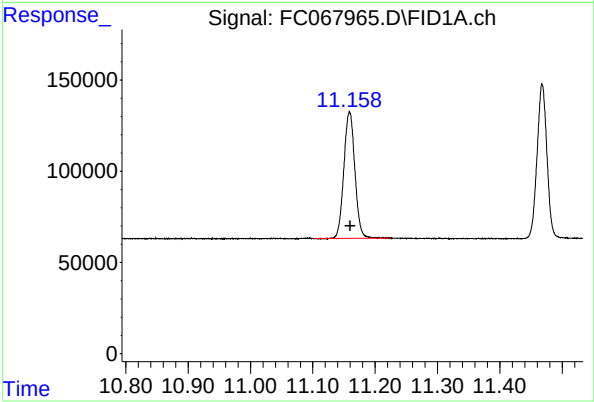

#6 n-Tetradecane (C14)

R.T.: 8.120 min
Delta R.T.: -0.001 min
Response: 844626
Conc: 5.23 ug/ml



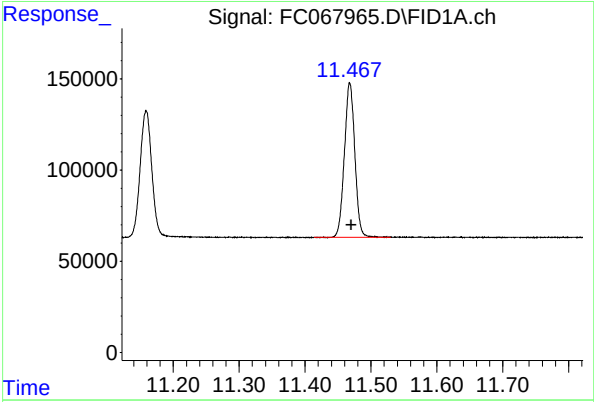

#7 n-Hexadecane (C16)

R.T.: 9.719 min
Delta R.T.: -0.002 min
Response: 857364
Conc: 5.24 ug/ml




#8 n-Octadecane (C18)

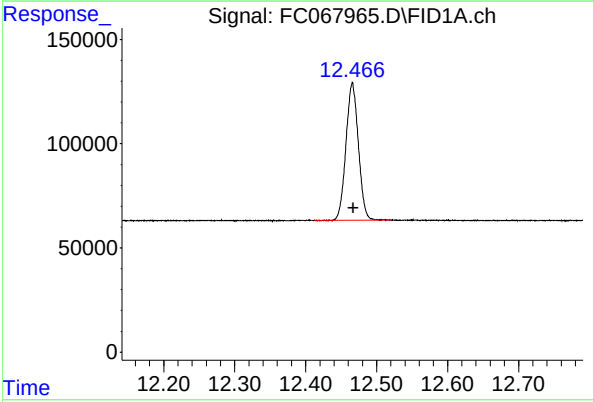
R.T.: 11.159 min
Delta R.T.: -0.001 min
Response: 853140
Conc: 5.23 ug/ml




#9 ortho-Terphenyl (SURR)

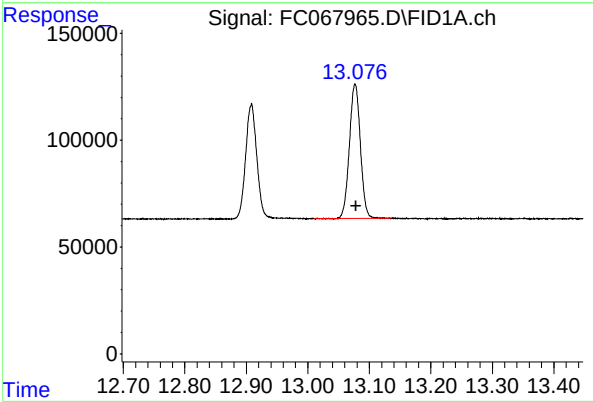
R.T.: 11.468 min
Delta R.T.: -0.002 min
Response: 931695
Conc: 5.36 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5



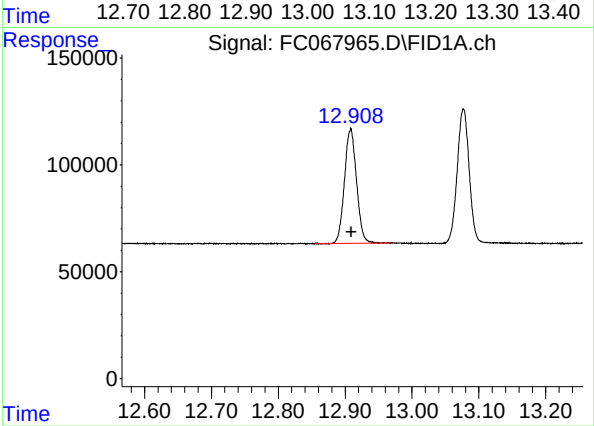

#10 n-Eicosane (C20)

R.T.: 12.466 min
Delta R.T.: -0.002 min
Response: 802158
Conc: 5.28 ug/ml



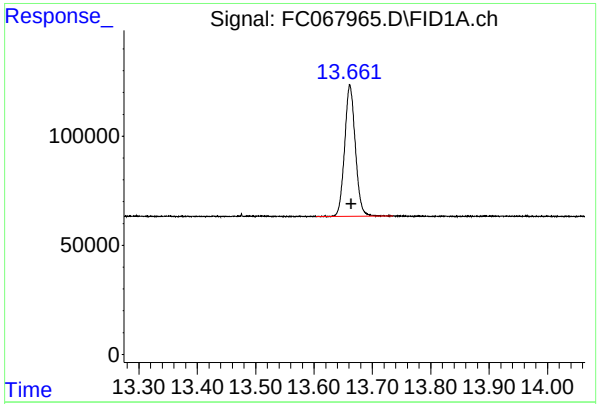

#11 n-Heneicosane (C21)

R.T.: 13.077 min
Delta R.T.: -0.002 min
Response: 781976
Conc: 5.30 ug/ml




#12 1-chlorooctadecane (SURR)

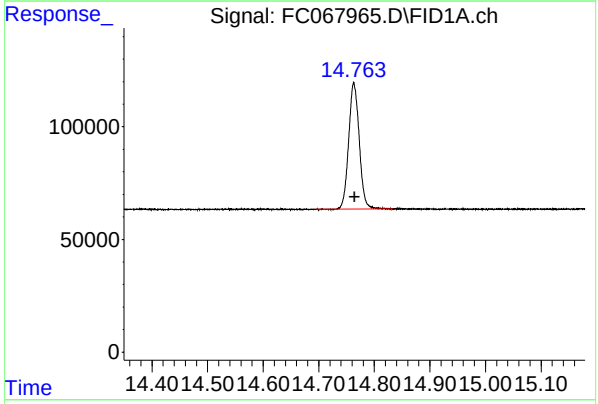
R.T.: 12.908 min
Delta R.T.: -0.001 min
Response: 673575
Conc: 5.23 ug/ml




#13 n-Docosane (C22)

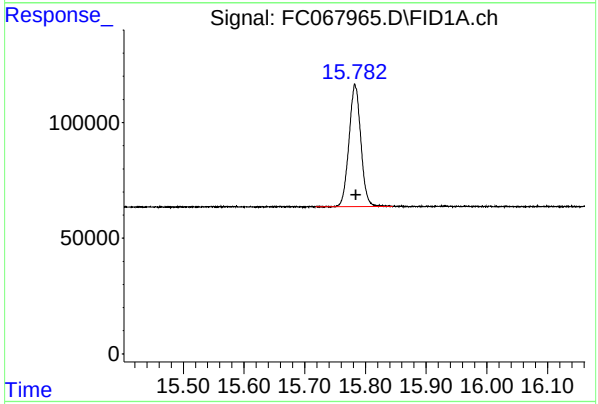
R.T.: 13.662 min
Delta R.T.: -0.002 min
Response: 767100
Conc: 5.32 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5



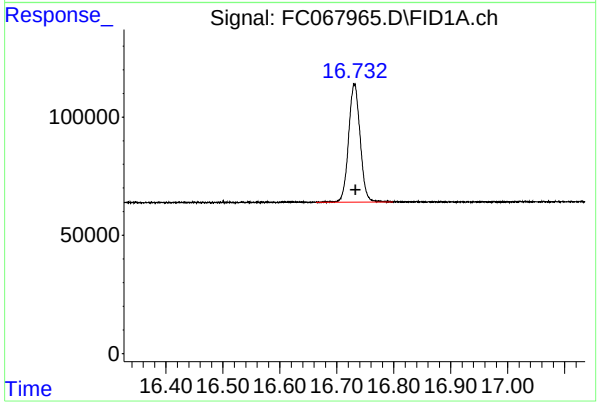

#14 n-Tetracosane (C24)

R.T.: 14.763 min
Delta R.T.: -0.001 min
Response: 744614
Conc: 5.33 ug/ml



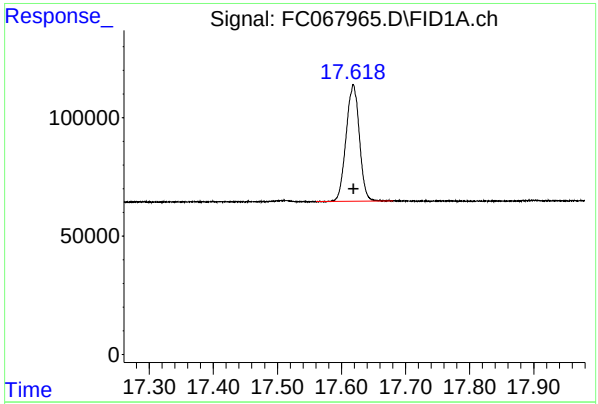

#15 n-Hexacosane (C26)

R.T.: 15.783 min
Delta R.T.: -0.002 min
Response: 715051
Conc: 5.33 ug/ml




#16 n-Octacosane (C28)

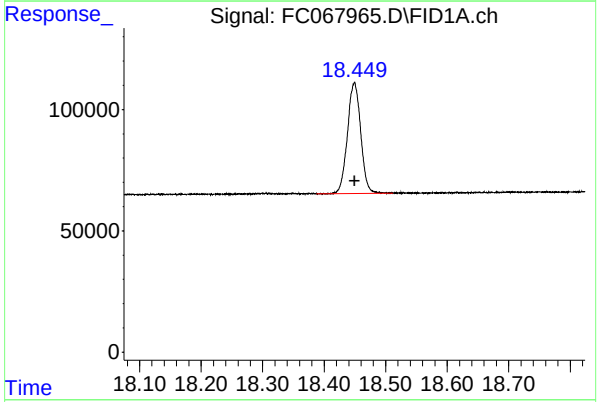
R.T.: 16.731 min
Delta R.T.: -0.002 min
Response: 704114
Conc: 5.45 ug/ml




#17 n-Tricontane (C30)

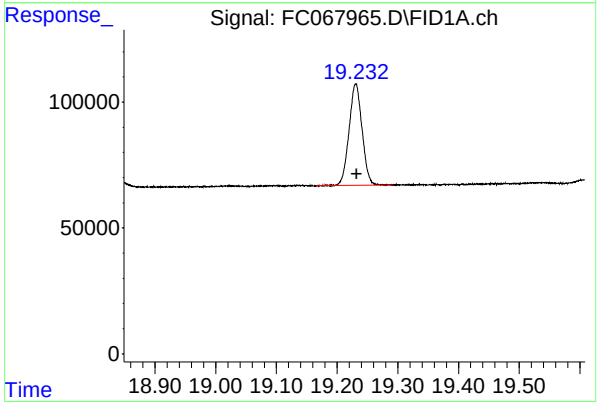
R.T.: 17.618 min
Delta R.T.: 0.000 min
Response: 709104
Conc: 5.51 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5



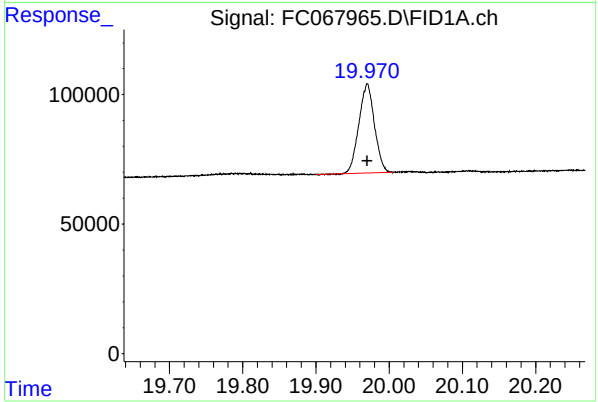

#18 n-Dotriacontane (C32)

R.T.: 18.449 min
Delta R.T.: 0.000 min
Response: 683639
Conc: 5.56 ug/ml



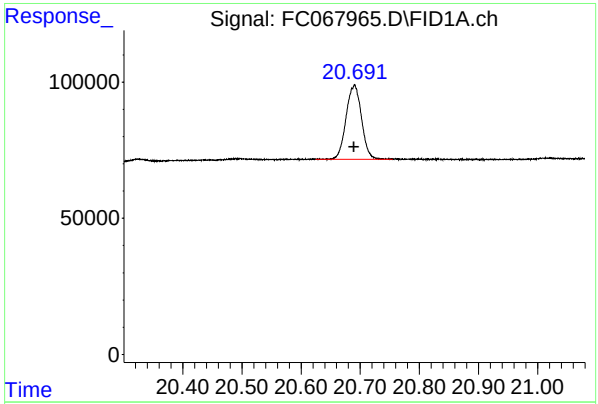

#19 n-Tetratriacontane (C34)

R.T.: 19.231 min
Delta R.T.: -0.002 min
Response: 601708
Conc: 5.56 ug/ml




#20 n-Hexatriacontane (C36)

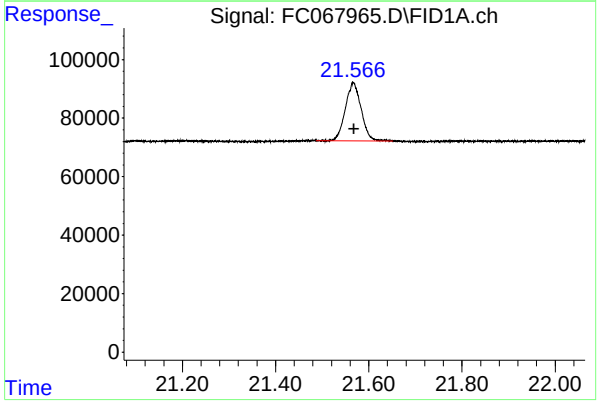
R.T.: 19.970 min
Delta R.T.: 0.000 min
Response: 508095
Conc: 5.38 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.690 min
Delta R.T.: 0.000 min
Response: 491184
Conc: 5.44 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
5 PPM ALIPHATIC HC STD5




#22 n-Tetracontane (C40)

R.T.: 21.567 min
Delta R.T.: 0.000 min
Response: 470158
Conc: 5.35 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067965.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:14
Sample : 5 PPM ALIPHATIC HC STD5
Misc :
ALS Vial : 30 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.252 | 3.195 | 3.310 | BB | 98464 | 837588 | 89.90% | 5.085% |
| 2 | 4.314 | 4.265 | 4.369 | BB | 90579 | 849284 | 91.15% | 5.156% |
| 3 | 5.889 | 5.839 | 5.975 | BB | 94582 | 920617 | 98.81% | 5.589% |
| 4 | 6.328 | 6.272 | 6.379 | BB | 85381 | 856678 | 91.95% | 5.201% |
| 5 | 6.944 | 6.882 | 7.035 | BB | 78290 | 869061 | 93.28% | 5.276% |
| 6 | 8.120 | 8.067 | 8.187 | BB | 76887 | 844626 | 90.65% | 5.127% |
| 7 | 9.719 | 9.655 | 9.790 | BB | 71298 | 857364 | 92.02% | 5.205% |
| 8 | 11.159 | 11.102 | 11.225 | BB | 69339 | 853140 | 91.57% | 5.179% |
| 9 | 11.468 | 11.414 | 11.530 | BB | 84392 | 931695 | 100.00% | 5.656% |
| 10 | 12.466 | 12.412 | 12.520 | BB | 65591 | 802158 | 86.10% | 4.870% |
| 11 | 12.908 | 12.854 | 12.969 | BB | 53827 | 673575 | 72.30% | 4.089% |
| 12 | 13.077 | 13.010 | 13.135 | BB | 62999 | 781976 | 83.93% | 4.747% |
| 13 | 13.662 | 13.604 | 13.735 | BB | 60235 | 767100 | 82.33% | 4.657% |
| 14 | 14.763 | 14.695 | 14.834 | BB | 55934 | 744614 | 79.92% | 4.520% |
| 15 | 15.783 | 15.719 | 15.845 | BB | 52306 | 715051 | 76.75% | 4.341% |
| 16 | 16.731 | 16.664 | 16.799 | BB | 50095 | 704114 | 75.57% | 4.274% |
| 17 | 17.618 | 17.560 | 17.680 | BB | 49392 | 709104 | 76.11% | 4.305% |
| 18 | 18.449 | 18.387 | 18.512 | BB | 45576 | 683639 | 73.38% | 4.150% |
| 19 | 19.231 | 19.165 | 19.292 | BB | 40235 | 601708 | 64.58% | 3.653% |
| 20 | 19.970 | 19.900 | 20.005 | BB | 34623 | 508095 | 54.53% | 3.084% |
| 21 | 20.690 | 20.625 | 20.755 | BB | 27363 | 491184 | 52.72% | 2.982% |
| 22 | 21.567 | 21.487 | 21.652 | BB | 19977 | 470158 | 50.46% | 2.854% |
| | | | Sum of corrected areas: | | | 16472529 | | |

Aliphatic EPH 121024.M Tue Dec 10 08:35:44 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067966.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:51
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 31 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
Quant Time: Dec 10 08:28:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.470 | 3272172 | 18.924 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 37.85% |
| 12) S | 1-chlorooctadecane (S... | 12.910 | 2422368 | 18.985 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 37.97% |
| | **Target Compounds** | | | |
| 1) T | n-Nonane (C9) | 3.251 | 2939755 | 18.921 ug/ml |
| 2) T | n-Decane (C10) | 4.314 | 3002452 | 18.940 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.889 | 3305883 | 18.936 ug/ml |
| 4) T | n-Dodecane (C12) | 6.329 | 3047202 | 18.925 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.944 | 3200059 | 19.099 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.121 | 3014050 | 18.957 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.720 | 3071861 | 19.015 ug/ml |
| 8) T | n-Octadecane (C18) | 11.160 | 3056414 | 19.038 ug/ml |
| 10) T | n-Eicosane (C20) | 12.467 | 2858175 | 19.000 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.078 | 2768356 | 18.946 ug/ml |
| 13) T | n-Docosane (C22) | 13.664 | 2714314 | 18.962 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.765 | 2625090 | 18.893 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.784 | 2526631 | 18.893 ug/ml |
| 16) T | n-Octacosane (C28) | 16.732 | 2447157 | 18.866 ug/ml |
| 17) T | n-Tricontane (C30) | 17.619 | 2446667 | 18.887 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.449 | 2342650 | 18.910 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.231 | 2066031 | 18.929 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.971 | 1796559 | 18.989 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.690 | 1708885 | 18.891 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.567 | 1658551 | 18.817 ug/ml |

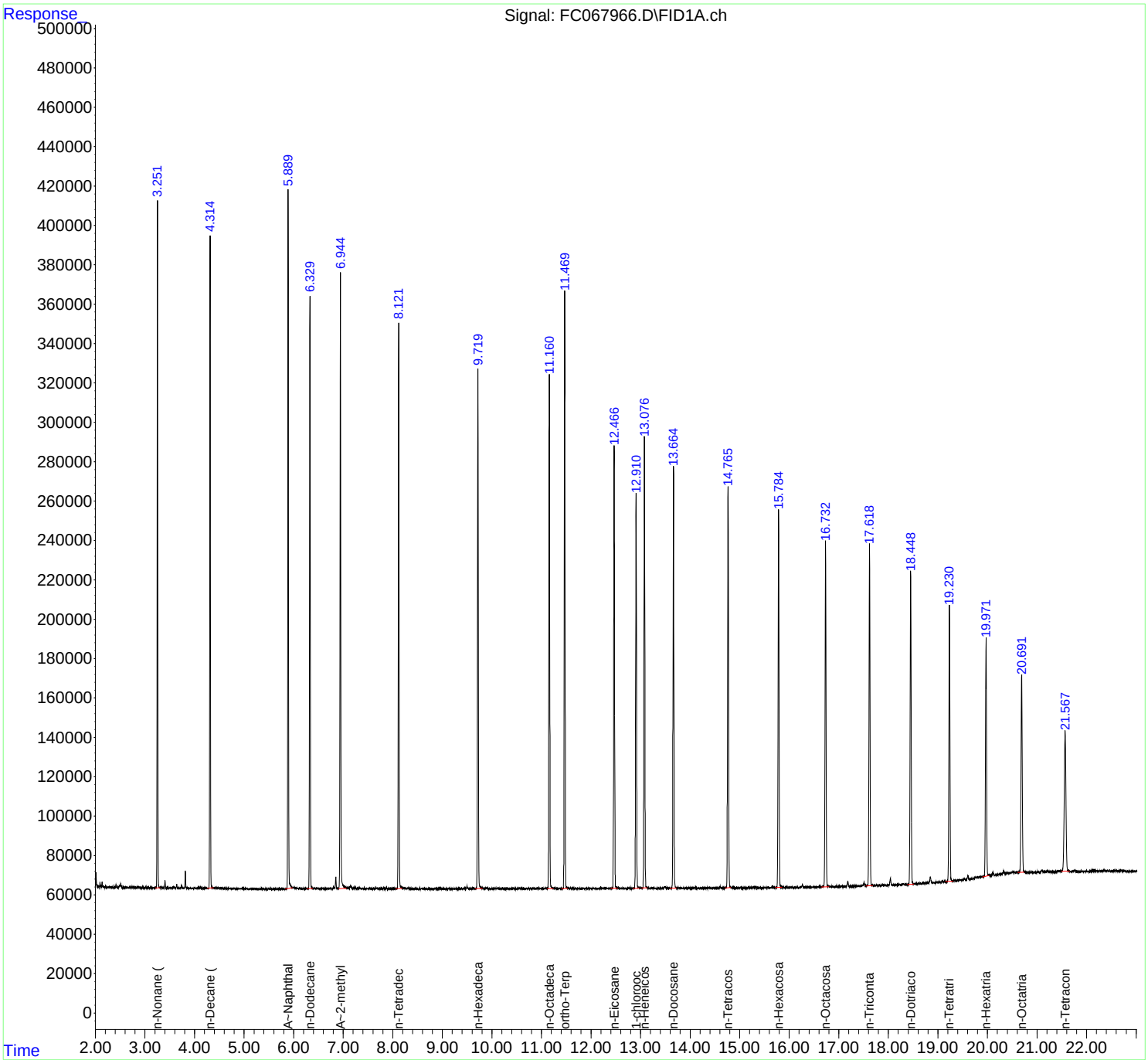
(f)=RT Delta > 1/2 Window (m)=manual int.

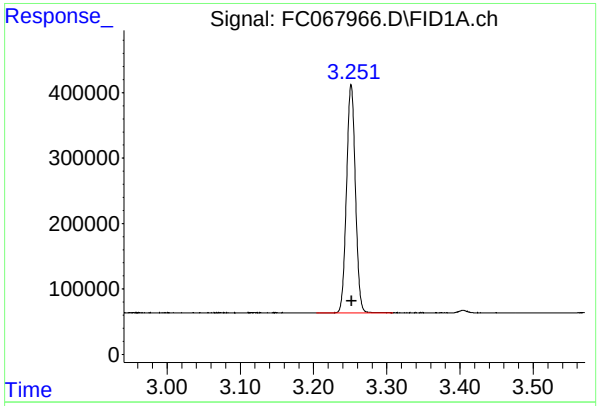
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067966.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:51
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 31 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV

Integration File: autoint1.e
Quant Time: Dec 10 08:28:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

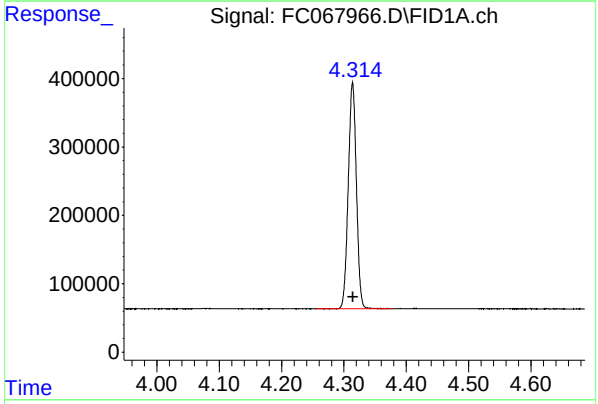





#1 n-Nonane (C9)

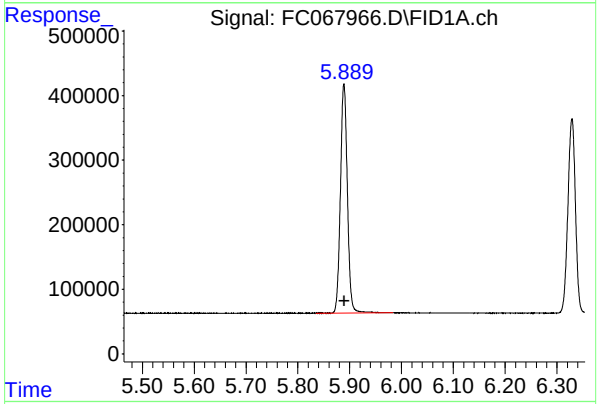
R.T.: 3.251 min
Delta R.T.: 0.000 min
Response: 2939755
Conc: 18.92 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV



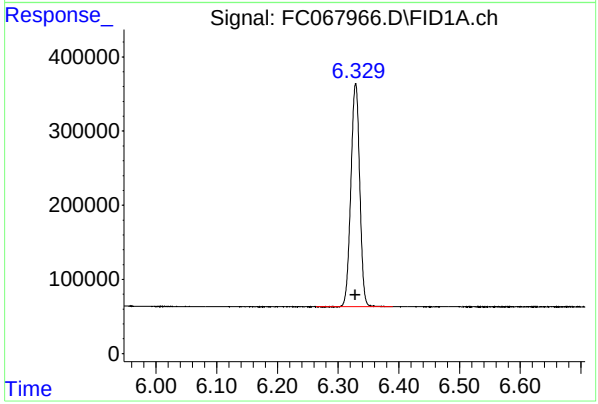

#2 n-Decane (C10)

R.T.: 4.314 min
Delta R.T.: 0.000 min
Response: 3002452
Conc: 18.94 ug/ml



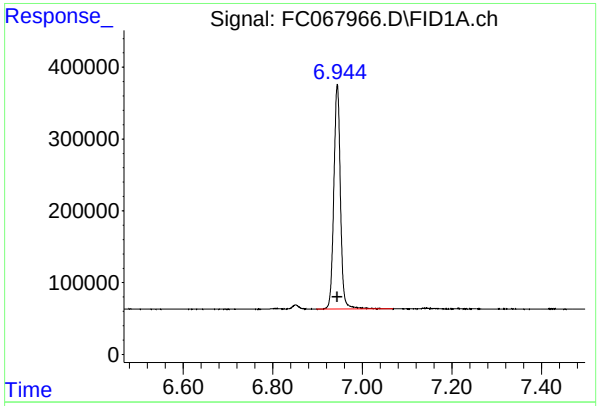

#3 A~Naphthalene (C11.7)

R.T.: 5.889 min
Delta R.T.: 0.000 min
Response: 3305883
Conc: 18.94 ug/ml




#4 n-Dodecane (C12)

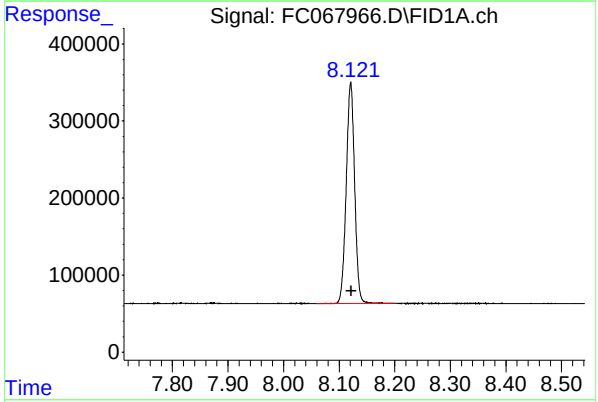
R.T.: 6.329 min
Delta R.T.: 0.000 min
Response: 3047202
Conc: 18.93 ug/ml




#5 A~2-methylnaphthalene (C12.89)

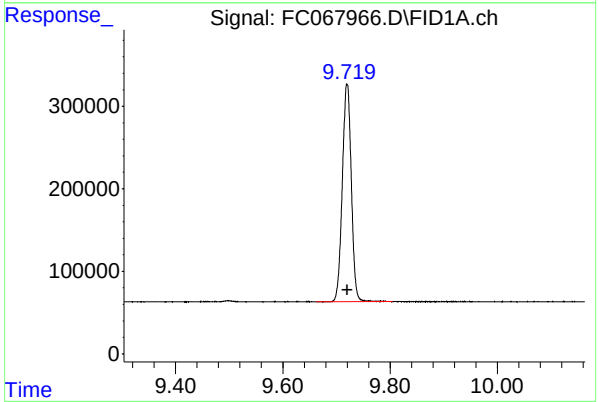
R.T.: 6.944 min
Delta R.T.: 0.000 min
Response: 3200059
Conc: 19.10 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV



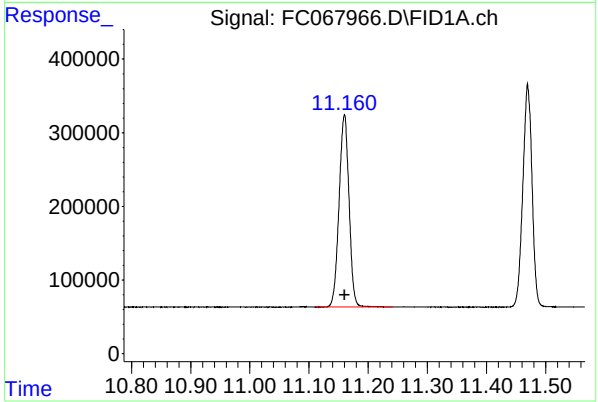

#6 n-Tetradecane (C14)

R.T.: 8.121 min
Delta R.T.: 0.000 min
Response: 3014050
Conc: 18.96 ug/ml



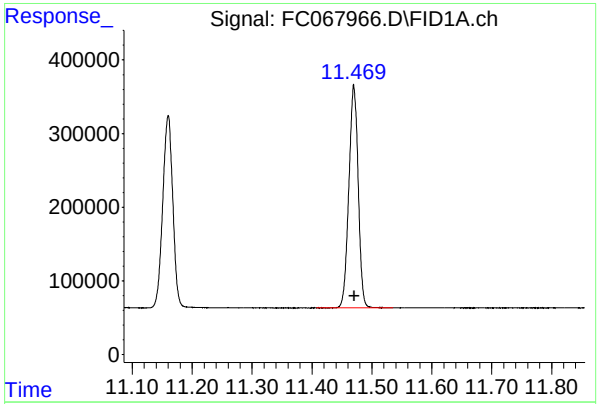

#7 n-Hexadecane (C16)

R.T.: 9.720 min
Delta R.T.: 0.000 min
Response: 3071861
Conc: 19.01 ug/ml




#8 n-Octadecane (C18)

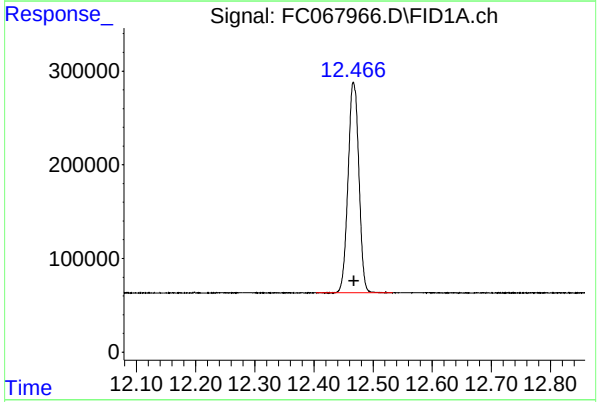
R.T.: 11.160 min
Delta R.T.: 0.000 min
Response: 3056414
Conc: 19.04 ug/ml




#9 ortho-Terphenyl (SURR)

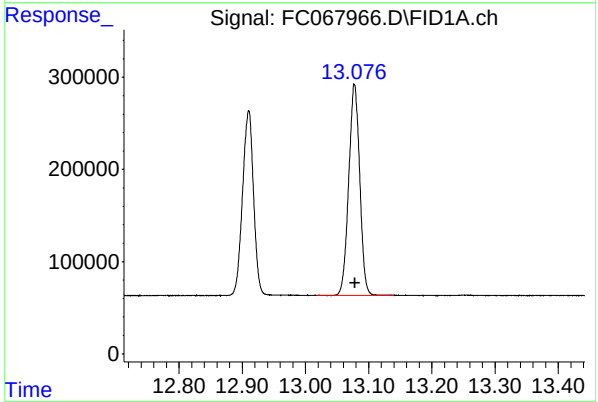
R.T.: 11.470 min
Delta R.T.: 0.000 min
Response: 3272172
Conc: 18.92 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV



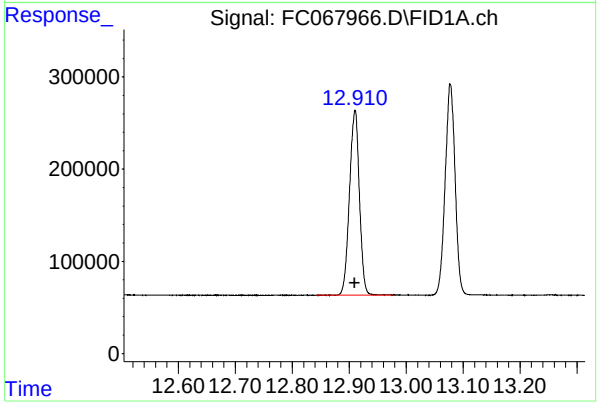

#10 n-Eicosane (C20)

R.T.: 12.467 min
Delta R.T.: 0.000 min
Response: 2858175
Conc: 19.00 ug/ml



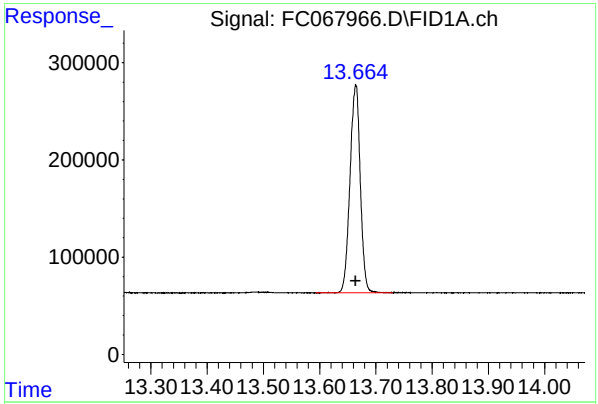

#11 n-Heneicosane (C21)

R.T.: 13.078 min
Delta R.T.: 0.000 min
Response: 2768356
Conc: 18.95 ug/ml




#12 1-chlorooctadecane (SURR)

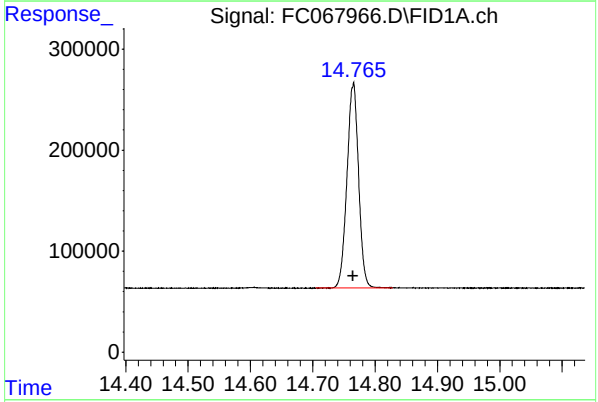
R.T.: 12.910 min
Delta R.T.: 0.000 min
Response: 2422368
Conc: 18.98 ug/ml




#13 n-Docosane (C22)

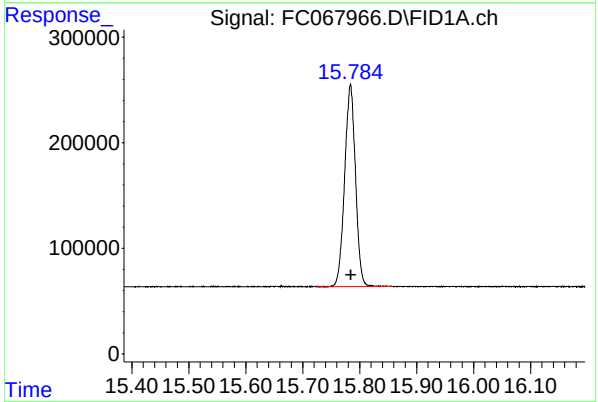
R.T.: 13.664 min
Delta R.T.: 0.000 min
Response: 2714314
Conc: 18.96 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV



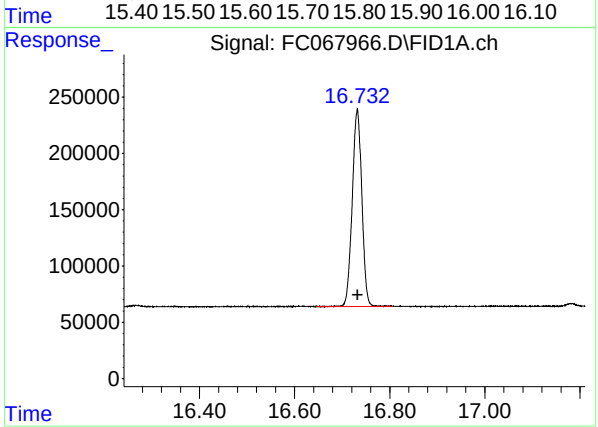

#14 n-Tetracosane (C24)

R.T.: 14.765 min
Delta R.T.: 0.000 min
Response: 2625090
Conc: 18.89 ug/ml



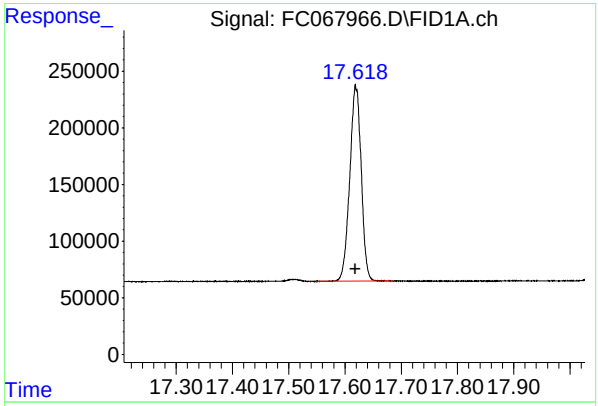

#15 n-Hexacosane (C26)

R.T.: 15.784 min
Delta R.T.: -0.001 min
Response: 2526631
Conc: 18.89 ug/ml




#16 n-Octacosane (C28)

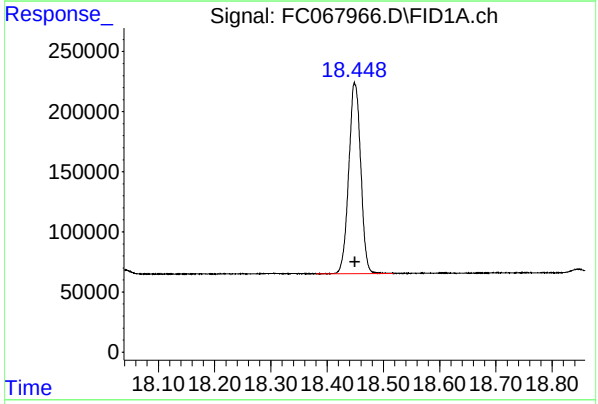
R.T.: 16.732 min
Delta R.T.: -0.001 min
Response: 2447157
Conc: 18.87 ug/ml




#17 n-Tricontane (C30)

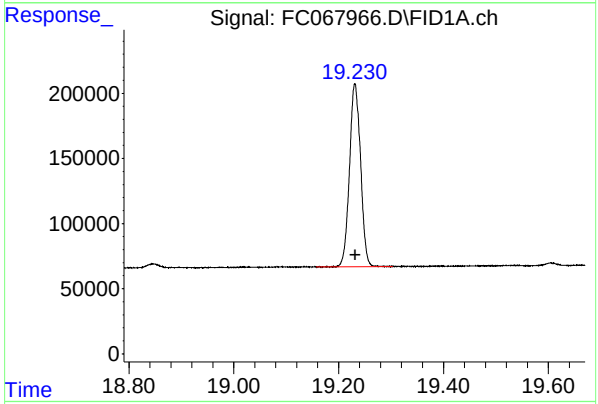
R.T.: 17.619 min
Delta R.T.: 0.000 min
Response: 2446667
Conc: 18.89 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV



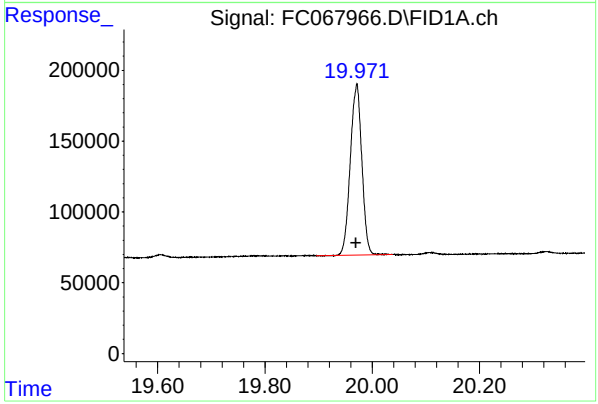

#18 n-Dotriacontane (C32)

R.T.: 18.449 min
Delta R.T.: 0.000 min
Response: 2342650
Conc: 18.91 ug/ml



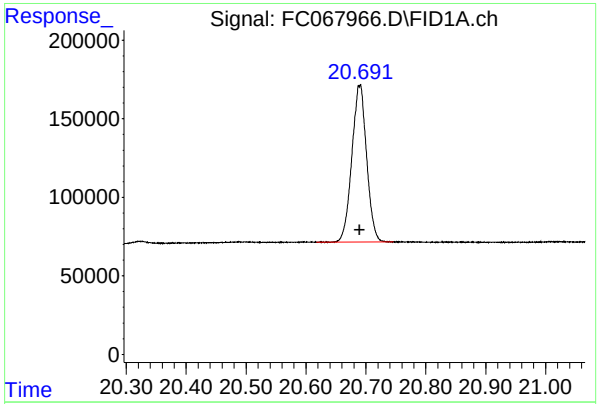

#19 n-Tetratriacontane (C34)

R.T.: 19.231 min
Delta R.T.: -0.001 min
Response: 2066031
Conc: 18.93 ug/ml




#20 n-Hexatriacontane (C36)

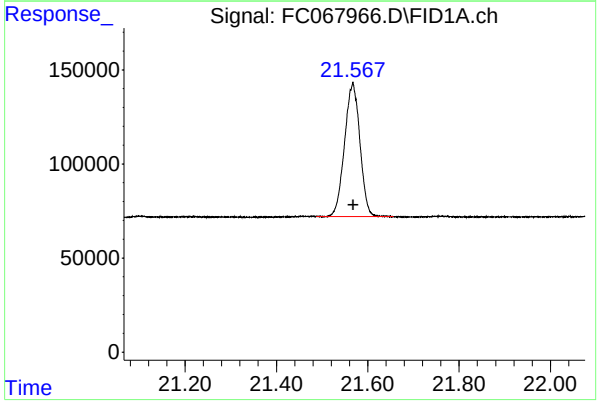
R.T.: 19.971 min
Delta R.T.: 0.000 min
Response: 1796559
Conc: 18.99 ug/ml




#21 n-Octatriacontane (C38)

R.T.: 20.690 min
Delta R.T.: 0.000 min
Response: 1708885
Conc: 18.89 ug/ml

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD ICV




#22 n-Tetracontane (C40)

R.T.: 21.567 min
Delta R.T.: 0.000 min
Response: 1658551
Conc: 18.82 ug/ml

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121024AL\
Data File : FC067966.D
Signal(s) : FID1A.ch
Acq On : 10 Dec 2024 07:51
Sample : 20 PPM ALIPHATIC HC STD ICV
Misc :
ALS Vial : 31 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.251 | 3.204 | 3.309 | BB | 348769 | 2939755 | 88.92% | 5.043% |
| 2 | 4.314 | 4.255 | 4.379 | BB | 329929 | 3002452 | 90.82% | 5.151% |
| 3 | 5.889 | 5.835 | 5.984 | BB | 355252 | 3305883 | 100.00% | 5.671% |
| 4 | 6.329 | 6.264 | 6.390 | BB | 300692 | 3047202 | 92.18% | 5.228% |
| 5 | 6.944 | 6.897 | 7.069 | BB | 311983 | 3200059 | 96.80% | 5.490% |
| 6 | 8.121 | 8.059 | 8.197 | BB | 286088 | 3014050 | 91.17% | 5.171% |
| 7 | 9.720 | 9.662 | 9.805 | BB | 263353 | 3071861 | 92.92% | 5.270% |
| 8 | 11.160 | 11.112 | 11.242 | BB | 261870 | 3056414 | 92.45% | 5.243% |
| 9 | 11.470 | 11.407 | 11.535 | BB | 300728 | 3272172 | 98.98% | 5.613% |
| 10 | 12.467 | 12.404 | 12.534 | BB | 224337 | 2858175 | 86.46% | 4.903% |
| 11 | 12.910 | 12.842 | 12.977 | BB | 201160 | 2422368 | 73.27% | 4.156% |
| 12 | 13.078 | 13.017 | 13.139 | BB | 228570 | 2768356 | 83.74% | 4.749% |
| 13 | 13.664 | 13.594 | 13.730 | BB | 213690 | 2714314 | 82.11% | 4.656% |
| 14 | 14.765 | 14.705 | 14.829 | BB | 202143 | 2625090 | 79.41% | 4.503% |
| 15 | 15.784 | 15.724 | 15.859 | BB | 191355 | 2526631 | 76.43% | 4.334% |
| 16 | 16.732 | 16.645 | 16.807 | BB | 175283 | 2447157 | 74.02% | 4.198% |
| 17 | 17.619 | 17.549 | 17.685 | BB | 168643 | 2446667 | 74.01% | 4.197% |
| 18 | 18.449 | 18.380 | 18.517 | BB | 157186 | 2342650 | 70.86% | 4.019% |
| 19 | 19.231 | 19.157 | 19.304 | BB | 140632 | 2066031 | 62.50% | 3.544% |
| 20 | 19.971 | 19.895 | 20.039 | BB | 119656 | 1796559 | 54.34% | 3.082% |
| 21 | 20.690 | 20.617 | 20.745 | BB | 99450 | 1708885 | 51.69% | 2.932% |
| 22 | 21.567 | 21.487 | 21.655 | BB | 71034 | 1658551 | 50.17% | 2.845% |
| | | | Sum of corrected areas: | | | 58291281 | | |

Aliphatic EPH 121024.M Tue Dec 10 08:40:04 2024

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

# Inital Calibration Report for SequenceID : FD121024AR

**AreaCount**

| Parameter Range | FD048862.D | FD048863.D | FD048864.D | FD048865.D | FD048866.D | |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 36144450.000 | 18307256.000 | 7704703.000 | 4202950.000 | 1844873.000 | |
| Aromatic C12-C16 | 52606403.000 | 26714057.000 | 11173780.000 | 6154338.000 | 2768912.000 | |
| Aromatic C16-C21 | 65406144.000 | 33090551.000 | 13675456.000 | 7455120.000 | 3226208.000 | |
| Aromatic C21-C36 | 122999142.000 | 62178240.000 | 25807519.000 | 13997336.000 | 6039121.000 | |
| Aromatic EPH | 277156139.000 | 140290104.000 | 58361458.000 | 31809744.000 | 13879114.000 | |

**AVG Response Factor**

| Parameter Range | AVG RF | % RSD | | | | |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 190209.437 | 6.314 | | | | |
| Aromatic C12-C16 | 185883.3579996 | 6.276 | | | | |
| Aromatic C16-C21 | 169519.943 | 5.945 | | | | |
| Aromatic C21-C36 | 141588.6659994 | 5.992 | | | | |
| Aromatic EPH | 160580.3729996 | 5.982 | | | | |

**Concentration**

| Parameter Range | FD048862.D | FD048863.D | FD048864.D | FD048865.D | FD048866.D | |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 200.000 | 100.000 | 40.000 | 20.000 | 10.000 | |
| Aromatic C12-C16 | 300.000 | 150.000 | 60.000 | 30.000 | 15.000 | |
| Aromatic C16-C21 | 400.000 | 200.000 | 80.000 | 40.000 | 20.000 | |
| Aromatic C21-C36 | 900.000 | 450.000 | 180.000 | 90.000 | 45.000 | |
| Aromatic EPH | 1800.000 | 900.000 | 360.000 | 180.000 | 90.000 | |

**Response Factor**

| Parameter Range | FD048862.D | FD048863.D | FD048864.D | FD048865.D | FD048866.D | |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 180722.250000 | 183072.560000 | 192617.575000 | 210147.500000 | 184487.300000 | |
| Aromatic C12-C16 | 175354.676666 | 178093.713333 | 186229.666666 | 205144.600000 | 184594.133333 | |
| Aromatic C16-C21 | 163515.360000 | 165452.755000 | 170943.200000 | 186378.000000 | 161310.400000 | |
| Aromatic C21-C36 | 136665.713333 | 138173.866666 | 143375.105555 | 155525.955555 | 134202.688888 | |
| Aromatic EPH | 153975.632777 | 155877.893333 | 162115.161111 | 176720.800000 | 154212.377777 | |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048862.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 02:58
Operator : YP/AJ
Sample : 100 PPM AROMATIC HC STD1
Misc :
ALS Vial : 71 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:00:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.368 | 15921295 | 93.981 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 187.96% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.220 | 10548610 | 98.744 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 197.49%# |
| 11) S | ortho-Terphenyl (SURR) | 11.256 | 16688784 | 93.186 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 186.37% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.190 | 17896321 | 94.195 ug/ml |
| 2) T | Naphthalene (C11.7) | 5.708 | 18248129 | 93.464 ug/ml |
| 3) T | 2-Methylnaphthalene (... | 6.756 | 17647356 | 94.886 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.023 | 17689794 | 94.386 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.319 | 17269253 | 93.203 ug/ml |
| 8) T | Flouorene (C16.55) | 9.098 | 17270251 | 95.273 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.485 | 16362315 | 96.999 ug/ml |
| 10) T | Anthracene (C19.43) | 10.562 | 16263903 | 94.872 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.291 | 15655851 | 94.377 ug/ml |
| 13) T | Pyrene (C20.8) | 12.584 | 15509675 | 95.510 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.454 | 14161136 | 101.685 ug/ml |
| 15) T | Chrysene (C27.41) | 14.500 | 14249238 | 90.269 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 16.004 | 13748802 | 98.495 ug/ml |
| 17) T | Bnezo[k]fluoranthene ... | 16.043 | 13643820 | 92.001 ug/mlm |
| 18) T | Benzo[a]pyrene (C31.34) | 16.381 | 13033554 | 93.325 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.749 | 12448244 | 116.520 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.787 | 12848217 | 84.867 ug/ml |
| 21) T | Benzo[g,h,i]perylene ... | 18.006 | 13210280 | 93.294 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048862.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 02:58
Operator : YP/AJ
Sample : 100 PPM AROMATIC HC STD1
Misc :
ALS Vial : 71 Sample Multiplier: 1

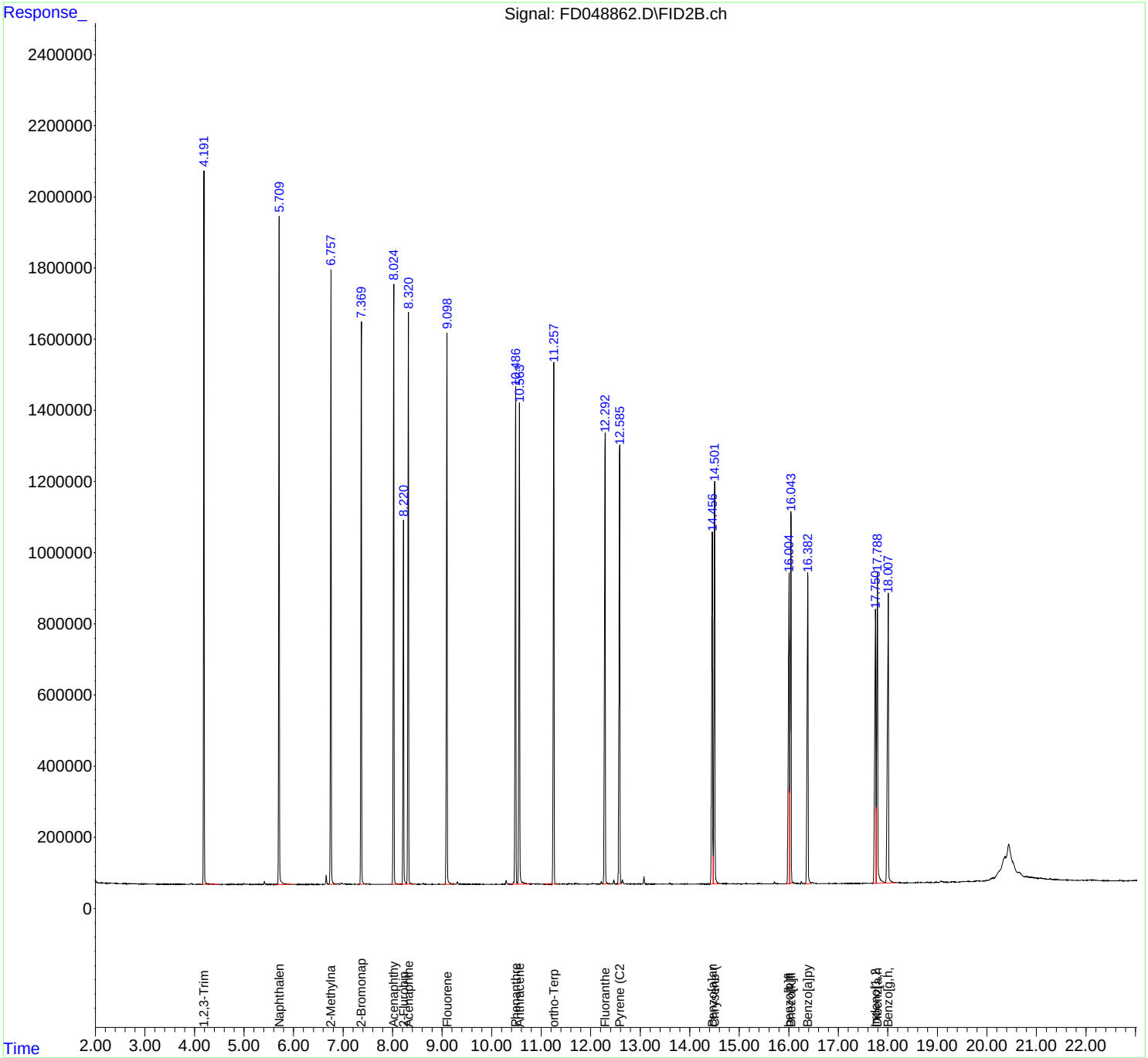
**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

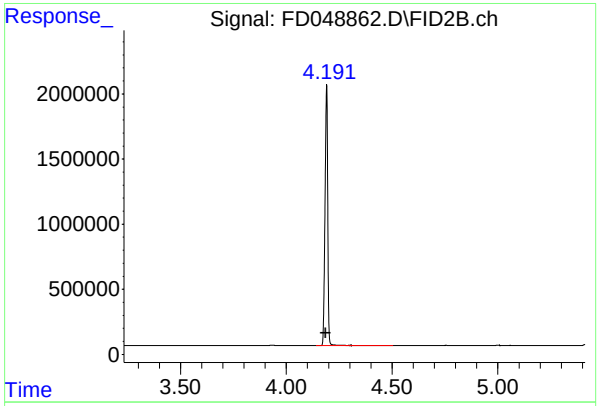
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:00:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





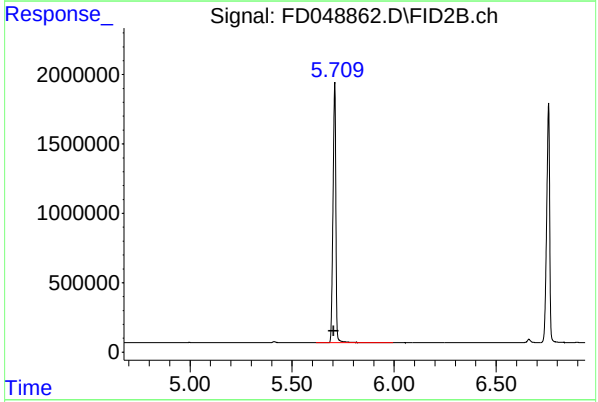

#1 1,2,3-Trimethylbenzene (C10.1)

R.T.: 4.190 min
Delta R.T.: 0.004 min
Response: 17896321
Conc: 94.19 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

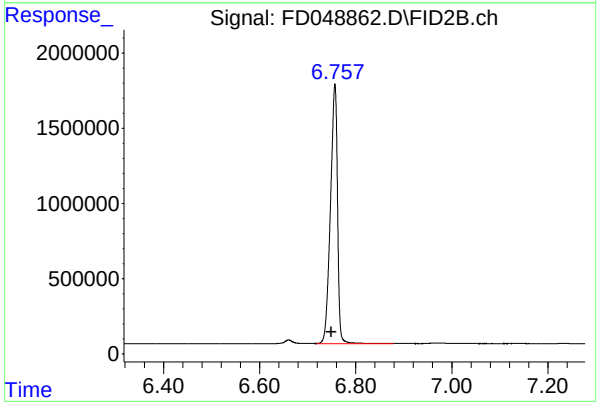
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



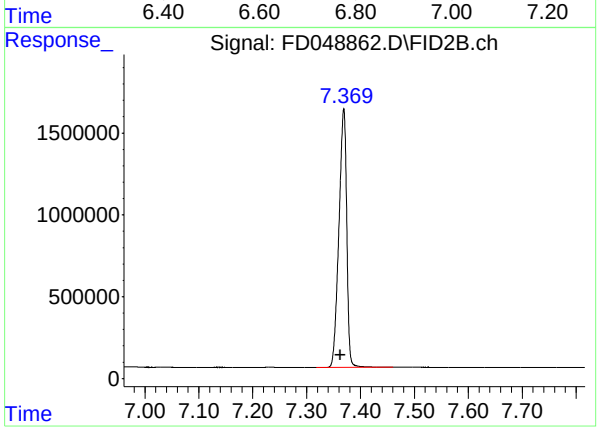

#2 Naphthalene (C11.7)

R.T.: 5.708 min
Delta R.T.: 0.005 min
Response: 18248129
Conc: 93.46 ug/ml



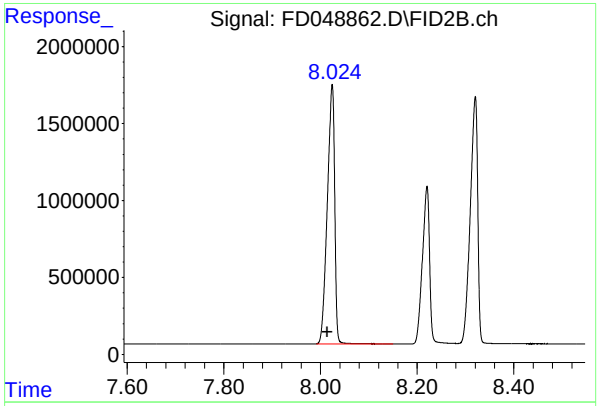

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.756 min
Delta R.T.: 0.006 min
Response: 17647356
Conc: 94.89 ug/ml




#4 2-Bromonaphthalene (SURR)

R.T.: 7.368 min
Delta R.T.: 0.006 min
Response: 15921295
Conc: 93.98 ug/ml



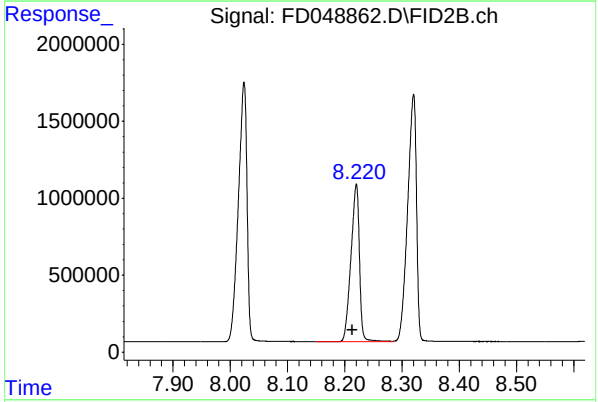

#5 Acenaphthylene (C15.06)

R.T.: 8.023 min
Delta R.T.: 0.009 min
Response: 17689794
Conc: 94.39 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

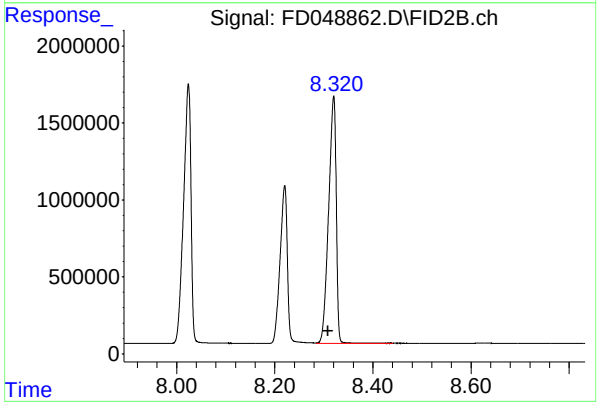
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



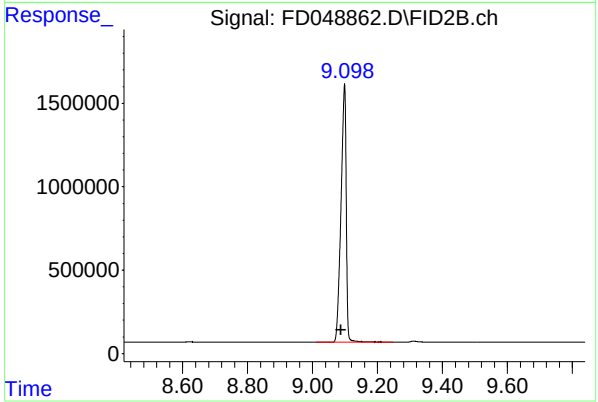

#6 2-Flurobiphenyl (SURR)

R.T.: 8.220 min
Delta R.T.: 0.007 min
Response: 10548610
Conc: 98.74 ug/ml



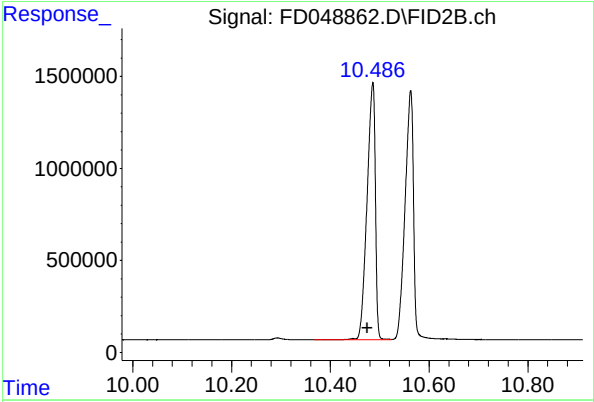

#7 Acenaphthene (C15.5)

R.T.: 8.319 min
Delta R.T.: 0.011 min
Response: 17269253
Conc: 93.20 ug/ml




#8 Flouorene (C16.55)

R.T.: 9.098 min
Delta R.T.: 0.010 min
Response: 17270251
Conc: 95.27 ug/ml



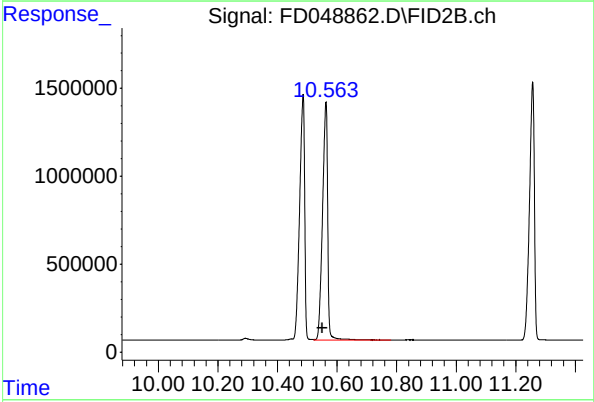

#9 Phenanthrene (C19.36)

R.T.: 10.485 min
Delta R.T.: 0.010 min
Response: 16362315
Conc: 97.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

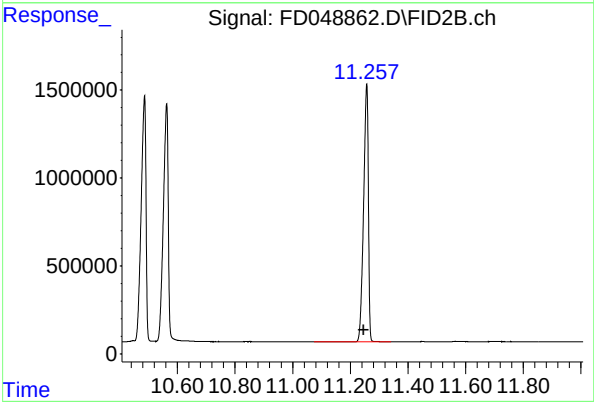
**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



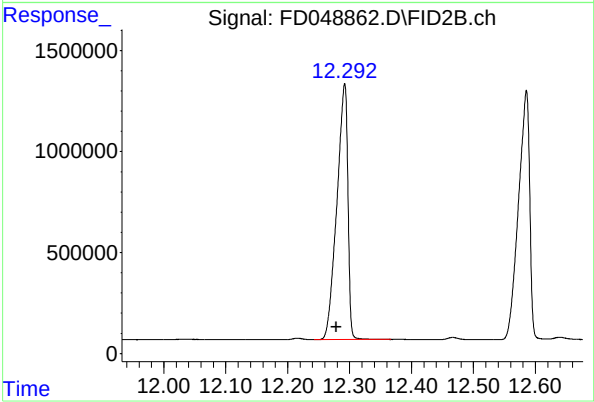

#10 Anthracene (C19.43)

R.T.: 10.562 min
Delta R.T.: 0.011 min
Response: 16263903
Conc: 94.87 ug/ml



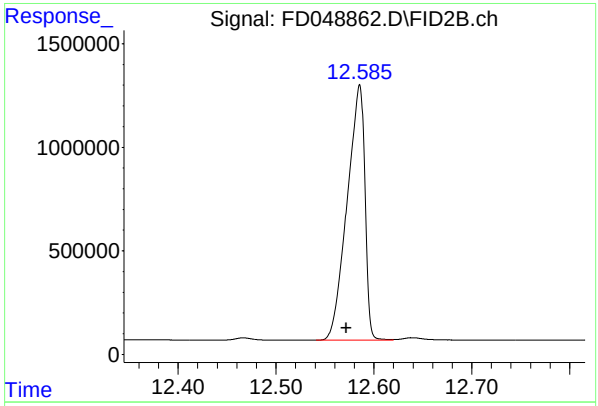

#11 ortho-Terphenyl (SURR)

R.T.: 11.256 min
Delta R.T.: 0.010 min
Response: 16688784
Conc: 93.19 ug/ml




#12 Fluoranthene (C21.85)

R.T.: 12.291 min
Delta R.T.: 0.012 min
Response: 15655851
Conc: 94.38 ug/ml



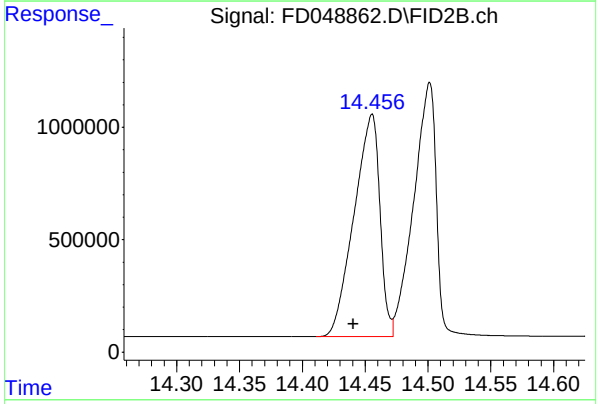

#13 Pyrene (C20.8)

R.T.: 12.584 min
Delta R.T.: 0.013 min
Response: 15509675
Conc: 95.51 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

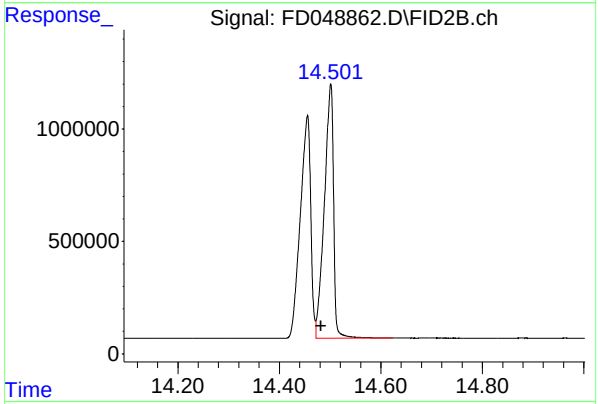
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



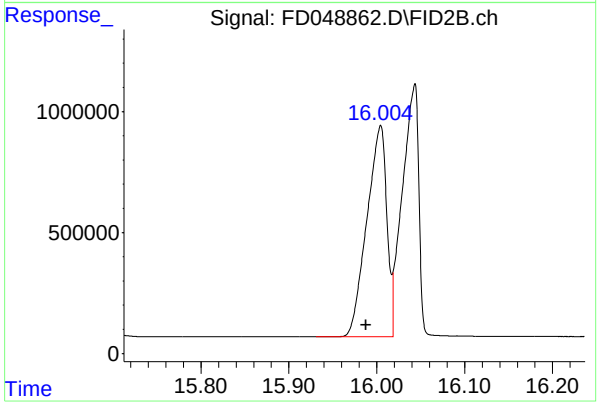

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.454 min
Delta R.T.: 0.014 min
Response: 14161136
Conc: 101.68 ug/ml



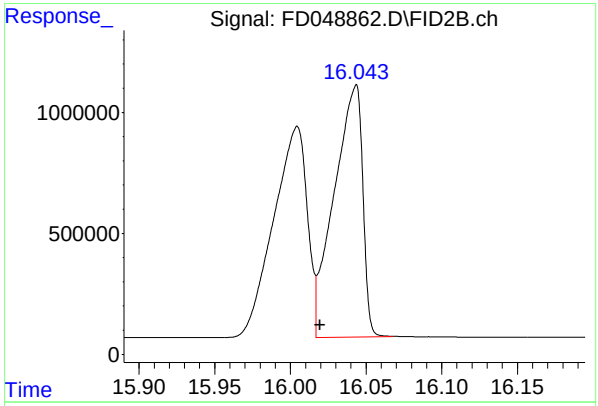

#15 Chrysene (C27.41)

R.T.: 14.500 min
Delta R.T.: 0.019 min
Response: 14249238
Conc: 90.27 ug/ml




#16 benzo[b]fluoranthene (C30.41)

R.T.: 16.004 min
Delta R.T.: 0.016 min
Response: 13748802
Conc: 98.49 ug/ml



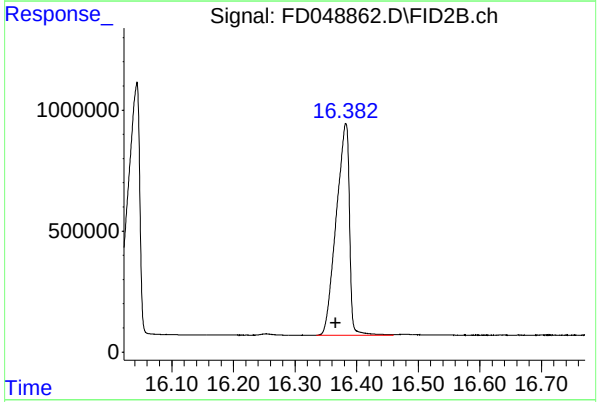

#17 Bnezo[k]fluoranthene (C30.14)

R.T.: 16.043 min
Delta R.T.: 0.024 min
Response: 13643820
Conc: 92.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

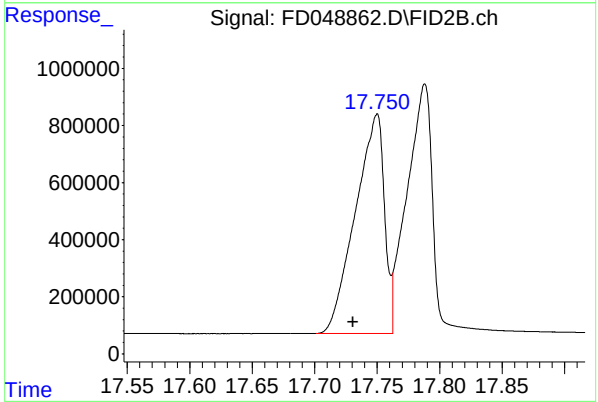
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



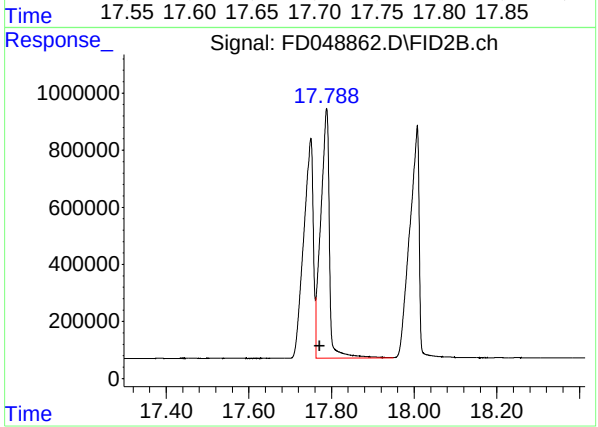

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.381 min
Delta R.T.: 0.015 min
Response: 13033554
Conc: 93.32 ug/ml



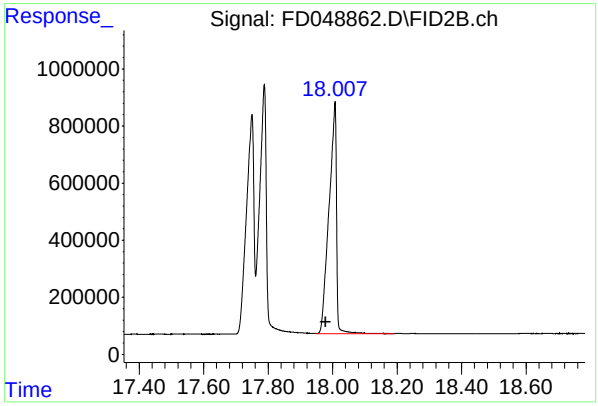

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.749 min
Delta R.T.: 0.018 min
Response: 12448244
Conc: 116.52 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.787 min
Delta R.T.: 0.016 min
Response: 12848217
Conc: 84.87 ug/ml




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 18.006 min
Delta R.T.: 0.027 mi
Response: 13210280
Conc: 93.29 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
100 PPM AROMATIC HC STD1

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

**Instrument :**
FID_D
**LabSampleId :**
100 PPM AROMATIC HC STD1

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12102
Data File : FD048862.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 02:58
Sample : 100 PPM AROMATIC HC STD1
Misc :
ALS Vial : 71 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.190 | 4.141 | 4.504 | BB | 2022212 | 17896321 | 98.07% | 5.587% |
| 2 | 5.708 | 5.618 | 5.994 | VV | 1846237 | 18248129 | 100.00% | 5.697% |
| 3 | 6.756 | 6.718 | 6.878 | VV | 1759878 | 17647356 | 96.71% | 5.509% |
| 4 | 7.368 | 7.318 | 7.460 | PV | 1560518 | 15921295 | 87.25% | 4.970% |
| 5 | 8.023 | 7.991 | 8.150 | BV | 1707263 | 17689794 | 96.94% | 5.522% |
| 6 | 8.220 | 8.150 | 8.284 | PV | 1042647 | 10548610 | 57.81% | 3.293% |
| 7 | 8.319 | 8.284 | 8.441 | VV | 1648008 | 17269253 | 94.64% | 5.391% |
| 8 | 9.098 | 9.011 | 9.248 | BV | 1533227 | 17270251 | 94.64% | 5.392% |
| 9 | 10.485 | 10.367 | 10.523 | PV | 1375229 | 16362315 | 89.67% | 5.108% |
| 10 | 10.562 | 10.523 | 10.781 | VV | 1337293 | 16263903 | 89.13% | 5.077% |
| 11 | 11.256 | 11.074 | 11.341 | BV | 1493318 | 16688784 | 91.45% | 5.210% |
| 12 | 12.291 | 12.243 | 12.367 | PV | 1259349 | 15655851 | 85.79% | 4.888% |
| 13 | 12.584 | 12.541 | 12.620 | PV | 1219791 | 15509675 | 84.99% | 4.842% |
| 14 | 14.454 | 14.411 | 14.472 | BV | 981717 | 14161136 | 77.60% | 4.421% |
| 15 | 14.500 | 14.472 | 14.624 | VV | 1137801 | 14249238 | 78.09% | 4.448% |
| 16 | 16.004 | 15.931 | 16.018 | BV | 876069 | 13748802 | 75.34% | 4.292% |
| 17 | 16.042 | 16.018 | 16.234 | VV | 1019255 | 13652134 | 74.81% | 4.262% |
| 18 | 16.381 | 16.334 | 16.459 | VV | 870599 | 13033554 | 71.42% | 4.069% |
| 19 | 17.749 | 17.701 | 17.762 | BV | 755590 | 12448244 | 68.22% | 3.886% |
| 20 | 17.787 | 17.762 | 17.949 | VV | 878040 | 12848217 | 70.41% | 4.011% |
| 21 | 18.006 | 17.949 | 18.187 | VV | 837103 | 13210280 | 72.39% | 4.124% |
| | | | Sum of corrected areas: | | | 320323141 | | |

Aromatic EPH 121024.M Tue Dec 10 07:08:36 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048863.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 03:35
Operator : YP/AJ
Sample : 50 PPM AROMATIC HC STD2
Misc :
ALS Vial : 72 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2

Integration File: autoint1.e
Quant Time: Dec 10 06:01:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.364 | 8039257 | 47.454 ug/ml |
| | Spiked Amount 50.000 | | Recovery = | 94.91% |
| 6) | S 2-Flurobiphenyl (SURR) | 8.214 | 5291629 | 49.534 ug/ml |
| | Spiked Amount 50.000 Range 0 - 131 | | Recovery = | 99.07% |
| 11) | S ortho-Terphenyl (SURR) | 11.250 | 8496175 | 47.441 ug/ml |
| | Spiked Amount 50.000 | | Recovery = | 94.88% |
| | **Target Compounds** | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.187 | 9057209 | 47.671 ug/ml |
| 2) | T Naphthalene (C11.7) | 5.705 | 9250047 | 47.377 ug/ml |
| 3) | T 2-Methylnaphthalene (... | 6.751 | 8909043 | 47.902 ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.018 | 8950507 | 47.757 ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.313 | 8854507 | 47.788 ug/ml |
| 8) | T Flouorene (C16.55) | 9.091 | 8747897 | 48.259 ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.478 | 8237835 | 48.835 ug/ml |
| 10) | T Anthracene (C19.43) | 10.554 | 8241212 | 48.074 ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.283 | 7953997 | 47.949 ug/ml |
| 13) | T Pyrene (C20.8) | 12.576 | 7863607 | 48.425 ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.446 | 7072378 | 50.784 ug/ml |
| 15) | T Chrysene (C27.41) | 14.488 | 7315160 | 46.341 ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.994 | 6901644 | 49.443 ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.027 | 6959962 | 46.932 ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.369 | 6619739 | 47.400 ug/ml |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.735 | 5859994 | 54.851 ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.772 | 6804381 | 44.945 ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.988 | 6690985 | 47.253 ug/ml |

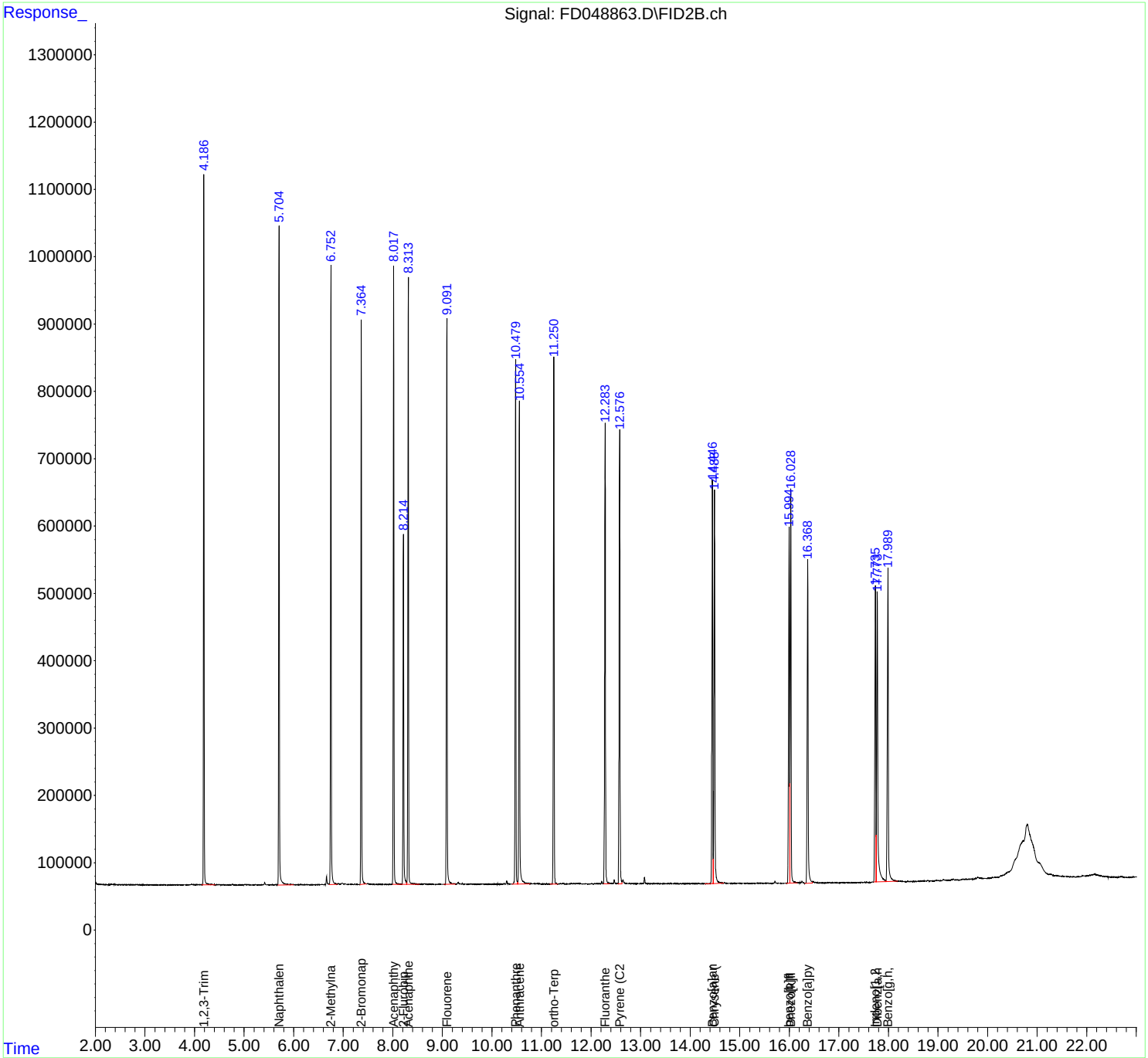
(f)=RT Delta > 1/2 Window (m)=manual int.

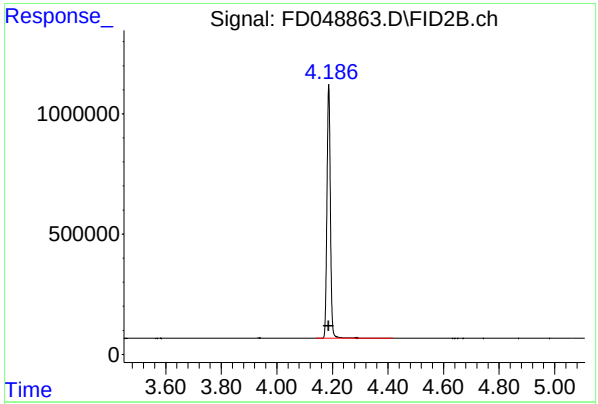
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048863.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 03:35
Operator : YP/AJ
Sample : 50 PPM AROMATIC HC STD2
Misc :
ALS Vial : 72 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2

Integration File: autoint1.e
Quant Time: Dec 10 06:01:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

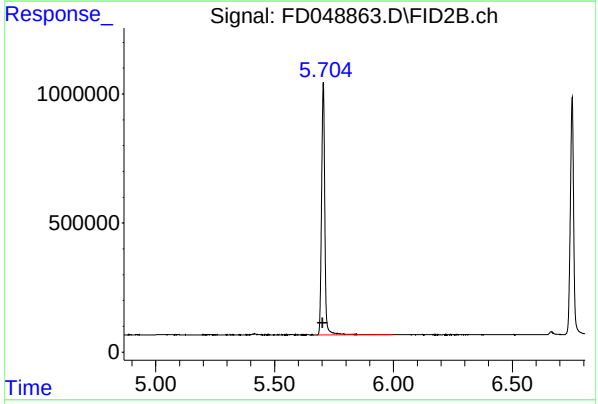





#1 1,2,3-Trimethylbenzene (C10.1)

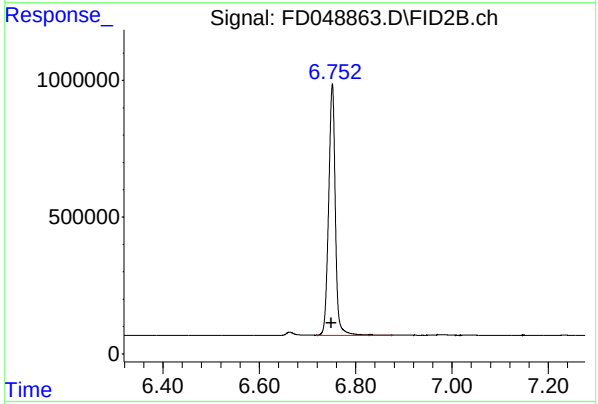
R.T.: 4.187 min
Delta R.T.: 0.000 min
Response: 9057209
Conc: 47.67 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2



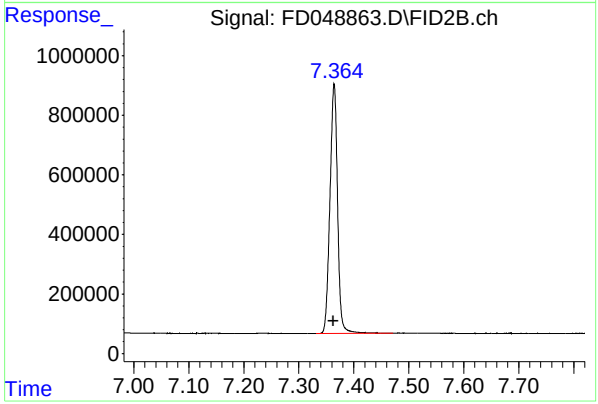

#2 Naphthalene (C11.7)

R.T.: 5.705 min
Delta R.T.: 0.001 min
Response: 9250047
Conc: 47.38 ug/ml



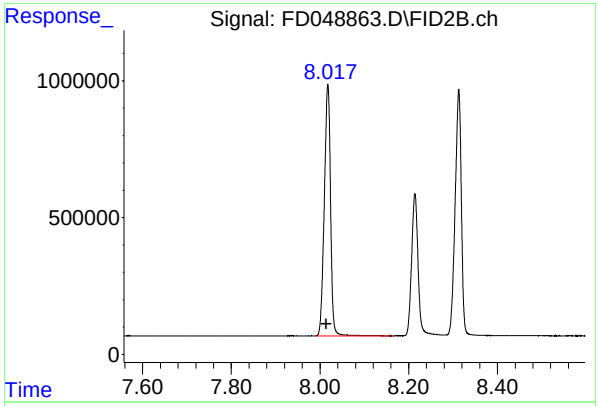

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.751 min
Delta R.T.: 0.002 min
Response: 8909043
Conc: 47.90 ug/ml




#4 2-Bromonaphthalene (SURR)

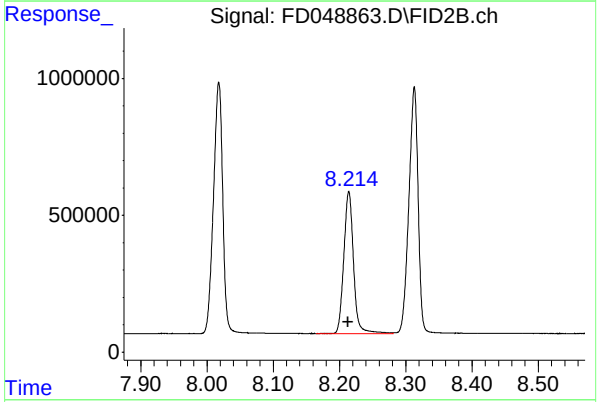
R.T.: 7.364 min
Delta R.T.: 0.002 min
Response: 8039257
Conc: 47.45 ug/ml




#5 Acenaphthylene (C15.06)

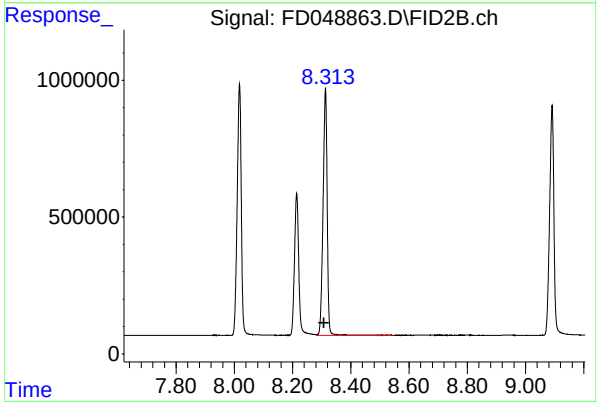
R.T.: 8.018 min
Delta R.T.: 0.003 min
Response: 8950507
Conc: 47.76 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2



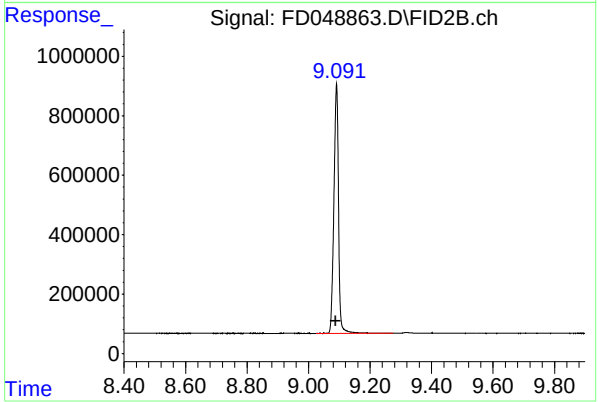

#6 2-Flurobiphenyl (SURR)

R.T.: 8.214 min
Delta R.T.: 0.001 min
Response: 5291629
Conc: 49.53 ug/ml



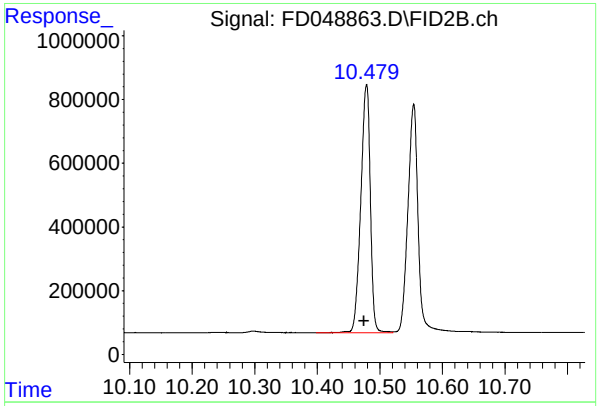

#7 Acenaphthene (C15.5)

R.T.: 8.313 min
Delta R.T.: 0.004 min
Response: 8854507
Conc: 47.79 ug/ml




#8 Flouorene (C16.55)

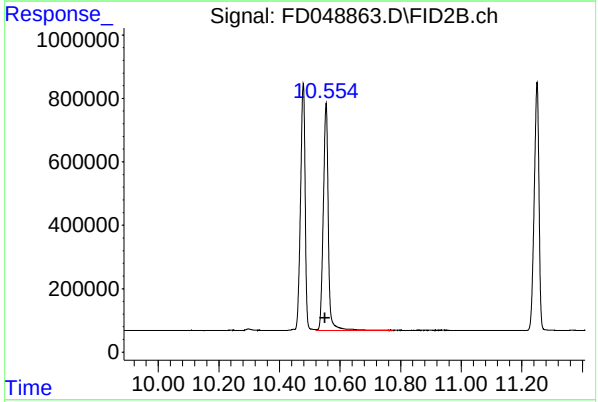
R.T.: 9.091 min
Delta R.T.: 0.003 min
Response: 8747897
Conc: 48.26 ug/ml




#9 Phenanthrene (C19.36)

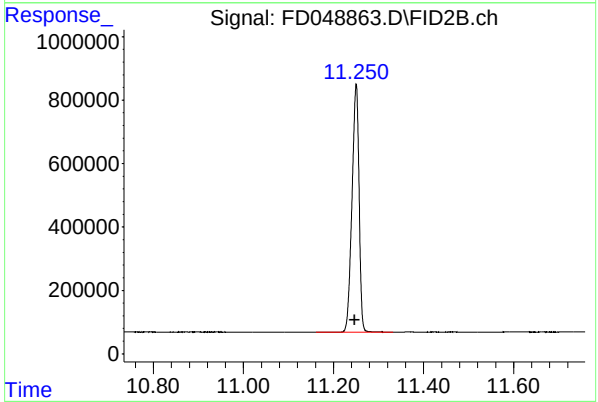
R.T.: 10.478 min
Delta R.T.: 0.003 min
Response: 8237835
Conc: 48.84 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2



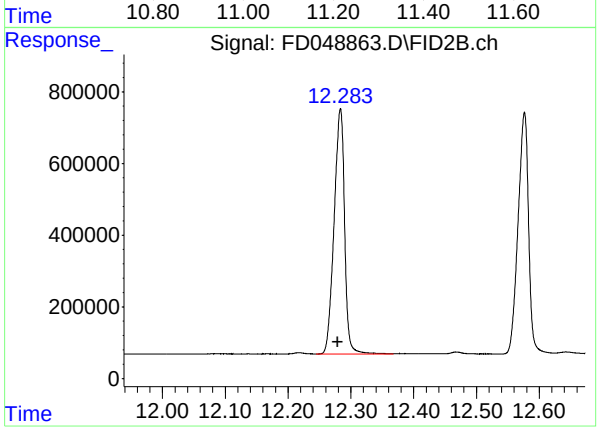

#10 Anthracene (C19.43)

R.T.: 10.554 min
Delta R.T.: 0.003 min
Response: 8241212
Conc: 48.07 ug/ml



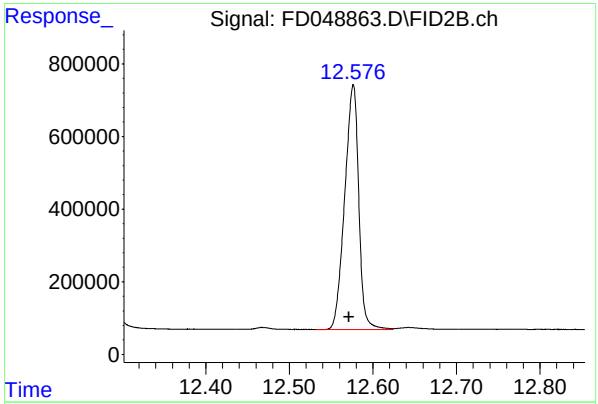

#11 ortho-Terphenyl (SURR)

R.T.: 11.250 min
Delta R.T.: 0.003 min
Response: 8496175
Conc: 47.44 ug/ml




#12 Fluoranthene (C21.85)

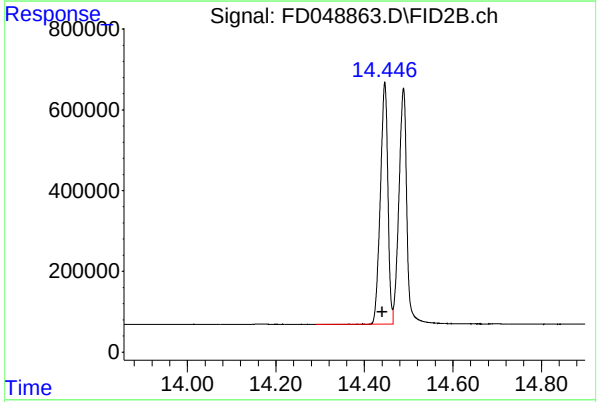
R.T.: 12.283 min
Delta R.T.: 0.005 min
Response: 7953997
Conc: 47.95 ug/ml




#13 Pyrene (C20.8)

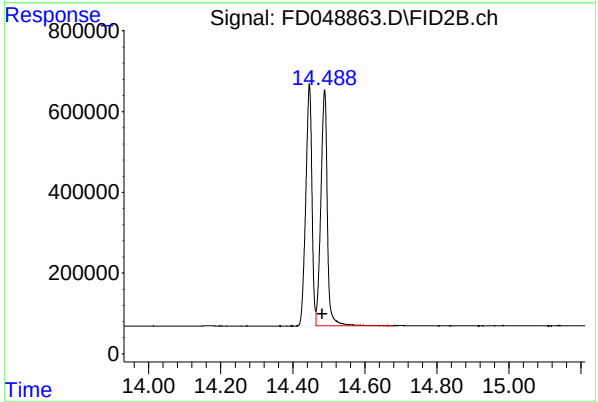
R.T.: 12.576 min
Delta R.T.: 0.005 min
Response: 7863607
Conc: 48.42 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2



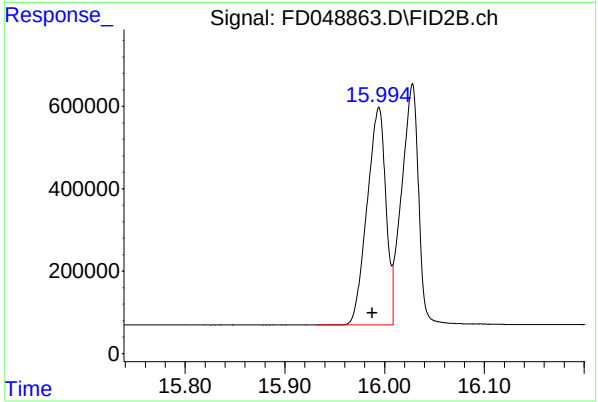

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.446 min
Delta R.T.: 0.005 min
Response: 7072378
Conc: 50.78 ug/ml



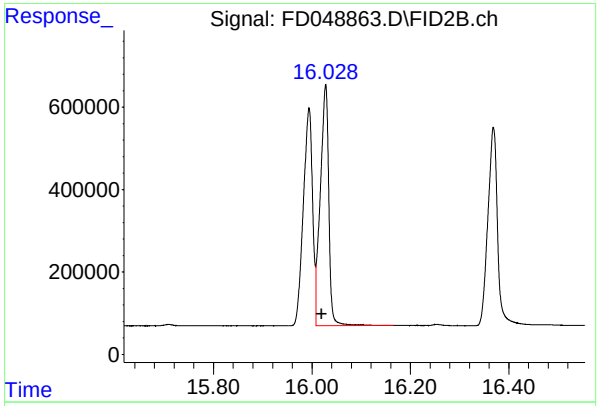

#15 Chrysene (C27.41)

R.T.: 14.488 min
Delta R.T.: 0.006 min
Response: 7315160
Conc: 46.34 ug/ml




#16 benzo[b]fluoranthene (C30.41)

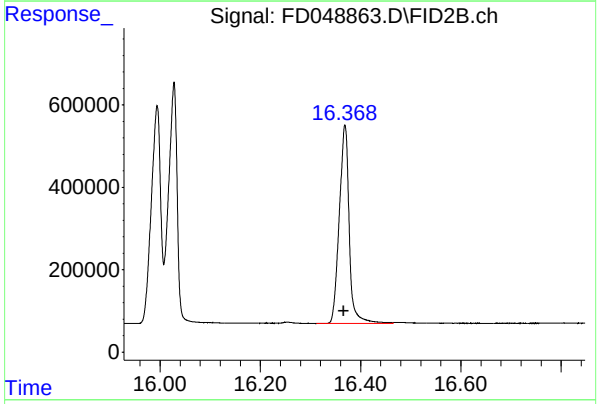
R.T.: 15.994 min
Delta R.T.: 0.006 min
Response: 6901644
Conc: 49.44 ug/ml




#17 Bnezo[k]fluoranthene (C30.14)

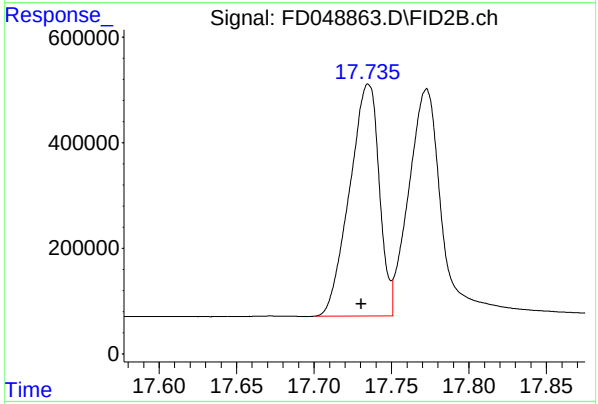
R.T.: 16.027 min
Delta R.T.: 0.008 min
Response: 6959962
Conc: 46.93 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2



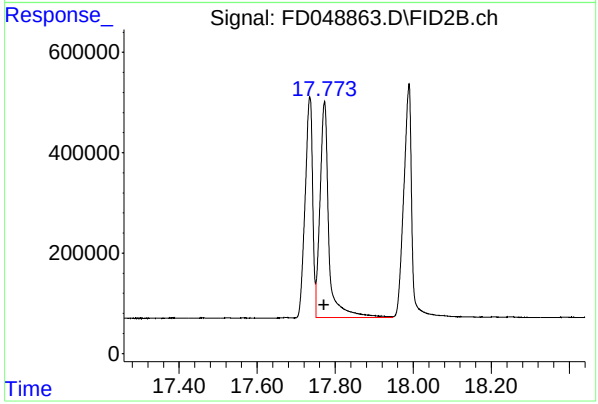

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.369 min
Delta R.T.: 0.002 min
Response: 6619739
Conc: 47.40 ug/ml



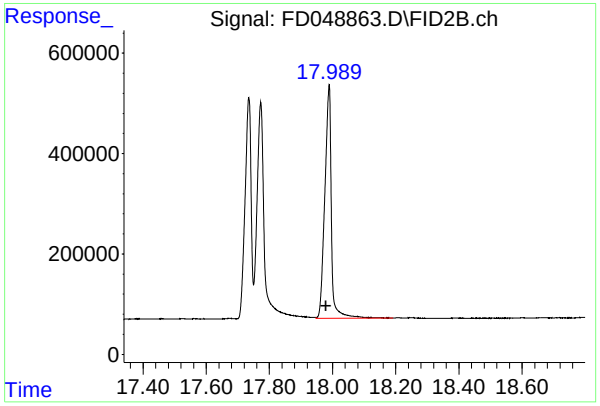

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.735 min
Delta R.T.: 0.004 min
Response: 5859994
Conc: 54.85 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.772 min
Delta R.T.: 0.001 min
Response: 6804381
Conc: 44.95 ug/ml




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.988 min
Delta R.T.: 0.009 mi
Response: 6690985
Conc: 47.25 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
50 PPM AROMATIC HC STD2

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048863.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 03:35
Sample : 50 PPM AROMATIC HC STD2
Misc :
ALS Vial : 72 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.187 | 4.141 | 4.418 | BB | 1049787 | 9057209 | 97.92% | 5.587% |
| 2 | 5.705 | 5.675 | 5.998 | PB | 977324 | 9250047 | 100.00% | 5.706% |
| 3 | 6.751 | 6.718 | 6.878 | VV | 916014 | 8909043 | 96.31% | 5.495% |
| 4 | 7.364 | 7.331 | 7.471 | PV | 840576 | 8039257 | 86.91% | 4.959% |
| 5 | 8.018 | 7.991 | 8.165 | BV | 922385 | 8950507 | 96.76% | 5.521% |
| 6 | 8.214 | 8.165 | 8.281 | PV | 519986 | 5291629 | 57.21% | 3.264% |
| 7 | 8.313 | 8.281 | 8.545 | VB | 880751 | 8854507 | 95.72% | 5.462% |
| 8 | 9.091 | 9.025 | 9.275 | BV | 842709 | 8747897 | 94.57% | 5.396% |
| 9 | 10.478 | 10.398 | 10.521 | PV | 777460 | 8237835 | 89.06% | 5.081% |
| 10 | 10.554 | 10.521 | 10.775 | VV | 723214 | 8241212 | 89.09% | 5.083% |
| 11 | 11.250 | 11.161 | 11.332 | BV | 788935 | 8496175 | 91.85% | 5.241% |
| 12 | 12.283 | 12.245 | 12.367 | VV | 692860 | 7953997 | 85.99% | 4.906% |
| 13 | 12.576 | 12.532 | 12.624 | PV | 666038 | 7863607 | 85.01% | 4.851% |
| 14 | 14.446 | 14.291 | 14.465 | PV | 594062 | 7072378 | 76.46% | 4.363% |
| 15 | 14.488 | 14.465 | 14.678 | VV | 584606 | 7315160 | 79.08% | 4.512% |
| 16 | 15.994 | 15.931 | 16.008 | BV | 531588 | 6901644 | 74.61% | 4.257% |
| 17 | 16.027 | 16.008 | 16.165 | VV | 589067 | 6959962 | 75.24% | 4.293% |
| 18 | 16.369 | 16.311 | 16.465 | PV | 481546 | 6619739 | 71.56% | 4.083% |
| 19 | 17.735 | 17.701 | 17.751 | BV | 440629 | 5859994 | 63.35% | 3.615% |
| 20 | 17.772 | 17.751 | 17.948 | VV | 428816 | 6804381 | 73.56% | 4.197% |
| 21 | 17.988 | 17.948 | 18.191 | VV | 460312 | 6690985 | 72.33% | 4.127% |

Sum of corrected areas: 162117165

Aromatic EPH 121024.M Tue Dec 10 07:09:08 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048864.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:12
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD3
Misc :
ALS Vial : 73 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3

Integration File: autoint1.e
Quant Time: Dec 10 06:01:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.363 | 3388201 | 20.000 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 40.00% | |
| 6) | S 2-Flurobiphenyl (SURR) | 8.213 | 2136555 | 20.000 | ug/ml |
| Spiked Amount | 50.000 Range 0 - 131 | | Recovery = | 40.00% | |
| 11) | S ortho-Terphenyl (SURR) | 11.247 | 3581810 | 20.000 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 40.00% | |
| | **Target Compounds** | | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.186 | 3799863 | 20.000 | ug/ml |
| 2) | T Naphthalene (C11.7) | 5.703 | 3904840 | 20.000 | ug/ml |
| 3) | T 2-Methylnaphthalene (... | 6.750 | 3719679 | 20.000 | ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.014 | 3748378 | 20.000 | ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.308 | 3705723 | 20.000 | ug/ml |
| 8) | T Flouorene (C16.55) | 9.088 | 3625415 | 20.000 | ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.475 | 3373709 | 20.000 | ug/ml |
| 10) | T Anthracene (C19.43) | 10.551 | 3428584 | 20.000 | ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.279 | 3317711 | 20.000 | ug/ml |
| 13) | T Pyrene (C20.8) | 12.572 | 3247748 | 20.000 | ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.441 | 2785295 | 20.000 | ug/ml |
| 15) | T Chrysene (C27.41) | 14.482 | 3157073 | 20.000 | ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.988 | 2791784 | 20.000 | ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.020 | 2966008 | 20.000 | ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.366 | 2793165 | 20.000 | ug/ml |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.731 | 2136680 | 20.000 | ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.771 | 3027849 | 20.000 | ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.979 | 2831954 | 20.000 | ug/ml |

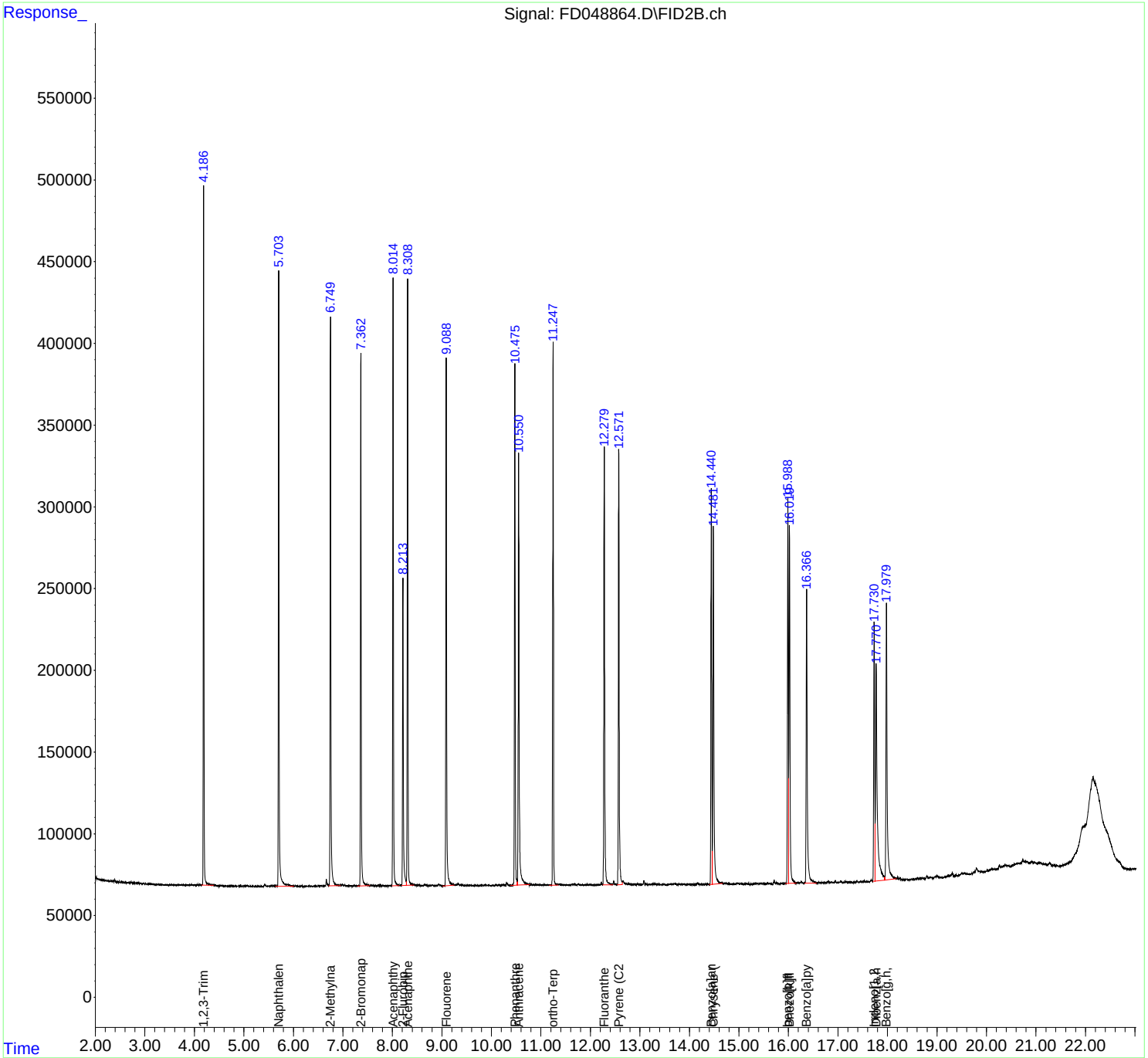
(f)=RT Delta > 1/2 Window (m)=manual int.

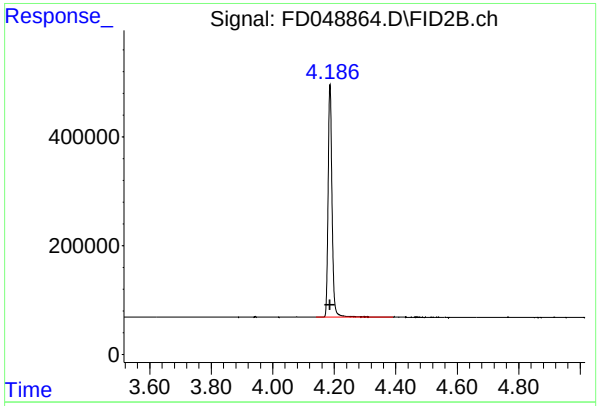
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048864.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:12
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD3
Misc :
ALS Vial : 73 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3

Integration File: autoint1.e
Quant Time: Dec 10 06:01:21 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

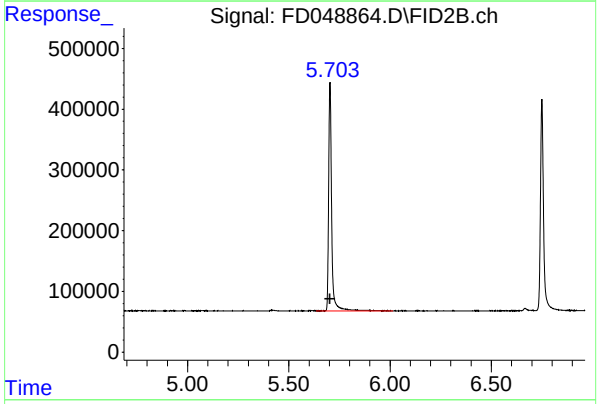





#1 1,2,3-Trimethylbenzene (C10.1)

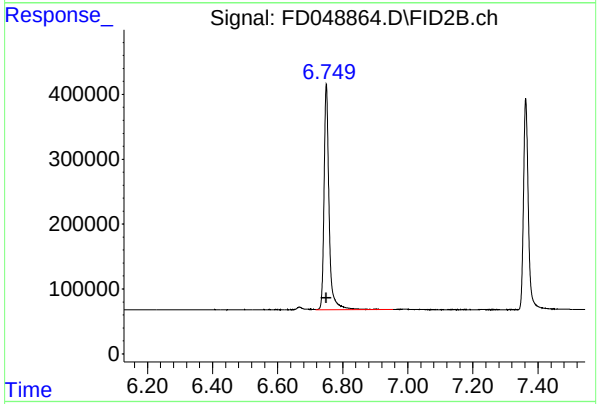
R.T.: 4.186 min
Delta R.T.: 0.000 min
Response: 3799863
Conc: 20.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3



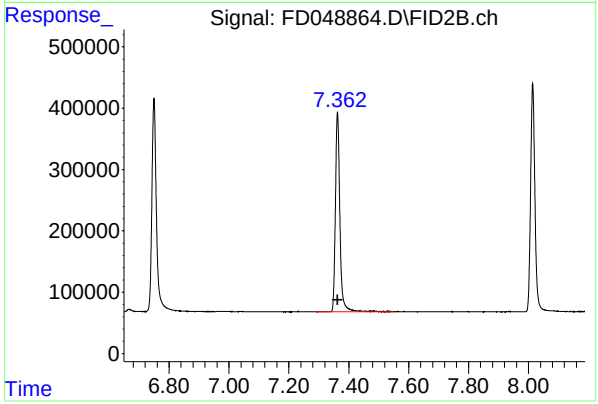

#2 Naphthalene (C11.7)

R.T.: 5.703 min
Delta R.T.: 0.000 min
Response: 3904840
Conc: 20.00 ug/ml



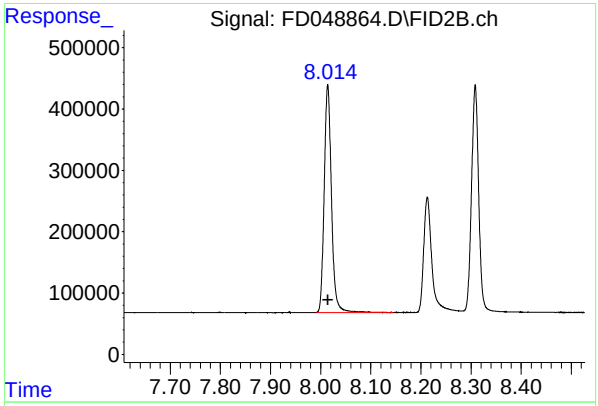

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.750 min
Delta R.T.: 0.000 min
Response: 3719679
Conc: 20.00 ug/ml




#4 2-Bromonaphthalene (SURR)

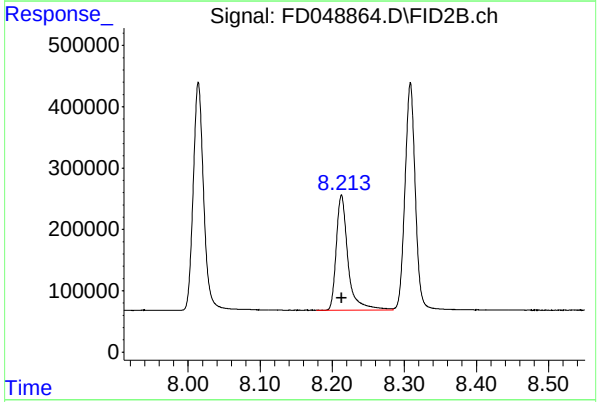
R.T.: 7.363 min
Delta R.T.: 0.000 min
Response: 3388201
Conc: 20.00 ug/ml




#5 Acenaphthylene (C15.06)

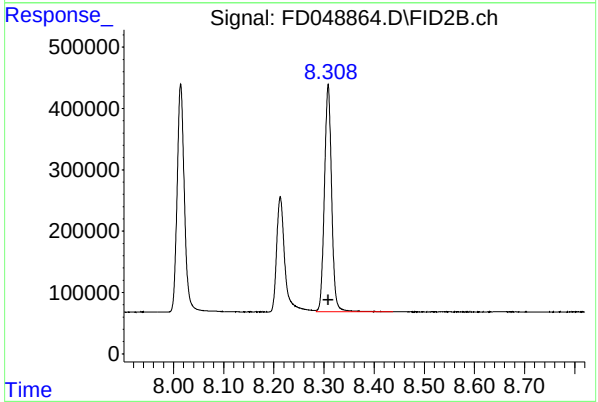
R.T.: 8.014 min
Delta R.T.: 0.000 min
Response: 3748378
Conc: 20.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3



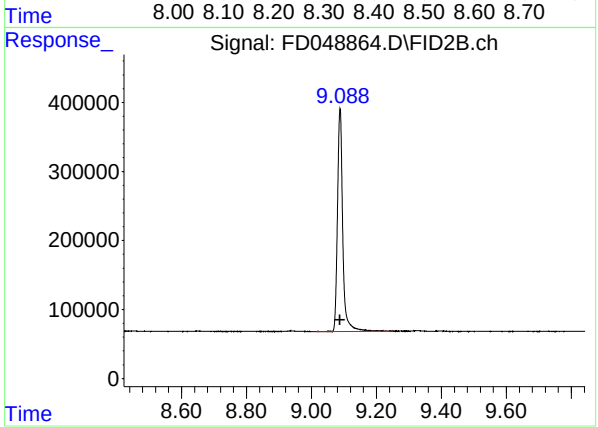

#6 2-Flurobiphenyl (SURR)

R.T.: 8.213 min
Delta R.T.: 0.000 min
Response: 2136555
Conc: 20.00 ug/ml



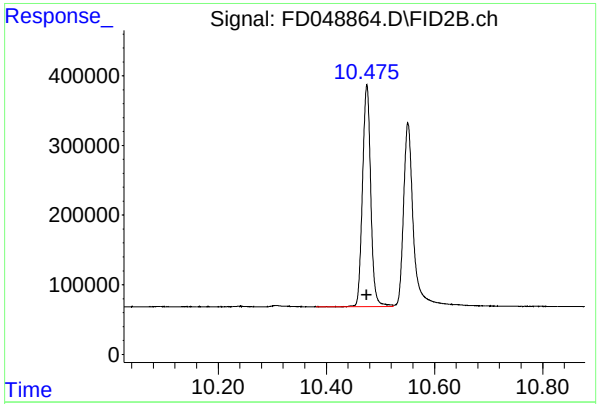

#7 Acenaphthene (C15.5)

R.T.: 8.308 min
Delta R.T.: 0.000 min
Response: 3705723
Conc: 20.00 ug/ml




#8 Flouorene (C16.55)

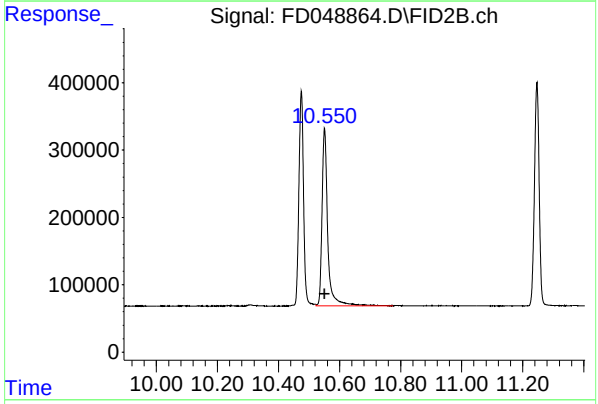
R.T.: 9.088 min
Delta R.T.: 0.000 min
Response: 3625415
Conc: 20.00 ug/ml




#9 Phenanthrene (C19.36)

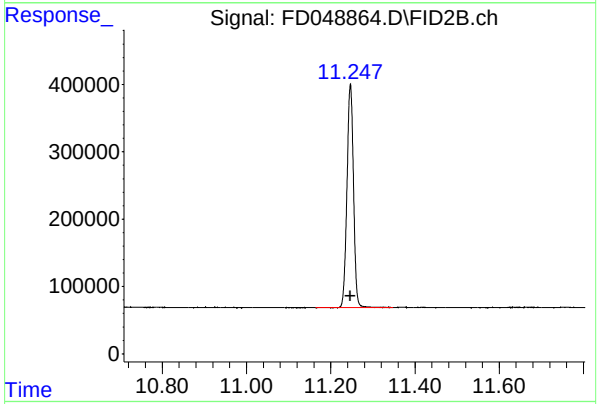
R.T.: 10.475 min
Delta R.T.: 0.000 min
Response: 3373709
Conc: 20.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3



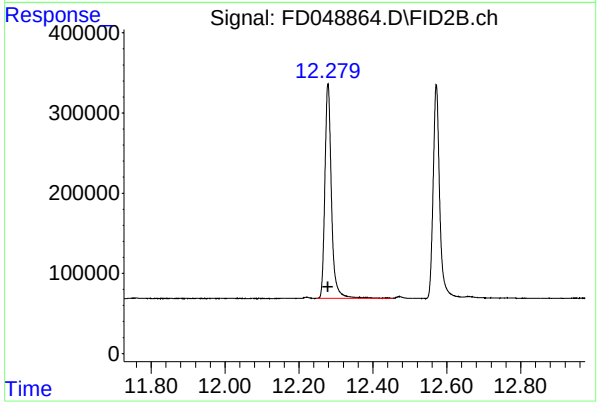

#10 Anthracene (C19.43)

R.T.: 10.551 min
Delta R.T.: 0.000 min
Response: 3428584
Conc: 20.00 ug/ml



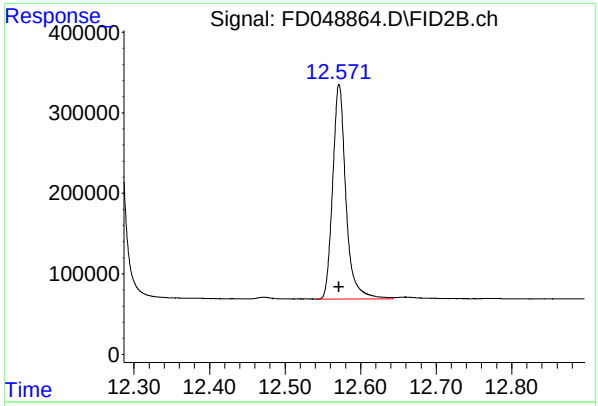

#11 ortho-Terphenyl (SURR)

R.T.: 11.247 min
Delta R.T.: 0.000 min
Response: 3581810
Conc: 20.00 ug/ml




#12 Fluoranthene (C21.85)

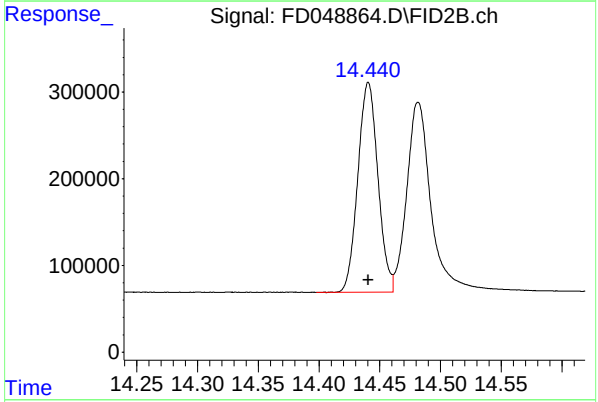
R.T.: 12.279 min
Delta R.T.: 0.000 min
Response: 3317711
Conc: 20.00 ug/ml




#13 Pyrene (C20.8)

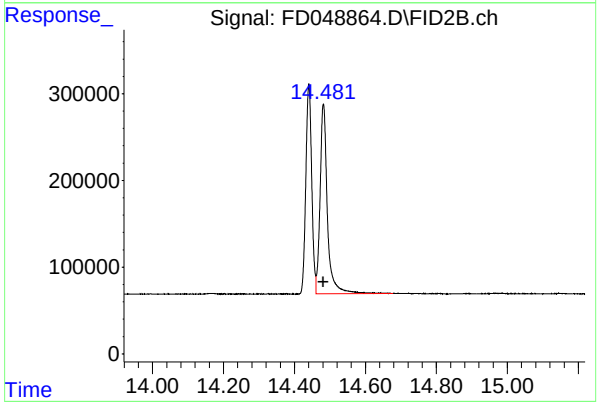
R.T.: 12.572 min
Delta R.T.: 0.000 min
Response: 3247748
Conc: 20.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3



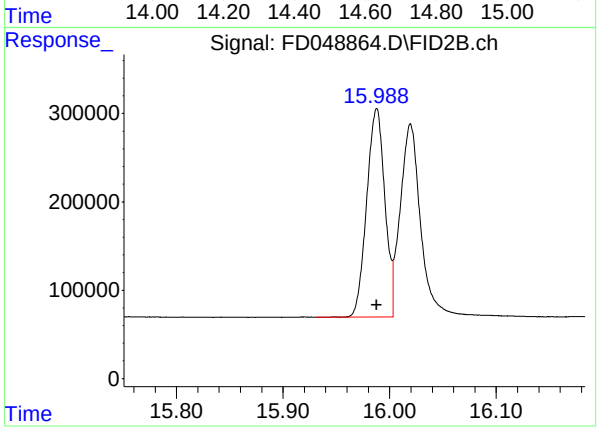

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.441 min
Delta R.T.: 0.000 min
Response: 2785295
Conc: 20.00 ug/ml



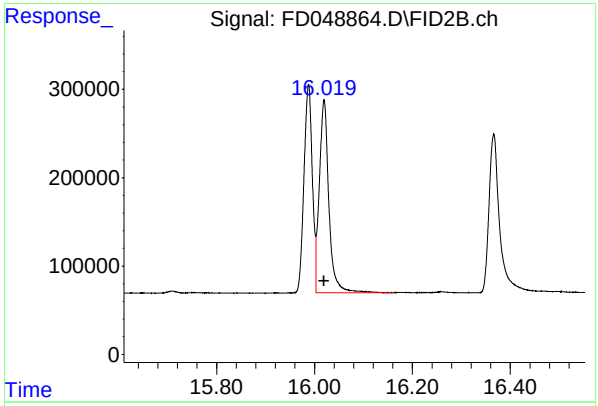

#15 Chrysene (C27.41)

R.T.: 14.482 min
Delta R.T.: 0.000 min
Response: 3157073
Conc: 20.00 ug/ml




#16 benzo[b]fluoranthene (C30.41)

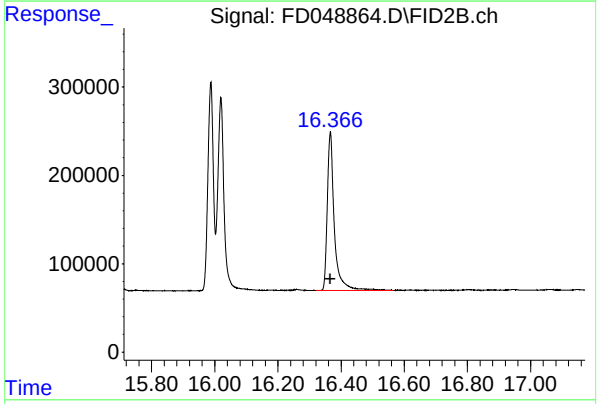
R.T.: 15.988 min
Delta R.T.: 0.000 min
Response: 2791784
Conc: 20.00 ug/ml




#17 Bnezo[k]fluoranthene (C30.14)

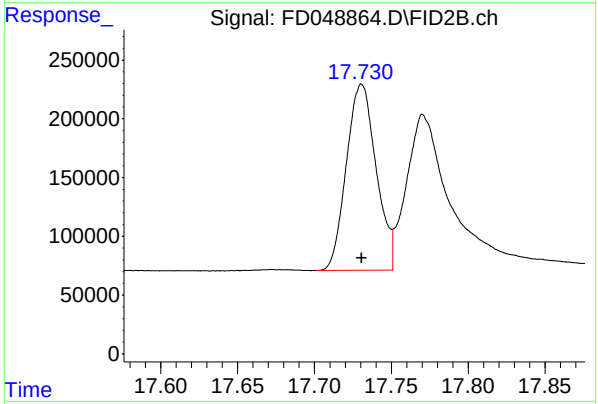
R.T.: 16.020 min
Delta R.T.: 0.000 min
Response: 2966008
Conc: 20.00 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3



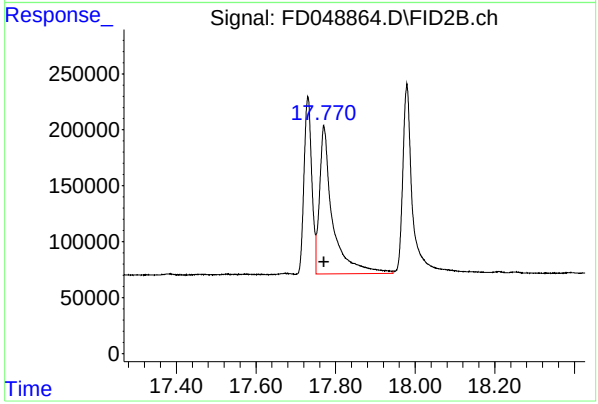

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.366 min
Delta R.T.: 0.000 min
Response: 2793165
Conc: 20.00 ug/ml



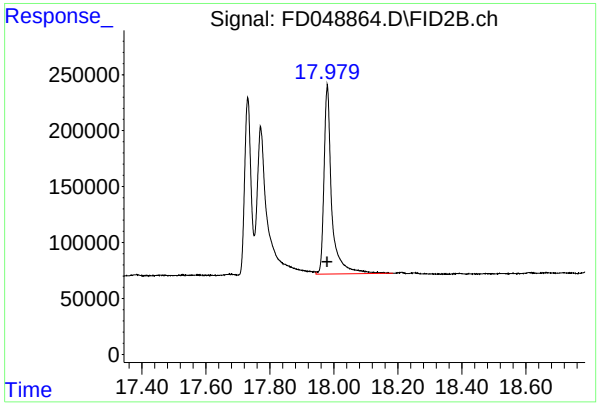

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.731 min
Delta R.T.: 0.000 min
Response: 2136680
Conc: 20.00 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.771 min
Delta R.T.: 0.000 min
Response: 3027849
Conc: 20.00 ug/ml




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.979 min
Delta R.T.: 0.000 mi
Response: 2831954
Conc: 20.00 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD3

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048864.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:12
Sample : 20 PPM AROMATIC HC STD3
Misc :
ALS Vial : 73 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.186 | 4.141 | 4.391 | BB | 424412 | 3799863 | 97.31% | 5.632% |
| 2 | 5.703 | 5.635 | 6.014 | VB | 372221 | 3904840 | 100.00% | 5.788% |
| 3 | 6.750 | 6.718 | 6.954 | VV | 346277 | 3719679 | 95.26% | 5.513% |
| 4 | 7.363 | 7.291 | 7.548 | BB | 324535 | 3388201 | 86.77% | 5.022% |
| 5 | 8.014 | 7.991 | 8.144 | BB | 371081 | 3748378 | 95.99% | 5.556% |
| 6 | 8.213 | 8.178 | 8.284 | BV | 186223 | 2136555 | 54.72% | 3.167% |
| 7 | 8.308 | 8.284 | 8.438 | VV | 368117 | 3705723 | 94.90% | 5.493% |
| 8 | 9.088 | 9.014 | 9.251 | PV | 322076 | 3625415 | 92.84% | 5.374% |
| 9 | 10.475 | 10.381 | 10.523 | BV | 317583 | 3373709 | 86.40% | 5.000% |
| 10 | 10.551 | 10.523 | 10.775 | VV | 263763 | 3428584 | 87.80% | 5.082% |
| 11 | 11.247 | 11.165 | 11.348 | PV | 331652 | 3581810 | 91.73% | 5.309% |
| 12 | 12.279 | 12.246 | 12.454 | VV | 268543 | 3317711 | 84.96% | 4.917% |
| 13 | 12.572 | 12.541 | 12.643 | BV | 267108 | 3247748 | 83.17% | 4.814% |
| 14 | 14.441 | 14.398 | 14.461 | BV | 242468 | 2785295 | 71.33% | 4.128% |
| 15 | 14.482 | 14.461 | 14.678 | VB | 219837 | 3157073 | 80.85% | 4.679% |
| 16 | 15.988 | 15.931 | 16.003 | BV | 236061 | 2791784 | 71.50% | 4.138% |
| 17 | 16.020 | 16.003 | 16.160 | VV | 218879 | 2966008 | 75.96% | 4.396% |
| 18 | 16.366 | 16.321 | 16.564 | BV | 180609 | 2793165 | 71.53% | 4.140% |
| 19 | 17.731 | 17.701 | 17.751 | BV | 158582 | 2136680 | 54.72% | 3.167% |
| 20 | 17.771 | 17.751 | 17.944 | VV | 132069 | 3027849 | 77.54% | 4.488% |
| 21 | 17.979 | 17.944 | 18.184 | VV | 167117 | 2831954 | 72.52% | 4.197% |
| | | | Sum of corrected areas: | | | 67468024 | | |

Aromatic EPH 121024.M Tue Dec 10 07:09:33 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048865.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:48
Operator : YP/AJ
Sample : 10 PPM AROMATIC HC STD4
Misc :
ALS Vial : 74 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:01:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.363 | 1801246 | 10.632 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 21.26% | |
| 6) | S 2-Flurobiphenyl (SURR) | 8.216 | 1109904 | 10.390 | ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 20.78% | |
| 11) | S ortho-Terphenyl (SURR) | 11.246 | 1959151 | 10.939 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 21.88% | |
| | **Target Compounds** | | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.187 | 2071069 | 10.901 | ug/ml |
| 2) | T Naphthalene (C11.7) | 5.704 | 2131881 | 10.919 | ug/mlm |
| 3) | T 2-Methylnaphthalene (... | 6.751 | 2042623 | 10.983 | ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.015 | 2048400 | 10.930 | ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.307 | 2063315 | 11.136 | ug/ml |
| 8) | T Flouorene (C16.55) | 9.090 | 1967074 | 10.852 | ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.475 | 1818745 | 10.782 | ug/ml |
| 10) | T Anthracene (C19.43) | 10.553 | 1860334 | 10.852 | ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.281 | 1813128 | 10.930 | ug/ml |
| 13) | T Pyrene (C20.8) | 12.574 | 1808967 | 11.140 | ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.444 | 1368072 | 9.824 | ug/ml |
| 15) | T Chrysene (C27.41) | 14.483 | 1837551 | 11.641 | ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.988 | 1450632 | 10.392 | ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.020 | 1704463 | 11.493 | ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.372 | 1522903 | 10.904 | ug/ml |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.737 | 1050378 | 9.832 | ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.781 | 1689181 | 11.158 | ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.983 | 1561028 | 11.024 | ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048865.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:48
Operator : YP/AJ
Sample : 10 PPM AROMATIC HC STD4
Misc :
ALS Vial : 74 Sample Multiplier: 1

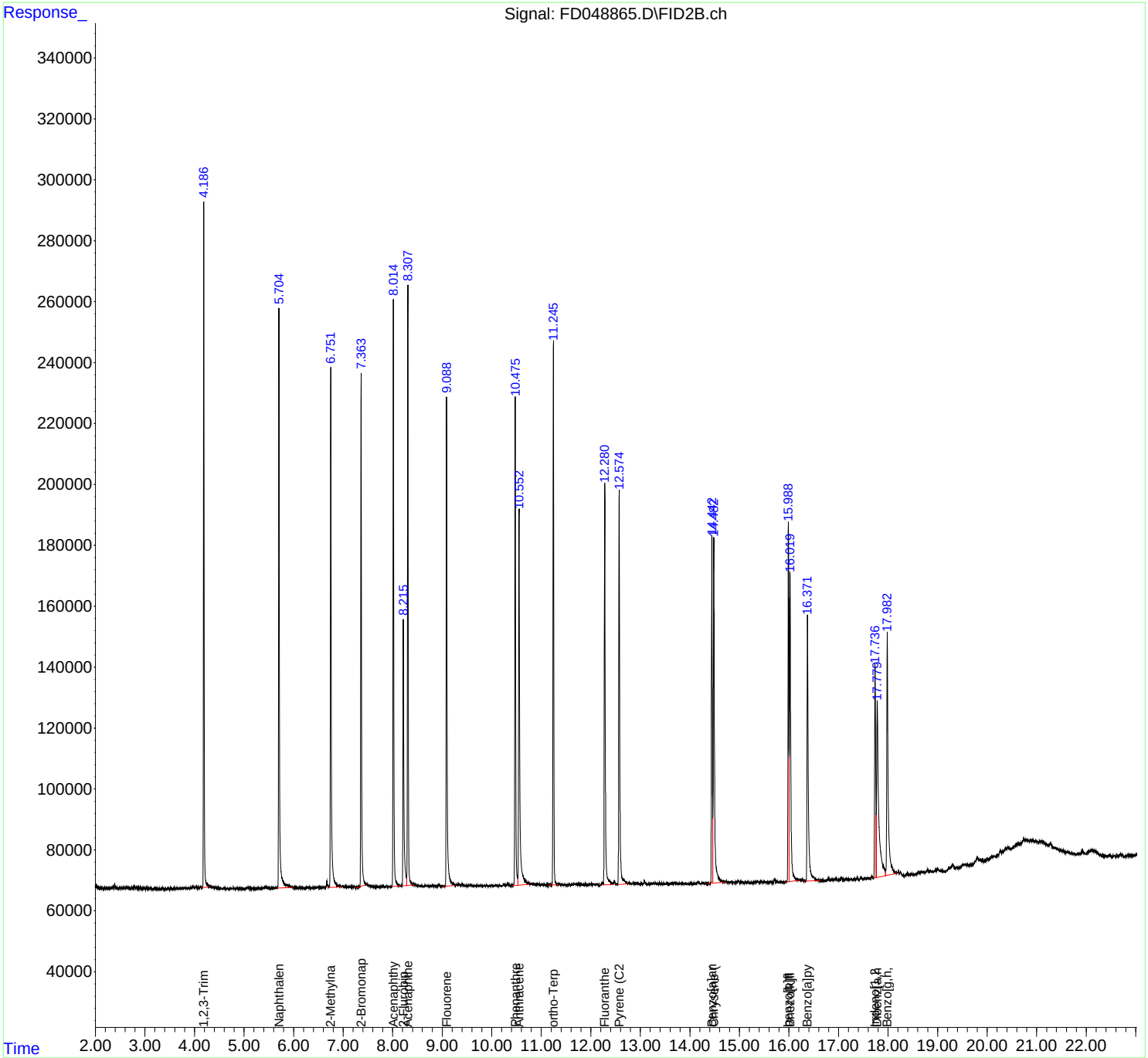
**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

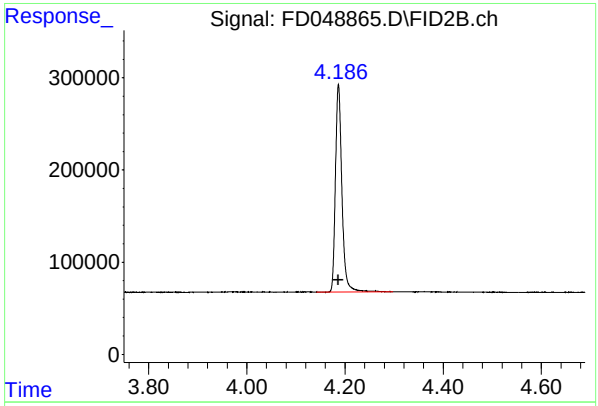
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:01:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





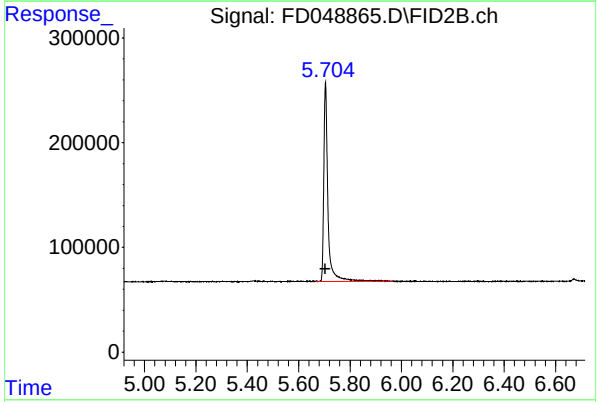

#1 1,2,3-Trimethylbenzene (C10.1)

R.T.: 4.187 min
Delta R.T.: 0.001 mi
Response: 2071069
Conc: 10.90 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

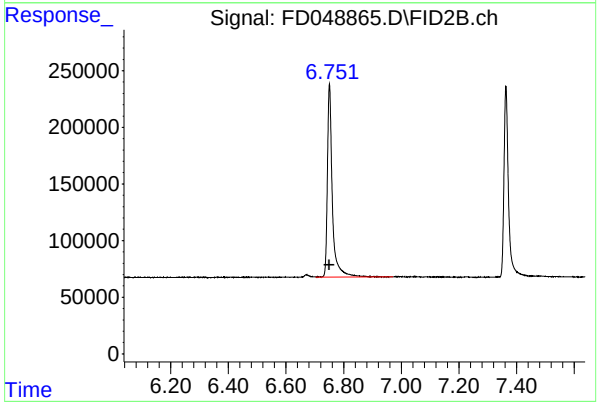
**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



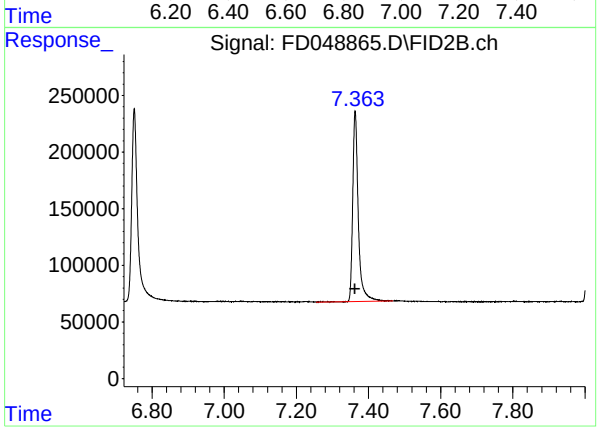

#2 Naphthalene (C11.7)

R.T.: 5.704 min
Delta R.T.: 0.000 min
Response: 2131881
Conc: 10.92 ug/ml m



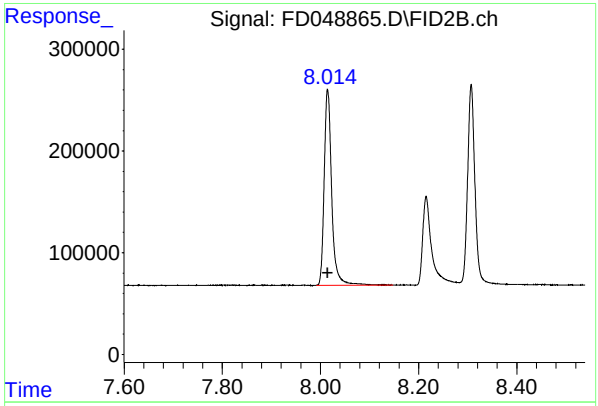

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.751 min
Delta R.T.: 0.001 min
Response: 2042623
Conc: 10.98 ug/ml




#4 2-Bromonaphthalene (SURR)

R.T.: 7.363 min
Delta R.T.: 0.000 min
Response: 1801246
Conc: 10.63 ug/ml



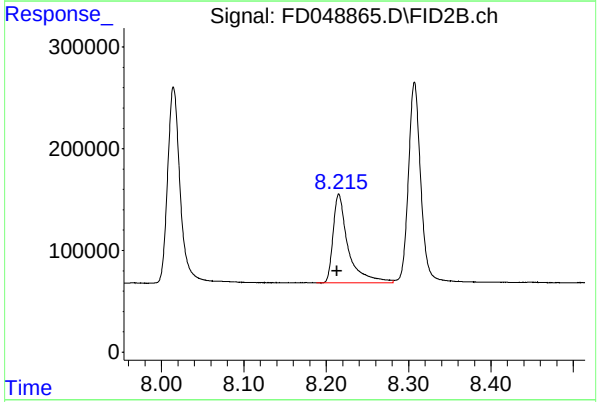

#5 Acenaphthylene (C15.06)

R.T.: 8.015 min
Delta R.T.: 0.000 min
Response: 2048400
Conc: 10.93 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

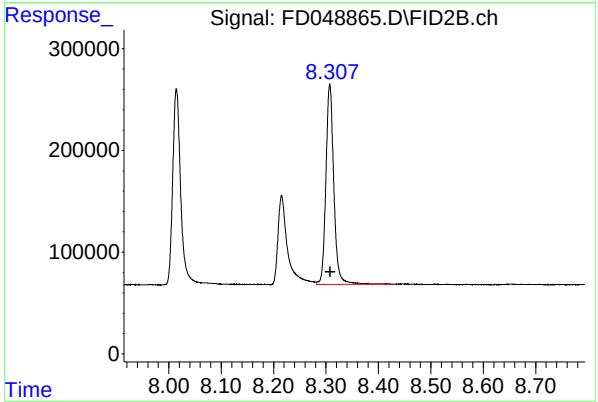
**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



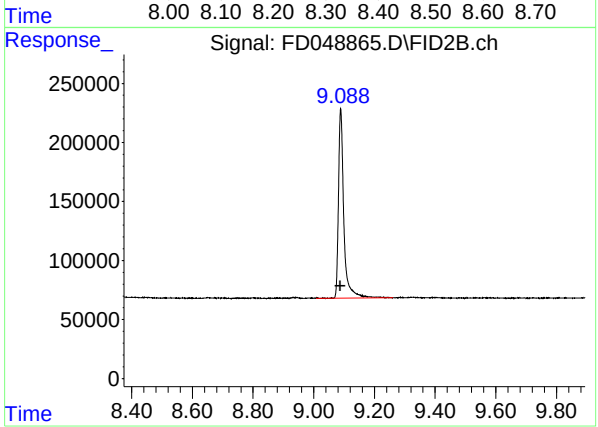

#6 2-Flurobiphenyl (SURR)

R.T.: 8.216 min
Delta R.T.: 0.003 min
Response: 1109904
Conc: 10.39 ug/ml



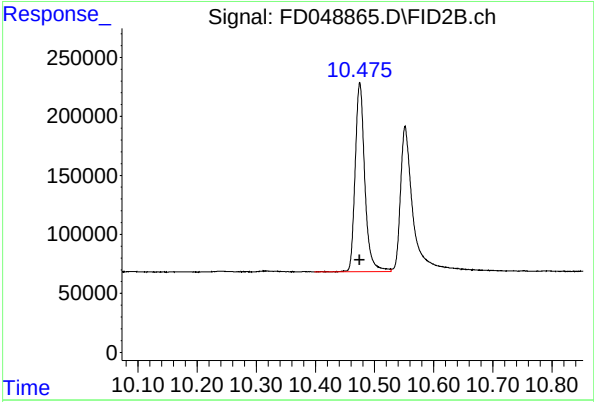

#7 Acenaphthene (C15.5)

R.T.: 8.307 min
Delta R.T.: 0.000 min
Response: 2063315
Conc: 11.14 ug/ml




#8 Flouorene (C16.55)

R.T.: 9.090 min
Delta R.T.: 0.002 min
Response: 1967074
Conc: 10.85 ug/ml



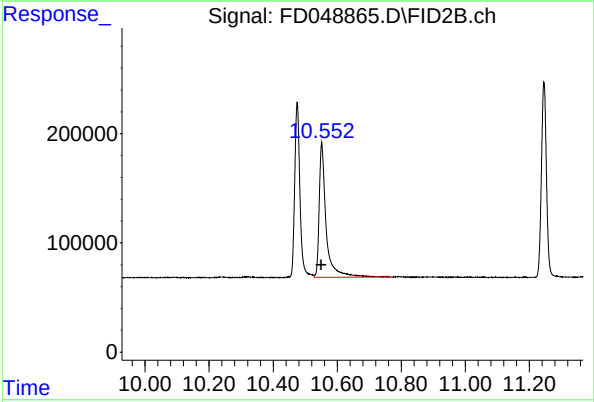

#9 Phenanthrene (C19.36)

R.T.: 10.475 min
Delta R.T.: 0.000 min
Response: 1818745
Conc: 10.78 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

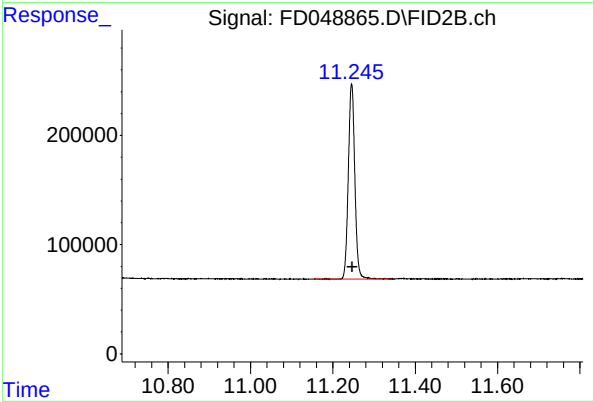
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



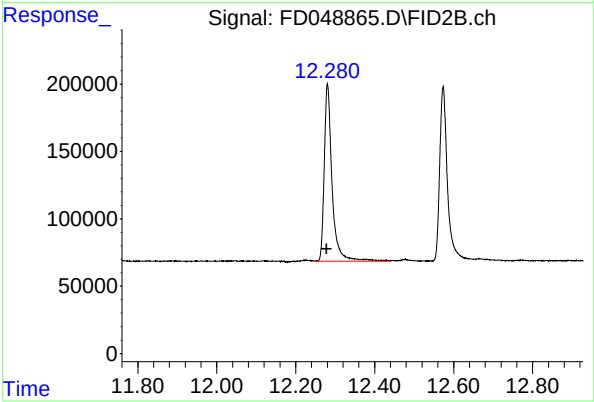

#10 Anthracene (C19.43)

R.T.: 10.553 min
Delta R.T.: 0.002 min
Response: 1860334
Conc: 10.85 ug/ml



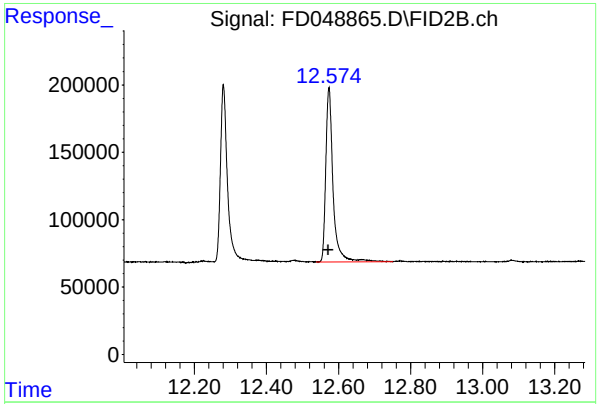

#11 ortho-Terphenyl (SURR)

R.T.: 11.246 min
Delta R.T.: -0.001 min
Response: 1959151
Conc: 10.94 ug/ml




#12 Fluoranthene (C21.85)

R.T.: 12.281 min
Delta R.T.: 0.003 min
Response: 1813128
Conc: 10.93 ug/ml



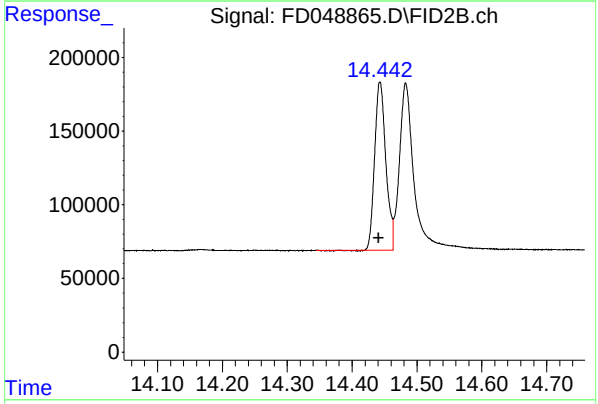

#13 Pyrene (C20.8)

R.T.: 12.574 min
Delta R.T.: 0.002 min
Response: 1808967
Conc: 11.14 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

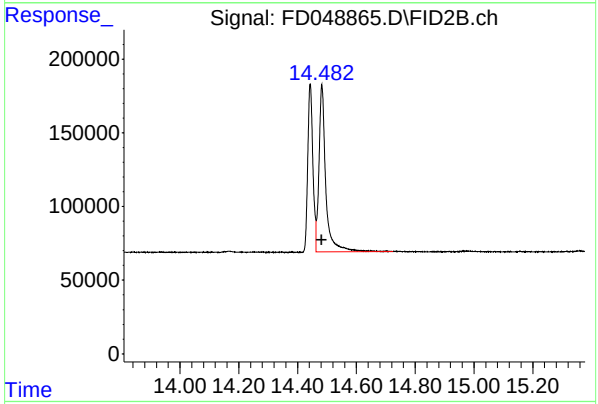
**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



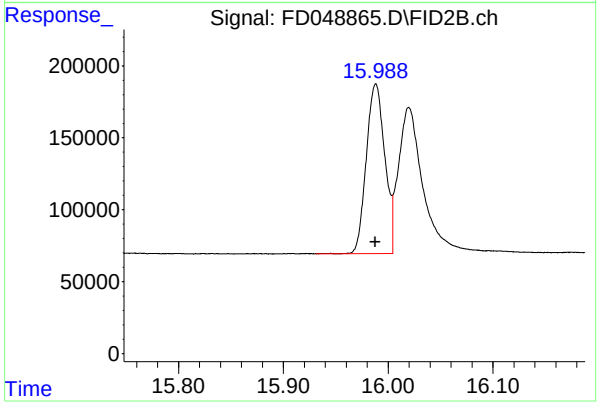

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.444 min
Delta R.T.: 0.003 min
Response: 1368072
Conc: 9.82 ug/ml



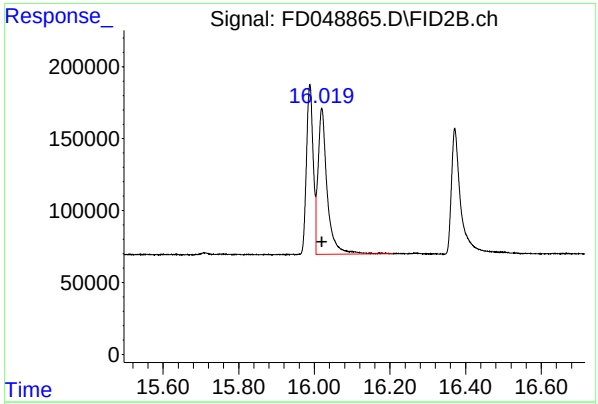

#15 Chrysene (C27.41)

R.T.: 14.483 min
Delta R.T.: 0.001 min
Response: 1837551
Conc: 11.64 ug/ml




#16 benzo[b]fluoranthene (C30.41)

R.T.: 15.988 min
Delta R.T.: 0.000 min
Response: 1450632
Conc: 10.39 ug/ml



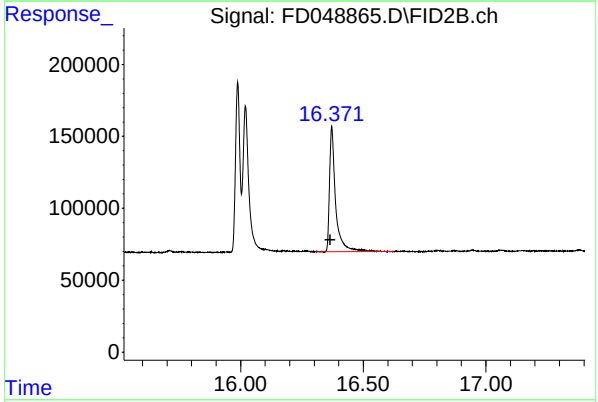

#17 Bnezo[k]fluoranthene (C30.14)

R.T.: 16.020 min
Delta R.T.: 0.000 min
Response: 1704463
Conc: 11.49 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

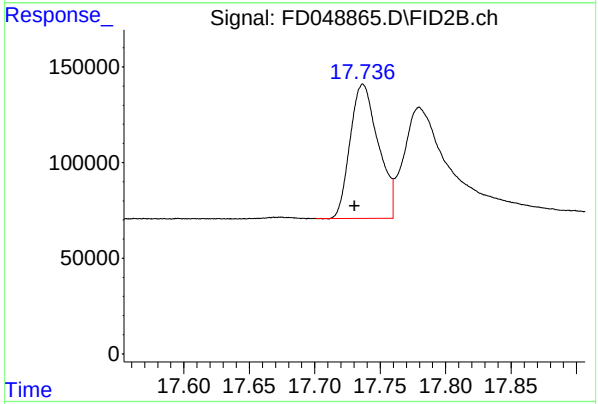
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



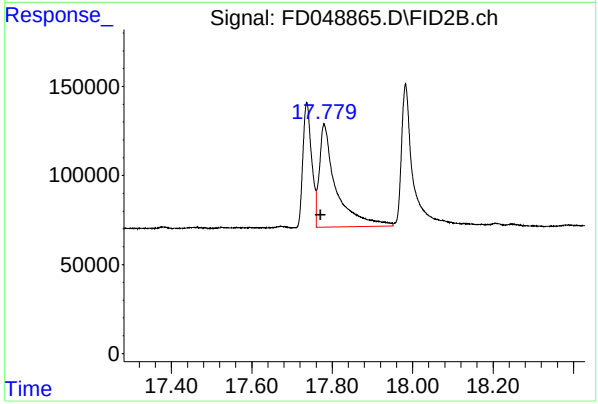

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.372 min
Delta R.T.: 0.006 min
Response: 1522903
Conc: 10.90 ug/ml



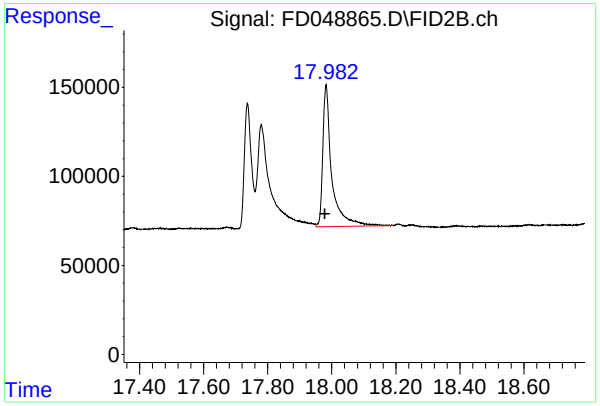

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.737 min
Delta R.T.: 0.007 min
Response: 1050378
Conc: 9.83 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.781 min
Delta R.T.: 0.010 min
Response: 1689181
Conc: 11.16 ug/ml




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.983 min
Delta R.T.: 0.004 mi
Response: 1561028
Conc: 11.02 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
10 PPM AROMATIC HC STD4

**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

**Instrument :**
FID_D
**LabSampleId :**
10 PPM AROMATIC HC STD4

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12102
Data File : FD048865.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 04:48
Sample : 10 PPM AROMATIC HC STD4
Misc :
ALS Vial : 74 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.187 | 4.141 | 4.298 | BV | 222432 | 2071069 | 96.26% | 5.643% |
| 2 | 5.705 | 5.488 | 5.974 | BB | 188880 | 2151601 | 100.00% | 5.863% |
| 3 | 6.751 | 6.704 | 6.971 | VB | 170298 | 2042623 | 94.94% | 5.566% |
| 4 | 7.363 | 7.255 | 7.468 | PV | 166485 | 1801246 | 83.72% | 4.908% |
| 5 | 8.015 | 7.991 | 8.148 | BB | 192145 | 2048400 | 95.20% | 5.582% |
| 6 | 8.216 | 8.188 | 8.281 | BV | 82800 | 1109904 | 51.59% | 3.024% |
| 7 | 8.308 | 8.281 | 8.428 | VV | 196012 | 2063315 | 95.90% | 5.622% |
| 8 | 9.090 | 9.008 | 9.261 | BV | 155815 | 1967074 | 91.42% | 5.360% |
| 9 | 10.475 | 10.398 | 10.528 | BV | 159549 | 1818745 | 84.53% | 4.956% |
| 10 | 10.553 | 10.528 | 10.768 | VV | 121963 | 1860334 | 86.46% | 5.069% |
| 11 | 11.246 | 11.154 | 11.341 | BV | 179084 | 1959151 | 91.06% | 5.338% |
| 12 | 12.281 | 12.246 | 12.441 | VV | 130035 | 1813128 | 84.27% | 4.940% |
| 13 | 12.574 | 12.538 | 12.751 | PV | 128701 | 1808967 | 84.08% | 4.929% |
| 14 | 14.444 | 14.344 | 14.463 | BV | 113009 | 1368072 | 63.58% | 3.728% |
| 15 | 14.483 | 14.463 | 14.724 | VB | 112053 | 1837551 | 85.40% | 5.007% |
| 16 | 15.988 | 15.931 | 16.004 | BV | 117662 | 1450632 | 67.42% | 3.953% |
| 17 | 16.020 | 16.004 | 16.208 | VB | 101231 | 1704463 | 79.22% | 4.644% |
| 18 | 16.372 | 16.308 | 16.621 | BB | 86887 | 1522903 | 70.78% | 4.150% |
| 19 | 17.737 | 17.701 | 17.760 | BV | 69561 | 1050378 | 48.82% | 2.862% |
| 20 | 17.781 | 17.760 | 17.951 | VV | 57090 | 1689181 | 78.51% | 4.603% |
| 21 | 17.983 | 17.951 | 18.191 | VV | 78482 | 1561028 | 72.55% | 4.254% |
| | | | Sum of corrected areas: | | | 36699766 | | |

Aromatic EPH 121024.M Tue Dec 10 07:09:53 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048866.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 05:24
Operator : YP/AJ
Sample : 5 PPM AROMATIC HC STD5
Misc :
ALS Vial : 75 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:02:03 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.368 | 863222 | 5.095 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 10.19% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.227 | 437018 | 4.091 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 8.18% |
| 11) S | ortho-Terphenyl (SURR) | 11.248 | 882460 | 4.927 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 9.85% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.189 | 947332 | 4.986 ug/ml |
| 2) T | Naphthalene (C11.7) | 5.708 | 897541 | 4.597 ug/mlm |
| 3) T | 2-Methylnaphthalene (... | 6.757 | 895007 | 4.812 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.019 | 924981 | 4.935 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.310 | 948924 | 5.121 ug/ml |
| 8) T | Flouorene (C16.55) | 9.096 | 839037 | 4.629 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.483 | 780930 | 4.630 ug/ml |
| 10) T | Anthracene (C19.43) | 10.564 | 818431 | 4.774 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.291 | 777996 | 4.690 ug/ml |
| 13) T | Pyrene (C20.8) | 12.580 | 787810 | 4.851 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.455 | 507076 | 3.641 ug/ml |
| 15) T | Chrysene (C27.41) | 14.492 | 883975 | 5.600 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 15.999 | 564845 | 4.046 ug/ml |
| 17) T | Bnezo[k]fluoranthene ... | 16.032 | 836054 | 5.638 ug/ml |
| 18) T | Benzo[a]pyrene (C31.34) | 16.389 | 684346 | 4.900 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.759 | 396470 | 3.711 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.803 | 701278 | 4.632 ug/mlm |
| 21) T | Benzo[g,h,i]perylene ... | 17.996 | 687081 | 4.852 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048866.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 05:24
Operator : YP/AJ
Sample : 5 PPM AROMATIC HC STD5
Misc :
ALS Vial : 75 Sample Multiplier: 1

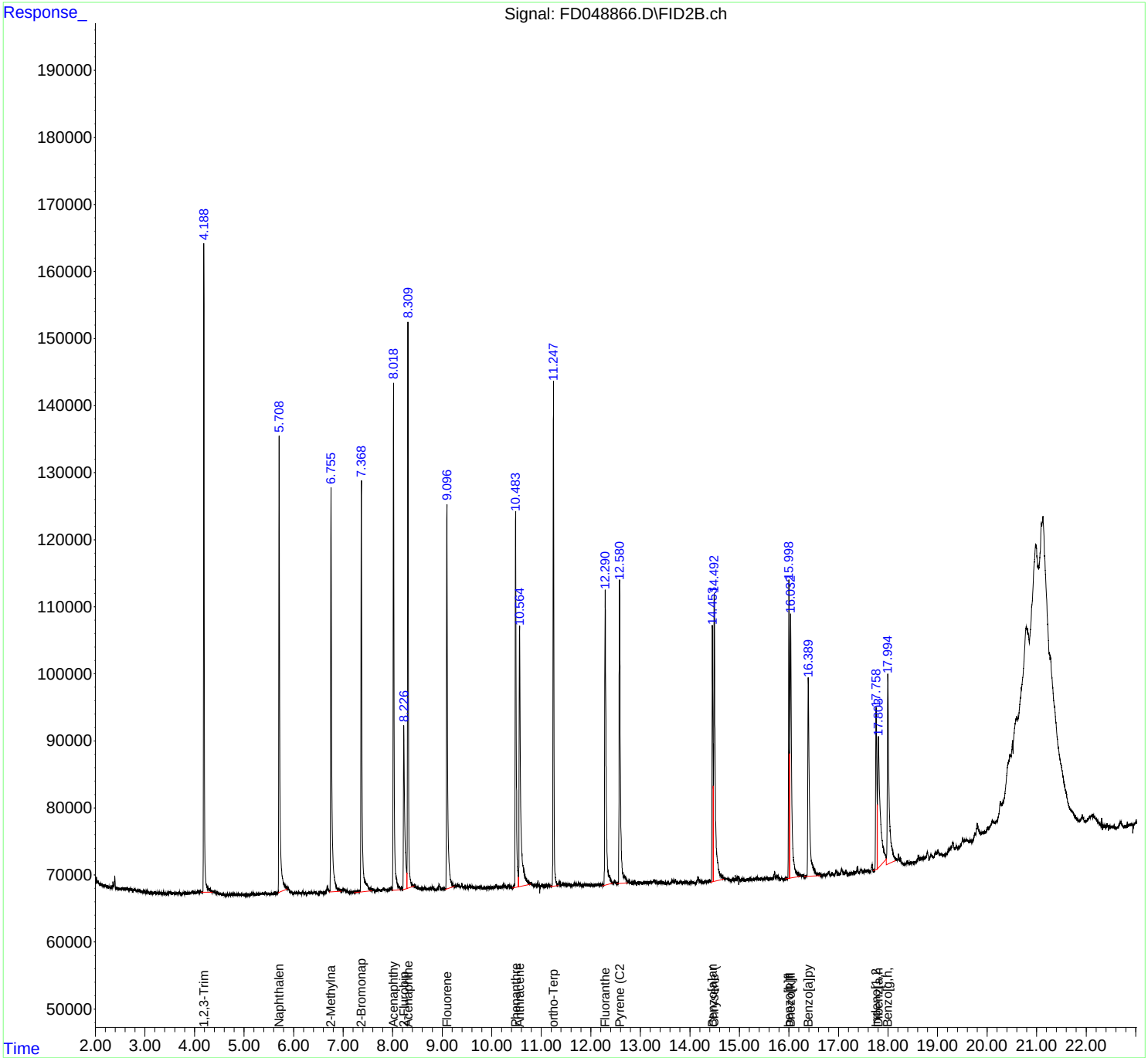
**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

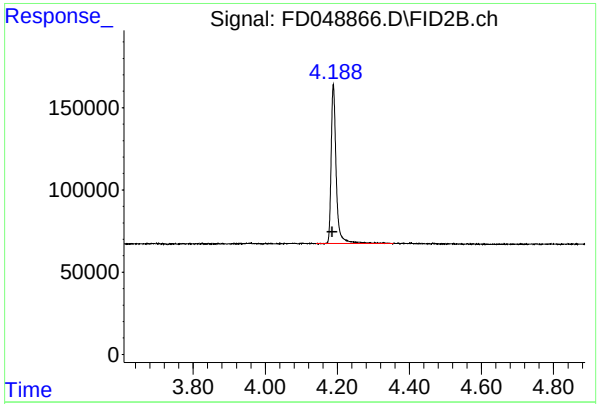
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 06:02:03 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 05:59:54 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





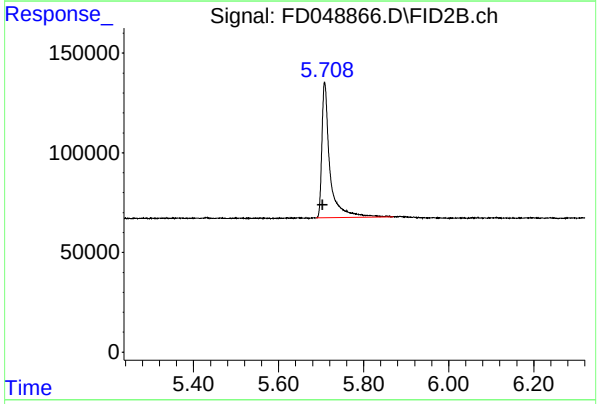

#1 1,2,3-Trimethylbenzene (C10.1)

R.T.: 4.189 min
Delta R.T.: 0.003 mi
Response: 947332
Conc: 4.99 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

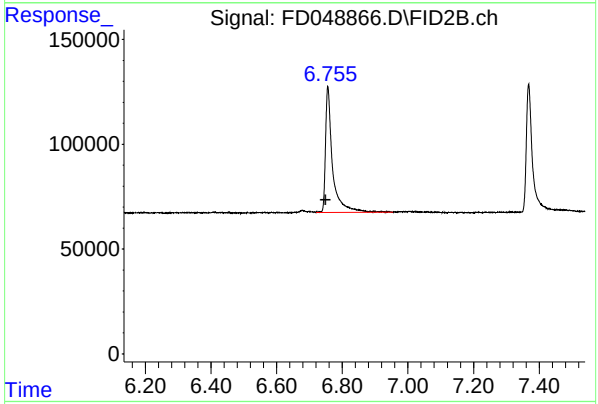
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



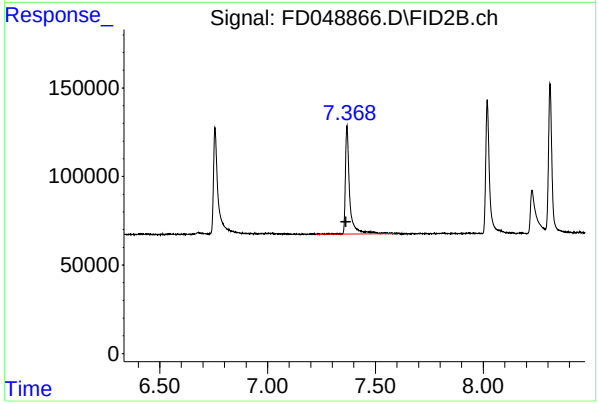

#2 Naphthalene (C11.7)

R.T.: 5.708 min
Delta R.T.: 0.004 min
Response: 897541
Conc: 4.60 ug/ml m



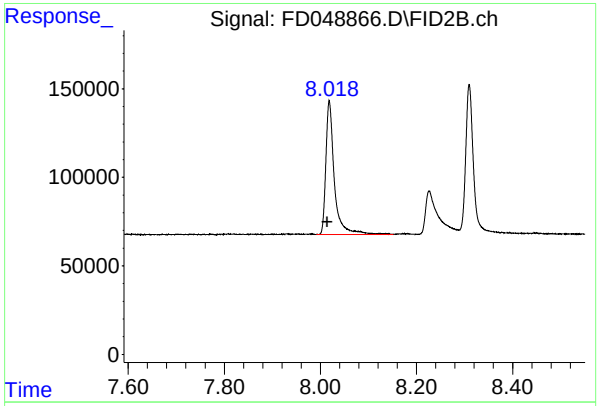

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.757 min
Delta R.T.: 0.007 min
Response: 895007
Conc: 4.81 ug/ml




#4 2-Bromonaphthalene (SURR)

R.T.: 7.368 min
Delta R.T.: 0.006 min
Response: 863222
Conc: 5.10 ug/ml



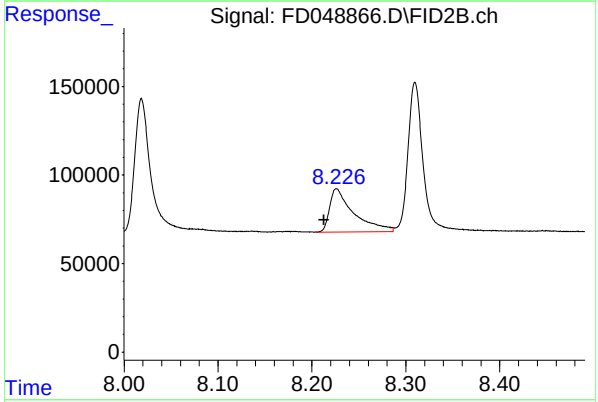

#5 Acenaphthylene (C15.06)

R.T.: 8.019 min
Delta R.T.: 0.004 min
Response: 924981
Conc: 4.94 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

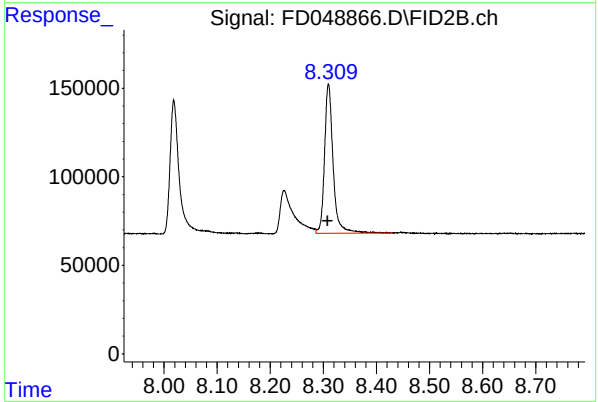
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



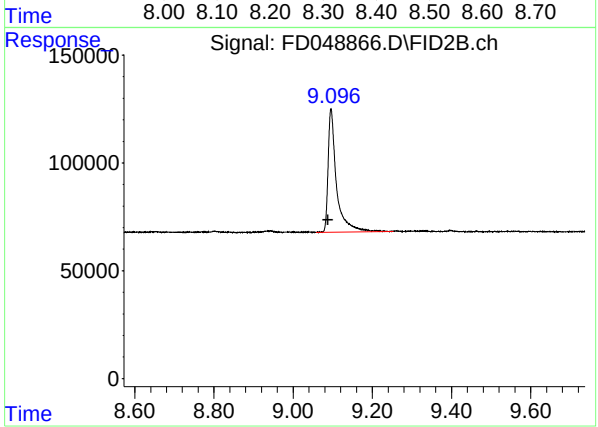

#6 2-Flurobiphenyl (SURR)

R.T.: 8.227 min
Delta R.T.: 0.014 min
Response: 437018
Conc: 4.09 ug/ml



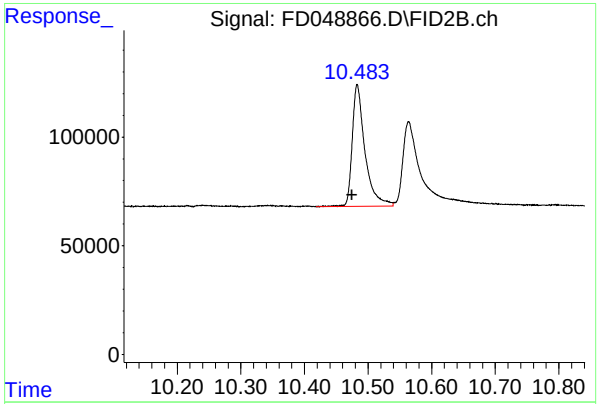

#7 Acenaphthene (C15.5)

R.T.: 8.310 min
Delta R.T.: 0.002 min
Response: 948924
Conc: 5.12 ug/ml




#8 Flouorene (C16.55)

R.T.: 9.096 min
Delta R.T.: 0.008 min
Response: 839037
Conc: 4.63 ug/ml




#9 Phenanthrene (C19.36)

R.T.: 10.483 min
Delta R.T.: 0.009 min
Response: 780930
Conc: 4.63 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

**Manual Integrations APPROVED**

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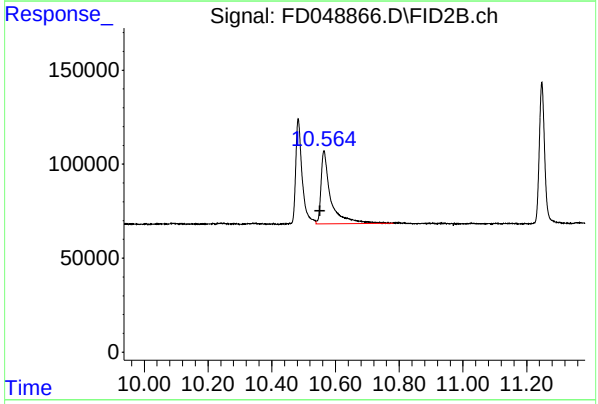
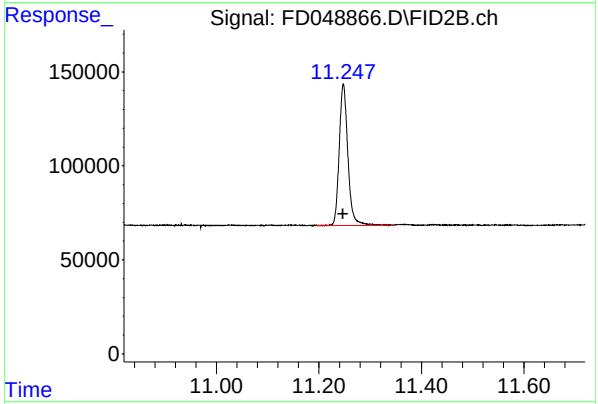
Supervised By :Ankita Jodhani 12/10/2024



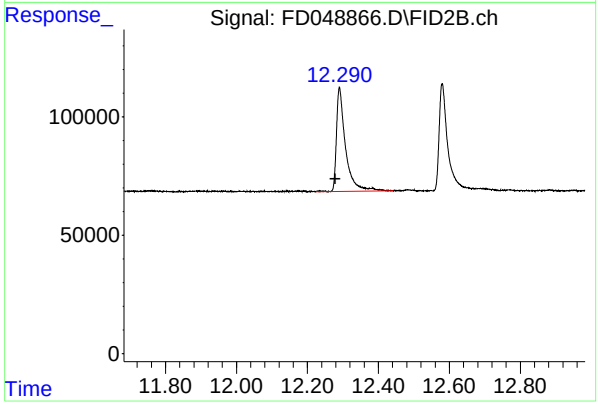

#10 Anthracene (C19.43)

R.T.: 10.564 min
Delta R.T.: 0.013 min
Response: 818431
Conc: 4.77 ug/ml



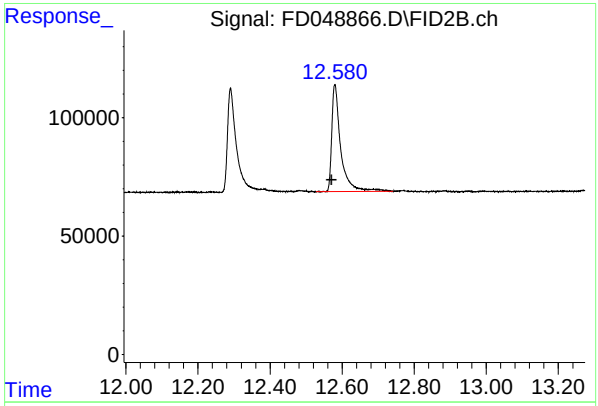

#11 ortho-Terphenyl (SURR)

R.T.: 11.248 min
Delta R.T.: 0.001 min
Response: 882460
Conc: 4.93 ug/ml




#12 Fluoranthene (C21.85)

R.T.: 12.291 min
Delta R.T.: 0.012 min
Response: 777996
Conc: 4.69 ug/ml




#13 Pyrene (C20.8)

R.T.: 12.580 min
Delta R.T.: 0.009 min
Response: 787810
Conc: 4.85 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
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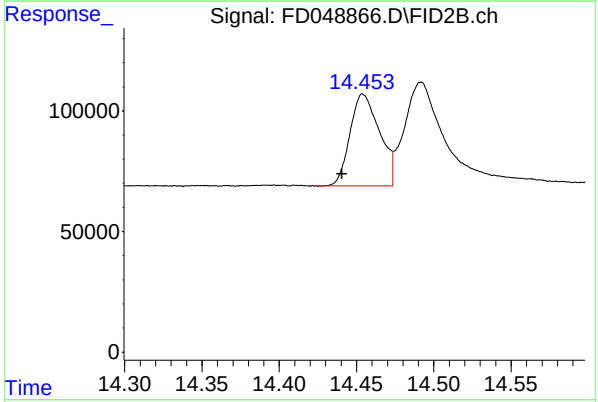
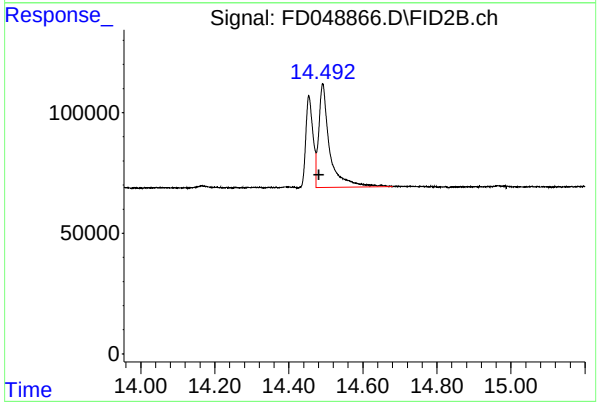


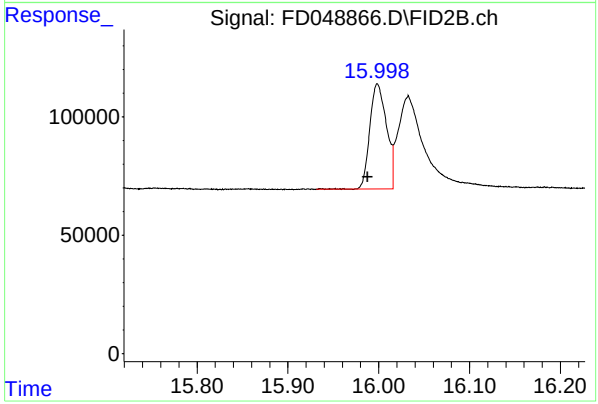

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.455 min
Delta R.T.: 0.014 min
Response: 507076
Conc: 3.64 ug/ml



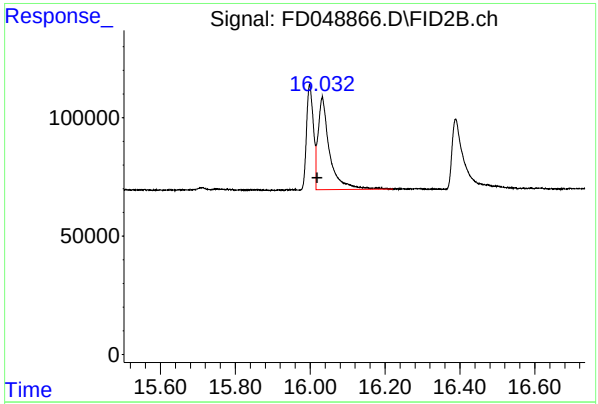

#15 Chrysene (C27.41)

R.T.: 14.492 min
Delta R.T.: 0.010 min
Response: 883975
Conc: 5.60 ug/ml




#16 benzo[b]fluoranthene (C30.41)

R.T.: 15.999 min
Delta R.T.: 0.011 min
Response: 564845
Conc: 4.05 ug/ml




#17 Bnezo[k]fluoranthene (C30.14)

R.T.: 16.032 min
Delta R.T.: 0.013 min
Response: 836054
Conc: 5.64 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
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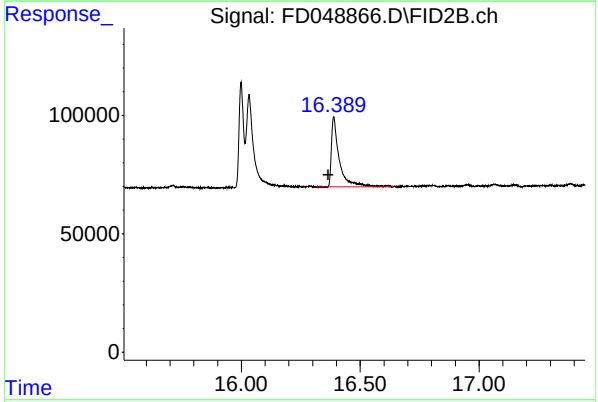
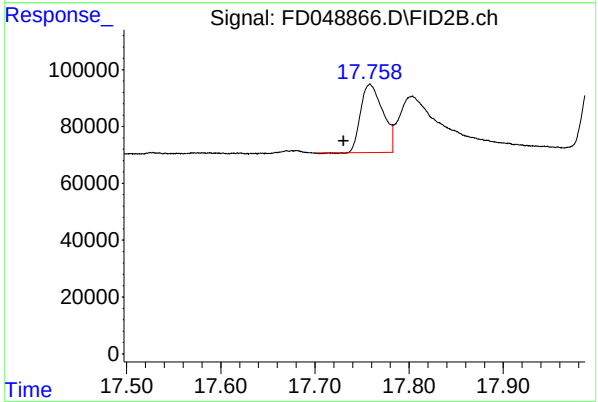


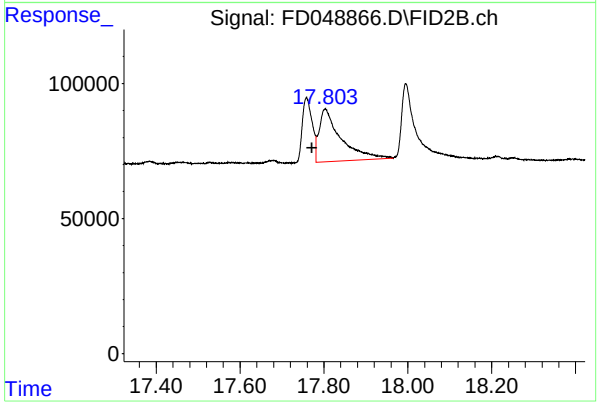

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.389 min
Delta R.T.: 0.023 min
Response: 684346
Conc: 4.90 ug/ml



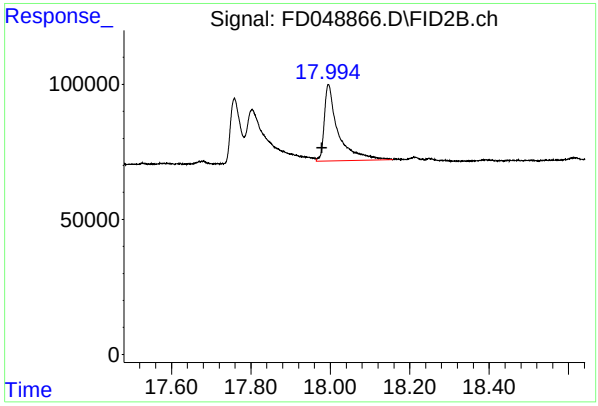

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.759 min
Delta R.T.: 0.028 min
Response: 396470
Conc: 3.71 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.803 min
Delta R.T.: 0.032 min
Response: 701278
Conc: 4.63 ug/ml m




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.996 min
Delta R.T.: 0.017 mir
Response: 687081
Conc: 4.85 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
5 PPM AROMATIC HC STD5

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

**Instrument :**
FID_D
**LabSampleId :**
5 PPM AROMATIC HC STD5

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12102
Data File : FD048866.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 05:24
Sample : 5 PPM AROMATIC HC STD5
Misc :
ALS Vial : 75 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.189 | 4.141 | 4.354 | BB | 96180 | 947332 | 99.83% | 5.896% |
| 2 | 5.709 | 5.504 | 5.874 | BV | 68017 | 868319 | 91.51% | 5.404% |
| 3 | 6.757 | 6.720 | 6.954 | VV | 58927 | 895007 | 94.32% | 5.570% |
| 4 | 7.368 | 7.225 | 7.581 | VV | 60961 | 863222 | 90.97% | 5.372% |
| 5 | 8.019 | 7.991 | 8.151 | BV | 75240 | 924981 | 97.48% | 5.757% |
| 6 | 8.227 | 8.204 | 8.286 | PV | 24121 | 437018 | 46.05% | 2.720% |
| 7 | 8.310 | 8.286 | 8.431 | VV | 83714 | 948924 | 100.00% | 5.906% |
| 8 | 9.096 | 9.058 | 9.252 | BV | 57359 | 839037 | 88.42% | 5.222% |
| 9 | 10.483 | 10.418 | 10.539 | PV | 55264 | 780930 | 82.30% | 4.860% |
| 10 | 10.564 | 10.539 | 10.780 | VV | 38785 | 818431 | 86.25% | 5.094% |
| 11 | 11.248 | 11.194 | 11.344 | BV | 75144 | 882460 | 93.00% | 5.492% |
| 12 | 12.291 | 12.224 | 12.441 | PB | 43647 | 777996 | 81.99% | 4.842% |
| 13 | 12.580 | 12.528 | 12.741 | BV | 45032 | 787810 | 83.02% | 4.903% |
| 14 | 14.455 | 14.424 | 14.473 | PV | 37959 | 507076 | 53.44% | 3.156% |
| 15 | 14.492 | 14.473 | 14.681 | VB | 42972 | 883975 | 93.16% | 5.502% |
| 16 | 15.999 | 15.931 | 16.016 | BV | 44293 | 564845 | 59.52% | 3.515% |
| 17 | 16.032 | 16.016 | 16.221 | VV | 38834 | 836054 | 88.11% | 5.203% |
| 18 | 16.389 | 16.314 | 16.638 | BB | 29661 | 684346 | 72.12% | 4.259% |
| 19 | 17.759 | 17.701 | 17.783 | BV | 23979 | 396470 | 41.78% | 2.467% |
| 20 | 17.803 | 17.783 | 17.964 | VV | 19606 | 736450 | 77.61% | 4.583% |
| 21 | 17.996 | 17.964 | 18.158 | VV | 28378 | 687081 | 72.41% | 4.276% |
| | | | Sum of corrected areas: | | | 16067761 | | |

Aromatic EPH 121024.M Tue Dec 10 07:10:52 2024

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048867.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 06:01
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD ICV
Misc :
ALS Vial : 76 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 07:06:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.363 | 3313381 | 19.672 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 39.34% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.213 | 2069271 | 20.030 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 40.06% |
| 11) S | ortho-Terphenyl (SURR) | 11.246 | 3446740 | 19.401 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 38.80% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.186 | 3701153 | 19.548 ug/ml |
| 2) T | Naphthalene (C11.7) | 5.703 | 3740432 | 19.575 ug/ml |
| 3) T | 2-Methylnaphthalene (... | 6.750 | 3629123 | 19.640 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.014 | 3654040 | 19.579 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.308 | 3616915 | 19.421 ug/ml |
| 8) T | Flouorene (C16.55) | 9.088 | 3518743 | 19.692 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.474 | 3288341 | 19.688 ug/ml |
| 10) T | Anthracene (C19.43) | 10.551 | 3378394 | 19.905 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.279 | 3234389 | 19.760 ug/ml |
| 13) T | Pyrene (C20.8) | 12.571 | 3220981 | 19.804 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.440 | 2679502 | 20.282 ug/ml |
| 15) T | Chrysene (C27.41) | 14.482 | 3056237 | 18.931 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 15.987 | 2683723 | 19.934 ug/mlm |
| 17) T | Bnezo[k]fluoranthene ... | 16.018 | 2817570 | 18.498 ug/mlm |
| 18) T | Benzo[a]pyrene (C31.34) | 16.365 | 2721975 | 19.680 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.729 | 2035411 | 19.099 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.770 | 2920346 | 20.137 ug/ml |
| 21) T | Benzo[g,h,i]perylene ... | 17.978 | 2749325 | 19.609 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121024AR\
Data File : FD048867.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 06:01
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD ICV
Misc :
ALS Vial : 76 Sample Multiplier: 1

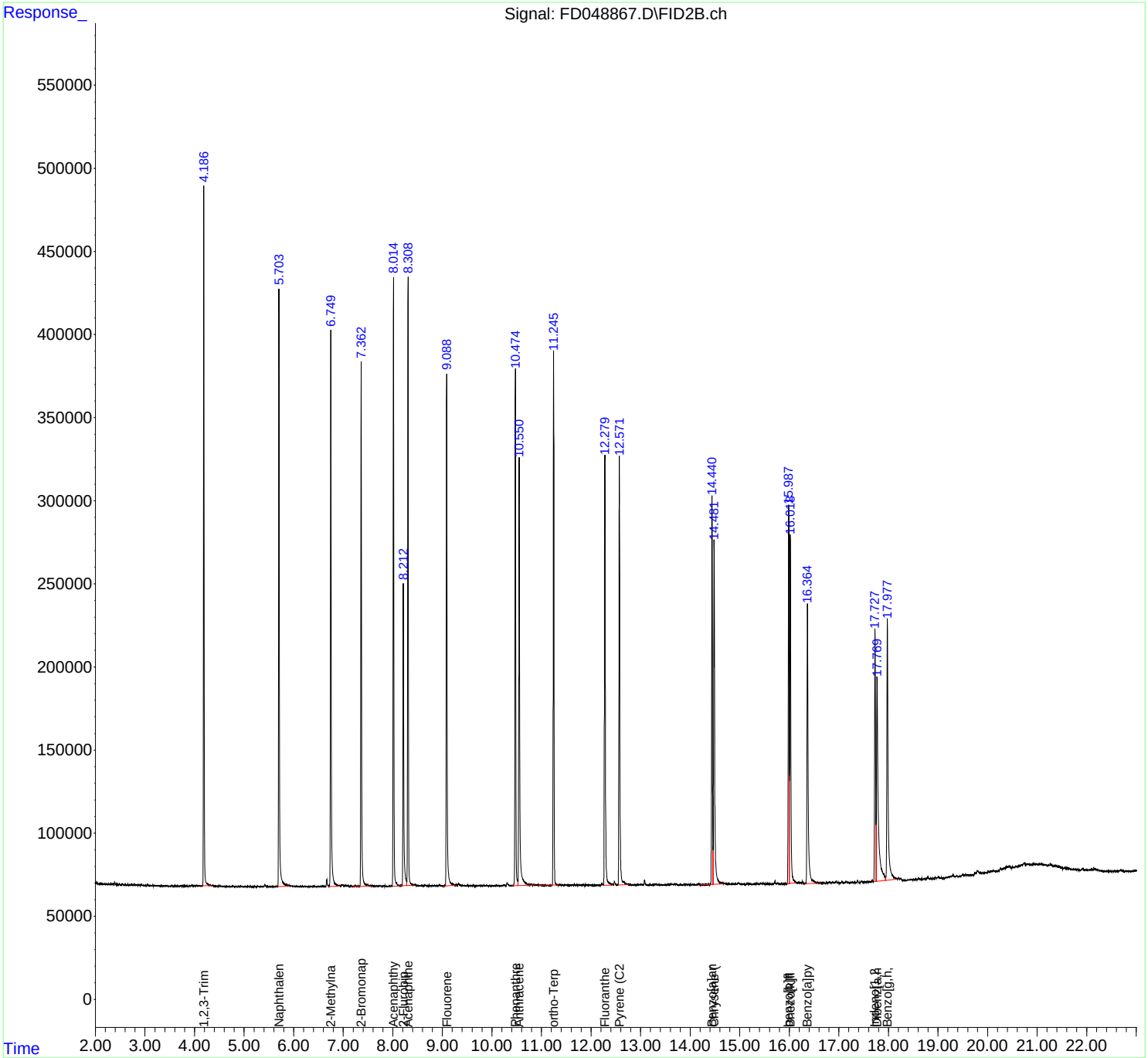
**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

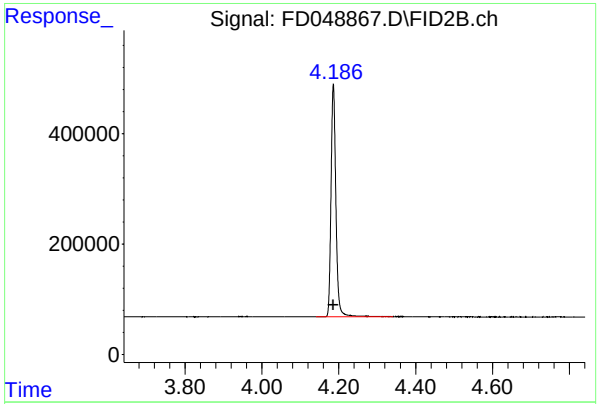
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Integration File: autoint1.e
Quant Time: Dec 10 07:06:10 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm





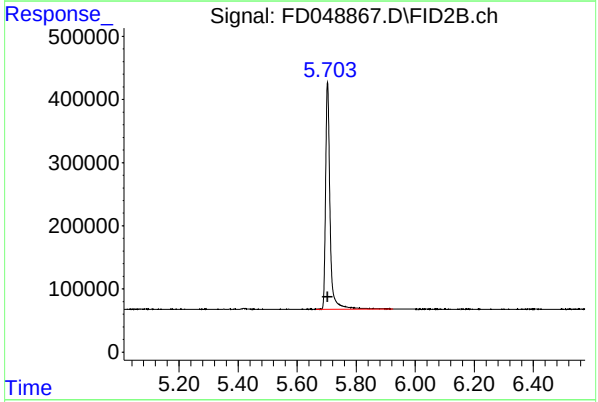

#1 1,2,3-Trimethylbenzene (C10.1)

R.T.: 4.186 min
Delta R.T.: 0.000 min
Response: 3701153
Conc: 19.55 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

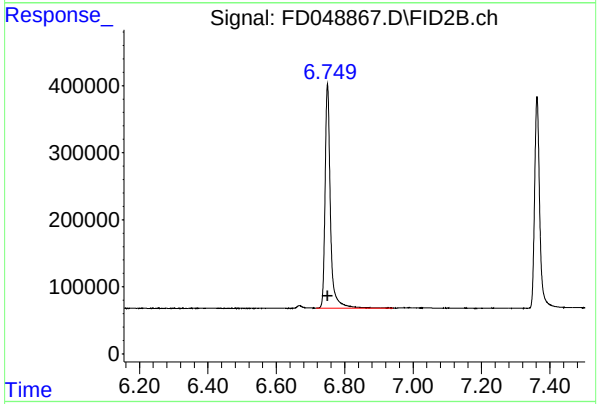
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



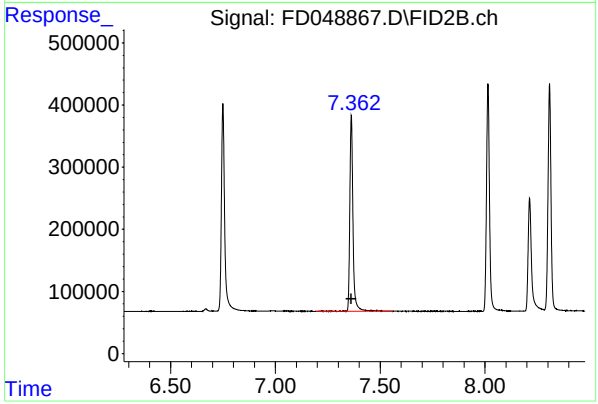

#2 Naphthalene (C11.7)

R.T.: 5.703 min
Delta R.T.: 0.000 min
Response: 3740432
Conc: 19.57 ug/ml



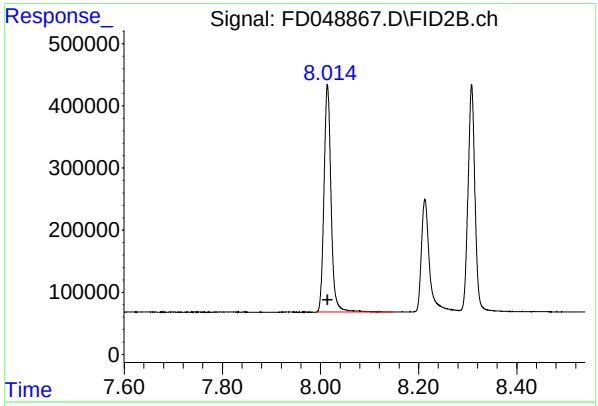

#3 2-Methylnaphthalene (C12.89)

R.T.: 6.750 min
Delta R.T.: 0.000 min
Response: 3629123
Conc: 19.64 ug/ml




#4 2-Bromonaphthalene (SURR)

R.T.: 7.363 min
Delta R.T.: 0.000 min
Response: 3313381
Conc: 19.67 ug/ml



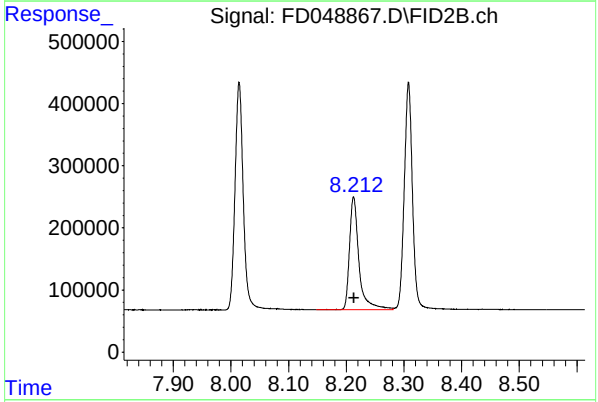

#5 Acenaphthylene (C15.06)

R.T.: 8.014 min
Delta R.T.: 0.000 min
Response: 3654040
Conc: 19.58 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

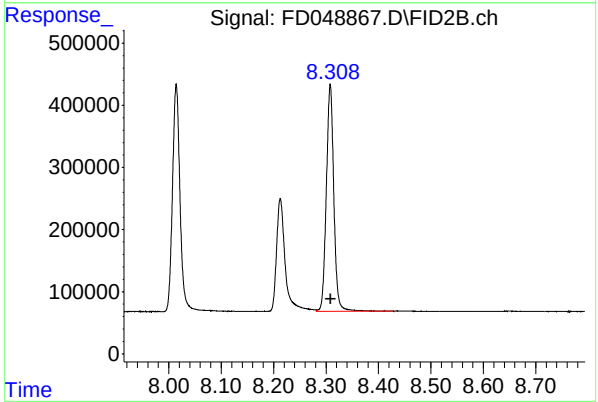
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



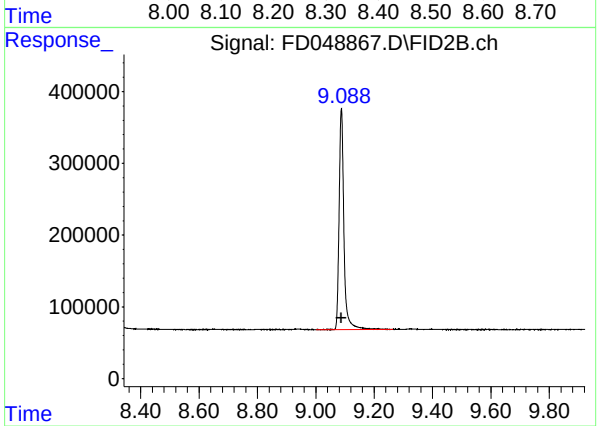

#6 2-Flurobiphenyl (SURR)

R.T.: 8.213 min
Delta R.T.: 0.000 min
Response: 2069271
Conc: 20.03 ug/ml



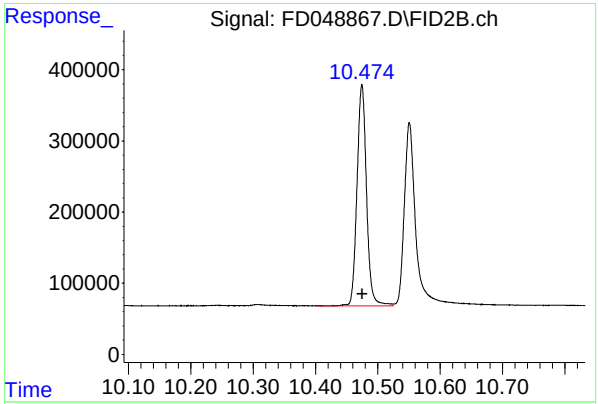

#7 Acenaphthene (C15.5)

R.T.: 8.308 min
Delta R.T.: 0.000 min
Response: 3616915
Conc: 19.42 ug/ml




#8 Flouorene (C16.55)

R.T.: 9.088 min
Delta R.T.: 0.000 min
Response: 3518743
Conc: 19.69 ug/ml



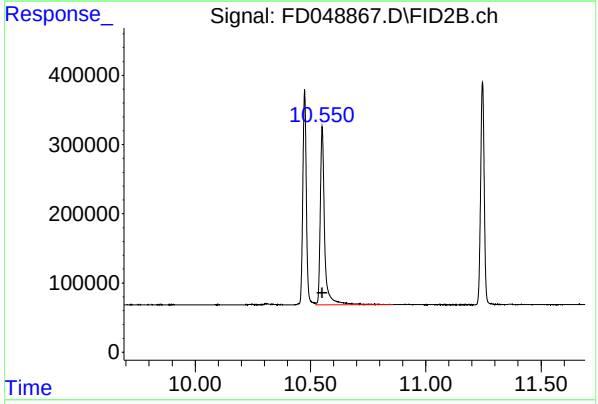

#9 Phenanthrene (C19.36)

R.T.: 10.474 min
Delta R.T.: 0.000 min
Response: 3288341
Conc: 19.69 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

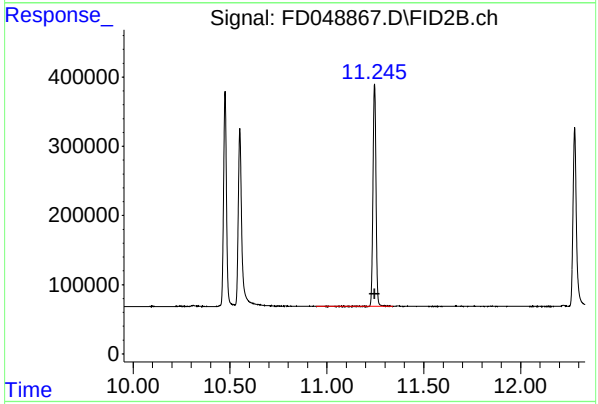
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



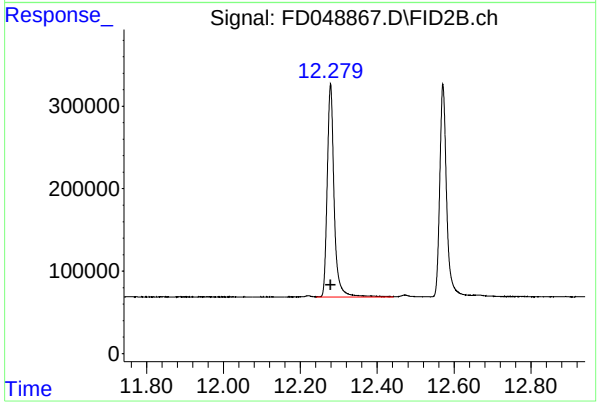

#10 Anthracene (C19.43)

R.T.: 10.551 min
Delta R.T.: 0.000 min
Response: 3378394
Conc: 19.91 ug/ml



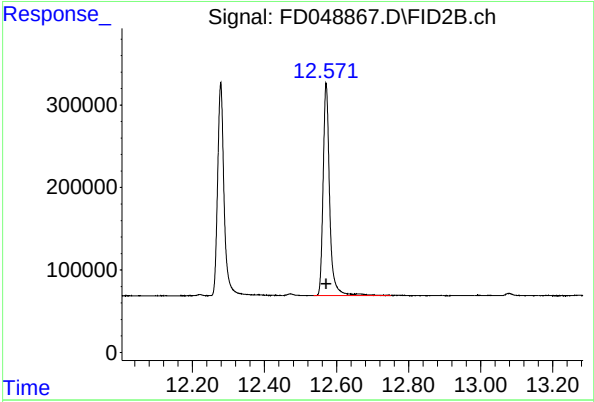

#11 ortho-Terphenyl (SURR)

R.T.: 11.246 min
Delta R.T.: 0.000 min
Response: 3446740
Conc: 19.40 ug/ml




#12 Fluoranthene (C21.85)

R.T.: 12.279 min
Delta R.T.: 0.000 min
Response: 3234389
Conc: 19.76 ug/ml



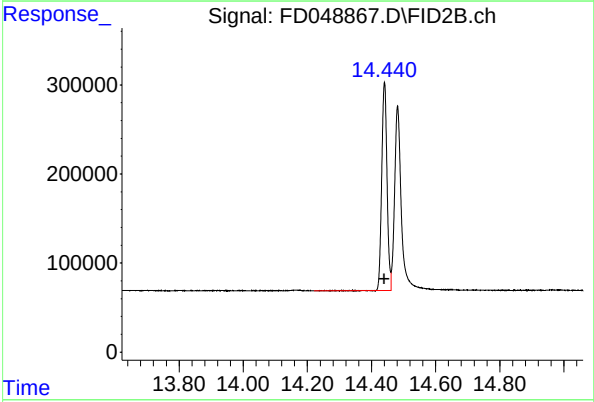

#13 Pyrene (C20.8)

R.T.: 12.571 min
Delta R.T.: 0.000 min
Response: 3220981
Conc: 19.80 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

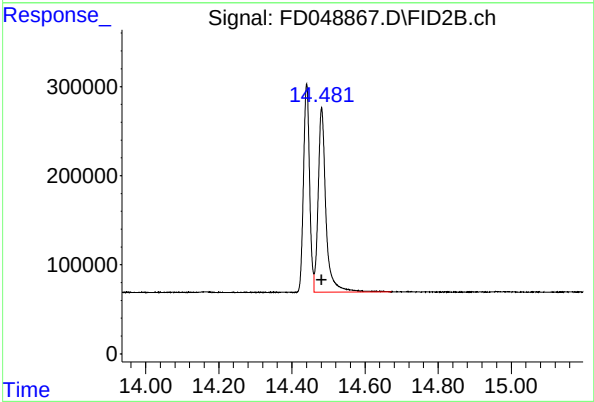
**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



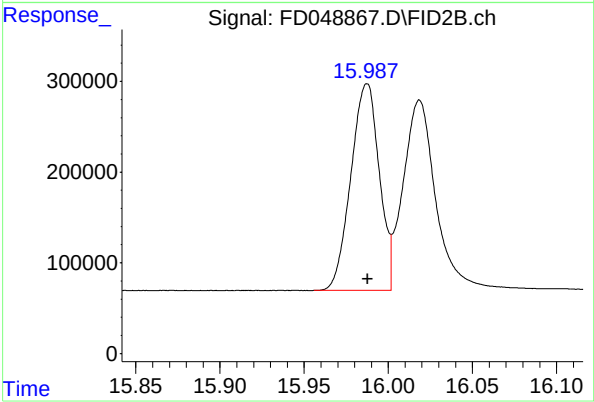

#14 Benzo[a]anthracene (C26.37)

R.T.: 14.440 min
Delta R.T.: 0.000 min
Response: 2679502
Conc: 20.28 ug/ml



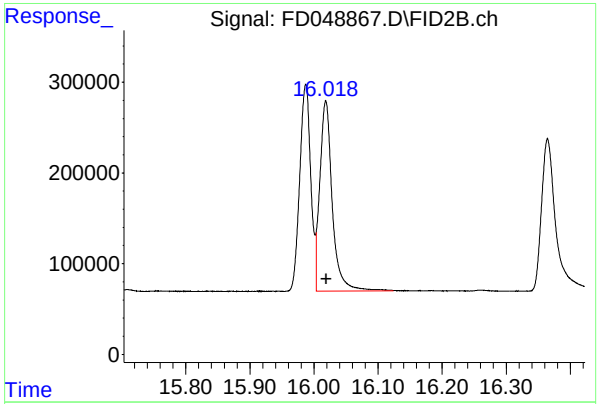

#15 Chrysene (C27.41)

R.T.: 14.482 min
Delta R.T.: 0.000 min
Response: 3056237
Conc: 18.93 ug/ml




#16 benzo[b]fluoranthene (C30.41)

R.T.: 15.987 min
Delta R.T.: 0.000 min
Response: 2683723
Conc: 19.93 ug/ml m



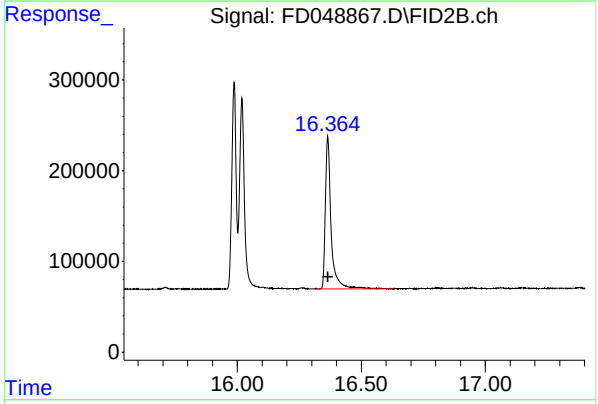

#17 Bnezo[k]fluoranthene (C30.14)

R.T.: 16.018 min
Delta R.T.: -0.001 min
Response: 2817570
Conc: 18.50 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

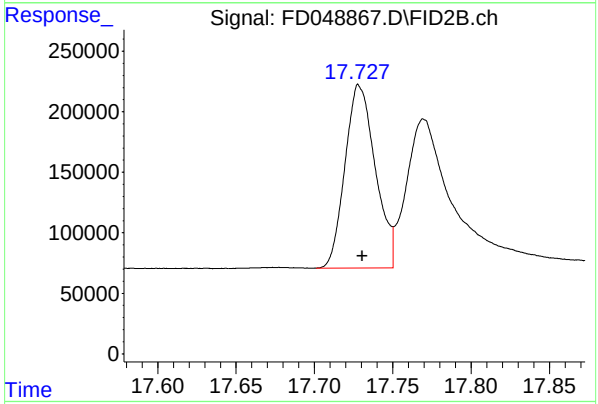
**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024



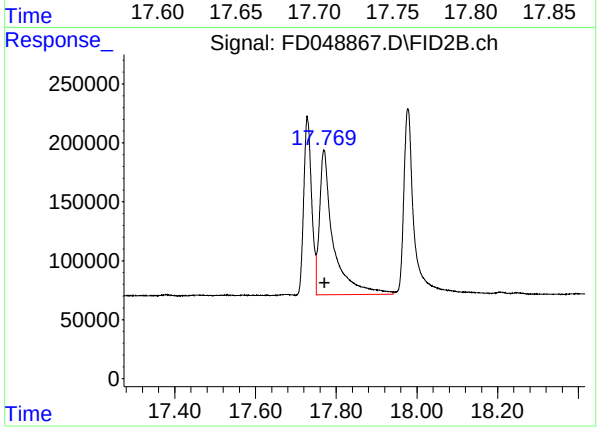

#18 Benzo[a]pyrene (C31.34)

R.T.: 16.365 min
Delta R.T.: -0.001 min
Response: 2721975
Conc: 19.68 ug/ml



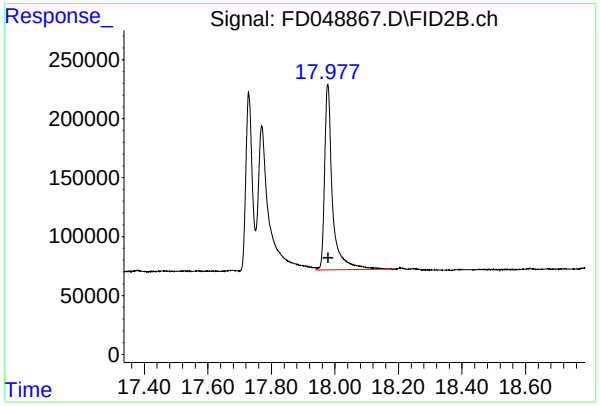

#19 Indeno[1,2,3-cd]pyrene (C35.01)

R.T.: 17.729 min
Delta R.T.: -0.001 min
Response: 2035411
Conc: 19.10 ug/ml




#20 Dibenz[a,h]anthracene (C30.36)

R.T.: 17.770 min
Delta R.T.: 0.000 min
Response: 2920346
Conc: 20.14 ug/ml




#21 Benzo[g,h,i]perylene (C34.01)

R.T.: 17.978 min
Delta R.T.: -0.001 mir
Response: 2749325
Conc: 19.61 ug/m

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

**Manual Integrations**
**APPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD ICV

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/10/2024
Supervised By :Ankita Jodhani 12/10/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12102
Data File : FD048867.D
Signal(s) : FID2B.ch
Acq On : 10 Dec 2024 06:01
Sample : 20 PPM AROMATIC HC STD ICV
Misc :
ALS Vial : 76 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.186 | 4.141 | 4.341 | BB | 413941 | 3701153 | 98.95% | 5.649% |
| 2 | 5.703 | 5.664 | 5.924 | PV | 356377 | 3740432 | 100.00% | 5.709% |
| 3 | 6.750 | 6.716 | 6.941 | VV | 332871 | 3629123 | 97.02% | 5.539% |
| 4 | 7.363 | 7.194 | 7.561 | BB | 313738 | 3313381 | 88.58% | 5.057% |
| 5 | 8.014 | 7.991 | 8.148 | BV | 365126 | 3654040 | 97.69% | 5.577% |
| 6 | 8.213 | 8.148 | 8.281 | PV | 177876 | 2069271 | 55.32% | 3.158% |
| 7 | 8.308 | 8.281 | 8.428 | VB | 365024 | 3616915 | 96.70% | 5.520% |
| 8 | 9.088 | 9.001 | 9.264 | BB | 307951 | 3518743 | 94.07% | 5.370% |
| 9 | 10.474 | 10.401 | 10.524 | BV | 310501 | 3288341 | 87.91% | 5.019% |
| 10 | 10.551 | 10.524 | 10.858 | VB | 256242 | 3378394 | 90.32% | 5.156% |
| 11 | 11.246 | 10.944 | 11.341 | BV | 321232 | 3446740 | 92.15% | 5.261% |
| 12 | 12.279 | 12.241 | 12.441 | VV | 256842 | 3234389 | 86.47% | 4.936% |
| 13 | 12.571 | 12.538 | 12.751 | PB | 257405 | 3220981 | 86.11% | 4.916% |
| 14 | 14.440 | 14.221 | 14.461 | BV | 234909 | 2679502 | 71.64% | 4.090% |
| 15 | 14.482 | 14.461 | 14.671 | VB | 206406 | 3056237 | 81.71% | 4.665% |
| 16 | 15.987 | 15.955 | 16.001 | M | 228220 | 2664317 | 71.23% | 4.066% |
| 17 | 16.018 | 16.001 | 16.118 | M | 210292 | 2882005 | 77.05% | 4.399% |
| 18 | 16.365 | 16.318 | 16.628 | BB | 167296 | 2721975 | 72.77% | 4.154% |
| 19 | 17.729 | 17.701 | 17.750 | BV | 151435 | 2035411 | 54.42% | 3.107% |
| 20 | 17.770 | 17.750 | 17.941 | VV | 122115 | 2920346 | 78.08% | 4.457% |
| 21 | 17.978 | 17.941 | 18.183 | VV | 157312 | 2749325 | 73.50% | 4.196% |
| | | | Sum of corrected areas: | | | 65521022 | | |

Aromatic EPH 121024.M Tue Dec 10 08:27:13 2024

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

# Continuing Calibration Report for SequenceID : FC121124AL

| Parameter | AreaCount | Conc. | RT_Min | RT_Max | Response Factor | AVGRF | %DEV |
|---|---|---|---|---|---|---|---|
| **File ID :** | **FC067983.D** | | | | | | |
| Aliphatic C9-C12 | 8663037.000 | 60.000 | 3.151 | 6.428 | 144383.950 | 158302.459 | 8.792 |
| Aliphatic C12-C16 | 6011580.000 | 40.000 | 6.429 | 9.820 | 150289.500 | 160275.290 | 6.230 |
| Aliphatic C16-C21 | 8662899.000 | 60.000 | 9.821 | 13.180 | 144381.650 | 152362.625 | 5.238 |
| Aliphatic C21-C28 | 10464742.000 | 80.000 | 13.181 | 16.836 | 130809.275 | 136384.122 | 4.088 |
| Aliphatic C28-C40 | 12972101.000 | 120.000 | 16.837 | 21.674 | 108100.842 | 105964.639 | -2.016 |
| Aliphatic EPH | 46774359.000 | 360.000 | 3.151 | 21.674 | 129928.775 | 135215.008 | 3.910 |

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

| | | | |
|---|---|---|---|
| Lab Sample ID: | 20 PPM ALIPHATIC HC S | Acq On: | 11 Dec 2024 13:37 |
| Client Sample ID: | | Operator: | YP/AJ |
| Data file: | FC067983.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 3 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | Units |
|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 8663037.000 | 60.000 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 6011580.000 | 40.000 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 8662899.000 | 60.000 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 10464742.000 | 80.000 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 12972101.000 | 120.000 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 46774359.000 | 360.000 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067983.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 13:37
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:32:05 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.471 | 3247439 | 18.781 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 37.56% |
| 12) S | 1-chlorooctadecane (S... | 12.911 | 2413022 | 18.912 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 37.82% |
| | **Target Compounds** | | | |
| 1) T | n-Nonane (C9) | 3.251 | 2779907 | 17.892 ug/ml |
| 2) T | n-Decane (C10) | 4.314 | 2900639 | 18.298 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.888 | 3176560 | 18.195 ug/ml |
| 4) T | n-Dodecane (C12) | 6.328 | 2982491 | 18.523 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.943 | 3108832 | 18.555 ug/mlm |
| 6) T | n-Tetradecane (C14) | 8.122 | 2973200 | 18.700 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.720 | 3038380 | 18.807 ug/ml |
| 8) T | n-Octadecane (C18) | 11.161 | 3034451 | 18.901 ug/ml |
| 10) T | n-Eicosane (C20) | 12.468 | 2857094 | 18.993 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.080 | 2771354 | 18.967 ug/ml |
| 13) T | n-Docosane (C22) | 13.666 | 2713592 | 18.957 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.768 | 2641053 | 19.007 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.787 | 2559573 | 19.140 ug/ml |
| 16) T | n-Octacosane (C28) | 16.736 | 2550524 | 19.663 ug/ml |
| 17) T | n-Tricontane (C30) | 17.622 | 2692940 | 20.788 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.455 | 2647831 | 21.373 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.236 | 2291910 | 20.998 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.976 | 1922016 | 20.315 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.695 | 1773244 | 19.602 ug/mlm |
| 22) T | n-Tetracontane (C40) | 21.574 | 1644160 | 18.654 ug/mlm |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067983.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 13:37
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

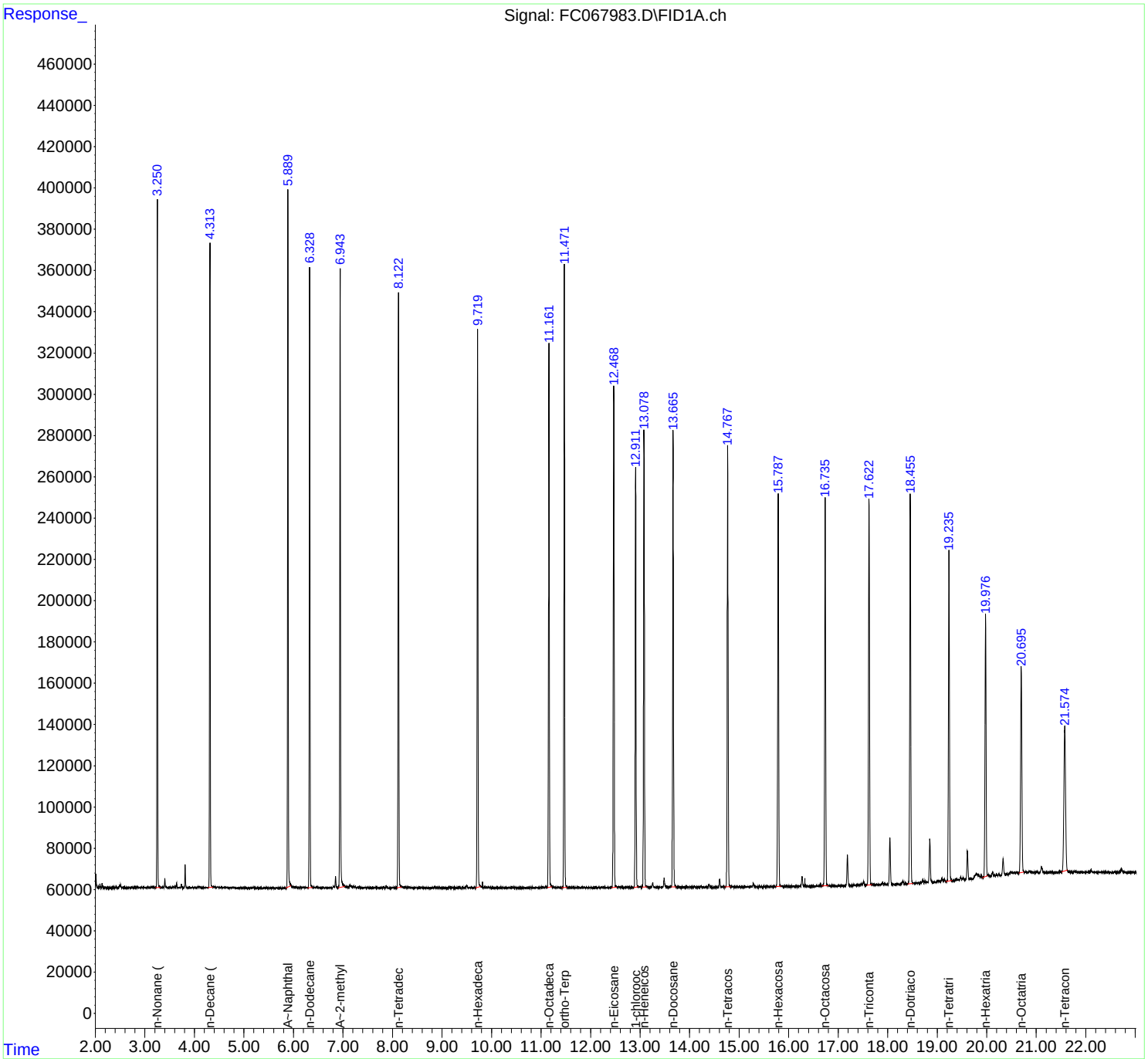
Integration File: autoint1.e
Quant Time: Dec 12 03:32:05 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024



**Instrument :**
FID_C
**LabSampleId :**
20 PPM ALIPHATIC HC STD

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC12112
Data File : FC067983.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 13:37
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 3 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.251 | 3.215 | 3.311 | BB | 332065 | 2779907 | 85.60% | 4.732% |
| 2 | 4.314 | 4.268 | 4.371 | BB | 313299 | 2900639 | 89.32% | 4.938% |
| 3 | 5.889 | 5.841 | 5.951 | BB | 333319 | 3176560 | 97.82% | 5.407% |
| 4 | 6.328 | 6.291 | 6.385 | BB | 299808 | 2982491 | 91.84% | 5.077% |
| 5 | 6.944 | 6.831 | 7.005 | BB | 296664 | 3086803 | 95.05% | 5.255% |
| 6 | 8.122 | 8.088 | 8.184 | BB | 285077 | 2973200 | 91.56% | 5.061% |
| 7 | 9.720 | 9.681 | 9.781 | BB | 269355 | 3038380 | 93.56% | 5.172% |
| 8 | 11.161 | 11.125 | 11.225 | BB | 264055 | 3034451 | 93.44% | 5.166% |
| 9 | 11.471 | 11.421 | 11.531 | BB | 300204 | 3247439 | 100.00% | 5.528% |
| 10 | 12.468 | 12.425 | 12.531 | BB | 241504 | 2857094 | 87.98% | 4.864% |
| 11 | 12.911 | 12.871 | 12.965 | BB | 203555 | 2413022 | 74.31% | 4.108% |
| 12 | 13.080 | 13.038 | 13.141 | BB | 218936 | 2771354 | 85.34% | 4.718% |
| 13 | 13.666 | 13.628 | 13.728 | BB | 220367 | 2713592 | 83.56% | 4.619% |
| 14 | 14.768 | 14.708 | 14.831 | BB | 211536 | 2641053 | 81.33% | 4.496% |
| 15 | 15.787 | 15.741 | 15.848 | BB | 189613 | 2559573 | 78.82% | 4.357% |
| 16 | 16.736 | 16.668 | 16.798 | BB | 185788 | 2550524 | 78.54% | 4.342% |
| 17 | 17.622 | 17.578 | 17.685 | BB | 184401 | 2692940 | 82.93% | 4.584% |
| 18 | 18.455 | 18.401 | 18.515 | BB | 186939 | 2647831 | 81.54% | 4.507% |
| 19 | 19.236 | 19.175 | 19.298 | BB | 159028 | 2291910 | 70.58% | 3.902% |
| 20 | 19.976 | 19.915 | 20.018 | BB | 126736 | 1922016 | 59.19% | 3.272% |
| 21 | 20.695 | 20.644 | 20.758 | M | 100063 | 1778431 | 54.76% | 3.027% |
| 22 | 21.574 | 21.511 | 21.666 | M | 70942 | 1684835 | 51.88% | 2.868% |
| | | | Sum of corrected areas: | | | 58744047 | | |

Aliphatic EPH 121024.M Thu Dec 12 03:59:21 2024

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

# Continuing Calibration Report for SequenceID : FC121124AL

| Parameter | AreaCount | Conc. | RT_Min | RT_Max | Response Factor | AVGRF | %DEV |
|---|---|---|---|---|---|---|---|
| **File ID :** | **FC067993.D** | | | | | | |
| Aliphatic C9-C12 | 9185556.000 | 60.000 | 3.151 | 6.428 | 153092.600 | 158302.459 | 3.291 |
| Aliphatic C12-C16 | 6207242.000 | 40.000 | 6.429 | 9.820 | 155181.050 | 160275.290 | 3.178 |
| Aliphatic C16-C21 | 8760777.000 | 60.000 | 9.821 | 13.180 | 146012.950 | 152362.625 | 4.167 |
| Aliphatic C21-C28 | 10604423.000 | 80.000 | 13.181 | 16.836 | 132555.288 | 136384.122 | 2.807 |
| Aliphatic C28-C40 | 13092661.000 | 120.000 | 16.837 | 21.674 | 109105.508 | 105964.639 | -2.964 |
| Aliphatic EPH | 47850659.000 | 360.000 | 3.151 | 21.674 | 132918.497 | 135215.008 | 1.698 |

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

| | | | |
|---|---|---|---|
| Lab Sample ID: | 20 PPM ALIPHATIC HC S | Acq On: | 12 Dec 2024 02:11 |
| Client Sample ID: | | Operator: | YP/AJ |
| Data file: | FC067993.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 2 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | Units |
|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 9185556.000 | 60.000 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 6207242.000 | 40.000 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 8760777.000 | 60.000 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 10604423.000 | 80.000 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 13092661.000 | 120.000 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 47850659.000 | 360.000 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067993.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 02:11
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:35:45 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 9) S | ortho-Terphenyl (SURR) | 11.470 | 3294895 | 19.055 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 38.11% |
| 12) S | 1-chlorooctadecane (S... | 12.911 | 2441540 | 19.135 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 38.27% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.251 | 2997409 | 19.292 ug/ml |
| 2) T | n-Decane (C10) | 4.314 | 3069961 | 19.366 ug/ml |
| 3) T | A~Naphthalene (C11.7) | 5.889 | 3370623 | 19.307 ug/ml |
| 4) T | n-Dodecane (C12) | 6.329 | 3118186 | 19.366 ug/ml |
| 5) T | A~2-methylnaphthalene... | 6.944 | 3274447 | 19.543 ug/mlm |
| 6) T | n-Tetradecane (C14) | 8.121 | 3085522 | 19.406 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.721 | 3121720 | 19.323 ug/ml |
| 8) T | n-Octadecane (C18) | 11.161 | 3079638 | 19.183 ug/ml |
| 10) T | n-Eicosane (C20) | 12.468 | 2885146 | 19.179 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.079 | 2795993 | 19.135 ug/ml |
| 13) T | n-Docosane (C22) | 13.665 | 2744719 | 19.174 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.765 | 2688567 | 19.349 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.786 | 2606252 | 19.489 ug/ml |
| 16) T | n-Octacosane (C28) | 16.735 | 2564885 | 19.774 ug/ml |
| 17) T | n-Tricontane (C30) | 17.621 | 2646280 | 20.428 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.453 | 2591411 | 20.918 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.236 | 2248664 | 20.602 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.973 | 1944054 | 20.548 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.693 | 1872987 | 20.705 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.573 | 1789265 | 20.301 ug/mlm |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067993.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 02:11
Operator : YP/AJ
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

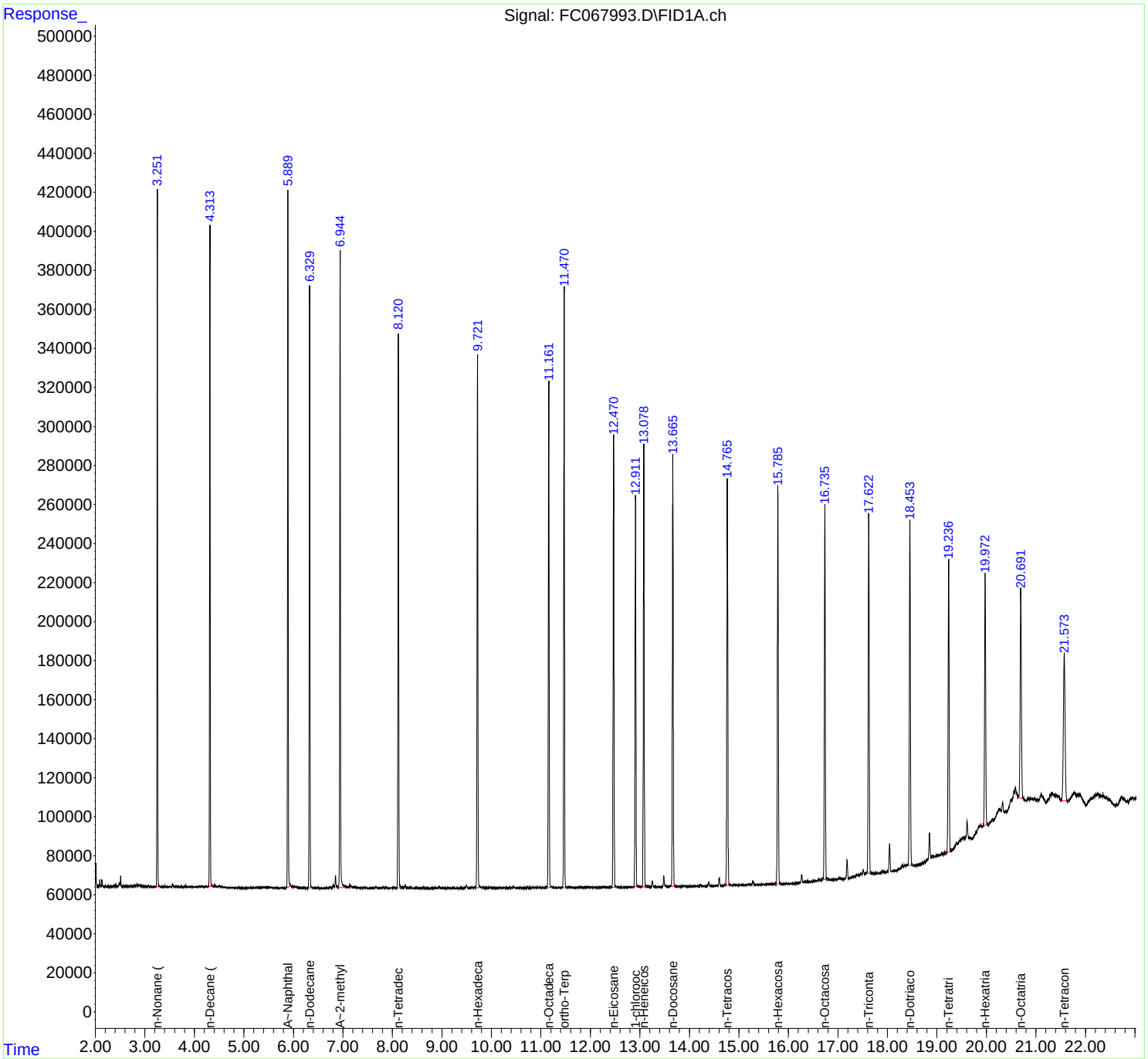
Integration File: autoint1.e
Quant Time: Dec 12 03:35:45 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

**Instrument :**
FID_C
**ClientSampleId :**
20 PPM ALIPHATIC HC STD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024



**Instrument :**
FID_C
**LabSampleId :**
20 PPM ALIPHATIC HC STD

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC12112
Data File : FC067993.D
Signal(s) : FID1A.ch
Acq On : 12 Dec 2024 02:11
Sample : 20 PPM ALIPHATIC HC STD
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.251 | 3.221 | 3.304 | BB | 354843 | 2997409 | 88.93% | 4.978% |
| 2 | 4.314 | 4.278 | 4.374 | BB | 338819 | 3069961 | 91.08% | 5.098% |
| 3 | 5.889 | 5.858 | 5.951 | BB | 354343 | 3370623 | 100.00% | 5.598% |
| 4 | 6.329 | 6.294 | 6.391 | BB | 306322 | 3118186 | 92.51% | 5.178% |
| 5 | 6.945 | 6.828 | 7.008 | BB | 325430 | 3250509 | 96.44% | 5.398% |
| 6 | 8.121 | 8.081 | 8.184 | BB | 284297 | 3085522 | 91.54% | 5.124% |
| 7 | 9.721 | 9.674 | 9.774 | BB | 273958 | 3121720 | 92.62% | 5.184% |
| 8 | 11.161 | 11.118 | 11.218 | BB | 259925 | 3079638 | 91.37% | 5.114% |
| 9 | 11.470 | 11.418 | 11.528 | BB | 308249 | 3294895 | 97.75% | 5.472% |
| 10 | 12.468 | 12.431 | 12.531 | BB | 230317 | 2885146 | 85.60% | 4.791% |
| 11 | 12.911 | 12.861 | 12.961 | BB | 200524 | 2441540 | 72.44% | 4.055% |
| 12 | 13.079 | 13.041 | 13.141 | BB | 226894 | 2795993 | 82.95% | 4.643% |
| 13 | 13.665 | 13.628 | 13.721 | BB | 221693 | 2744719 | 81.43% | 4.558% |
| 14 | 14.765 | 14.708 | 14.828 | BB | 208360 | 2688567 | 79.76% | 4.465% |
| 15 | 15.786 | 15.731 | 15.848 | BB | 204326 | 2606252 | 77.32% | 4.328% |
| 16 | 16.735 | 16.678 | 16.794 | BB | 191238 | 2564885 | 76.10% | 4.259% |
| 17 | 17.621 | 17.558 | 17.661 | BB | 182671 | 2646280 | 78.51% | 4.395% |
| 18 | 18.453 | 18.404 | 18.514 | BB | 176522 | 2591411 | 76.88% | 4.304% |
| 19 | 19.236 | 19.174 | 19.274 | BB | 149596 | 2248664 | 66.71% | 3.734% |
| 20 | 19.973 | 19.934 | 20.021 | BB | 126065 | 1944054 | 57.68% | 3.228% |
| 21 | 20.693 | 20.641 | 20.754 | BB | 105103 | 1872987 | 55.57% | 3.110% |
| 22 | 21.573 | 21.516 | 21.625 | M | 75885 | 1797192 | 53.32% | 2.985% |
| | | | Sum of corrected areas: | | | 60216152 | | |

Aliphatic EPH 121024.M Thu Dec 12 04:01:17 2024

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

# Continuing Calibration Report for SequenceID : FD121124AR

| Parameter | AreaCount | Conc. | RT_Min | RT_Max | Response Factor | AVGRF | %DEV |
|---|---|---|---|---|---|---|---|
| **File ID :** | **FD048872.D** | | | | | | |
| Aromatic C10-C12 | 7405186.000 | 40.000 | 4.086 | 5.804 | 185129.650 | 190209.437 | 2.671 |
| Aromatic C12-C16 | 11067363.000 | 60.000 | 5.805 | 8.409 | 184456.050 | 185883.358 | 0.768 |
| Aromatic C16-C21 | 13208158.000 | 80.000 | 8.410 | 12.673 | 165101.975 | 169519.943 | 2.606 |
| Aromatic C21-C36 | 24543906.000 | 180.000 | 12.674 | 18.083 | 136355.033 | 141588.666 | 3.696 |
| Aromatic EPH | 56224613.000 | 360.000 | 4.086 | 18.083 | 156179.481 | 160580.373 | 2.741 |

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

| | | | |
|---|---|---|---|
| Lab Sample ID: | 20 PPM AROMATIC HC S | Acq On: | 11 Dec 2024 13:37 |
| Client Sample ID: | | Operator: | YP/AJ |
| Data file: | FD048872.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 53 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | Units |
|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 7405186.000 | 40.000 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 11067363.000 | 60.000 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 13208158.000 | 80.000 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 24543906.000 | 180.000 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 56224613.000 | 360.000 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048872.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 13:37
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Dec 12 04:27:36 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.363 | 3223645 | 19.139 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 38.28% |
| 6) | S 2-Flurobiphenyl (SURR) | 8.214 | 1986370 | 19.228 ug/ml |
| Spiked Amount | 50.000 Range 0 - 131 | | Recovery = | 38.46% |
| 11) | S ortho-Terphenyl (SURR) | 11.248 | 3475341 | 19.562 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 39.12% |
| | **Target Compounds** | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.186 | 3658078 | 19.321 ug/ml |
| 2) | T Naphthalene (C11.7) | 5.704 | 3747108 | 19.610 ug/ml |
| 3) | T 2-Methylnaphthalene (... | 6.750 | 3694233 | 19.993 ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.015 | 3640479 | 19.506 ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.309 | 3732651 | 20.042 ug/ml |
| 8) | T Flouorene (C16.55) | 9.089 | 3495986 | 19.565 ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.476 | 3297948 | 19.745 ug/ml |
| 10) | T Anthracene (C19.43) | 10.552 | 3268389 | 19.257 ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.281 | 3208145 | 19.599 ug/ml |
| 13) | T Pyrene (C20.8) | 12.573 | 3145835 | 19.342 ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.445 | 2606864 | 19.733 ug/ml |
| 15) | T Chrysene (C27.41) | 14.486 | 3068676 | 19.008 ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.991 | 2657631 | 19.740 ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.022 | 2649998 | 17.398 ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.371 | 2703494 | 19.547 ug/ml |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.735 | 1992934 | 18.701 ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.777 | 2889867 | 19.926 ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.983 | 2766297 | 19.730 ug/ml |

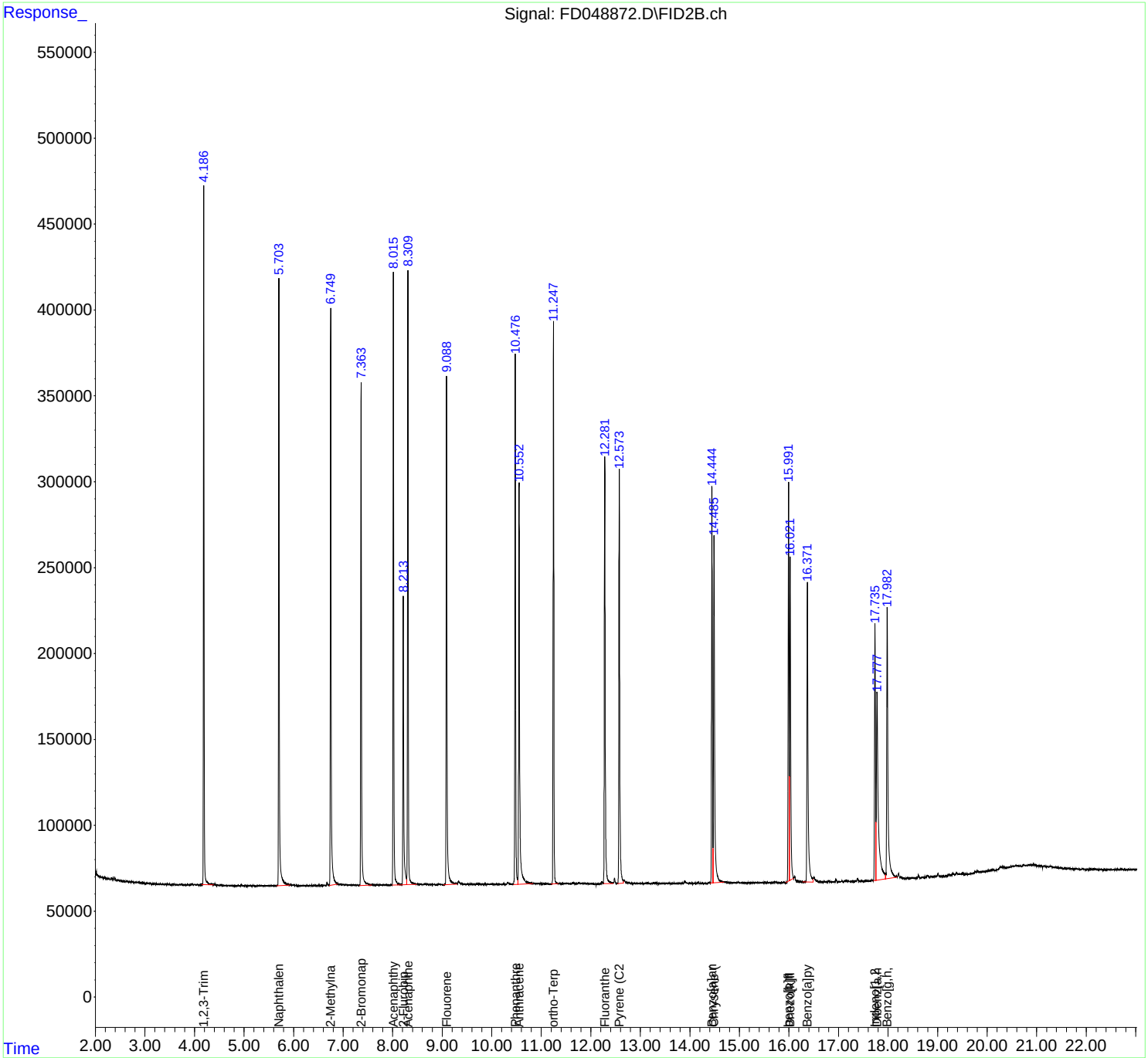
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048872.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 13:37
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Dec 12 04:27:36 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048872.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 13:37
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 53 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.186 | 4.141 | 4.391 | BB | 399873 | 3658078 | 97.62% | 5.636% |
| 2 | 5.704 | 5.655 | 5.934 | BV | 350188 | 3747108 | 100.00% | 5.773% |
| 3 | 6.750 | 6.718 | 6.888 | PV | 333166 | 3694233 | 98.59% | 5.691% |
| 4 | 7.363 | 7.336 | 7.578 | PV | 291070 | 3223645 | 86.03% | 4.966% |
| 5 | 8.015 | 7.991 | 8.191 | BV | 354170 | 3640479 | 97.15% | 5.609% |
| 6 | 8.214 | 8.191 | 8.284 | PV | 167103 | 1986370 | 53.01% | 3.060% |
| 7 | 8.309 | 8.284 | 8.488 | VB | 354281 | 3732651 | 99.61% | 5.751% |
| 8 | 9.089 | 9.021 | 9.305 | BV | 295027 | 3495986 | 93.30% | 5.386% |
| 9 | 10.476 | 10.431 | 10.528 | BV | 308205 | 3297948 | 88.01% | 5.081% |
| 10 | 10.552 | 10.528 | 10.838 | VV | 234287 | 3268389 | 87.22% | 5.035% |
| 11 | 11.248 | 11.191 | 11.345 | BV | 327697 | 3475341 | 92.75% | 5.354% |
| 12 | 12.281 | 12.248 | 12.448 | VV | 248917 | 3208145 | 85.62% | 4.942% |
| 13 | 12.573 | 12.541 | 12.661 | PV | 240883 | 3145835 | 83.95% | 4.846% |
| 14 | 14.445 | 14.405 | 14.465 | PV | 230584 | 2606864 | 69.57% | 4.016% |
| 15 | 14.486 | 14.465 | 14.691 | VB | 201829 | 3068676 | 81.89% | 4.728% |
| 16 | 15.991 | 15.931 | 16.006 | BV | 231376 | 2657631 | 70.92% | 4.094% |
| 17 | 16.022 | 16.006 | 16.096 | VV | 187727 | 2649998 | 70.72% | 4.083% |
| 18 | 16.371 | 16.278 | 16.484 | BV | 174468 | 2703494 | 72.15% | 4.165% |
| 19 | 17.735 | 17.701 | 17.756 | BV | 148785 | 1992934 | 53.19% | 3.070% |
| 20 | 17.777 | 17.756 | 17.951 | VV | 109561 | 2889867 | 77.12% | 4.452% |
| 21 | 17.983 | 17.951 | 18.186 | VV | 158657 | 2766297 | 73.82% | 4.262% |
| | | | Sum of corrected areas: | | | 64909968 | | |

Aromatic EPH 121024.M Thu Dec 12 05:01:51 2024

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

# Continuing Calibration Report for SequenceID : FD121124AR

| Parameter | AreaCount | Conc. | RT_Min | RT_Max | Response Factor | AVGRF | %DEV |
|---|---|---|---|---|---|---|---|
| **File ID :** | **FD048882.D** | | | | | | |
| Aromatic C10-C12 | 6799290.000 | 40.000 | 4.086 | 5.804 | 169982.250 | 190209.437 | 10.634 |
| Aromatic C12-C16 | 10008221.000 | 60.000 | 5.805 | 8.409 | 166803.683 | 185883.358 | 10.264 |
| Aromatic C16-C21 | 11888636.000 | 80.000 | 8.410 | 12.673 | 148607.950 | 169519.943 | 12.336 |
| Aromatic C21-C36 | 23479063.000 | 180.000 | 12.674 | 18.083 | 130439.239 | 141588.666 | 7.875 |
| Aromatic EPH | 52175210.000 | 360.000 | 4.086 | 18.083 | 144931.139 | 160580.373 | 9.745 |

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Fax : 908 789 8922

| | | | |
|---|---|---|---|
| Lab Sample ID: | 20 PPM AROMATIC HC S | Acq On: | 12 Dec 2024 02:11 |
| Client Sample ID: | | Operator: | YP/AJ |
| Data file: | FD048882.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 52 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | Units |
|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 6799290.000 | 40.000 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 10008221.000 | 60.000 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 11888636.000 | 80.000 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 23479063.000 | 180.000 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 52175210.000 | 360.000 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048882.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 02:11
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Dec 12 04:32:52 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.362 | 2946877 | 17.496 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 34.99% | |
| 6) | S 2-Flurobiphenyl (SURR) | 8.213 | 1839632 | 17.807 | ug/ml |
| Spiked Amount | 50.000 Range 0 - 131 | | Recovery = | 35.61% | |
| 11) | S ortho-Terphenyl (SURR) | 11.248 | 3126625 | 17.599 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 35.20% | |
| | **Target Compounds** | | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.185 | 3348445 | 17.685 | ug/ml |
| 2) | T Naphthalene (C11.7) | 5.702 | 3450845 | 18.059 | ug/ml |
| 3) | T 2-Methylnaphthalene (... | 6.749 | 3393157 | 18.363 | ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.015 | 3294698 | 17.653 | ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.309 | 3320366 | 17.829 | ug/ml |
| 8) | T Flouorene (C16.55) | 9.088 | 3164606 | 17.710 | ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.475 | 2981999 | 17.854 | ug/ml |
| 10) | T Anthracene (C19.43) | 10.551 | 2929989 | 17.263 | ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.280 | 2852394 | 17.426 | ug/ml |
| 13) | T Pyrene (C20.8) | 12.572 | 2812042 | 17.290 | ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.443 | 2474497 | 18.731 | ug/ml |
| 15) | T Chrysene (C27.41) | 14.485 | 2712470 | 16.802 | ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.991 | 2570516 | 19.093 | ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.023 | 2515714 | 16.516 | ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.369 | 2562858 | 18.530 | ug/ml |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.734 | 2249523 | 21.108 | ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.773 | 2822056 | 19.459 | ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.985 | 2719035 | 19.393 | ug/ml |

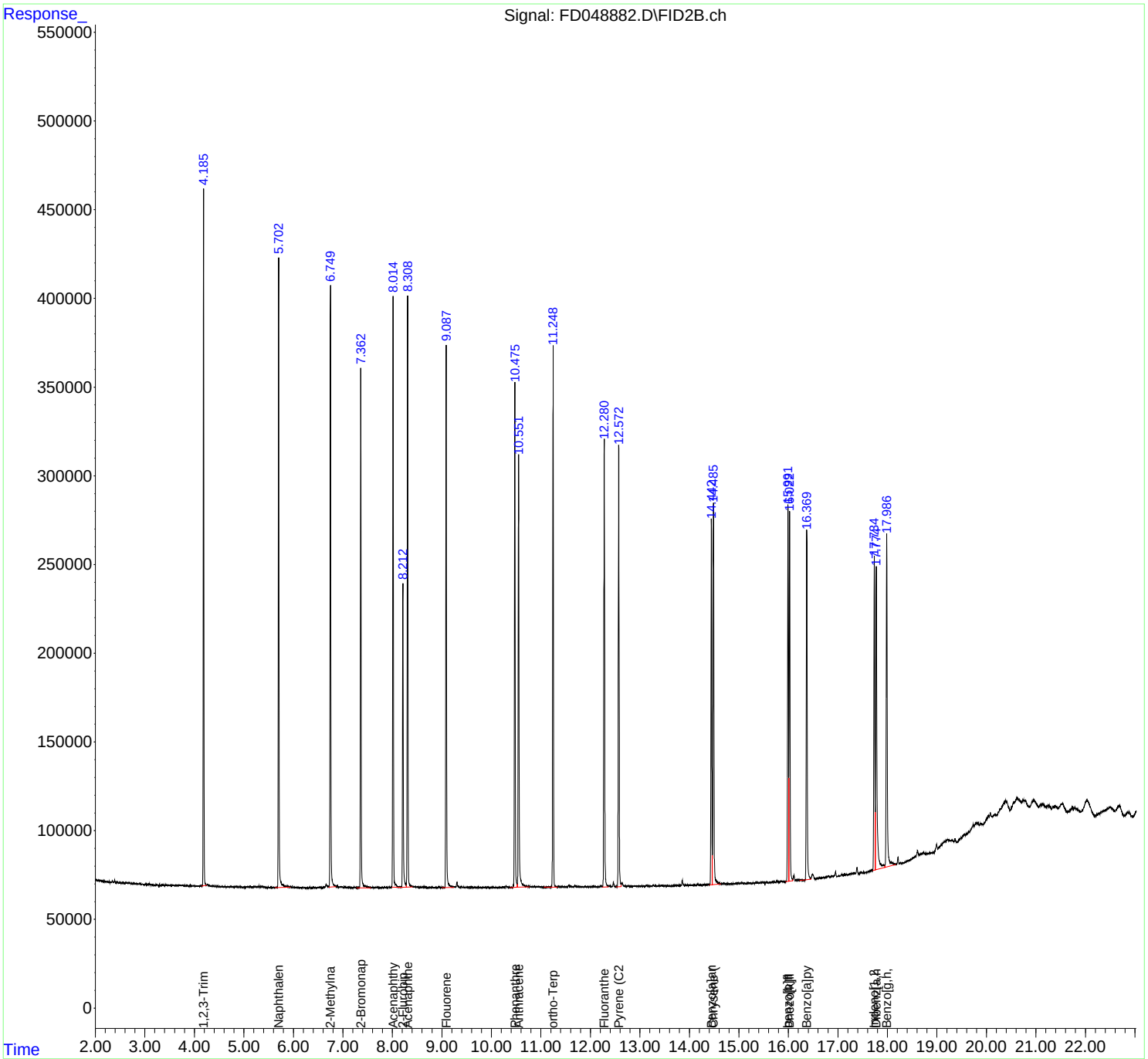
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048882.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 02:11
Operator : YP/AJ
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
20 PPM AROMATIC HC STD

Integration File: autoint1.e
Quant Time: Dec 12 04:32:52 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048882.D
Signal(s) : FID2B.ch
Acq On : 12 Dec 2024 02:11
Sample : 20 PPM AROMATIC HC STD
Misc :
ALS Vial : 52 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.185 | 4.141 | 4.251 | BV | 390135 | 3348445 | 97.03% | 5.573% |
| 2 | 5.702 | 5.622 | 5.934 | PB | 353117 | 3450845 | 100.00% | 5.743% |
| 3 | 6.749 | 6.718 | 6.868 | VV | 336447 | 3393157 | 98.33% | 5.647% |
| 4 | 7.362 | 7.278 | 7.568 | BB | 291676 | 2946877 | 85.40% | 4.904% |
| 5 | 8.015 | 7.991 | 8.154 | BV | 332266 | 3294698 | 95.48% | 5.483% |
| 6 | 8.213 | 8.154 | 8.281 | PV | 170168 | 1839632 | 53.31% | 3.062% |
| 7 | 8.309 | 8.281 | 8.414 | VV | 333721 | 3320366 | 96.22% | 5.526% |
| 8 | 9.088 | 9.004 | 9.238 | BV | 305020 | 3164606 | 91.71% | 5.267% |
| 9 | 10.475 | 10.378 | 10.522 | BV | 285034 | 2981999 | 86.41% | 4.963% |
| 10 | 10.551 | 10.522 | 10.771 | VV | 243761 | 2929989 | 84.91% | 4.876% |
| 11 | 11.248 | 11.064 | 11.341 | BV | 302890 | 3126625 | 90.60% | 5.203% |
| 12 | 12.280 | 12.238 | 12.360 | VV | 253151 | 2852394 | 82.66% | 4.747% |
| 13 | 12.572 | 12.528 | 12.622 | BV | 246762 | 2812042 | 81.49% | 4.680% |
| 14 | 14.443 | 14.406 | 14.463 | PV | 205927 | 2474497 | 71.71% | 4.118% |
| 15 | 14.485 | 14.463 | 14.634 | VV | 215130 | 2712470 | 78.60% | 4.514% |
| 16 | 15.991 | 15.941 | 16.007 | BV | 212659 | 2570516 | 74.49% | 4.278% |
| 17 | 16.023 | 16.007 | 16.088 | VV | 206300 | 2515714 | 72.90% | 4.187% |
| 18 | 16.369 | 16.228 | 16.454 | BV | 196425 | 2562858 | 74.27% | 4.265% |
| 19 | 17.734 | 17.701 | 17.753 | BV | 177284 | 2249523 | 65.19% | 3.744% |
| 20 | 17.773 | 17.753 | 17.948 | VV | 171386 | 2822056 | 81.78% | 4.697% |
| 21 | 17.985 | 17.948 | 18.174 | VV | 187889 | 2719035 | 78.79% | 4.525% |
| | | | Sum of corrected areas: | | | 60088344 | | |

Aromatic EPH 121024.M Thu Dec 12 05:48:07 2024

# QC SAMPLE DATA

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BL | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BL | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 16:23 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 0.38 | U | 1 | 0.38 | 1.00 | mg/kg | FC067984.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 0.24 | U | 1 | 0.24 | 0.67 | mg/kg | FC067984.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 0.30 | U | 1 | 0.30 | 1.00 | mg/kg | FC067984.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 0.80 | U | 1 | 0.80 | 1.33 | mg/kg | FC067984.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 1.80 | U | 1 | 1.80 | 2.00 | mg/kg | FC067984.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.30 | U | 1 | 0.30 | 0.67 | mg/kg | FD048873.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.34 | U | 1 | 0.34 | 1.00 | mg/kg | FD048873.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 0.96 | U | 1 | 0.96 | 1.67 | mg/kg | FD048873.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 2.00 | U | 1 | 2.00 | 2.67 | mg/kg | FD048873.D |
| Total AliphaticEPH | Total AliphaticEPH | 3.52 | U | | 3.52 | 6.00 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 3.60 | U | | 3.60 | 6.01 | mg/kg | |
| Total EPH | Total EPH | 7.12 | U | | 7.12 | 12.0 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BL | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BL | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067984.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | | 0.38 | U | 0.38 | 1.00 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | | 0.24 | U | 0.24 | 0.67 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | | 0.30 | U | 0.30 | 1.00 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | | 0.80 | U | 0.80 | 1.33 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | | 1.80 | U | 1.80 | 2.00 | mg/kg |
| **SURROGATES** | | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | | 49.1 | | 40 - 140 | 98% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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

# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BL | Acq On: | 11 Dec 2024 16:23 |
| Client Sample ID: | PB165557BL | Operator: | YP/AJ |
| Data file: | FC067984.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 11 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 0 | 0 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 0 | 0 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 0 | 0 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 0 | 0 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 0 | 0 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 0 | 0 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.916 | 12.916 | 6270957 | 49.15 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 0 | 0 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067984.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 16:23
Operator : YP/AJ
Sample : PB165557BL
Misc :
ALS Vial : 11 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BL

Integration File: autoint1.e
Quant Time: Dec 12 03:32:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 12) S 1-chlorooctadecane (S... | 12.916 | 6270957 | 49.148 ug/ml |
| Spiked Amount 50.000 | | Recovery = 98.30% | |
| Target Compounds | | | |

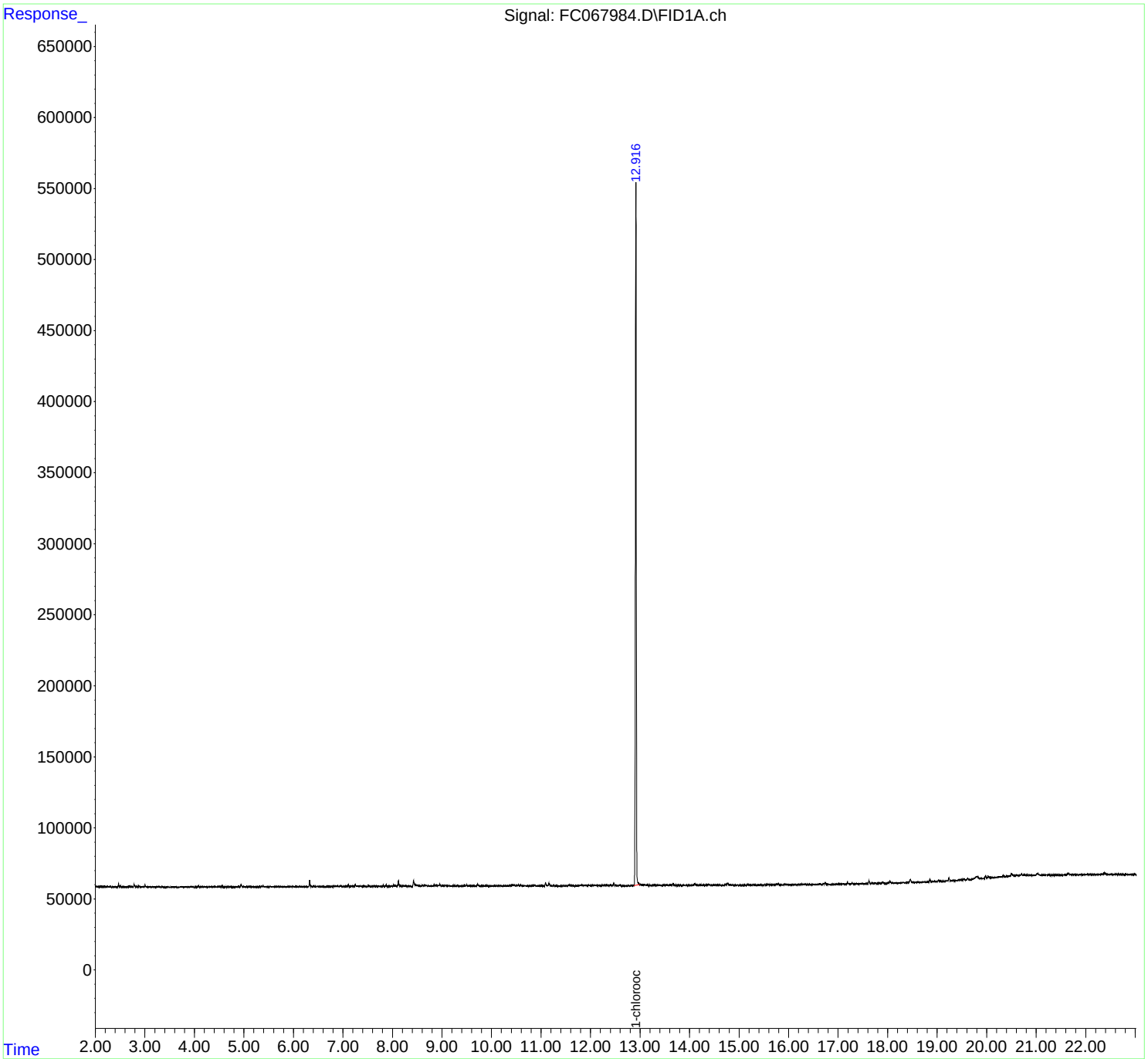
(f)=RT Delta > 1/2 Window (m)=manual int.

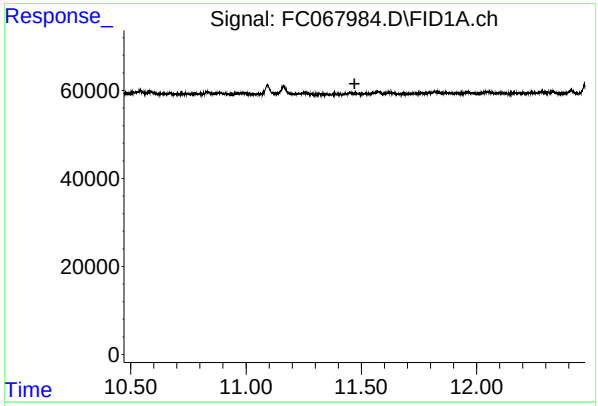
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067984.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 16:23
Operator : YP/AJ
Sample : PB165557BL
Misc :
ALS Vial : 11 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BL

Integration File: autoint1.e
Quant Time: Dec 12 03:32:32 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

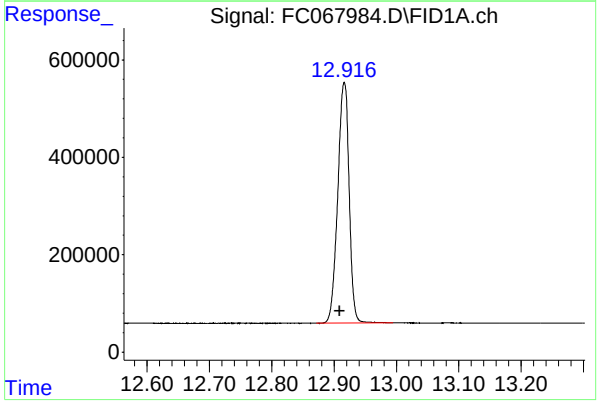





#9 ortho-Terphenyl (SURR)

R.T.: 0.000 min
Exp R.T. : 11.470 min
Response: 0
Conc: N.D.

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BL




#12 1-chlorooctadecane (SURR)

R.T.: 12.916 min
Delta R.T.: 0.007 min
Response: 6270957
Conc: 49.15 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067984.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 16:23
Sample : PB165557BL
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 12.916 | 12.871 | 12.995 | BB | 499369 | 6270957 | 100.00% | 100.000% |

Sum of corrected areas: 6270957

Aliphatic EPH 121024.M Thu Dec 12 03:59:41 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BL | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BL | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048873.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 0.30 | U | 0.30 | 0.67 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 0.34 | U | 0.34 | 1.00 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 0.96 | U | 0.96 | 1.67 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 2.00 | U | 2.00 | 2.67 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 47.2 | | 40 - 140 | 94% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 50.5 | | 40 - 140 | 101% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 45.3 | | 40 - 140 | 91% | SPK: 50 |

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# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BL | Acq On: | 11 Dec 2024 16:23 |
| Client Sample ID: | PB165557BL | Operator: | YP/AJ |
| Data file: | FD048873.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 61 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 0 | 0 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 0 | 0 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 0 | 0 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 0 | 0 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 0 | 0 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.211 | 8.211 | 5212363 | 50.45 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.361 | 7.361 | 7957555 | 47.24 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.249 | 11.249 | 8049563 | 45.31 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048873.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 16:23
Operator : YP/AJ
Sample : PB165557BL
Misc :
ALS Vial : 61 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
PB165557BL

Integration File: autoint1.e
Quant Time: Dec 12 04:28:08 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| **System Monitoring Compounds** | | | |
| 4) S 2-Bromonaphthalene (S... | 7.361 | 7957555 | 47.244 ug/ml |
| Spiked Amount 50.000 | | Recovery = 94.49% | |
| 6) S 2-Flurobiphenyl (SURR) | 8.211 | 5212363 | 50.455 ug/ml |
| Spiked Amount 50.000 Range 0 - 131 | | Recovery = 100.91% | |
| 11) S ortho-Terphenyl (SURR) | 11.249 | 8049563 | 45.308 ug/ml |
| Spiked Amount 50.000 | | Recovery = 90.62% | |
| **Target Compounds** | | | |

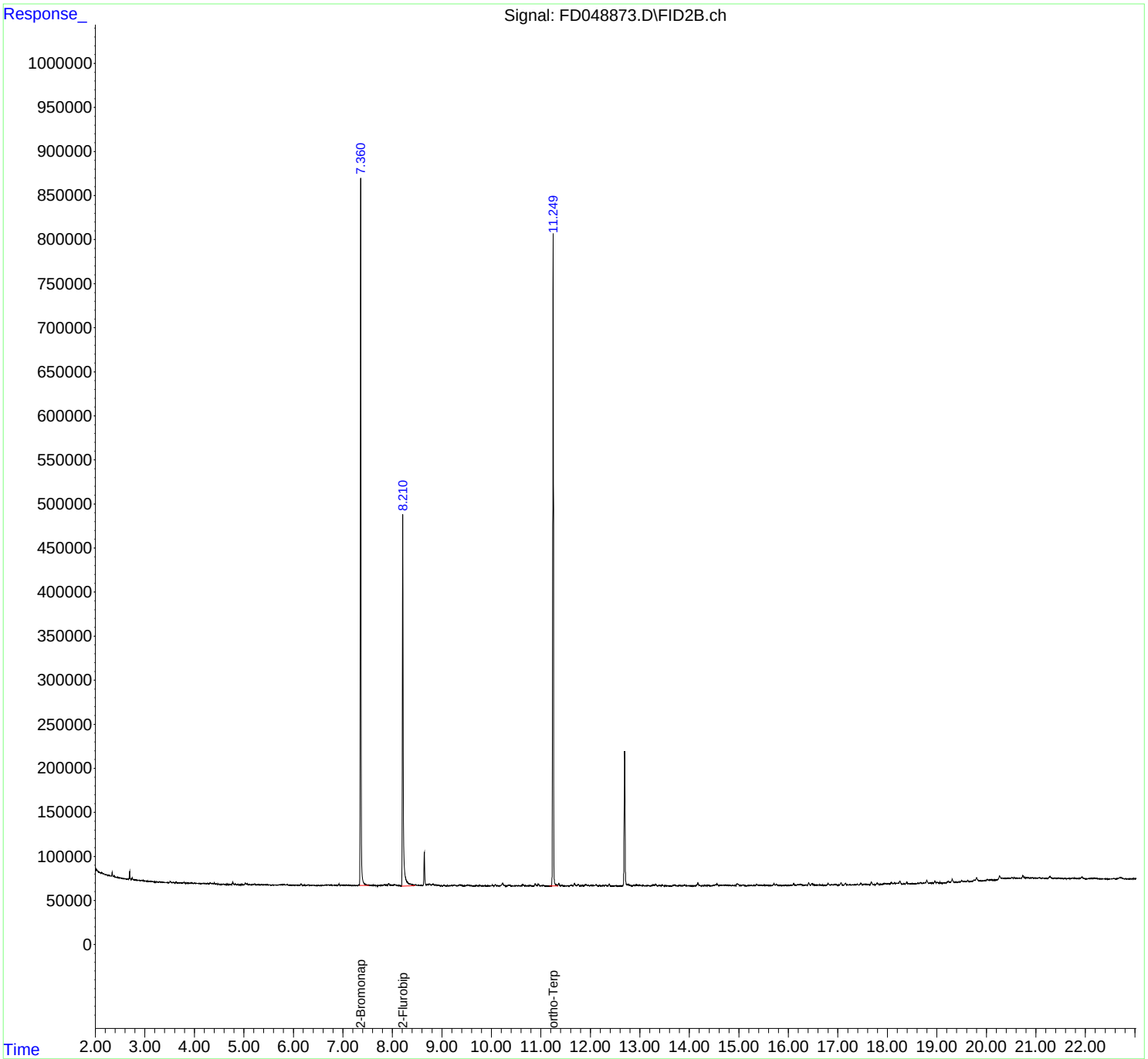
(f)=RT Delta > 1/2 Window (m)=manual int.

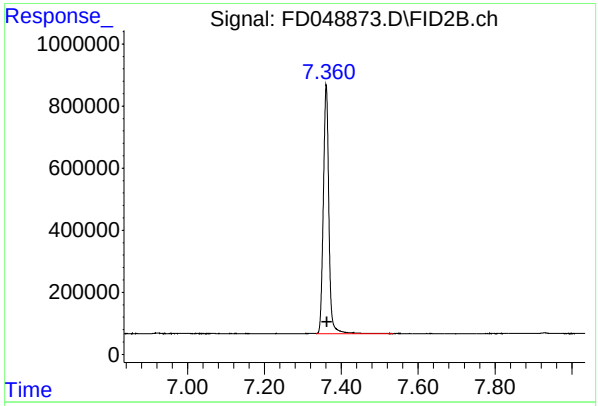
Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048873.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 16:23
Operator : YP/AJ
Sample : PB165557BL
Misc :
ALS Vial : 61 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
PB165557BL

Integration File: autoint1.e
Quant Time: Dec 12 04:28:08 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

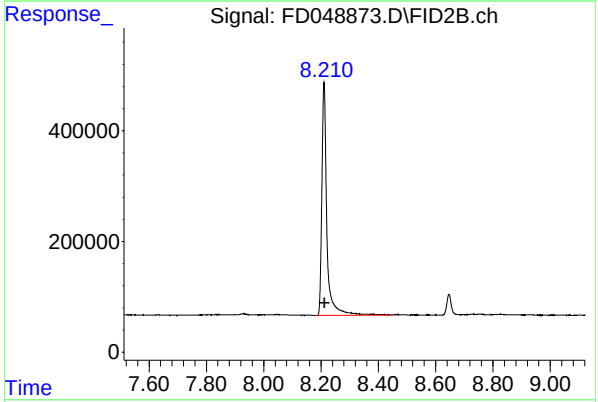





#4 2-Bromonaphthalene (SURR)

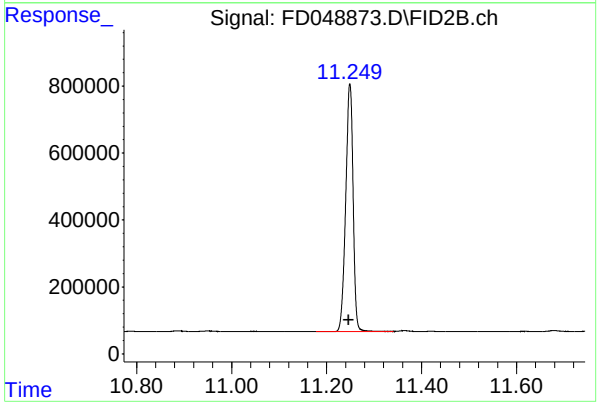
R.T.: 7.361 min
Delta R.T.: -0.002 min
Response: 7957555
Conc: 47.24 ug/ml

**Instrument :**
FID_D
**ClientSampleId :**
PB165557BL




#6 2-Flurobiphenyl (SURR)

R.T.: 8.211 min
Delta R.T.: -0.002 min
Response: 5212363
Conc: 50.45 ug/ml




#11 ortho-Terphenyl (SURR)

R.T.: 11.249 min
Delta R.T.: 0.002 min
Response: 8049563
Conc: 45.31 ug/ml

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048873.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 16:23
Sample : PB165557BL
Misc :
ALS Vial : 61 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 7.361 | 7.335 | 7.535 | VV | 802991 | 7957555 | 98.86% | 37.501% |
| 2 | 8.211 | 8.183 | 8.451 | PV | 421522 | 5212363 | 64.75% | 24.564% |
| 3 | 11.249 | 11.178 | 11.340 | BV | 740173 | 8049563 | 100.00% | 37.935% |
| | | | Sum of corrected areas: | | | 21219482 | | |

Aromatic EPH 121024.M Thu Dec 12 05:04:19 2024

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Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BS | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048874.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.02 | | 0.30 | 0.67 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 7.60 | | 0.34 | 1.00 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 16.0 | | 0.96 | 1.67 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 25.4 | | 2.00 | 2.66 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 47.8 | | 40 - 140 | 96% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 48.8 | | 40 - 140 | 98% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 45.5 | | 40 - 140 | 91% | SPK: 50 |

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# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BS | Acq On: | 11 Dec 2024 20:45 |
| Client Sample ID: | PB165557BS | Operator: | YP/AJ |
| Data file: | FD048874.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 62 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 11492461 | 60.42 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 21218542 | 114.15 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 40653878 | 239.818 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 53970856 | 381.181 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 127335737 | 795.568 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.249 | 11.249 | 8078018 | 45.47 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.361 | 7.361 | 8055044 | 47.82 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.212 | 8.212 | 5036000 | 48.75 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048874.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 20:45
Operator : YP/AJ
Sample : PB165557BS
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Dec 12 04:28:29 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

**Instrument :**
FID_D
**ClientSampleId :**
PB165557BS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel
12/12/2024
Supervised By :Ankita Jodhani

12/12/2024

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.361 | 8055044 | 47.823 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 95.65% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.212 | 5036000 | 48.747 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 97.49% |
| 11) S | ortho-Terphenyl (SURR) | 11.249 | 8078018 | 45.469 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 90.94% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.182 | 5173353 | 27.324 ug/mlm |
| 2) T | Naphthalene (C11.7) | 5.700 | 6326704 | 33.110 ug/ml |
| 3) T | 2-Methylnaphthalene (... | 6.747 | 6456658 | 34.942 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.014 | 7084014 | 37.957 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.309 | 7677870 | 41.226 ug/ml |
| 8) T | Flouorene (C16.55) | 9.088 | 7787656 | 43.582 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.477 | 7820185 | 46.820 ug/ml |
| 10) T | Anthracene (C19.43) | 10.552 | 7813962 | 46.040 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.283 | 7916910 | 48.366 ug/mlm |
| 13) T | Pyrene (C20.8) | 12.576 | 8337137 | 51.260 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.447 | 7084322 | 53.625 ug/ml |
| 15) T | Chrysene (C27.41) | 14.489 | 7192787 | 44.554 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 15.996 | 6909847 | 51.325 ug/ml |
| 17) T | Bnezo[k]fluoranthene ... | 16.029 | 6955169 | 45.662 ug/ml |
| 18) T | Benzo[a]pyrene (C31.34) | 16.371 | 6644681 | 48.042 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.740 | 6461610 | 60.633 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.776 | 6534494 | 45.057 ug/ml |
| 21) T | Benzo[g,h,i]perylene ... | 17.990 | 6187946 | 44.134 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048874.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 20:45
Operator : YP/AJ
Sample : PB165557BS
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Dec 12 04:28:29 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

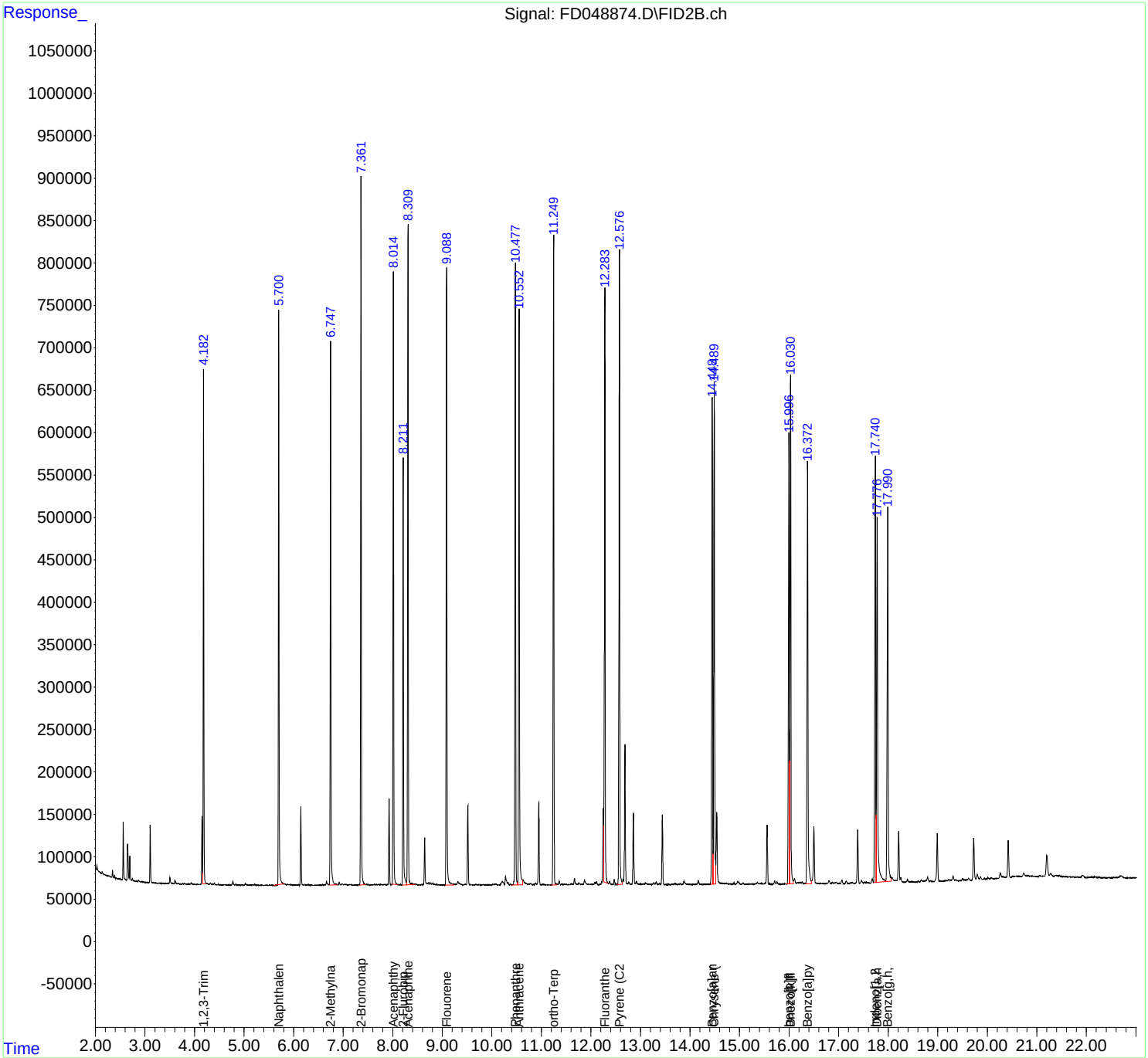
**Instrument :**
FID_D
**ClientSampleId :**
PB165557BS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel

12/12/2024
Supervised By :Ankita Jodhani

12/12/2024



**Instrument :**
FID_D
**ClientSampleId :**
PB165557BS

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12112
Data File : FD048874.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 20:45
Sample : PB165557BS
Misc :
ALS Vial : 62 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.182 | 4.165 | 4.244 | M | 607505 | 5165757 | 57.67% | 3.479% |
| 2 | 5.700 | 5.591 | 5.801 | BV | 675389 | 6326704 | 70.63% | 4.260% |
| 3 | 6.747 | 6.718 | 6.884 | VV | 643817 | 6456658 | 72.08% | 4.348% |
| 4 | 7.361 | 7.333 | 7.457 | VV | 836102 | 8055044 | 89.93% | 5.424% |
| 5 | 8.014 | 7.991 | 8.108 | BV | 721998 | 7084014 | 79.09% | 4.770% |
| 6 | 8.212 | 8.184 | 8.280 | PV | 501226 | 5036000 | 56.22% | 3.391% |
| 7 | 8.309 | 8.280 | 8.454 | VV | 768383 | 7677870 | 85.72% | 5.170% |
| 8 | 9.088 | 9.056 | 9.228 | PV | 725161 | 7787656 | 86.94% | 5.244% |
| 9 | 10.477 | 10.401 | 10.521 | PV | 740364 | 7820185 | 87.31% | 5.266% |
| 10 | 10.552 | 10.521 | 10.620 | VV | 677834 | 7813962 | 87.24% | 5.262% |
| 11 | 11.249 | 11.198 | 11.314 | BV | 755810 | 8078018 | 90.18% | 5.440% |
| 12 | 12.282 | 12.201 | 12.356 | VV | 690276 | 8957292 | 100.00% | 6.032% |
| 13 | 12.576 | 12.546 | 12.629 | M | 747973 | 8274783 | 92.38% | 5.572% |
| 14 | 14.447 | 14.410 | 14.466 | PV | 579474 | 7084322 | 79.09% | 4.770% |
| 15 | 14.489 | 14.466 | 14.518 | VV | 589619 | 7192787 | 80.30% | 4.843% |
| 16 | 15.996 | 15.931 | 16.011 | BV | 525274 | 6909847 | 77.14% | 4.653% |
| 17 | 16.029 | 16.011 | 16.086 | VV | 584736 | 6955169 | 77.65% | 4.683% |
| 18 | 16.371 | 16.314 | 16.450 | VV | 497432 | 6644681 | 74.18% | 4.474% |
| 19 | 17.740 | 17.701 | 17.755 | BV | 511093 | 6461610 | 72.14% | 4.351% |
| 20 | 17.776 | 17.755 | 17.950 | VV | 427149 | 6534494 | 72.95% | 4.400% |
| 21 | 17.990 | 17.950 | 18.063 | VV | 446146 | 6187946 | 69.08% | 4.167% |
| | | | Sum of corrected areas: | | | 148504801 | | |

Aromatic EPH 121024.M Thu Dec 12 05:42:31 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BS | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 20:45 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 5.54 | | 1 | 0.38 | 1.00 | mg/kg | FC067985.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 5.53 | | 1 | 0.24 | 0.67 | mg/kg | FC067985.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 9.92 | | 1 | 0.30 | 1.00 | mg/kg | FC067985.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.5 | | 1 | 0.80 | 1.33 | mg/kg | FC067985.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 23.1 | | 1 | 1.80 | 2.00 | mg/kg | FC067985.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.02 | | 1 | 0.30 | 0.67 | mg/kg | FD048874.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 7.60 | | 1 | 0.34 | 1.00 | mg/kg | FD048874.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 16.0 | | 1 | 0.96 | 1.67 | mg/kg | FD048874.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 25.4 | | 1 | 2.00 | 2.66 | mg/kg | FD048874.D |
| Total AliphaticEPH | Total AliphaticEPH | 57.6 | | | 3.52 | 5.99 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 53.0 | | | 3.60 | 6.00 | mg/kg | |
| Total EPH | Total EPH | 111 | | | 7.12 | 12.0 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BS | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067985.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 5.54 | | 0.38 | 1.00 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 5.53 | | 0.24 | 0.67 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 9.92 | | 0.30 | 1.00 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.5 | | 0.80 | 1.33 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 23.1 | | 1.80 | 2.00 | mg/kg |
| **SURROGATES** | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | 52.4 | | 40 - 140 | 105% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BS | Acq On: | 11 Dec 2024 20:45 |
| Client Sample ID: | PB165557BS | Operator: | YP/AJ |
| Data file: | FC067985.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 12 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 13179906 | 83.258 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 13303249 | 83.002 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 22699902 | 148.986 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 27689055 | 203.023 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 36815604 | 347.433 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 113687716 | 865.702 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.915 | 12.915 | 6689899 | 52.43 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 76872112 | 518.269 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067985.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 20:45
Operator : YP/AJ
Sample : PB165557BS
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BS

Integration File: autoint1.e
Quant Time: Dec 12 03:32:50 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 12) S | 1-chlorooctadecane (S... | 12.915 | 6689899 | 52.431 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 104.86% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.250 | 3253062 | 20.938 ug/ml |
| 2) T | n-Decane (C10) | 4.313 | 4312232 | 27.202 ug/ml |
| 4) T | n-Dodecane (C12) | 6.329 | 5614612 | 34.870 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.123 | 6434698 | 40.471 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.724 | 6868551 | 42.516 ug/ml |
| 8) T | n-Octadecane (C18) | 11.165 | 7527529 | 46.888 ug/ml |
| 10) T | n-Eicosane (C20) | 12.472 | 7757487 | 51.569 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.085 | 7414886 | 50.746 ug/ml |
| 13) T | n-Docosane (C22) | 13.670 | 7310689 | 51.072 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.772 | 7027295 | 50.575 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.792 | 6793943 | 50.803 ug/ml |
| 16) T | n-Octacosane (C28) | 16.741 | 6557128 | 50.552 ug/ml |
| 17) T | n-Tricontane (C30) | 17.627 | 6497949 | 50.161 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.459 | 6372488 | 51.438 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.242 | 6236485 | 57.138 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.981 | 6010428 | 63.529 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.701 | 5908903 | 65.319 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.581 | 5789351 | 65.684 ug/ml |

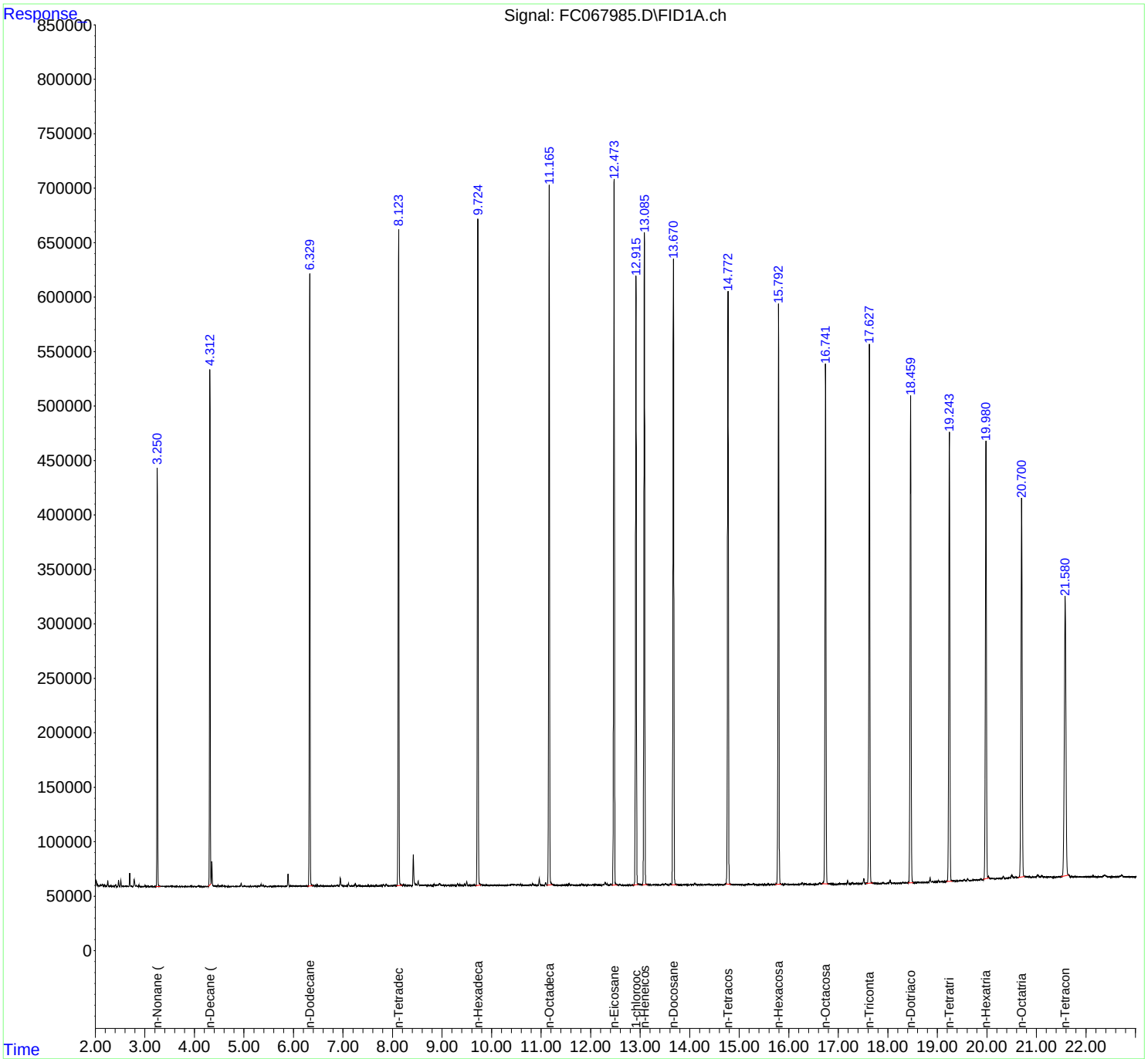
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067985.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 20:45
Operator : YP/AJ
Sample : PB165557BS
Misc :
ALS Vial : 12 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BS

Integration File: autoint1.e
Quant Time: Dec 12 03:32:50 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067985.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 20:45
Sample : PB165557BS
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.250 | 3.218 | 3.311 | BB | 383381 | 3253062 | 41.93% | 2.702% |
| 2 | 4.313 | 4.281 | 4.337 | BV | 469661 | 4312232 | 55.59% | 3.582% |
| 3 | 6.329 | 6.291 | 6.391 | BB | 557983 | 5614612 | 72.38% | 4.664% |
| 4 | 8.123 | 8.084 | 8.188 | BB | 603240 | 6434698 | 82.95% | 5.345% |
| 5 | 9.724 | 9.678 | 9.788 | BB | 614247 | 6868551 | 88.54% | 5.706% |
| 6 | 11.165 | 11.121 | 11.228 | BB | 641025 | 7527529 | 97.04% | 6.253% |
| 7 | 12.472 | 12.431 | 12.534 | BB | 643435 | 7757487 | 100.00% | 6.444% |
| 8 | 12.915 | 12.851 | 12.958 | BB | 543748 | 6689899 | 86.24% | 5.557% |
| 9 | 13.085 | 13.041 | 13.148 | BB | 593710 | 7414886 | 95.58% | 6.160% |
| 10 | 13.670 | 13.631 | 13.734 | BB | 572183 | 7310689 | 94.24% | 6.073% |
| 11 | 14.772 | 14.731 | 14.834 | BB | 541936 | 7027295 | 90.59% | 5.838% |
| 12 | 15.792 | 15.724 | 15.854 | BB | 527628 | 6793943 | 87.58% | 5.644% |
| 13 | 16.741 | 16.674 | 16.798 | BB | 475140 | 6557128 | 84.53% | 5.447% |
| 14 | 17.627 | 17.558 | 17.691 | BB | 489206 | 6497949 | 83.76% | 5.398% |
| 15 | 18.459 | 18.408 | 18.518 | BB | 433456 | 6372488 | 82.15% | 5.294% |
| 16 | 19.242 | 19.184 | 19.304 | BB | 407328 | 6236485 | 80.39% | 5.181% |
| 17 | 19.981 | 19.921 | 20.044 | BB | 398444 | 6010428 | 77.48% | 4.993% |
| 18 | 20.701 | 20.624 | 20.764 | BB | 343534 | 5908903 | 76.17% | 4.909% |
| 19 | 21.581 | 21.494 | 21.654 | BB | 253479 | 5789351 | 74.63% | 4.809% |

Sum of corrected areas: 120377615

Aliphatic EPH 121024.M Thu Dec 12 04:00:05 2024

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Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BSD | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BSD | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 21:20 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 5.49 | | 1 | 0.38 | 1.00 | mg/kg | FC067986.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 5.42 | | 1 | 0.24 | 0.67 | mg/kg | FC067986.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 9.70 | | 1 | 0.30 | 1.00 | mg/kg | FC067986.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.3 | | 1 | 0.80 | 1.33 | mg/kg | FC067986.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 22.8 | | 1 | 1.80 | 2.00 | mg/kg | FC067986.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.14 | | 1 | 0.30 | 0.67 | mg/kg | FD048875.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 7.86 | | 1 | 0.34 | 1.00 | mg/kg | FD048875.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 16.5 | | 1 | 0.96 | 1.67 | mg/kg | FD048875.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 26.3 | | 1 | 2.00 | 2.67 | mg/kg | FD048875.D |
| Total AliphaticEPH | Total AliphaticEPH | 56.7 | | | 3.52 | 6.00 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 54.8 | | | 3.60 | 6.01 | mg/kg | |
| Total EPH | Total EPH | 112 | | | 7.12 | 12.0 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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Fax : 908 789 8922

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | PB165557BSD | SDG No.: | P5194 |
| Lab Sample ID: | PB165557BSD | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 100 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067986.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 5.49 | | 0.38 | 1.00 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 5.42 | | 0.24 | 0.67 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 9.70 | | 0.30 | 1.00 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.3 | | 0.80 | 1.33 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 22.8 | | 1.80 | 2.00 | mg/kg |
| **SURROGATES** | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | 52.2 | | 40 - 140 | 104% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BSD | Acq On: | 11 Dec 2024 21:20 |
| Client Sample ID: | PB165557BSD | Operator: | YP/AJ |
| Data file: | FC067986.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 13 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 13030617 | 82.315 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 13041205 | 81.368 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 22179106 | 145.568 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 27140726 | 199.002 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 36281307 | 342.391 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 111672961 | 850.643 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.914 | 12.914 | 6655769 | 52.16 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 75391654 | 508.253 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067986.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:20
Operator : YP/AJ
Sample : PB165557BSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BSD

Integration File: autoint1.e
Quant Time: Dec 12 03:33:16 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | |
| 12) S | 1-chlorooctadecane (S... | 12.914 | 6655769 | 52.164 | ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 104.33% | |
| | **Target Compounds** | | | | |
| 1) T | n-Nonane (C9) | 3.251 | 3223834 | 20.750 | ug/ml |
| 2) T | n-Decane (C10) | 4.313 | 4265747 | 26.909 | ug/ml |
| 4) T | n-Dodecane (C12) | 6.329 | 5541036 | 34.413 | ug/ml |
| 6) T | n-Tetradecane (C14) | 8.123 | 6320754 | 39.754 | ug/ml |
| 7) T | n-Hexadecane (C16) | 9.722 | 6720451 | 41.599 | ug/ml |
| 8) T | n-Octadecane (C18) | 11.164 | 7356768 | 45.824 | ug/ml |
| 10) T | n-Eicosane (C20) | 12.472 | 7575521 | 50.360 | ug/ml |
| 11) T | n-Heneicosane (C21) | 13.083 | 7246817 | 49.596 | ug/ml |
| 13) T | n-Docosane (C22) | 13.668 | 7148648 | 49.940 | ug/ml |
| 14) T | n-Tetracosane (C24) | 14.769 | 6883193 | 49.538 | ug/ml |
| 15) T | n-Hexacosane (C26) | 15.790 | 6670087 | 49.877 | ug/ml |
| 16) T | n-Octacosane (C28) | 16.739 | 6438798 | 49.639 | ug/ml |
| 17) T | n-Tricontane (C30) | 17.625 | 6385965 | 49.296 | ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.456 | 6240457 | 50.372 | ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.238 | 6133181 | 56.191 | ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.977 | 5916340 | 62.535 | ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.697 | 5845004 | 64.613 | ug/ml |
| 22) T | n-Tetracontane (C40) | 21.579 | 5760360 | 65.355 | ug/ml |

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

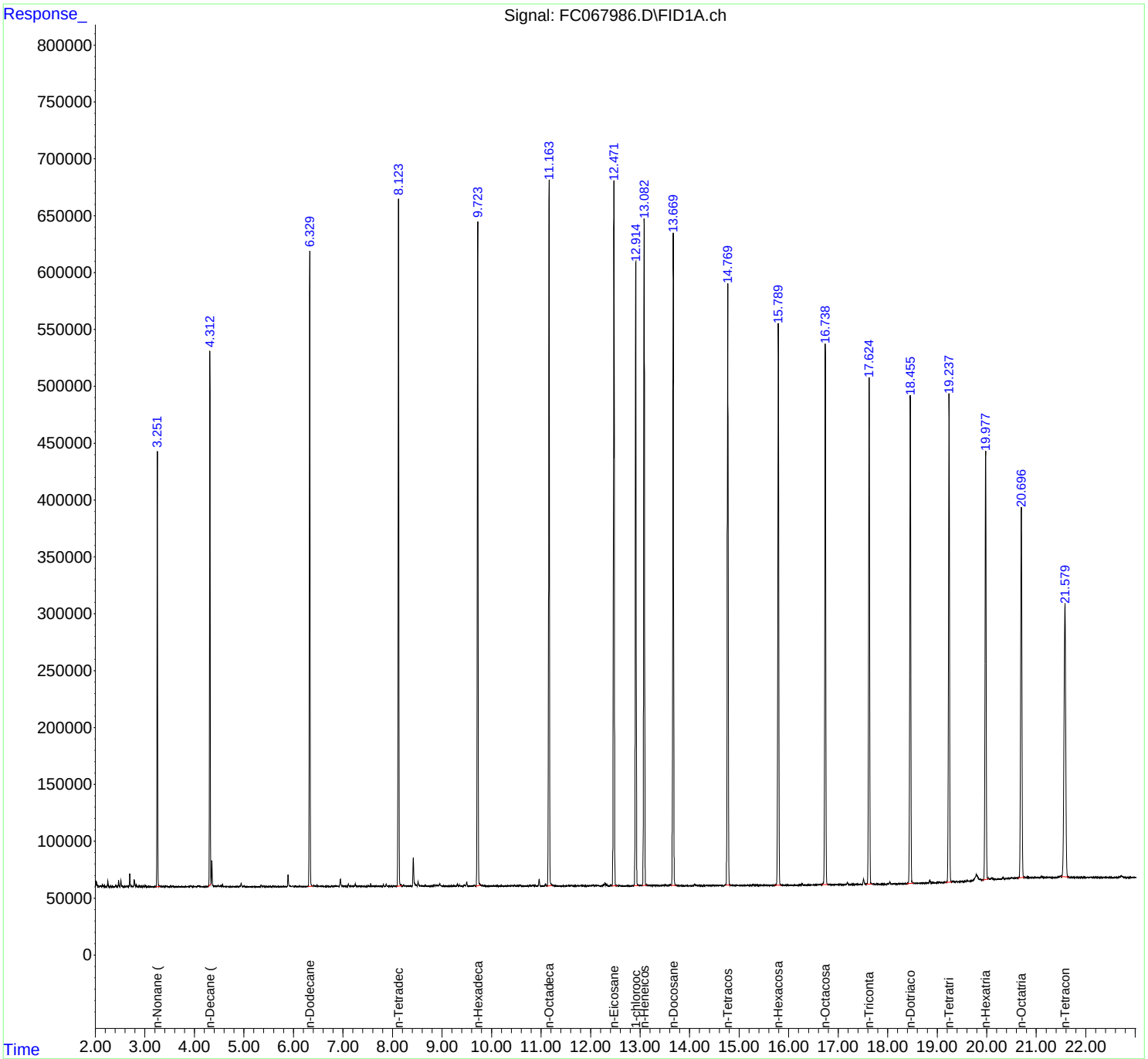
Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067986.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:20
Operator : YP/AJ
Sample : PB165557BSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
PB165557BSD

Integration File: autoint1.e
Quant Time: Dec 12 03:33:16 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067986.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 21:20
Sample : PB165557BSD
Misc :
ALS Vial : 13 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.251 | 3.221 | 3.311 | BB | 381938 | 3223834 | 42.56% | 2.724% |
| 2 | 4.313 | 4.281 | 4.337 | BV | 465694 | 4265747 | 56.31% | 3.605% |
| 3 | 6.329 | 6.294 | 6.391 | BB | 555024 | 5541036 | 73.14% | 4.683% |
| 4 | 8.123 | 8.084 | 8.188 | BB | 602187 | 6320754 | 83.44% | 5.342% |
| 5 | 9.722 | 9.678 | 9.784 | BB | 575674 | 6720451 | 88.71% | 5.679% |
| 6 | 11.164 | 11.121 | 11.228 | BB | 624218 | 7356768 | 97.11% | 6.217% |
| 7 | 12.472 | 12.431 | 12.534 | BB | 619322 | 7575521 | 100.00% | 6.402% |
| 8 | 12.914 | 12.871 | 12.974 | BB | 552853 | 6655769 | 87.86% | 5.625% |
| 9 | 13.083 | 13.041 | 13.144 | BB | 579884 | 7246817 | 95.66% | 6.124% |
| 10 | 13.668 | 13.628 | 13.728 | BB | 561658 | 7148648 | 94.37% | 6.041% |
| 11 | 14.769 | 14.728 | 14.831 | BB | 514605 | 6883193 | 90.86% | 5.817% |
| 12 | 15.790 | 15.718 | 15.854 | BB | 489152 | 6670087 | 88.05% | 5.637% |
| 13 | 16.739 | 16.668 | 16.798 | BB | 472717 | 6438798 | 84.99% | 5.441% |
| 14 | 17.625 | 17.561 | 17.688 | BB | 442514 | 6385965 | 84.30% | 5.397% |
| 15 | 18.456 | 18.384 | 18.518 | BB | 426609 | 6240457 | 82.38% | 5.274% |
| 16 | 19.238 | 19.161 | 19.298 | BB | 427992 | 6133181 | 80.96% | 5.183% |
| 17 | 19.977 | 19.908 | 20.041 | BB | 375777 | 5916340 | 78.10% | 5.000% |
| 18 | 20.697 | 20.621 | 20.761 | BB | 321966 | 5845004 | 77.16% | 4.940% |
| 19 | 21.579 | 21.498 | 21.654 | BB | 238969 | 5760360 | 76.04% | 4.868% |

Sum of corrected areas: 118328731

Aliphatic EPH 121024.M Thu Dec 12 04:00:22 2024

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

# Report of Analysis

| | | | | | |
|---|---|---|---|---|---|
| Client: | JPCL Engineering | | Date Collected: | | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | | Date Received: | | |
| Client Sample ID: | PB165557BSD | | SDG No.: | P5194 | |
| Lab Sample ID: | PB165557BSD | | Matrix: | Solid | |
| Analytical Method: | NJEPH | | % Solid: | 100 | |
| Sample Wt/Vol: | 30.01 | Units: g | Final Vol: | 2000 | uL |
| Soil Aliquot Vol: | | uL | Test: | EPH | |
| Prep Method : | | | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048875.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.14 | | 0.30 | 0.67 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 7.86 | | 0.34 | 1.00 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 16.5 | | 0.96 | 1.67 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 26.3 | | 2.00 | 2.67 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 49.6 | | 40 - 140 | 99% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 50.1 | | 40 - 140 | 100% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 46.5 | | 40 - 140 | 93% | SPK: 50 |

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

# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | PB165557BSD | Acq On: | 11 Dec 2024 21:20 |
| Client Sample ID: | PB165557BSD | Operator: | YP/AJ |
| Data file: | FD048875.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 63 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 11825988 | 62.174 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 21922031 | 117.934 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 41872377 | 247.006 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 55889497 | 394.731 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 131509893 | 821.845 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.250 | 11.250 | 8262269 | 46.51 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.364 | 7.364 | 8361439 | 49.64 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.214 | 8.214 | 5171241 | 50.06 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048875.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:20
Operator : YP/AJ
Sample : PB165557BSD
Misc :
ALS Vial : 63 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
PB165557BSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:28:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.364 | 8361439 | 49.642 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 99.28% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.214 | 5171241 | 50.057 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 100.11% |
| 11) S | ortho-Terphenyl (SURR) | 11.250 | 8262269 | 46.506 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 93.01% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.187 | 5311938 | 28.056 ug/ml |
| 2) T | Naphthalene (C11.7) | 5.704 | 6514050 | 34.090 ug/ml |
| 3) T | 2-Methylnaphthalene (... | 6.751 | 6646031 | 35.967 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.017 | 7323686 | 39.241 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.311 | 7952314 | 42.700 ug/ml |
| 8) T | Flouorene (C16.55) | 9.090 | 8020016 | 44.882 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.478 | 8002917 | 47.914 ug/ml |
| 10) T | Anthracene (C19.43) | 10.554 | 8086147 | 47.643 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.284 | 8180351 | 49.976 ug/mlm |
| 13) T | Pyrene (C20.8) | 12.577 | 8549404 | 52.565 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.447 | 7331570 | 55.496 ug/ml |
| 15) T | Chrysene (C27.41) | 14.489 | 7355273 | 45.560 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 15.996 | 7164634 | 53.218 ug/ml |
| 17) T | Bnezo[k]fluoranthene ... | 16.030 | 7133556 | 46.833 ug/ml |
| 18) T | Benzo[a]pyrene (C31.34) | 16.371 | 6813102 | 49.260 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.739 | 6797799 | 63.787 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.776 | 6752781 | 46.562 ug/ml |
| 21) T | Benzo[g,h,i]perylene ... | 17.990 | 6540782 | 46.651 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048875.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:20
Operator : YP/AJ
Sample : PB165557BSD
Misc :
ALS Vial : 63 Sample Multiplier: 1

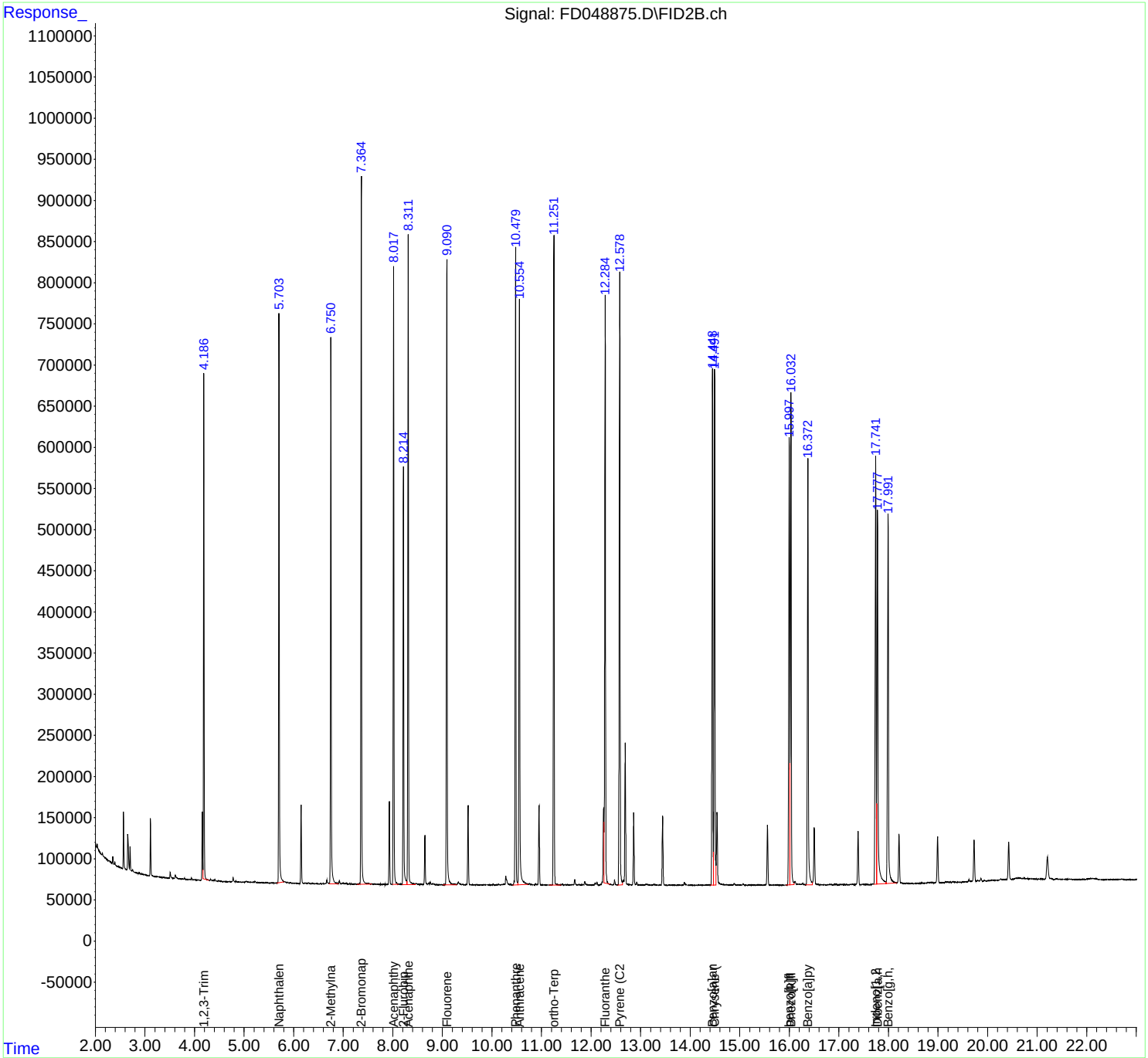
**Instrument :**
FID_D
**ClientSampleId :**
PB165557BSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:28:59 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



**Instrument :**
FID_D
**ClientSampleId :**
PB165557BSD

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12112
Data File : FD048875.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 21:20
Sample : PB165557BSD
Misc :
ALS Vial : 63 Sample Multiplier: 1

Integration File: autoint1.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.187 | 4.169 | 4.291 | VV | 609091 | 5311938 | 57.65% | 3.465% |
| 2 | 5.704 | 5.657 | 5.806 | PV | 690996 | 6514050 | 70.70% | 4.249% |
| 3 | 6.751 | 6.720 | 6.901 | VV | 663892 | 6646031 | 72.13% | 4.335% |
| 4 | 7.364 | 7.274 | 7.574 | BV | 862819 | 8361439 | 90.75% | 5.454% |
| 5 | 8.017 | 7.991 | 8.108 | BV | 755487 | 7323686 | 79.49% | 4.777% |
| 6 | 8.214 | 8.184 | 8.284 | PV | 509660 | 5171241 | 56.12% | 3.373% |
| 7 | 8.311 | 8.284 | 8.451 | VV | 786810 | 7952314 | 86.31% | 5.187% |
| 8 | 9.090 | 9.008 | 9.284 | BV | 769073 | 8020016 | 87.04% | 5.231% |
| 9 | 10.478 | 10.414 | 10.524 | PV | 778656 | 8002917 | 86.86% | 5.220% |
| 10 | 10.554 | 10.524 | 10.731 | VV | 713229 | 8086147 | 87.76% | 5.275% |
| 11 | 11.250 | 11.154 | 11.394 | BV | 802663 | 8262269 | 89.67% | 5.389% |
| 12 | 12.283 | 12.160 | 12.451 | PV | 729252 | 9213893 | 100.00% | 6.010% |
| 13 | 12.577 | 12.538 | 12.631 | VV | 745250 | 8549404 | 92.79% | 5.577% |
| 14 | 14.447 | 14.408 | 14.468 | PV | 628179 | 7331570 | 79.57% | 4.782% |
| 15 | 14.489 | 14.468 | 14.519 | VV | 605390 | 7355273 | 79.83% | 4.798% |
| 16 | 15.996 | 15.931 | 16.012 | BV | 537868 | 7164634 | 77.76% | 4.673% |
| 17 | 16.030 | 16.012 | 16.093 | VV | 608715 | 7133556 | 77.42% | 4.653% |
| 18 | 16.371 | 16.324 | 16.464 | BV | 513851 | 6813102 | 73.94% | 4.444% |
| 19 | 17.739 | 17.701 | 17.758 | BV | 498424 | 6797799 | 73.78% | 4.434% |
| 20 | 17.776 | 17.758 | 17.948 | VV | 461227 | 6752781 | 73.29% | 4.405% |
| 21 | 17.990 | 17.948 | 18.174 | VV | 451502 | 6540782 | 70.99% | 4.267% |

Sum of corrected areas: 153304839

Aromatic EPH 121024.M Thu Dec 12 05:45:56 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | UST-1MS | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01MS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048878.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.91 | | 0.34 | 0.76 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 11.7 | | 0.39 | 1.13 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 15.3 | | 1.09 | 1.89 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 23.6 | | 2.27 | 3.02 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 51.0 | | 40 - 140 | 102% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 55.0 | | 40 - 140 | 110% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 23.4 | | 40 - 140 | 47% | SPK: 50 |

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

# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01MS | Acq On: | 11 Dec 2024 23:09 |
| Client Sample ID: | UST-1MS | Operator: | YP/AJ |
| Data file: | FD048878.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 66 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 12346714 | 64.911 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 28869650 | 155.311 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 34229828 | 201.922 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 44291632 | 312.819 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 119737824 | 734.963 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.248 | 11.248 | 4166594 | 23.45 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.364 | 7.364 | 8595731 | 51.03 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.214 | 8.214 | 5680203 | 54.98 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048878.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:09
Operator : YP/AJ
Sample : P5194-01MS
Misc :
ALS Vial : 66 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:30:58 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) | S 2-Bromonaphthalene (S... | 7.364 | 8595731 | 51.033 ug/ml |
| | Spiked Amount 50.000 | | Recovery = 102.07% | |
| 6) | S 2-Flurobiphenyl (SURR) | 8.214 | 5680203 | 54.983 ug/ml |
| | Spiked Amount 50.000 Range 0 - 131 | | Recovery = 109.97% | |
| 11) | S ortho-Terphenyl (SURR) | 11.248 | 4166594 | 23.452 ug/ml |
| | Spiked Amount 50.000 | | Recovery = 46.90% | |
| | **Target Compounds** | | | |
| 1) | T 1,2,3-Trimethylbenzen... | 4.187 | 5167594 | 27.293 ug/ml |
| 2) | T Naphthalene (C11.7) | 5.703 | 5852873 | 30.630 ug/ml |
| 3) | T 2-Methylnaphthalene (... | 6.749 | 5688547 | 30.785 ug/ml |
| 5) | T Acenaphthylene (C15.06) | 8.015 | 5848039 | 31.334 ug/ml |
| 7) | T Acenaphthene (C15.5) | 8.311 | 6369439 | 34.201 ug/ml |
| 8) | T Flouorene (C16.55) | 9.089 | 6189650 | 34.639 ug/ml |
| 9) | T Phenanthrene (C19.36) | 10.477 | 5855963 | 35.060 ug/ml |
| 10) | T Anthracene (C19.43) | 10.553 | 5782496 | 34.070 ug/ml |
| 12) | T Fluoranthene (C21.85) | 12.282 | 5619561 | 34.331 ug/mlm |
| 13) | T Pyrene (C20.8) | 12.576 | 5856512 | 36.008 ug/ml |
| 14) | T Benzo[a]anthracene (C... | 14.446 | 4769516 | 36.103 ug/ml |
| 15) | T Chrysene (C27.41) | 14.487 | 4863742 | 30.127 ug/ml |
| 16) | T benzo[b]fluoranthene ... | 15.996 | 4340102 | 32.238 ug/ml |
| 17) | T Bnezo[k]fluoranthene ... | 16.027 | 4439330 | 29.145 ug/ml |
| 18) | T Benzo[a]pyrene (C31.34) | 16.372 | 4048185 | 29.269 ug/mlm |
| 19) | T Indeno[1,2,3-cd]pyren... | 17.742 | 4000902 | 37.543 ug/ml |
| 20) | T Dibenz[a,h]anthracene... | 17.778 | 4012260 | 27.666 ug/ml |
| 21) | T Benzo[g,h,i]perylene ... | 17.991 | 3722151 | 26.547 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048878.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:09
Operator : YP/AJ
Sample : P5194-01MS
Misc :
ALS Vial : 66 Sample Multiplier: 1

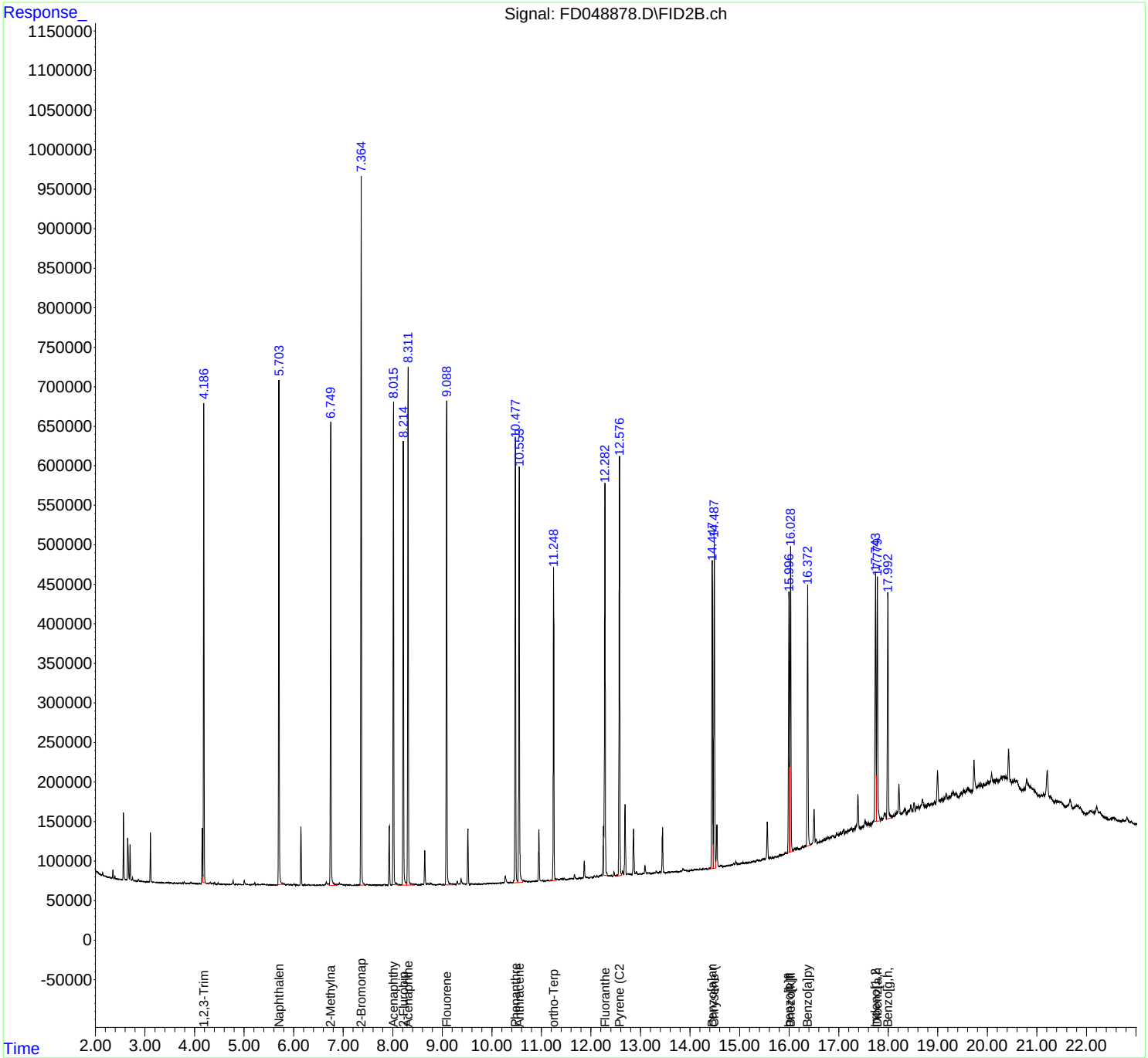
**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:30:58 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12112
Data File : FD048878.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:09
Sample : P5194-01MS
Misc :
ALS Vial : 66 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.106 | 4.072 | 4.128 | BV | 236 | 1991 | 0.02% | 0.002% |
| 2 | 4.156 | 4.128 | 4.169 | PV | 70769 | 619764 | 7.18% | 0.476% |
| 3 | 4.187 | 4.169 | 4.242 | VV | 608319 | 5240895 | 60.68% | 4.022% |
| 4 | 4.246 | 4.242 | 4.253 | VV | 992 | 6259 | 0.07% | 0.005% |
| 5 | 4.265 | 4.253 | 4.281 | VV | 1212 | 15921 | 0.18% | 0.012% |
| 6 | 4.319 | 4.281 | 4.360 | VV | 2526 | 55799 | 0.65% | 0.043% |
| 7 | 4.375 | 4.360 | 4.391 | VV | 1862 | 21813 | 0.25% | 0.017% |
| 8 | 4.406 | 4.391 | 4.456 | VV | 2840 | 34387 | 0.40% | 0.026% |
| 9 | 4.475 | 4.456 | 4.492 | VV | 2081 | 21365 | 0.25% | 0.016% |
| 10 | 4.497 | 4.492 | 4.509 | VV | 400 | 3252 | 0.04% | 0.002% |
| 11 | 4.520 | 4.509 | 4.548 | VV | 496 | 7433 | 0.09% | 0.006% |
| 12 | 4.554 | 4.548 | 4.564 | VV | 312 | 2278 | 0.03% | 0.002% |
| 13 | 4.573 | 4.564 | 4.577 | VV | 331 | 1868 | 0.02% | 0.001% |
| 14 | 4.590 | 4.577 | 4.624 | VV | 944 | 12074 | 0.14% | 0.009% |
| 15 | 4.630 | 4.624 | 4.652 | PV | 216 | 2296 | 0.03% | 0.002% |
| 16 | 4.663 | 4.652 | 4.672 | VV | 276 | 1598 | 0.02% | 0.001% |
| 17 | 4.683 | 4.672 | 4.687 | PV | 179 | 1093 | 0.01% | 0.001% |
| 18 | 4.697 | 4.687 | 4.722 | VV | 336 | 4141 | 0.05% | 0.003% |
| 19 | 4.756 | 4.722 | 4.762 | VV | 1000 | 12275 | 0.14% | 0.009% |
| 20 | 4.778 | 4.762 | 4.816 | VV | 5295 | 59780 | 0.69% | 0.046% |
| 21 | 4.833 | 4.816 | 4.852 | VV | 1025 | 10099 | 0.12% | 0.008% |
| 22 | 4.864 | 4.852 | 4.875 | VV | 361 | 4154 | 0.05% | 0.003% |
| 23 | 4.889 | 4.875 | 4.944 | VV | 769 | 18643 | 0.22% | 0.014% |
| 24 | 4.964 | 4.944 | 4.987 | VV | 423 | 8269 | 0.10% | 0.006% |
| 25 | 5.004 | 4.987 | 5.040 | VV | 5634 | 70474 | 0.82% | 0.054% |
| 26 | 5.049 | 5.040 | 5.120 | VV | 738 | 19751 | 0.23% | 0.015% |
| 27 | 5.125 | 5.120 | 5.139 | VV | 412 | 2943 | 0.03% | 0.002% |
| 28 | 5.145 | 5.139 | 5.160 | VV | 468 | 4208 | 0.05% | 0.003% |
| 29 | 5.178 | 5.160 | 5.194 | VV | 1348 | 16530 | 0.19% | 0.013% |
| 30 | 5.218 | 5.194 | 5.242 | VV | 1957 | 26899 | 0.31% | 0.021% |
| 31 | 5.278 | 5.242 | 5.304 | VV | 785 | 19167 | 0.22% | 0.015% |
| 32 | 5.311 | 5.304 | 5.325 | VV | 532 | 5844 | 0.07% | 0.004% |
| 33 | 5.360 | 5.325 | 5.400 | VV | 1470 | 34305 | 0.40% | 0.026% |
| 34 | 5.405 | 5.400 | 5.440 | VV | 892 | 14052 | 0.16% | 0.011% |
| 35 | 5.449 | 5.440 | 5.455 | VV | 409 | 3399 | 0.04% | 0.003% |
| 36 | 5.463 | 5.455 | 5.490 | VV | 517 | 8134 | 0.09% | 0.006% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | rteres | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 5.501 | 5.490 | 5.514 | VV | 553 | 4708 | 0.05% | 0.004% |
| 38 | 5.516 | 5.514 | 5.525 | VV | 283 | 1294 | | |
| 39 | 5.545 | 5.537 | 5.565 | VV | 264 | 2312 | | |
| 40 | 5.576 | 5.565 | 5.582 | VV | 222 | 1601 | | |
| 41 | 5.592 | 5.582 | 5.605 | VV | 293 | 2384 | | |
| 42 | 5.608 | 5.605 | 5.617 | VV | 245 | 1375 | | |
| 43 | 5.623 | 5.617 | 5.634 | VV | 361 | 2729 | 0.03% | 0.002% |
| 44 | 5.639 | 5.634 | 5.651 | VV | 323 | 2806 | 0.03% | 0.002% |
| 45 | 5.669 | 5.651 | 5.677 | VV | 474 | 5537 | 0.06% | 0.004% |
| 46 | 5.703 | 5.677 | 5.797 | VV | 639015 | 5928815 | 68.64% | 4.550% |
| 47 | 5.812 | 5.797 | 5.838 | VV | 2140 | 34782 | 0.40% | 0.027% |
| 48 | 5.845 | 5.838 | 5.861 | VV | 842 | 10831 | 0.13% | 0.008% |
| 49 | 5.876 | 5.861 | 5.921 | VV | 1027 | 29167 | 0.34% | 0.022% |
| 50 | 5.927 | 5.921 | 5.934 | VV | 840 | 5985 | 0.07% | 0.005% |
| 51 | 5.937 | 5.934 | 5.967 | VV | 917 | 13341 | 0.15% | 0.010% |
| 52 | 5.973 | 5.967 | 5.985 | VV | 443 | 3821 | 0.04% | 0.003% |
| 53 | 6.003 | 5.985 | 6.069 | VV | 1592 | 32457 | 0.38% | 0.025% |
| 54 | 6.074 | 6.069 | 6.085 | VV | 475 | 3119 | 0.04% | 0.002% |
| 55 | 6.089 | 6.085 | 6.102 | VV | 358 | 2286 | 0.03% | 0.002% |
| 56 | 6.112 | 6.102 | 6.118 | PV | 333 | 1663 | 0.02% | 0.001% |
| 57 | 6.148 | 6.118 | 6.207 | VV | 74167 | 729621 | 8.45% | 0.560% |
| 58 | 6.227 | 6.207 | 6.246 | VV | 1021 | 12142 | 0.14% | 0.009% |
| 59 | 6.265 | 6.246 | 6.282 | VV | 530 | 6437 | 0.07% | 0.005% |
| 60 | 6.296 | 6.282 | 6.314 | VV | 1400 | 15299 | 0.18% | 0.012% |
| 61 | 6.328 | 6.314 | 6.349 | VV | 520 | 5896 | 0.07% | 0.005% |
| 62 | 6.369 | 6.349 | 6.392 | VV | 855 | 9363 | 0.11% | 0.007% |
| 63 | 6.413 | 6.392 | 6.439 | VV | 609 | 9464 | 0.11% | 0.007% |
| 64 | 6.456 | 6.439 | 6.464 | VV | 431 | 4195 | 0.05% | 0.003% |
| 65 | 6.467 | 6.464 | 6.487 | VV | 460 | 4566 | 0.05% | 0.004% |
| 66 | 6.517 | 6.487 | 6.523 | VV | 504 | 6859 | 0.08% | 0.005% |
| 67 | 6.537 | 6.523 | 6.554 | VV | 567 | 6637 | 0.08% | 0.005% |
| 68 | 6.558 | 6.554 | 6.566 | VV | 235 | 1364 | 0.02% | 0.001% |
| 69 | 6.586 | 6.566 | 6.604 | VV | 984 | 13034 | 0.15% | 0.010% |
| 70 | 6.612 | 6.604 | 6.616 | VV | 541 | 3050 | 0.04% | 0.002% |
| 71 | 6.660 | 6.616 | 6.679 | VV | 4955 | 75230 | 0.87% | 0.058% |
| 72 | 6.690 | 6.679 | 6.696 | VV | 2021 | 19299 | 0.22% | 0.015% |
| 73 | 6.704 | 6.696 | 6.719 | VV | 2078 | 24930 | 0.29% | 0.019% |
| 74 | 6.750 | 6.719 | 6.831 | VV | 586142 | 5674155 | 65.69% | 4.355% |
| 75 | 6.837 | 6.831 | 6.845 | VV | 1441 | 11842 | 0.14% | 0.009% |
| 76 | 6.850 | 6.845 | 6.877 | VV | 1375 | 22803 | 0.26% | 0.017% |
| 77 | 6.891 | 6.877 | 6.902 | VV | 1343 | 16838 | 0.19% | 0.013% |
| 78 | 6.924 | 6.902 | 6.939 | VV | 3457 | 41792 | 0.48% | 0.032% |
| 79 | 6.947 | 6.939 | 6.952 | VV | 1405 | 10272 | 0.12% | 0.008% |
| 80 | 6.956 | 6.952 | 6.973 | VV | 1351 | 15302 | 0.18% | 0.012% |
| 81 | 6.982 | 6.973 | 7.016 | VV | 1270 | 23813 | 0.28% | 0.018% |
| 82 | 7.030 | 7.016 | 7.047 | VV | 1106 | 14315 | 0.17% | 0.011% |
| 83 | 7.064 | 7.047 | 7.087 | VV | 1405 | 19343 | 0.22% | 0.015% |
| 84 | 7.104 | 7.087 | 7.118 | VV | 467 | 7040 | 0.08% | 0.005% |
| 85 | 7.134 | 7.118 | 7.145 | VV | 704 | 9501 | 0.11% | 0.007% |
| 86 | 7.153 | 7.145 | 7.177 | VV | 790 | 8424 | 0.10% | 0.006% |
| 87 | 7.184 | 7.177 | 7.192 | PV | 195 | 1199 | 0.01% | 0.001% |
| 88 | 7.225 | 7.192 | 7.252 | VV | 699 | 12925 | 0.15% | 0.010% |
| 89 | 7.271 | 7.252 | 7.289 | VV | 640 | 8057 | 0.09% | 0.006% |

**Instrument :**
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**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

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|---|---|---|---|---|---|---|---|---|
| 90 | 7.296 | 7.289 | 7.310 | VV | 614 | 5005 | 0.06% | 0.004% |
| 91 | 7.324 | 7.310 | 7.337 | VV | 1106 | 11303 | 0 | |
| 92 | 7.365 | 7.337 | 7.454 | VV | 898095 | 8637420 | 100 | |
| 93 | 7.476 | 7.454 | 7.482 | VV | 1338 | 18914 | 0 | |
| 94 | 7.484 | 7.482 | 7.506 | VV | 1368 | 15107 | 0 | |
| 95 | 7.513 | 7.506 | 7.535 | VV | 762 | 11163 | 0 | |
| 96 | 7.541 | 7.535 | 7.567 | VV | 668 | 9548 | 0.11% | 0.007% |
| 97 | 7.585 | 7.567 | 7.604 | VV | 581 | 8872 | 0.10% | 0.007% |
| 98 | 7.628 | 7.604 | 7.646 | VV | 896 | 13743 | 0.16% | 0.011% |
| 99 | 7.658 | 7.646 | 7.665 | VV | 467 | 4315 | 0.05% | 0.003% |
| 100 | 7.671 | 7.665 | 7.677 | VV | 370 | 2142 | 0.02% | 0.002% |
| 101 | 7.682 | 7.677 | 7.699 | VV | 513 | 4715 | 0.05% | 0.004% |
| 102 | 7.717 | 7.699 | 7.746 | VV | 554 | 11690 | 0.14% | 0.009% |
| 103 | 7.754 | 7.746 | 7.771 | VV | 351 | 3102 | 0.04% | 0.002% |
| 104 | 7.837 | 7.771 | 7.859 | PV | 1447 | 35256 | 0.41% | 0.027% |
| 105 | 7.871 | 7.859 | 7.900 | VV | 640 | 8380 | 0.10% | 0.006% |
| 106 | 7.930 | 7.900 | 7.967 | VV | 75008 | 764702 | 8.85% | 0.587% |
| 107 | 7.971 | 7.967 | 7.986 | VV | 609 | 5842 | 0.07% | 0.004% |
| 108 | 8.015 | 7.986 | 8.071 | VV | 611283 | 5858545 | 67.83% | 4.496% |
| 109 | 8.076 | 8.071 | 8.144 | VV | 2421 | 56884 | 0.66% | 0.044% |
| 110 | 8.163 | 8.144 | 8.184 | VV | 905 | 13811 | 0.16% | 0.011% |
| 111 | 8.214 | 8.184 | 8.267 | VV | 559845 | 5668470 | 65.63% | 4.350% |
| 112 | 8.272 | 8.267 | 8.284 | VV | 3031 | 28254 | 0.33% | 0.022% |
| 113 | 8.311 | 8.284 | 8.379 | VV | 654368 | 6338314 | 73.38% | 4.864% |
| 114 | 8.382 | 8.379 | 8.405 | VV | 1631 | 20164 | 0.23% | 0.015% |
| 115 | 8.412 | 8.405 | 8.421 | VV | 1269 | 10766 | 0.12% | 0.008% |
| 116 | 8.428 | 8.421 | 8.442 | VV | 1188 | 12651 | 0.15% | 0.010% |
| 117 | 8.462 | 8.442 | 8.505 | VV | 1396 | 33683 | 0.39% | 0.026% |
| 118 | 8.517 | 8.505 | 8.540 | VV | 579 | 7343 | 0.09% | 0.006% |
| 119 | 8.555 | 8.540 | 8.582 | VV | 735 | 12785 | 0.15% | 0.010% |
| 120 | 8.601 | 8.582 | 8.622 | VV | 1567 | 24644 | 0.29% | 0.019% |
| 121 | 8.648 | 8.622 | 8.696 | VV | 43440 | 472482 | 5.47% | 0.363% |
| 122 | 8.711 | 8.696 | 8.732 | VV | 2496 | 33038 | 0.38% | 0.025% |
| 123 | 8.759 | 8.732 | 8.775 | VV | 2324 | 37975 | 0.44% | 0.029% |
| 124 | 8.786 | 8.775 | 8.817 | VV | 1967 | 26230 | 0.30% | 0.020% |
| 125 | 8.834 | 8.817 | 8.854 | VV | 695 | 8599 | 0.10% | 0.007% |
| 126 | 8.879 | 8.854 | 8.901 | PV | 600 | 8010 | 0.09% | 0.006% |
| 127 | 8.943 | 8.901 | 8.990 | VV | 999 | 23510 | 0.27% | 0.018% |
| 128 | 9.006 | 8.990 | 9.023 | VV | 372 | 4556 | 0.05% | 0.003% |
| 129 | 9.032 | 9.023 | 9.040 | VV | 360 | 2697 | 0.03% | 0.002% |
| 130 | 9.050 | 9.040 | 9.060 | VV | 484 | 3981 | 0.05% | 0.003% |
| 131 | 9.089 | 9.060 | 9.212 | VV | 611703 | 6180565 | 71.56% | 4.743% |
| 132 | 9.219 | 9.212 | 9.233 | VV | 834 | 9641 | 0.11% | 0.007% |
| 133 | 9.246 | 9.233 | 9.275 | VV | 1094 | 17326 | 0.20% | 0.013% |
| 134 | 9.303 | 9.275 | 9.332 | VV | 4536 | 65550 | 0.76% | 0.050% |
| 135 | 9.343 | 9.332 | 9.361 | VV | 1506 | 18240 | 0.21% | 0.014% |
| 136 | 9.380 | 9.361 | 9.427 | VV | 7695 | 122265 | 1.42% | 0.094% |
| 137 | 9.433 | 9.427 | 9.445 | VV | 1088 | 11104 | 0.13% | 0.009% |
| 138 | 9.455 | 9.445 | 9.476 | VV | 1254 | 15448 | 0.18% | 0.012% |
| 139 | 9.518 | 9.476 | 9.554 | VV | 70728 | 756431 | 8.76% | 0.581% |
| 140 | 9.582 | 9.554 | 9.597 | PV | 860 | 16285 | 0.19% | 0.012% |
| 141 | 9.602 | 9.597 | 9.605 | VV | 689 | 2904 | 0.03% | 0.002% |

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**Manual IntegrationsAPPROVED**

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Supervised By :Ankita Jodhani 12/12/2024

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|---|---|---|---|---|---|---|---|---|
| 142 | 9.609 | 9.605 | 9.633 | VV | 684 | 7811 | 0.09% | 0.006% |
| 143 | 9.636 | 9.633 | 9.642 | VV | 325 | 1302 | | |
| 144 | 9.682 | 9.642 | 9.710 | VV | 616 | 12453 | | |
| 145 | 9.727 | 9.710 | 9.749 | VV | 469 | 6281 | | |
| 146 | 9.788 | 9.749 | 9.807 | VV | 357 | 6536 | | |
| 147 | 9.832 | 9.807 | 9.837 | PV | 527 | 4496 | | |
| 148 | 9.840 | 9.837 | 9.881 | VV | 497 | 7915 | 0.09% | 0.006% |
| 149 | 9.912 | 9.881 | 9.919 | VV | 454 | 6295 | 0.07% | 0.005% |
| 150 | 9.939 | 9.919 | 10.003 | VV | 547 | 18311 | 0.21% | 0.014% |
| 151 | 10.020 | 10.003 | 10.044 | VV | 974 | 12175 | 0.14% | 0.009% |
| 152 | 10.091 | 10.044 | 10.105 | PV | 650 | 12698 | 0.15% | 0.010% |
| 153 | 10.131 | 10.105 | 10.142 | VV | 694 | 12267 | 0.14% | 0.009% |
| 154 | 10.152 | 10.142 | 10.157 | VV | 531 | 3939 | 0.05% | 0.003% |
| 155 | 10.168 | 10.157 | 10.184 | VV | 666 | 7296 | 0.08% | 0.006% |
| 156 | 10.214 | 10.184 | 10.229 | VV | 853 | 15358 | 0.18% | 0.012% |
| 157 | 10.232 | 10.229 | 10.238 | VV | 370 | 1906 | 0.02% | 0.001% |
| 158 | 10.272 | 10.238 | 10.353 | VV | 9033 | 173130 | 2.00% | 0.133% |
| 159 | 10.378 | 10.353 | 10.397 | VV | 1196 | 16017 | 0.19% | 0.012% |
| 160 | 10.444 | 10.406 | 10.449 | VV | 3288 | 27769 | 0.32% | 0.021% |
| 161 | 10.477 | 10.449 | 10.523 | VV | 562762 | 5827122 | 67.46% | 4.472% |
| 162 | 10.553 | 10.523 | 10.625 | VV | 526227 | 5787459 | 67.00% | 4.441% |
| 163 | 10.638 | 10.625 | 10.656 | VV | 2450 | 40202 | 0.47% | 0.031% |
| 164 | 10.664 | 10.656 | 10.689 | VV | 1817 | 28693 | 0.33% | 0.022% |
| 165 | 10.698 | 10.689 | 10.735 | VV | 1152 | 18801 | 0.22% | 0.014% |
| 166 | 10.756 | 10.735 | 10.779 | VV | 992 | 16201 | 0.19% | 0.012% |
| 167 | 10.833 | 10.779 | 10.845 | VV | 816 | 24221 | 0.28% | 0.019% |
| 168 | 10.850 | 10.845 | 10.856 | VV | 512 | 2594 | 0.03% | 0.002% |
| 169 | 10.881 | 10.856 | 10.904 | VV | 919 | 16101 | 0.19% | 0.012% |
| 170 | 10.951 | 10.904 | 11.004 | VV | 65662 | 759827 | 8.80% | 0.583% |
| 171 | 11.019 | 11.004 | 11.056 | VV | 1015 | 18316 | 0.21% | 0.014% |
| 172 | 11.063 | 11.056 | 11.076 | VV | 610 | 4217 | 0.05% | 0.003% |
| 173 | 11.095 | 11.076 | 11.102 | VV | 494 | 3481 | 0.04% | 0.003% |
| 174 | 11.137 | 11.102 | 11.165 | VV | 679 | 14760 | 0.17% | 0.011% |
| 175 | 11.248 | 11.165 | 11.300 | PV | 395143 | 4168308 | 48.26% | 3.199% |
| 176 | 11.316 | 11.300 | 11.354 | VV | 1930 | 42965 | 0.50% | 0.033% |
| 177 | 11.391 | 11.354 | 11.405 | VV | 1729 | 35022 | 0.41% | 0.027% |
| 178 | 11.424 | 11.405 | 11.440 | VV | 2186 | 31217 | 0.36% | 0.024% |
| 179 | 11.461 | 11.440 | 11.486 | VV | 2120 | 32653 | 0.38% | 0.025% |
| 180 | 11.503 | 11.486 | 11.514 | VV | 306 | 2793 | 0.03% | 0.002% |
| 181 | 11.532 | 11.514 | 11.549 | VV | 727 | 8825 | 0.10% | 0.007% |
| 182 | 11.576 | 11.549 | 11.588 | VV | 1214 | 17273 | 0.20% | 0.013% |
| 183 | 11.607 | 11.588 | 11.614 | VV | 1258 | 16345 | 0.19% | 0.013% |
| 184 | 11.618 | 11.614 | 11.624 | VV | 1174 | 6568 | 0.08% | 0.005% |
| 185 | 11.627 | 11.624 | 11.644 | VV | 1184 | 9229 | 0.11% | 0.007% |
| 186 | 11.669 | 11.644 | 11.715 | VV | 6187 | 86744 | 1.00% | 0.067% |
| 187 | 11.732 | 11.715 | 11.743 | VV | 712 | 7895 | 0.09% | 0.006% |
| 188 | 11.767 | 11.743 | 11.800 | VV | 1712 | 32399 | 0.38% | 0.025% |
| 189 | 11.832 | 11.800 | 11.841 | VV | 1067 | 18508 | 0.21% | 0.014% |
| 190 | 11.866 | 11.841 | 11.907 | VV | 22103 | 278371 | 3.22% | 0.214% |
| 191 | 11.914 | 11.907 | 11.928 | VV | 1180 | 13142 | 0.15% | 0.010% |
| 192 | 11.934 | 11.928 | 11.960 | VV | 1060 | 15548 | 0.18% | 0.012% |
| 193 | 11.966 | 11.960 | 11.972 | VV | 546 | 3110 | 0.04% | 0.002% |
| 194 | 12.014 | 11.972 | 12.039 | VV | 1442 | 35189 | 0.41% | 0.027% |

**Instrument :**
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**Manual IntegrationsAPPROVED**

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Supervised By :Ankita Jodhani 12/12/2024

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|---|---|---|---|---|---|---|---|---|
| 195 | 12.067 | 12.039 | 12.100 | VV | 2773 | 48805 | 0.57% | 0.037% |
| 196 | 12.119 | 12.100 | 12.143 | VV | 3211 | 42158 | | |
| 197 | 12.173 | 12.143 | 12.189 | VV | 2723 | 44112 | | |
| 198 | 12.212 | 12.189 | 12.226 | VV | 3722 | 58086 | | |
| 199 | 12.253 | 12.226 | 12.260 | VV | 64871 | 644613 | | |
| 200 | 12.283 | 12.260 | 12.343 | VV | 497392 | 5688281 | 65 | |
| 201 | 12.353 | 12.343 | 12.359 | VV | 1587 | 13064 | 0.15% | 0.010% |
| 202 | 12.362 | 12.359 | 12.372 | VV | 1457 | 8947 | 0.10% | 0.007% |
| 203 | 12.387 | 12.372 | 12.392 | VV | 1336 | 13687 | 0.16% | 0.011% |
| 204 | 12.406 | 12.392 | 12.431 | VV | 1519 | 26104 | 0.30% | 0.020% |
| 205 | 12.465 | 12.431 | 12.502 | VV | 6216 | 90309 | 1.05% | 0.069% |
| 206 | 12.509 | 12.502 | 12.515 | VV | 1277 | 8232 | 0.10% | 0.006% |
| 207 | 12.522 | 12.515 | 12.541 | VV | 1557 | 19592 | 0.23% | 0.015% |
| 208 | 12.577 | 12.541 | 12.617 | VV | 532106 | 5868428 | 67.94% | 4.504% |
| 209 | 12.637 | 12.617 | 12.663 | VV | 6579 | 106955 | 1.24% | 0.082% |
| 210 | 12.690 | 12.663 | 12.717 | VV | 90122 | 1084422 | 12.55% | 0.832% |
| 211 | 12.747 | 12.717 | 12.768 | VV | 2562 | 61420 | 0.71% | 0.047% |
| 212 | 12.775 | 12.768 | 12.804 | VV | 1988 | 33338 | 0.39% | 0.026% |
| 213 | 12.813 | 12.804 | 12.827 | VV | 1614 | 18196 | 0.21% | 0.014% |
| 214 | 12.861 | 12.827 | 12.894 | VV | 58310 | 715769 | 8.29% | 0.549% |
| 215 | 12.916 | 12.894 | 12.959 | VV | 4397 | 85505 | 0.99% | 0.066% |
| 216 | 12.977 | 12.959 | 12.986 | VV | 1442 | 17804 | 0.21% | 0.014% |
| 217 | 12.997 | 12.986 | 13.025 | VV | 1473 | 24793 | 0.29% | 0.019% |
| 218 | 13.058 | 13.025 | 13.067 | VV | 1528 | 27268 | 0.32% | 0.021% |
| 219 | 13.090 | 13.067 | 13.125 | VV | 10976 | 155452 | 1.80% | 0.119% |
| 220 | 13.134 | 13.125 | 13.140 | VV | 1634 | 13425 | 0.16% | 0.010% |
| 221 | 13.156 | 13.140 | 13.168 | VV | 1985 | 27707 | 0.32% | 0.021% |
| 222 | 13.183 | 13.168 | 13.201 | VV | 1953 | 23885 | 0.28% | 0.018% |
| 223 | 13.212 | 13.201 | 13.223 | VV | 899 | 7089 | 0.08% | 0.005% |
| 224 | 13.240 | 13.223 | 13.258 | VV | 1013 | 14382 | 0.17% | 0.011% |
| 225 | 13.285 | 13.258 | 13.296 | VV | 1415 | 23138 | 0.27% | 0.018% |
| 226 | 13.317 | 13.296 | 13.338 | VV | 3507 | 47292 | 0.55% | 0.036% |
| 227 | 13.350 | 13.338 | 13.372 | VV | 1471 | 20598 | 0.24% | 0.016% |
| 228 | 13.392 | 13.372 | 13.413 | VV | 2378 | 40062 | 0.46% | 0.031% |
| 229 | 13.444 | 13.413 | 13.475 | VV | 57697 | 711800 | 8.24% | 0.546% |
| 230 | 13.478 | 13.475 | 13.509 | VV | 1334 | 14097 | 0.16% | 0.011% |
| 231 | 13.513 | 13.509 | 13.524 | VV | 471 | 3086 | 0.04% | 0.002% |
| 232 | 13.570 | 13.524 | 13.601 | VV | 1292 | 29181 | 0.34% | 0.022% |
| 233 | 13.623 | 13.601 | 13.637 | PV | 1490 | 20400 | 0.24% | 0.016% |
| 234 | 13.643 | 13.637 | 13.675 | VV | 1128 | 16230 | 0.19% | 0.012% |
| 235 | 13.694 | 13.675 | 13.705 | VV | 1184 | 15857 | 0.18% | 0.012% |
| 236 | 13.711 | 13.705 | 13.714 | VV | 841 | 3573 | 0.04% | 0.003% |
| 237 | 13.720 | 13.714 | 13.728 | VV | 1127 | 6719 | 0.08% | 0.005% |
| 238 | 13.738 | 13.728 | 13.761 | VV | 1308 | 16324 | 0.19% | 0.013% |
| 239 | 13.774 | 13.761 | 13.786 | PV | 572 | 5946 | 0.07% | 0.005% |
| 240 | 13.793 | 13.786 | 13.798 | VV | 711 | 3458 | 0.04% | 0.003% |
| 241 | 13.854 | 13.798 | 13.897 | VV | 4090 | 105871 | 1.23% | 0.081% |
| 242 | 13.901 | 13.897 | 13.917 | VV | 1401 | 13526 | 0.16% | 0.010% |
| 243 | 13.930 | 13.917 | 13.967 | VV | 986 | 19852 | 0.23% | 0.015% |
| 244 | 14.034 | 13.967 | 14.049 | VV | 1338 | 35799 | 0.41% | 0.027% |
| 245 | 14.053 | 14.049 | 14.062 | VV | 753 | 4761 | 0.06% | 0.004% |
| 246 | 14.067 | 14.062 | 14.074 | VV | 677 | 3633 | 0.04% | 0.003% |

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|---|---|---|---|---|---|---|---|---|
| 247 | 14.093 | 14.074 | 14.108 | VV | 1828 | 26975 | 0.31% | 0.021% |
| 248 | 14.112 | 14.108 | 14.117 | VV | 1188 | 5718 | | |
| 249 | 14.122 | 14.117 | 14.127 | VV | 1111 | 6139 | | |
| 250 | 14.138 | 14.127 | 14.159 | VV | 1836 | 21727 | | |
| 251 | 14.166 | 14.159 | 14.173 | VV | 962 | 5377 | | |
| 252 | 14.205 | 14.173 | 14.232 | VV | 1512 | 30923 | | |
| 253 | 14.258 | 14.232 | 14.262 | VV | 1508 | 17582 | 0.20% | 0.013% |
| 254 | 14.267 | 14.262 | 14.283 | VV | 1433 | 10162 | 0.12% | 0.008% |
| 255 | 14.308 | 14.283 | 14.322 | VV | 1122 | 17547 | 0.20% | 0.013% |
| 256 | 14.333 | 14.322 | 14.339 | VV | 1004 | 7603 | 0.09% | 0.006% |
| 257 | 14.343 | 14.339 | 14.349 | VV | 814 | 3174 | 0.04% | 0.002% |
| 258 | 14.376 | 14.349 | 14.380 | PV | 782 | 8409 | 0.10% | 0.006% |
| 259 | 14.385 | 14.380 | 14.390 | VV | 1050 | 5095 | 0.06% | 0.004% |
| 260 | 14.395 | 14.390 | 14.408 | VV | 1430 | 11602 | 0.13% | 0.009% |
| 261 | 14.447 | 14.408 | 14.466 | VV | 389642 | 4746949 | 54.96% | 3.643% |
| 262 | 14.488 | 14.466 | 14.518 | VV | 416664 | 4883311 | 56.54% | 3.748% |
| 263 | 14.541 | 14.518 | 14.577 | VV | 54900 | 721222 | 8.35% | 0.553% |
| 264 | 14.580 | 14.577 | 14.592 | VV | 2287 | 17188 | 0.20% | 0.013% |
| 265 | 14.613 | 14.592 | 14.642 | VV | 3233 | 61240 | 0.71% | 0.047% |
| 266 | 14.647 | 14.642 | 14.669 | VV | 1857 | 16363 | 0.19% | 0.013% |
| 267 | 14.695 | 14.669 | 14.730 | VV | 1200 | 27388 | 0.32% | 0.021% |
| 268 | 14.753 | 14.730 | 14.758 | VV | 1205 | 14674 | 0.17% | 0.011% |
| 269 | 14.778 | 14.758 | 14.789 | VV | 1601 | 22004 | 0.25% | 0.017% |
| 270 | 14.795 | 14.789 | 14.802 | VV | 1210 | 7063 | 0.08% | 0.005% |
| 271 | 14.809 | 14.802 | 14.820 | VV | 1174 | 8062 | 0.09% | 0.006% |
| 272 | 14.843 | 14.820 | 14.853 | VV | 1362 | 20308 | 0.24% | 0.016% |
| 273 | 14.874 | 14.853 | 14.904 | VV | 2957 | 55302 | 0.64% | 0.042% |
| 274 | 14.921 | 14.904 | 14.950 | VV | 4782 | 85824 | 0.99% | 0.066% |
| 275 | 14.957 | 14.950 | 14.963 | VV | 1694 | 11765 | 0.14% | 0.009% |
| 276 | 14.984 | 14.963 | 14.999 | VV | 1714 | 27699 | 0.32% | 0.021% |
| 277 | 15.003 | 14.999 | 15.006 | VV | 1222 | 4452 | 0.05% | 0.003% |
| 278 | 15.012 | 15.006 | 15.024 | VV | 1398 | 12285 | 0.14% | 0.009% |
| 279 | 15.035 | 15.024 | 15.050 | VV | 1813 | 21935 | 0.25% | 0.017% |
| 280 | 15.071 | 15.050 | 15.087 | VV | 2484 | 31022 | 0.36% | 0.024% |
| 281 | 15.123 | 15.087 | 15.146 | VV | 1474 | 32587 | 0.38% | 0.025% |
| 282 | 15.155 | 15.146 | 15.163 | VV | 990 | 8504 | 0.10% | 0.007% |
| 283 | 15.187 | 15.163 | 15.196 | VV | 1301 | 19278 | 0.22% | 0.015% |
| 284 | 15.207 | 15.196 | 15.219 | VV | 1203 | 11427 | 0.13% | 0.009% |
| 285 | 15.239 | 15.219 | 15.255 | PV | 1627 | 20863 | 0.24% | 0.016% |
| 286 | 15.276 | 15.255 | 15.312 | VV | 1859 | 46056 | 0.53% | 0.035% |
| 287 | 15.360 | 15.312 | 15.377 | VV | 1946 | 50359 | 0.58% | 0.039% |
| 288 | 15.387 | 15.377 | 15.400 | VV | 1504 | 14488 | 0.17% | 0.011% |
| 289 | 15.410 | 15.400 | 15.434 | VV | 1328 | 12223 | 0.14% | 0.009% |
| 290 | 15.449 | 15.434 | 15.457 | VV | 1707 | 13340 | 0.15% | 0.010% |
| 291 | 15.474 | 15.457 | 15.491 | VV | 2570 | 33387 | 0.39% | 0.026% |
| 292 | 15.503 | 15.491 | 15.515 | VV | 1455 | 16076 | 0.19% | 0.012% |
| 293 | 15.557 | 15.515 | 15.595 | VV | 47757 | 646289 | 7.48% | 0.496% |
| 294 | 15.606 | 15.595 | 15.610 | VV | 2103 | 14037 | 0.16% | 0.011% |
| 295 | 15.614 | 15.610 | 15.621 | VV | 1767 | 9960 | 0.12% | 0.008% |
| 296 | 15.628 | 15.621 | 15.639 | VV | 2107 | 13546 | 0.16% | 0.010% |
| 297 | 15.654 | 15.639 | 15.670 | VV | 1496 | 13876 | 0.16% | 0.011% |
| 298 | 15.680 | 15.670 | 15.690 | PV | 663 | 4349 | 0.05% | 0.003% |
| 299 | 15.715 | 15.690 | 15.745 | VV | 1857 | 28686 | 0.33% | 0.022% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

rteres

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 300 | 15.768 | 15.745 | 15.786 | VV | 1354 | 14633 | 0.17% | 0.011% |
| 301 | 15.812 | 15.786 | 15.817 | VV | 1446 | 17938 | | |
| 302 | 15.823 | 15.817 | 15.845 | VV | 1162 | 12472 | | |
| 303 | 15.862 | 15.845 | 15.867 | VV | 715 | 7317 | | |
| 304 | 15.876 | 15.867 | 15.879 | VV | 309 | 1815 | | |
| 305 | 15.922 | 15.879 | 15.940 | PV | 2283 | 37833 | | |
| 306 | 15.952 | 15.940 | 15.959 | VV | 1256 | 8993 | 0.10% | 0.007% |
| 307 | 15.996 | 15.959 | 16.011 | VV | 330479 | 4367075 | 50.56% | 3.351% |
| 308 | 16.028 | 16.011 | 16.076 | VV | 387742 | 4476628 | 51.83% | 3.436% |
| 309 | 16.082 | 16.076 | 16.089 | VV | 2665 | 16712 | 0.19% | 0.013% |
| 310 | 16.106 | 16.089 | 16.117 | VV | 3749 | 46860 | 0.54% | 0.036% |
| 311 | 16.134 | 16.117 | 16.140 | VV | 3204 | 39883 | 0.46% | 0.031% |
| 312 | 16.145 | 16.140 | 16.152 | VV | 2593 | 16838 | 0.19% | 0.013% |
| 313 | 16.164 | 16.152 | 16.184 | VV | 3431 | 39052 | 0.45% | 0.030% |
| 314 | 16.193 | 16.184 | 16.203 | VV | 1648 | 10850 | 0.13% | 0.008% |
| 315 | 16.230 | 16.203 | 16.236 | VV | 1355 | 18079 | 0.21% | 0.014% |
| 316 | 16.261 | 16.236 | 16.267 | VV | 2006 | 27678 | 0.32% | 0.021% |
| 317 | 16.271 | 16.267 | 16.274 | VV | 2222 | 8219 | 0.10% | 0.006% |
| 318 | 16.279 | 16.274 | 16.283 | VV | 2349 | 11185 | 0.13% | 0.009% |
| 319 | 16.289 | 16.283 | 16.300 | VV | 2181 | 17437 | 0.20% | 0.013% |
| 320 | 16.318 | 16.300 | 16.331 | VV | 3439 | 39842 | 0.46% | 0.031% |
| 321 | 16.372 | 16.331 | 16.438 | VV | 331405 | 4123093 | 47.74% | 3.164% |
| 322 | 16.501 | 16.438 | 16.525 | VV | 44977 | 693389 | 8.03% | 0.532% |
| 323 | 16.543 | 16.525 | 16.569 | VV | 6327 | 95828 | 1.11% | 0.074% |
| 324 | 16.583 | 16.569 | 16.592 | VV | 1971 | 15299 | 0.18% | 0.012% |
| 325 | 16.605 | 16.592 | 16.610 | VV | 1440 | 12280 | 0.14% | 0.009% |
| 326 | 16.615 | 16.610 | 16.625 | VV | 2108 | 10402 | 0.12% | 0.008% |
| 327 | 16.642 | 16.625 | 16.649 | VV | 1453 | 12668 | 0.15% | 0.010% |
| 328 | 16.687 | 16.649 | 16.694 | VV | 2725 | 40504 | 0.47% | 0.031% |
| 329 | 16.710 | 16.694 | 16.727 | VV | 3200 | 40551 | 0.47% | 0.031% |
| 330 | 16.747 | 16.727 | 16.764 | VV | 3211 | 44347 | 0.51% | 0.034% |
| 331 | 16.785 | 16.764 | 16.807 | VV | 3374 | 61038 | 0.71% | 0.047% |
| 332 | 16.871 | 16.807 | 16.884 | VV | 3905 | 115620 | 1.34% | 0.089% |
| 333 | 16.889 | 16.884 | 16.897 | VV | 2546 | 17398 | 0.20% | 0.013% |
| 334 | 16.903 | 16.897 | 16.914 | VV | 2045 | 13571 | 0.16% | 0.010% |
| 335 | 16.922 | 16.914 | 16.927 | VV | 1111 | 4314 | 0.05% | 0.003% |
| 336 | 16.955 | 16.927 | 16.975 | VV | 4594 | 84373 | 0.98% | 0.065% |
| 337 | 16.982 | 16.975 | 16.989 | VV | 2924 | 19938 | 0.23% | 0.015% |
| 338 | 16.992 | 16.989 | 17.000 | VV | 2516 | 13045 | 0.15% | 0.010% |
| 339 | 17.027 | 17.000 | 17.034 | VV | 3570 | 44758 | 0.52% | 0.034% |
| 340 | 17.042 | 17.034 | 17.060 | VV | 3473 | 40379 | 0.47% | 0.031% |
| 341 | 17.098 | 17.060 | 17.119 | VV | 6779 | 135140 | 1.56% | 0.104% |
| 342 | 17.133 | 17.119 | 17.140 | PV | 3421 | 29769 | 0.34% | 0.023% |
| 343 | 17.146 | 17.140 | 17.170 | VV | 2917 | 37287 | 0.43% | 0.029% |
| 344 | 17.186 | 17.170 | 17.208 | VV | 4690 | 70680 | 0.82% | 0.054% |
| 345 | 17.233 | 17.208 | 17.242 | VV | 4497 | 69145 | 0.80% | 0.053% |
| 346 | 17.260 | 17.242 | 17.279 | VV | 4795 | 77631 | 0.90% | 0.060% |
| 347 | 17.293 | 17.279 | 17.307 | VV | 3715 | 45849 | 0.53% | 0.035% |
| 348 | 17.354 | 17.307 | 17.360 | VV | 6833 | 129151 | 1.50% | 0.099% |
| 349 | 17.387 | 17.360 | 17.428 | VV | 44645 | 657211 | 7.61% | 0.504% |
| 350 | 17.455 | 17.428 | 17.462 | VV | 2512 | 25977 | 0.30% | 0.020% |
| 351 | 17.480 | 17.462 | 17.492 | VV | 2557 | 33977 | 0.39% | 0.026% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MS

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | rteres | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 352 | 17.527 | 17.492 | 17.543 | VV | 8555 | 148042 | 1.71% | 0.114% | |
| 353 | 17.550 | 17.543 | 17.559 | VV | 5701 | 48882 | | | |
| 354 | 17.562 | 17.559 | 17.579 | VV | 4519 | 39515 | | | |
| 355 | 17.595 | 17.579 | 17.619 | VV | 4366 | 67837 | | | |
| 356 | 17.623 | 17.619 | 17.631 | VV | 2181 | 13813 | | | |
| 357 | 17.641 | 17.631 | 17.654 | VV | 2327 | 18179 | | | |
| 358 | 17.674 | 17.654 | 17.684 | PV | 3195 | 39458 | 0.46% | 0.030% | |
| 359 | 17.698 | 17.684 | 17.705 | VV | 4598 | 47610 | 0.55% | 0.037% | |
| 360 | 17.743 | 17.705 | 17.758 | VV | 319708 | 4077439 | 47.21% | 3.129% | |
| 361 | 17.779 | 17.758 | 17.839 | VV | 311662 | 4157621 | 48.13% | 3.191% | |
| 362 | 17.854 | 17.839 | 17.895 | VV | 4546 | 108081 | 1.25% | 0.083% | |
| 363 | 17.922 | 17.895 | 17.930 | VV | 8485 | 130544 | 1.51% | 0.100% | |
| 364 | 17.938 | 17.930 | 17.961 | VV | 9107 | 104183 | 1.21% | 0.080% | |
| 365 | 17.992 | 17.961 | 18.032 | VV | 286588 | 3704929 | 42.89% | 2.843% | |
| 366 | 18.037 | 18.032 | 18.068 | VV | 5493 | 55872 | 0.65% | 0.043% | |
| 367 | 18.080 | 18.068 | 18.092 | VV | 2928 | 22598 | 0.26% | 0.017% | |
| 368 | 18.107 | 18.092 | 18.122 | VV | 2760 | 21881 | 0.25% | 0.017% | |
| 369 | 18.139 | 18.122 | 18.151 | VV | 4498 | 47975 | 0.56% | 0.037% | |
| 370 | 18.171 | 18.151 | 18.178 | VV | 4322 | 47847 | 0.55% | 0.037% | |
| 371 | 18.214 | 18.178 | 18.250 | VV | 39402 | 593342 | 6.87% | 0.455% | |
| 372 | 18.264 | 18.250 | 18.270 | PV | 1470 | 8158 | 0.09% | 0.006% | |
| 373 | 18.275 | 18.270 | 18.295 | VV | 1577 | 10382 | 0.12% | 0.008% | |
| | | | Sum of corrected areas: | | | 130304196 | | | |

Aromatic EPH 121024.M Thu Dec 12 05:53:06 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | UST-1MS | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01MS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 23:09 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 4.91 | | 1 | 0.43 | 1.13 | mg/kg | FC067989.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 4.59 | | 1 | 0.27 | 0.76 | mg/kg | FC067989.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 11.8 | | 1 | 0.34 | 1.13 | mg/kg | FC067989.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.0 | | 1 | 0.91 | 1.51 | mg/kg | FC067989.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 53.0 | E | 1 | 2.04 | 2.27 | mg/kg | FC067989.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 4.91 | | 1 | 0.34 | 0.76 | mg/kg | FD048878.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 11.7 | | 1 | 0.39 | 1.13 | mg/kg | FD048878.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 15.3 | | 1 | 1.09 | 1.89 | mg/kg | FD048878.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 23.6 | | 1 | 2.27 | 3.02 | mg/kg | FD048878.D |
| Total AliphaticEPH | Total AliphaticEPH | 87.3 | | | 3.99 | 6.80 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 55.5 | | | 4.09 | 6.80 | mg/kg | |
| Total EPH | Total EPH | 143 | | | 8.08 | 13.6 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | UST-1MS | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01MS | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.03 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067989.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 4.91 | | 0.43 | 1.13 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 4.59 | | 0.27 | 0.76 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 11.8 | | 0.34 | 1.13 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 13.0 | | 0.91 | 1.51 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 53.0 | E | 2.04 | 2.27 | mg/kg |
| **SURROGATES** | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | 43.2 | | 40 - 140 | 86% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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

# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01MS | Acq On: | 11 Dec 2024 23:09 |
| Client Sample ID: | UST-1MS | Operator: | YP/AJ |
| Data file: | FC067989.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 16 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 10291816 | 65.014 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 9721064 | 60.652 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 23860443 | 156.603 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 23431689 | 171.807 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 74285310 | 701.039 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 141590322 | 1160 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.912 | 12.912 | 5514516 | 43.22 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 67305012 | 454.076 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067989.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:09
Operator : YP/AJ
Sample : P5194-01MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:34:13 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 12) S | 1-chlorooctadecane (S... | 12.912 | 5514516 | 43.219 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 86.44% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.252 | 2559720 | 16.475 ug/ml |
| 2) T | n-Decane (C10) | 4.313 | 3228413 | 20.365 ug/mlm |
| 4) T | n-Dodecane (C12) | 6.329 | 3860290 | 23.975 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.122 | 4268007 | 26.843 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.721 | 4428806 | 27.414 ug/ml |
| 8) T | n-Octadecane (C18) | 11.162 | 4455745 | 27.754 ug/ml |
| 10) T | n-Eicosane (C20) | 12.470 | 4441045 | 29.523 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.081 | 4222533 | 28.898 ug/ml |
| 13) T | n-Docosane (C22) | 13.666 | 4164051 | 29.090 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.768 | 4006850 | 28.837 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.788 | 3880990 | 29.021 ug/ml |
| 16) T | n-Octacosane (C28) | 16.737 | 3897223 | 30.045 ug/ml |
| 17) T | n-Tricontane (C30) | 17.623 | 3793893 | 29.287 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.455 | 3649399 | 29.458 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.237 | 3685031 | 33.762 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.976 | 3692736 | 39.032 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.696 | 4138886 | 45.753 ug/ml |
| 22) T | n-Tetracontane (C40) | 21.577 | 4362961 | 49.501 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067989.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:09
Operator : YP/AJ
Sample : P5194-01MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

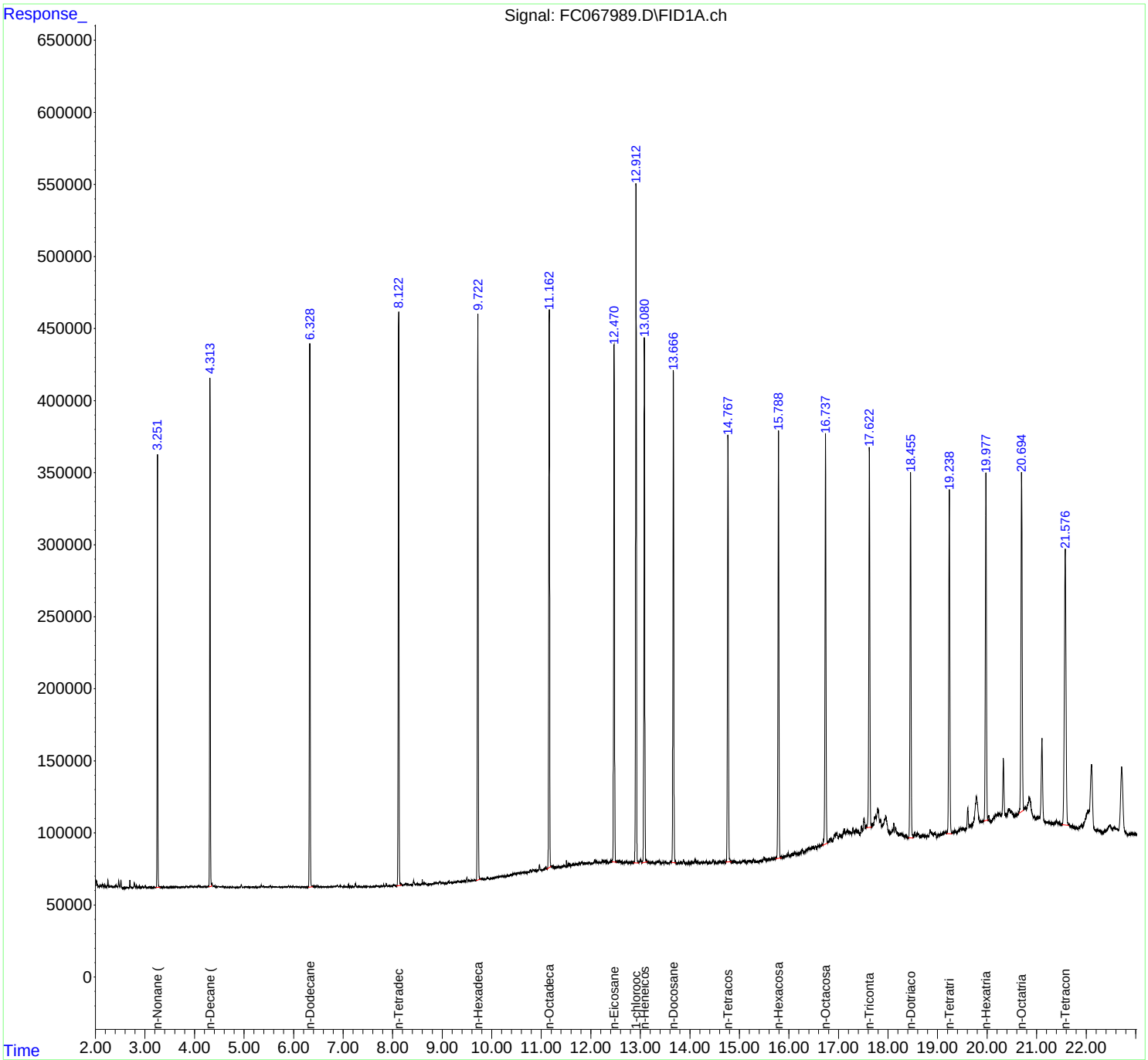
**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:34:13 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC12112
Data File : FC067989.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:09
Sample : P5194-01MS
Misc :
ALS Vial : 16 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.252 | 3.204 | 3.324 | BV | 298997 | 2563482 | 39.68% | 1.738% |
| 2 | 3.347 | 3.324 | 3.360 | VV | 164 | 2608 | 0.04% | 0.002% |
| 3 | 3.373 | 3.360 | 3.415 | VV | 316 | 4368 | 0.07% | 0.003% |
| 4 | 3.429 | 3.415 | 3.476 | VV | 173 | 3889 | 0.06% | 0.003% |
| 5 | 3.489 | 3.476 | 3.498 | VV | 139 | 1406 | 0.02% | 0.001% |
| 6 | 3.526 | 3.498 | 3.544 | VV | 303 | 5280 | 0.08% | 0.004% |
| 7 | 3.557 | 3.544 | 3.569 | VV | 350 | 3817 | 0.06% | 0.003% |
| 8 | 3.573 | 3.569 | 3.601 | VV | 288 | 2456 | 0.04% | 0.002% |
| 9 | 3.631 | 3.601 | 3.681 | VV | 308 | 8817 | 0.14% | 0.006% |
| 10 | 3.690 | 3.681 | 3.704 | VV | 239 | 2032 | 0.03% | 0.001% |
| 11 | 3.742 | 3.704 | 3.808 | VV | 614 | 16885 | 0.26% | 0.011% |
| 12 | 3.832 | 3.808 | 3.884 | VV | 662 | 20299 | 0.31% | 0.014% |
| 13 | 3.916 | 3.884 | 3.930 | VV | 829 | 14769 | 0.23% | 0.010% |
| 14 | 3.944 | 3.930 | 3.991 | VV | 936 | 21410 | 0.33% | 0.015% |
| 15 | 4.008 | 3.991 | 4.028 | VV | 568 | 10968 | 0.17% | 0.007% |
| 16 | 4.079 | 4.028 | 4.104 | VV | 1238 | 31287 | 0.48% | 0.021% |
| 17 | 4.115 | 4.104 | 4.156 | VV | 676 | 18229 | 0.28% | 0.012% |
| 18 | 4.177 | 4.156 | 4.208 | VV | 617 | 16719 | 0.26% | 0.011% |
| 19 | 4.241 | 4.208 | 4.283 | VV | 631 | 25801 | 0.40% | 0.017% |
| 20 | 4.313 | 4.283 | 4.342 | VV | 352679 | 3251808 | 50.33% | 2.205% |
| 21 | 4.353 | 4.342 | 4.397 | VV | 2949 | 50370 | 0.78% | 0.034% |
| 22 | 4.411 | 4.397 | 4.440 | VV | 1156 | 18487 | 0.29% | 0.013% |
| 23 | 4.481 | 4.440 | 4.523 | VV | 871 | 25034 | 0.39% | 0.017% |
| 24 | 4.536 | 4.523 | 4.550 | VV | 668 | 7929 | 0.12% | 0.005% |
| 25 | 4.567 | 4.550 | 4.585 | VV | 1124 | 12842 | 0.20% | 0.009% |
| 26 | 4.594 | 4.585 | 4.616 | VV | 318 | 4903 | 0.08% | 0.003% |
| 27 | 4.641 | 4.616 | 4.668 | VV | 258 | 6032 | 0.09% | 0.004% |
| 28 | 4.688 | 4.668 | 4.713 | VV | 267 | 4685 | 0.07% | 0.003% |
| 29 | 4.724 | 4.713 | 4.748 | VV | 170 | 2547 | 0.04% | 0.002% |
| 30 | 4.759 | 4.748 | 4.821 | VV | 333 | 5856 | 0.09% | 0.004% |
| 31 | 4.833 | 4.821 | 4.851 | PV | 117 | 1523 | 0.02% | 0.001% |
| 32 | 4.866 | 4.851 | 4.903 | VV | 223 | 3408 | 0.05% | 0.002% |
| 33 | 4.945 | 4.903 | 4.984 | VV | 2044 | 27319 | 0.42% | 0.019% |
| 34 | 5.001 | 4.984 | 5.015 | VV | 453 | 4520 | 0.07% | 0.003% |
| 35 | 5.032 | 5.015 | 5.044 | VV | 425 | 5407 | 0.08% | 0.004% |
| 36 | 5.055 | 5.044 | 5.087 | VV | 371 | 6824 | 0.11% | 0.005% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | rteres | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 5.102 | 5.087 | 5.114 | VV | 225 | 2858 | 0.04% | 0.002% |
| 38 | 5.117 | 5.114 | 5.148 | VV | 208 | 3444 | 0 | |
| 39 | 5.173 | 5.148 | 5.194 | VV | 351 | 6283 | 0 | |
| 40 | 5.205 | 5.194 | 5.211 | VV | 208 | 1458 | 0 | |
| 41 | 5.231 | 5.211 | 5.272 | VV | 283 | 6102 | 0 | |
| 42 | 5.303 | 5.272 | 5.324 | VV | 225 | 4504 | 0 | |
| 43 | 5.347 | 5.324 | 5.366 | VV | 1504 | 16816 | 0.26% | 0.011% |
| 44 | 5.387 | 5.366 | 5.412 | VV | 779 | 12422 | 0.19% | 0.008% |
| 45 | 5.446 | 5.412 | 5.470 | VV | 364 | 8566 | 0.13% | 0.006% |
| 46 | 5.485 | 5.470 | 5.498 | VV | 270 | 3633 | 0.06% | 0.002% |
| 47 | 5.530 | 5.498 | 5.618 | VV | 807 | 31198 | 0.48% | 0.021% |
| 48 | 5.630 | 5.618 | 5.667 | VV | 429 | 8818 | 0.14% | 0.006% |
| 49 | 5.678 | 5.667 | 5.741 | VV | 247 | 8508 | 0.13% | 0.006% |
| 50 | 5.751 | 5.741 | 5.777 | VV | 245 | 3393 | 0.05% | 0.002% |
| 51 | 5.855 | 5.777 | 5.871 | VV | 283 | 11649 | 0.18% | 0.008% |
| 52 | 5.894 | 5.871 | 5.931 | VV | 892 | 17538 | 0.27% | 0.012% |
| 53 | 5.944 | 5.931 | 5.961 | VV | 561 | 6880 | 0.11% | 0.005% |
| 54 | 5.987 | 5.961 | 6.034 | VV | 802 | 17495 | 0.27% | 0.012% |
| 55 | 6.049 | 6.034 | 6.091 | VV | 717 | 11833 | 0.18% | 0.008% |
| 56 | 6.102 | 6.091 | 6.108 | VV | 212 | 1542 | 0.02% | 0.001% |
| 57 | 6.119 | 6.108 | 6.154 | VV | 230 | 3250 | 0.05% | 0.002% |
| 58 | 6.172 | 6.154 | 6.198 | PV | 199 | 2665 | 0.04% | 0.002% |
| 59 | 6.217 | 6.198 | 6.244 | VV | 157 | 3098 | 0.05% | 0.002% |
| 60 | 6.252 | 6.244 | 6.293 | VV | 188 | 2083 | 0.03% | 0.001% |
| 61 | 6.329 | 6.293 | 6.398 | VV | 379613 | 3873880 | 59.96% | 2.627% |
| 62 | 6.410 | 6.398 | 6.427 | VV | 604 | 7884 | 0.12% | 0.005% |
| 63 | 6.445 | 6.427 | 6.461 | VV | 487 | 7488 | 0.12% | 0.005% |
| 64 | 6.477 | 6.461 | 6.498 | VV | 926 | 11680 | 0.18% | 0.008% |
| 65 | 6.511 | 6.498 | 6.531 | VV | 333 | 4250 | 0.07% | 0.003% |
| 66 | 6.549 | 6.531 | 6.566 | VV | 379 | 4627 | 0.07% | 0.003% |
| 67 | 6.581 | 6.566 | 6.594 | VV | 258 | 3364 | 0.05% | 0.002% |
| 68 | 6.604 | 6.594 | 6.621 | VV | 231 | 2665 | 0.04% | 0.002% |
| 69 | 6.647 | 6.621 | 6.673 | VV | 239 | 5067 | 0.08% | 0.003% |
| 70 | 6.687 | 6.673 | 6.706 | VV | 195 | 2817 | 0.04% | 0.002% |
| 71 | 6.723 | 6.706 | 6.748 | VV | 157 | 3321 | 0.05% | 0.002% |
| 72 | 6.769 | 6.748 | 6.797 | VV | 440 | 7441 | 0.12% | 0.005% |
| 73 | 6.822 | 6.797 | 6.834 | VV | 712 | 10064 | 0.16% | 0.007% |
| 74 | 6.878 | 6.834 | 6.912 | VV | 986 | 28363 | 0.44% | 0.019% |
| 75 | 6.948 | 6.912 | 7.011 | VV | 929 | 24443 | 0.38% | 0.017% |
| 76 | 7.027 | 7.011 | 7.068 | VV | 374 | 7018 | 0.11% | 0.005% |
| 77 | 7.110 | 7.068 | 7.188 | VV | 1410 | 23425 | 0.36% | 0.016% |
| 78 | 7.192 | 7.188 | 7.200 | VV | 227 | 1101 | 0.02% | 0.001% |
| 79 | 7.219 | 7.200 | 7.228 | VV | 302 | 3840 | 0.06% | 0.003% |
| 80 | 7.251 | 7.228 | 7.297 | VV | 2397 | 29775 | 0.46% | 0.020% |
| 81 | 7.314 | 7.297 | 7.328 | VV | 328 | 3996 | 0.06% | 0.003% |
| 82 | 7.341 | 7.328 | 7.391 | VV | 331 | 4205 | 0.07% | 0.003% |
| 83 | 7.418 | 7.391 | 7.468 | VV | 168 | 3558 | 0.06% | 0.002% |
| 84 | 7.511 | 7.468 | 7.538 | VV | 549 | 7425 | 0.11% | 0.005% |
| 85 | 7.608 | 7.538 | 7.624 | PV | 227 | 6043 | 0.09% | 0.004% |
| 86 | 7.674 | 7.624 | 7.696 | VV | 711 | 15078 | 0.23% | 0.010% |
| 87 | 7.704 | 7.696 | 7.748 | VV | 275 | 5346 | 0.08% | 0.004% |
| 88 | 7.774 | 7.748 | 7.786 | PV | 205 | 2979 | 0.05% | 0.002% |
| 89 | 7.816 | 7.786 | 7.839 | VV | 1163 | 13791 | 0.21% | 0.009% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

rteres

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 90 | 7.872 | 7.839 | 7.914 | VV | 2028 | 25173 | 0.39% | 0.017% |
| 91 | 7.947 | 7.914 | 7.957 | VV | 165 | 2348 | | |
| 92 | 8.025 | 7.957 | 8.077 | VV | 1071 | 25872 | | |
| 93 | 8.122 | 8.077 | 8.199 | PV | 396759 | 4291467 | 66 | |
| 94 | 8.274 | 8.199 | 8.293 | VV | 1139 | 45162 | | |
| 95 | 8.310 | 8.293 | 8.335 | VV | 1315 | 16768 | | |
| 96 | 8.357 | 8.335 | 8.366 | VV | 344 | 4975 | 0.08% | 0.003% |
| 97 | 8.384 | 8.366 | 8.402 | VV | 439 | 7007 | 0.11% | 0.005% |
| 98 | 8.424 | 8.402 | 8.458 | VV | 3404 | 48993 | 0.76% | 0.033% |
| 99 | 8.483 | 8.458 | 8.498 | VV | 738 | 16528 | 0.26% | 0.011% |
| 100 | 8.510 | 8.498 | 8.531 | VV | 898 | 12886 | 0.20% | 0.009% |
| 101 | 8.542 | 8.531 | 8.557 | VV | 417 | 4134 | 0.06% | 0.003% |
| 102 | 8.595 | 8.557 | 8.698 | PV | 1501 | 54533 | 0.84% | 0.037% |
| 103 | 8.708 | 8.698 | 8.721 | VV | 193 | 2093 | 0.03% | 0.001% |
| 104 | 8.738 | 8.721 | 8.755 | VV | 380 | 5462 | 0.08% | 0.004% |
| 105 | 8.768 | 8.755 | 8.784 | VV | 392 | 3933 | 0.06% | 0.003% |
| 106 | 8.810 | 8.784 | 8.824 | PV | 588 | 8006 | 0.12% | 0.005% |
| 107 | 8.842 | 8.824 | 8.855 | VV | 955 | 12673 | 0.20% | 0.009% |
| 108 | 8.872 | 8.855 | 8.891 | VV | 1169 | 19179 | 0.30% | 0.013% |
| 109 | 8.905 | 8.891 | 8.928 | VV | 788 | 15028 | 0.23% | 0.010% |
| 110 | 8.956 | 8.928 | 8.981 | VV | 1557 | 33661 | 0.52% | 0.023% |
| 111 | 9.005 | 8.981 | 9.014 | VV | 622 | 10468 | 0.16% | 0.007% |
| 112 | 9.019 | 9.014 | 9.051 | VV | 535 | 7841 | 0.12% | 0.005% |
| 113 | 9.078 | 9.051 | 9.094 | VV | 424 | 6339 | 0.10% | 0.004% |
| 114 | 9.130 | 9.094 | 9.155 | PV | 1297 | 25823 | 0.40% | 0.018% |
| 115 | 9.172 | 9.155 | 9.212 | VV | 449 | 12135 | 0.19% | 0.008% |
| 116 | 9.242 | 9.212 | 9.257 | VV | 849 | 12927 | 0.20% | 0.009% |
| 117 | 9.274 | 9.257 | 9.289 | VV | 627 | 10263 | 0.16% | 0.007% |
| 118 | 9.317 | 9.289 | 9.344 | VV | 1367 | 28253 | 0.44% | 0.019% |
| 119 | 9.361 | 9.344 | 9.383 | VV | 870 | 12553 | 0.19% | 0.009% |
| 120 | 9.406 | 9.383 | 9.424 | VV | 907 | 15962 | 0.25% | 0.011% |
| 121 | 9.443 | 9.424 | 9.481 | VV | 1127 | 30708 | 0.48% | 0.021% |
| 122 | 9.500 | 9.481 | 9.569 | VV | 3097 | 64563 | 1.00% | 0.044% |
| 123 | 9.593 | 9.569 | 9.611 | VV | 1112 | 23321 | 0.36% | 0.016% |
| 124 | 9.617 | 9.611 | 9.627 | VV | 825 | 7616 | 0.12% | 0.005% |
| 125 | 9.653 | 9.627 | 9.671 | VV | 1300 | 26307 | 0.41% | 0.018% |
| 126 | 9.721 | 9.671 | 9.776 | VV | 390236 | 4495007 | 69.57% | 3.048% |
| 127 | 9.788 | 9.776 | 9.810 | VV | 1722 | 31927 | 0.49% | 0.022% |
| 128 | 9.824 | 9.810 | 9.854 | VV | 1473 | 33875 | 0.52% | 0.023% |
| 129 | 9.915 | 9.854 | 9.957 | VV | 2062 | 88866 | 1.38% | 0.060% |
| 130 | 9.978 | 9.957 | 10.010 | VV | 1692 | 45353 | 0.70% | 0.031% |
| 131 | 10.111 | 10.010 | 10.128 | VV | 2407 | 127730 | 1.98% | 0.087% |
| 132 | 10.145 | 10.128 | 10.164 | VV | 2579 | 47355 | 0.73% | 0.032% |
| 133 | 10.191 | 10.164 | 10.208 | VV | 2752 | 63212 | 0.98% | 0.043% |
| 134 | 10.223 | 10.208 | 10.238 | VV | 2558 | 41239 | 0.64% | 0.028% |
| 135 | 10.319 | 10.238 | 10.332 | VV | 2926 | 140620 | 2.18% | 0.095% |
| 136 | 10.403 | 10.332 | 10.426 | VV | 3326 | 167398 | 2.59% | 0.114% |
| 137 | 10.454 | 10.426 | 10.493 | VV | 3750 | 138296 | 2.14% | 0.094% |
| 138 | 10.534 | 10.493 | 10.554 | VV | 4086 | 136038 | 2.11% | 0.092% |
| 139 | 10.582 | 10.554 | 10.601 | VV | 4279 | 109457 | 1.69% | 0.074% |
| 140 | 10.678 | 10.601 | 10.708 | VV | 4205 | 253476 | 3.92% | 0.172% |
| 141 | 10.780 | 10.708 | 10.808 | VV | 5646 | 263372 | 4.08% | 0.179% |

**Instrument :**
FID_C
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UST-1MS

**Manual IntegrationsAPPROVED**

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Supervised By :Ankita Jodhani 12/12/2024

rteres

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|---|---|---|---|---|---|---|---|---|
| 142 | 10.833 | 10.808 | 10.897 | VV | 5694 | 265789 | 4.11% | 0.180% |
| 143 | 10.964 | 10.897 | 11.003 | VV | 8204 | 343042 | 5 | |
| 144 | 11.091 | 11.003 | 11.114 | VV | 6374 | 358828 | 5 | |
| 145 | 11.162 | 11.114 | 11.204 | VV | 393507 | 4794588 | 74 | |
| 146 | 11.219 | 11.204 | 11.314 | VV | 7315 | 421141 | 6 | |
| 147 | 11.354 | 11.314 | 11.384 | VV | 6620 | 261982 | 4 | |
| 148 | 11.461 | 11.384 | 11.501 | VV | 6802 | 445695 | 6.90% | 0.302% |
| 149 | 11.553 | 11.501 | 11.586 | VV | 7545 | 352016 | 5.45% | 0.239% |
| 150 | 11.641 | 11.586 | 11.661 | VV | 7562 | 316331 | 4.90% | 0.215% |
| 151 | 11.681 | 11.661 | 11.741 | VV | 7739 | 349640 | 5.41% | 0.237% |
| 152 | 11.767 | 11.741 | 11.791 | VV | 8598 | 230386 | 3.57% | 0.156% |
| 153 | 11.822 | 11.791 | 11.862 | VV | 8591 | 334456 | 5.18% | 0.227% |
| 154 | 11.888 | 11.862 | 11.942 | VV | 7948 | 357392 | 5.53% | 0.242% |
| 155 | 11.969 | 11.942 | 12.020 | VV | 7951 | 347385 | 5.38% | 0.236% |
| 156 | 12.076 | 12.020 | 12.158 | VV | 9361 | 643379 | 9.96% | 0.436% |
| 157 | 12.176 | 12.158 | 12.198 | VV | 7989 | 182407 | 2.82% | 0.124% |
| 158 | 12.240 | 12.198 | 12.271 | VV | 8912 | 349262 | 5.41% | 0.237% |
| 159 | 12.292 | 12.271 | 12.364 | VV | 8667 | 424741 | 6.57% | 0.288% |
| 160 | 12.407 | 12.364 | 12.425 | VV | 7967 | 268230 | 4.15% | 0.182% |
| 161 | 12.469 | 12.425 | 12.528 | VV | 366178 | 4879124 | 75.52% | 3.309% |
| 162 | 12.576 | 12.528 | 12.604 | VV | 7573 | 325780 | 5.04% | 0.221% |
| 163 | 12.620 | 12.604 | 12.651 | VV | 7132 | 186227 | 2.88% | 0.126% |
| 164 | 12.721 | 12.651 | 12.764 | VV | 7022 | 427663 | 6.62% | 0.290% |
| 165 | 12.784 | 12.764 | 12.808 | VV | 6341 | 154133 | 2.39% | 0.105% |
| 166 | 12.835 | 12.808 | 12.858 | VV | 6667 | 181331 | 2.81% | 0.123% |
| 167 | 12.912 | 12.858 | 12.964 | VV | 473391 | 5872555 | 90.89% | 3.982% |
| 168 | 13.005 | 12.964 | 13.032 | VV | 7397 | 252778 | 3.91% | 0.171% |
| 169 | 13.080 | 13.032 | 13.194 | VV | 369347 | 4750430 | 73.52% | 3.221% |
| 170 | 13.238 | 13.194 | 13.277 | VV | 5256 | 247623 | 3.83% | 0.168% |
| 171 | 13.339 | 13.277 | 13.361 | VV | 5424 | 241711 | 3.74% | 0.164% |
| 172 | 13.380 | 13.361 | 13.428 | VV | 6043 | 191433 | 2.96% | 0.130% |
| 173 | 13.460 | 13.428 | 13.480 | VV | 4997 | 135046 | 2.09% | 0.092% |
| 174 | 13.503 | 13.480 | 13.588 | VV | 5270 | 267451 | 4.14% | 0.181% |
| 175 | 13.609 | 13.588 | 13.628 | VV | 4768 | 104782 | 1.62% | 0.071% |
| 176 | 13.666 | 13.628 | 13.747 | VV | 336769 | 4433242 | 68.62% | 3.006% |
| 177 | 13.769 | 13.747 | 13.800 | VV | 3604 | 110421 | 1.71% | 0.075% |
| 178 | 13.824 | 13.800 | 13.845 | VV | 3867 | 92701 | 1.43% | 0.063% |
| 179 | 13.870 | 13.845 | 13.901 | VV | 5388 | 124605 | 1.93% | 0.084% |
| 180 | 13.924 | 13.901 | 13.951 | VV | 3118 | 82787 | 1.28% | 0.056% |
| 181 | 13.969 | 13.951 | 13.994 | VV | 3140 | 73362 | 1.14% | 0.050% |
| 182 | 14.108 | 13.994 | 14.138 | VV | 4661 | 282475 | 4.37% | 0.192% |
| 183 | 14.159 | 14.138 | 14.201 | VV | 3499 | 102595 | 1.59% | 0.070% |
| 184 | 14.225 | 14.201 | 14.258 | VV | 3061 | 81801 | 1.27% | 0.055% |
| 185 | 14.334 | 14.258 | 14.374 | VV | 3530 | 171923 | 2.66% | 0.117% |
| 186 | 14.398 | 14.374 | 14.424 | VV | 2460 | 62571 | 0.97% | 0.042% |
| 187 | 14.469 | 14.424 | 14.553 | VV | 3871 | 174994 | 2.71% | 0.119% |
| 188 | 14.615 | 14.553 | 14.664 | VV | 2717 | 138426 | 2.14% | 0.094% |
| 189 | 14.688 | 14.664 | 14.708 | VV | 2701 | 58675 | 0.91% | 0.040% |
| 190 | 14.768 | 14.708 | 14.851 | VV | 298520 | 4165101 | 64.46% | 2.825% |
| 191 | 14.889 | 14.851 | 14.991 | VV | 2331 | 120965 | 1.87% | 0.082% |
| 192 | 15.003 | 14.991 | 15.031 | VV | 1318 | 24704 | 0.38% | 0.017% |
| 193 | 15.080 | 15.031 | 15.158 | VV | 2052 | 94605 | 1.46% | 0.064% |
| 194 | 15.184 | 15.158 | 15.201 | VV | 1862 | 30810 | 0.48% | 0.021% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 195 | 15.223 | 15.201 | 15.249 | VV | 1684 | 35459 | 0.55% | 0.024% |
| 196 | 15.283 | 15.249 | 15.338 | VV | 2690 | 60015 | | |
| 197 | 15.410 | 15.338 | 15.441 | VV | 1096 | 48380 | | |
| 198 | 15.498 | 15.441 | 15.556 | VV | 3567 | 115533 | | |
| 199 | 15.599 | 15.556 | 15.628 | VV | 2577 | 73737 | | |
| 200 | 15.660 | 15.628 | 15.684 | VV | 2451 | 68868 | | |
| 201 | 15.788 | 15.684 | 15.861 | VV | 296772 | 4098399 | 63.43% | 2.779% |
| 202 | 15.923 | 15.861 | 15.941 | VV | 3096 | 137867 | 2.13% | 0.093% |
| 203 | 15.983 | 15.941 | 16.034 | VV | 5396 | 200294 | 3.10% | 0.136% |
| 204 | 16.068 | 16.034 | 16.093 | VV | 4406 | 140067 | 2.17% | 0.095% |
| 205 | 16.122 | 16.093 | 16.151 | VV | 5331 | 156248 | 2.42% | 0.106% |
| 206 | 16.164 | 16.151 | 16.192 | VV | 4478 | 103715 | 1.61% | 0.070% |
| 207 | 16.225 | 16.192 | 16.244 | VV | 4958 | 144495 | 2.24% | 0.098% |
| 208 | 16.267 | 16.244 | 16.298 | VV | 7701 | 185816 | 2.88% | 0.126% |
| 209 | 16.419 | 16.298 | 16.448 | VV | 7783 | 583855 | 9.04% | 0.396% |
| 210 | 16.480 | 16.448 | 16.514 | VV | 8703 | 309828 | 4.80% | 0.210% |
| 211 | 16.534 | 16.514 | 16.558 | VV | 8751 | 203291 | 3.15% | 0.138% |
| 212 | 16.586 | 16.558 | 16.620 | VV | 9323 | 312997 | 4.84% | 0.212% |
| 213 | 16.737 | 16.620 | 16.786 | VV | 294026 | 4838016 | 74.88% | 3.281% |
| 214 | 16.840 | 16.786 | 16.881 | VV | 13259 | 685688 | 10.61% | 0.465% |
| 215 | 16.967 | 16.881 | 16.998 | VV | 16669 | 1027779 | 15.91% | 0.697% |
| 216 | 17.028 | 16.998 | 17.071 | VV | 15718 | 642249 | 9.94% | 0.436% |
| 217 | 17.121 | 17.071 | 17.148 | VV | 19370 | 759745 | 11.76% | 0.515% |
| 218 | 17.184 | 17.148 | 17.265 | VV | 17888 | 1187926 | 18.39% | 0.806% |
| 219 | 17.293 | 17.265 | 17.331 | VV | 19179 | 684909 | 10.60% | 0.464% |
| 220 | 17.347 | 17.331 | 17.431 | VV | 18462 | 1002310 | 15.51% | 0.680% |
| 221 | 17.464 | 17.431 | 17.484 | VV | 20442 | 556418 | 8.61% | 0.377% |
| 222 | 17.515 | 17.484 | 17.548 | VV | 25921 | 825124 | 12.77% | 0.560% |
| 223 | 17.623 | 17.548 | 17.666 | VV | 281610 | 5176944 | 80.13% | 3.511% |
| 224 | 17.794 | 17.666 | 17.877 | VV | 31874 | 3094862 | 47.90% | 2.099% |
| 225 | 17.955 | 17.877 | 18.024 | VV | 26620 | 1834528 | 28.39% | 1.244% |
| 226 | 18.040 | 18.024 | 18.058 | VV | 15457 | 294023 | 4.55% | 0.199% |
| 227 | 18.119 | 18.058 | 18.138 | VV | 19761 | 792875 | 12.27% | 0.538% |
| 228 | 18.155 | 18.138 | 18.244 | VV | 18161 | 911422 | 14.11% | 0.618% |
| 229 | 18.262 | 18.244 | 18.281 | VV | 13325 | 285820 | 4.42% | 0.194% |
| 230 | 18.297 | 18.281 | 18.327 | VV | 12739 | 334642 | 5.18% | 0.227% |
| 231 | 18.361 | 18.327 | 18.391 | VV | 12051 | 427936 | 6.62% | 0.290% |
| 232 | 18.455 | 18.391 | 18.518 | VV | 259812 | 4413750 | 68.31% | 2.993% |
| 233 | 18.541 | 18.518 | 18.564 | VV | 13765 | 334572 | 5.18% | 0.227% |
| 234 | 18.592 | 18.564 | 18.664 | VV | 13212 | 688115 | 10.65% | 0.467% |
| 235 | 18.712 | 18.664 | 18.781 | VV | 11096 | 740240 | 11.46% | 0.502% |
| 236 | 18.800 | 18.781 | 18.824 | VV | 10960 | 272079 | 4.21% | 0.185% |
| 237 | 18.849 | 18.824 | 18.912 | VV | 14315 | 644033 | 9.97% | 0.437% |
| 238 | 18.948 | 18.912 | 18.988 | VV | 12079 | 511045 | 7.91% | 0.347% |
| 239 | 19.022 | 18.988 | 19.044 | VV | 11481 | 362088 | 5.60% | 0.246% |
| 240 | 19.159 | 19.044 | 19.174 | VV | 12567 | 898969 | 13.91% | 0.610% |
| 241 | 19.237 | 19.174 | 19.291 | VV | 247692 | 4471215 | 69.20% | 3.032% |
| 242 | 19.349 | 19.291 | 19.395 | VV | 13417 | 738393 | 11.43% | 0.501% |
| 243 | 19.499 | 19.395 | 19.554 | VV | 14323 | 1288953 | 19.95% | 0.874% |
| 244 | 19.610 | 19.554 | 19.686 | VV | 28228 | 1355243 | 20.98% | 0.919% |
| 245 | 19.785 | 19.686 | 19.858 | VV | 34514 | 2424674 | 37.53% | 1.644% |
| 246 | 19.872 | 19.858 | 19.914 | VV | 18357 | 615428 | 9.53% | 0.417% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MS

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 247 | 19.976 | 19.914 | 20.018 | VV | 258886 | 4842899 | 74.96% | 3.284% |
| 248 | 20.032 | 20.018 | 20.087 | VV | 21922 | 787768 | 12 | |
| 249 | 20.247 | 20.087 | 20.274 | VV | 22703 | 2366432 | 36 | |
| 250 | 20.329 | 20.274 | 20.388 | VV | 60886 | 2063708 | 31 | |
| 251 | 20.446 | 20.388 | 20.568 | VV | 25397 | 2459003 | 38 | |
| 252 | 20.697 | 20.568 | 20.741 | VV | 248599 | 6461031 | 100 | |
| 253 | 20.772 | 20.741 | 20.788 | VV | 26122 | 704956 | 10.91% | 0.478% |
| 254 | 20.855 | 20.788 | 20.934 | VV | 31630 | 2309463 | 35.74% | 1.566% |
| 255 | 20.951 | 20.934 | 20.980 | VV | 19006 | 503506 | 7.79% | 0.341% |
| 256 | 21.005 | 20.980 | 21.057 | VV | 17872 | 823631 | 12.75% | 0.559% |
| 257 | 21.108 | 21.057 | 21.204 | VV | 73055 | 2465804 | 38.16% | 1.672% |
| 258 | 21.213 | 21.204 | 21.351 | VV | 15069 | 1209974 | 18.73% | 0.821% |
| 259 | 21.401 | 21.351 | 21.501 | VV | 15372 | 1206236 | 18.67% | 0.818% |
| 260 | 21.577 | 21.501 | 21.701 | VBA | 200173 | 5796902 | 89.72% | 3.931% |

Sum of corrected areas: 147462878

Aliphatic EPH 121024.M Thu Dec 12 04:04:08 2024

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

# Report of Analysis

| | | | | | |
|---|---|---|---|---|---|
| Client: | JPCL Engineering | | Date Collected: | | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | | Date Received: | | |
| Client Sample ID: | UST-1MSD | | SDG No.: | P5194 | |
| Lab Sample ID: | P5194-01MSD | | Matrix: | Solid | |
| Analytical Method: | NJEPH | | % Solid: | 88.1 | |
| Sample Wt/Vol: | 30.01 Units: | g | Final Vol: | 2000 | uL |
| Soil Aliquot Vol: | | uL | Test: | EPH | |
| Prep Method : | | | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FD048879.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| Aromatic C10-C12 | Aromatic C10-C12 | 5.08 | | 0.34 | 0.76 | mg/kg |
| Aromatic C12-C16 | Aromatic C12-C16 | 11.8 | | 0.39 | 1.13 | mg/kg |
| Aromatic C16-C21 | Aromatic C16-C21 | 15.3 | | 1.09 | 1.89 | mg/kg |
| Aromatic C21-C36 | Aromatic C21-C36 | 23.8 | | 2.27 | 3.03 | mg/kg |
| **SURROGATES** | | | | | | |
| 580-13-2 | 2-Bromonaphthalene (SURR) | 51.3 | | 40 - 140 | 103% | SPK: 50 |
| 321-60-8 | 2-Flurobiphenyl (SURR) | 55.1 | | 40 - 140 | 110% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | 23.4 | | 40 - 140 | 47% | SPK: 50 |

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

# Quantitation Report For Aromatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01MSD | Acq On: | 11 Dec 2024 23:45 |
| Client Sample ID: | UST-1MSD | Operator: | YP/AJ |
| Data file: | FD048879.D | Misc: | |
| Instrument: | FID_D | ALS Vial: | 67 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aromatic C10-C12 | 4.086 | 5.804 | 12778757 | 67.183 | 200 | ug/ml |
| Aromatic C12-C16 | 5.805 | 8.409 | 28963856 | 155.817 | 300 | ug/ml |
| Aromatic C16-C21 | 8.410 | 12.673 | 34320267 | 202.456 | 500 | ug/ml |
| Aromatic C21-C36 | 12.674 | 18.083 | 44611334 | 315.077 | 800 | ug/ml |
| Aromatic EPH | 4.086 | 18.083 | 120674214 | 740.533 | | ug/ml |
| ortho-Terphenyl (SURR) | 11.248 | 11.248 | 4155085 | 23.39 | | ug/ml |
| 2-Bromonaphthalene (SURR) | 7.364 | 7.364 | 8641283 | 51.3 | | ug/ml |
| 2-Flurobiphenyl (SURR) | 8.215 | 8.215 | 5696200 | 55.14 | | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048879.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:45
Operator : YP/AJ
Sample : P5194-01MSD
Misc :
ALS Vial : 67 Sample Multiplier: 1

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:31:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | **System Monitoring Compounds** | | | |
| 4) S | 2-Bromonaphthalene (S... | 7.364 | 8641283 | 51.303 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 102.61% |
| 6) S | 2-Flurobiphenyl (SURR) | 8.215 | 5696200 | 55.138 ug/ml |
| Spiked Amount | 50.000 Range | 0 - 131 | Recovery = | 110.28% |
| 11) S | ortho-Terphenyl (SURR) | 11.248 | 4155085 | 23.388 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 46.78% |
| | **Target Compounds** | | | |
| 1) T | 1,2,3-Trimethylbenzen... | 4.187 | 5206380 | 27.498 ug/ml |
| 2) T | Naphthalene (C11.7) | 5.703 | 5967665 | 31.231 ug/ml |
| 3) T | 2-Methylnaphthalene (... | 6.750 | 5704027 | 30.869 ug/ml |
| 5) T | Acenaphthylene (C15.06) | 8.016 | 5839035 | 31.286 ug/ml |
| 7) T | Acenaphthene (C15.5) | 8.311 | 6350798 | 34.101 ug/ml |
| 8) T | Flouorene (C16.55) | 9.089 | 6181105 | 34.591 ug/ml |
| 9) T | Phenanthrene (C19.36) | 10.477 | 5860643 | 35.088 ug/ml |
| 10) T | Anthracene (C19.43) | 10.553 | 5793111 | 34.133 ug/ml |
| 12) T | Fluoranthene (C21.85) | 12.283 | 5721379 | 34.953 ug/mlm |
| 13) T | Pyrene (C20.8) | 12.576 | 5842246 | 35.921 ug/ml |
| 14) T | Benzo[a]anthracene (C... | 14.447 | 4749915 | 35.954 ug/ml |
| 15) T | Chrysene (C27.41) | 14.489 | 4858227 | 30.093 ug/ml |
| 16) T | benzo[b]fluoranthene ... | 15.998 | 4457827 | 33.112 ug/mlm |
| 17) T | Bnezo[k]fluoranthene ... | 16.029 | 4426364 | 29.060 ug/ml |
| 18) T | Benzo[a]pyrene (C31.34) | 16.373 | 4127218 | 29.840 ug/ml |
| 19) T | Indeno[1,2,3-cd]pyren... | 17.744 | 3987429 | 37.416 ug/ml |
| 20) T | Dibenz[a,h]anthracene... | 17.780 | 4019883 | 27.718 ug/ml |
| 21) T | Benzo[g,h,i]perylene ... | 17.994 | 3687326 | 26.299 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD121124AR\
Data File : FD048879.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:45
Operator : YP/AJ
Sample : P5194-01MSD
Misc :
ALS Vial : 67 Sample Multiplier: 1

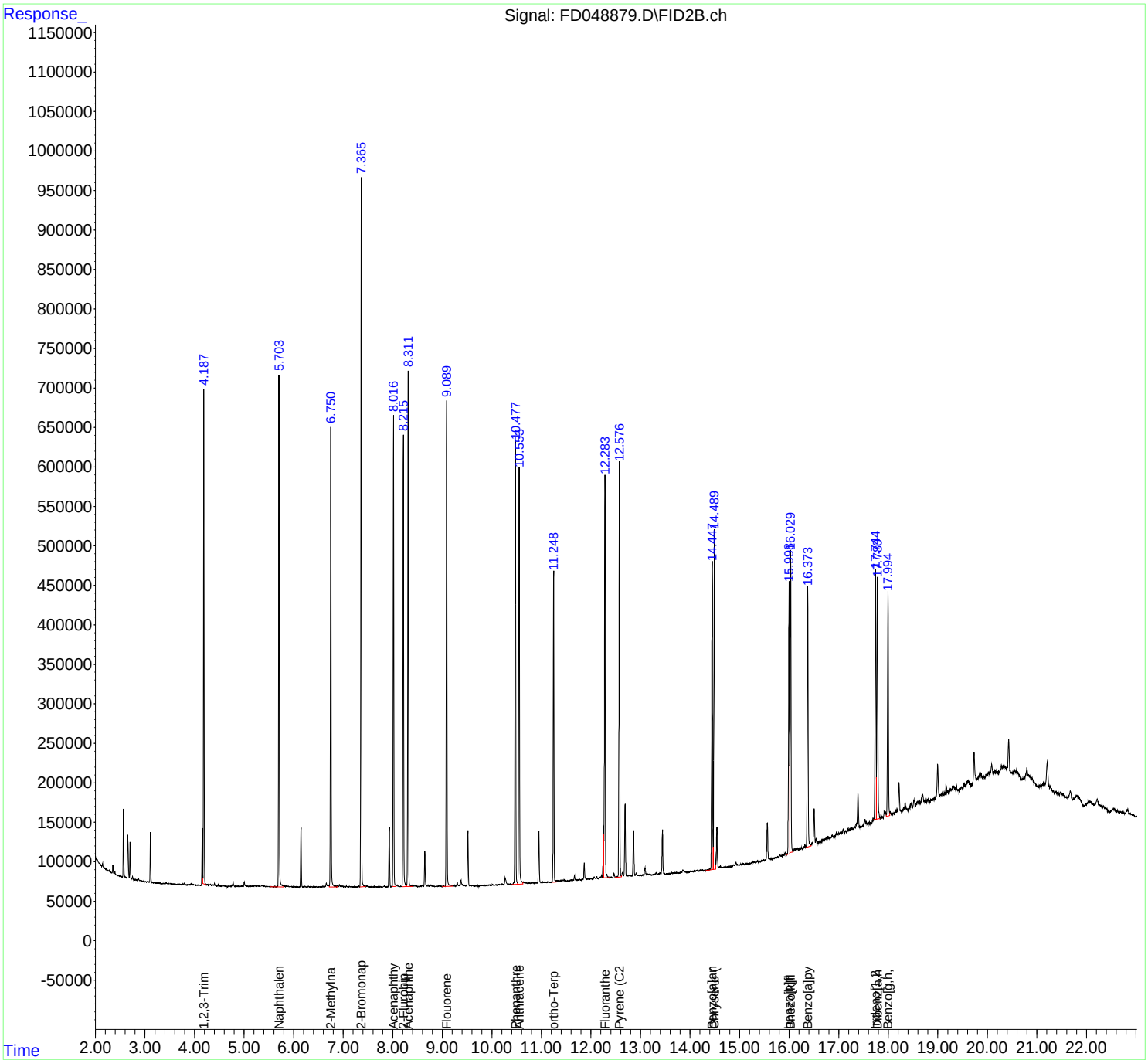
**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 04:31:31 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 06:07:50 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 µl
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18µm



**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_D\Data\FD12112
Data File : FD048879.D
Signal(s) : FID2B.ch
Acq On : 11 Dec 2024 23:45
Sample : P5194-01MSD
Misc :
ALS Vial : 67 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_D\methods\Aromatic EPH 121024.M
Title : GC Extractables

Signal : FID2B.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.057 | 4.042 | 4.085 | BV | 285 | 4154 | 0.05% | 0.003% |
| 2 | 4.093 | 4.085 | 4.099 | VV | 365 | 2032 | 0.02% | 0.002% |
| 3 | 4.105 | 4.099 | 4.132 | VV | 413 | 4690 | 0.05% | 0.004% |
| 4 | 4.156 | 4.132 | 4.169 | PV | 72520 | 630817 | 7.26% | 0.481% |
| 5 | 4.187 | 4.169 | 4.242 | VV | 628285 | 5283882 | 60.85% | 4.025% |
| 6 | 4.265 | 4.242 | 4.281 | VV | 1564 | 27718 | 0.32% | 0.021% |
| 7 | 4.285 | 4.281 | 4.289 | VV | 895 | 3959 | 0.05% | 0.003% |
| 8 | 4.320 | 4.289 | 4.344 | VV | 2555 | 48137 | 0.55% | 0.037% |
| 9 | 4.347 | 4.344 | 4.352 | VV | 906 | 4041 | 0.05% | 0.003% |
| 10 | 4.375 | 4.352 | 4.390 | VV | 1995 | 29220 | 0.34% | 0.022% |
| 11 | 4.404 | 4.390 | 4.458 | VV | 3124 | 47410 | 0.55% | 0.036% |
| 12 | 4.474 | 4.458 | 4.495 | VV | 2242 | 26825 | 0.31% | 0.020% |
| 13 | 4.508 | 4.495 | 4.543 | VV | 829 | 19044 | 0.22% | 0.015% |
| 14 | 4.559 | 4.543 | 4.580 | VV | 785 | 13900 | 0.16% | 0.011% |
| 15 | 4.592 | 4.580 | 4.625 | VV | 1199 | 24249 | 0.28% | 0.018% |
| 16 | 4.632 | 4.625 | 4.651 | VV | 979 | 11238 | 0.13% | 0.009% |
| 17 | 4.656 | 4.651 | 4.662 | VV | 783 | 4253 | 0.05% | 0.003% |
| 18 | 4.668 | 4.662 | 4.686 | PV | 871 | 9458 | 0.11% | 0.007% |
| 19 | 4.700 | 4.686 | 4.716 | VV | 865 | 13642 | 0.16% | 0.010% |
| 20 | 4.722 | 4.716 | 4.728 | VV | 690 | 4922 | 0.06% | 0.004% |
| 21 | 4.753 | 4.728 | 4.764 | VV | 1685 | 24409 | 0.28% | 0.019% |
| 22 | 4.779 | 4.764 | 4.807 | VV | 5674 | 72466 | 0.83% | 0.055% |
| 23 | 4.812 | 4.807 | 4.819 | VV | 705 | 5080 | 0.06% | 0.004% |
| 24 | 4.833 | 4.819 | 4.854 | VV | 1520 | 21383 | 0.25% | 0.016% |
| 25 | 4.859 | 4.854 | 4.871 | VV | 935 | 8124 | 0.09% | 0.006% |
| 26 | 4.893 | 4.871 | 4.907 | VV | 975 | 18762 | 0.22% | 0.014% |
| 27 | 4.910 | 4.907 | 4.925 | VV | 991 | 8790 | 0.10% | 0.007% |
| 28 | 4.931 | 4.925 | 4.937 | VV | 782 | 4944 | 0.06% | 0.004% |
| 29 | 4.940 | 4.937 | 4.953 | VV | 855 | 6752 | 0.08% | 0.005% |
| 30 | 4.965 | 4.953 | 4.982 | VV | 911 | 13310 | 0.15% | 0.010% |
| 31 | 5.003 | 4.982 | 5.079 | VV | 6377 | 114824 | 1.32% | 0.087% |
| 32 | 5.083 | 5.079 | 5.115 | VV | 782 | 14471 | 0.17% | 0.011% |
| 33 | 5.119 | 5.115 | 5.125 | VV | 726 | 3929 | 0.05% | 0.003% |
| 34 | 5.146 | 5.125 | 5.160 | VV | 900 | 14375 | 0.17% | 0.011% |
| 35 | 5.177 | 5.160 | 5.191 | VV | 1807 | 23296 | 0.27% | 0.018% |
| 36 | 5.217 | 5.191 | 5.236 | VV | 2258 | 37905 | 0.44% | 0.029% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | rteres | | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 5.240 | 5.236 | 5.249 | VV | 895 | 6678 | 0.08% | 0.005% |
| 38 | 5.254 | 5.249 | 5.258 | VV | 855 | 4007 | | |
| 39 | 5.285 | 5.258 | 5.305 | VV | 1441 | 29659 | | |
| 40 | 5.311 | 5.305 | 5.330 | VV | 1089 | 15197 | | |
| 41 | 5.359 | 5.330 | 5.394 | VV | 1883 | 48476 | | |
| 42 | 5.410 | 5.394 | 5.437 | VV | 1254 | 25524 | | |
| 43 | 5.447 | 5.437 | 5.459 | VV | 748 | 8949 | 0.10% | 0.007% |
| 44 | 5.465 | 5.459 | 5.480 | VV | 787 | 8057 | 0.09% | 0.006% |
| 45 | 5.499 | 5.480 | 5.528 | VV | 671 | 15495 | 0.18% | 0.012% |
| 46 | 5.545 | 5.528 | 5.563 | VV | 537 | 9985 | 0.11% | 0.008% |
| 47 | 5.569 | 5.563 | 5.595 | VV | 472 | 7180 | 0.08% | 0.005% |
| 48 | 5.634 | 5.595 | 5.649 | VV | 625 | 15041 | 0.17% | 0.011% |
| 49 | 5.671 | 5.649 | 5.676 | VV | 726 | 9089 | 0.10% | 0.007% |
| 50 | 5.703 | 5.676 | 5.795 | VV | 648194 | 5973163 | 68.79% | 4.550% |
| 51 | 5.812 | 5.795 | 5.849 | VV | 2342 | 45537 | 0.52% | 0.035% |
| 52 | 5.871 | 5.849 | 5.877 | VV | 1127 | 15233 | 0.18% | 0.012% |
| 53 | 5.882 | 5.877 | 5.902 | VV | 1167 | 13747 | 0.16% | 0.010% |
| 54 | 5.910 | 5.902 | 5.924 | VV | 935 | 10409 | 0.12% | 0.008% |
| 55 | 5.933 | 5.924 | 5.985 | VV | 921 | 24079 | 0.28% | 0.018% |
| 56 | 6.002 | 5.985 | 6.045 | VV | 1830 | 31092 | 0.36% | 0.024% |
| 57 | 6.050 | 6.045 | 6.060 | VV | 424 | 2576 | 0.03% | 0.002% |
| 58 | 6.078 | 6.060 | 6.111 | VV | 476 | 7663 | 0.09% | 0.006% |
| 59 | 6.149 | 6.111 | 6.206 | VV | 75309 | 733322 | 8.45% | 0.559% |
| 60 | 6.232 | 6.206 | 6.248 | VV | 1017 | 13197 | 0.15% | 0.010% |
| 61 | 6.266 | 6.248 | 6.277 | PV | 698 | 7684 | 0.09% | 0.006% |
| 62 | 6.296 | 6.277 | 6.319 | VV | 1557 | 19957 | 0.23% | 0.015% |
| 63 | 6.329 | 6.319 | 6.350 | VV | 593 | 6481 | 0.07% | 0.005% |
| 64 | 6.367 | 6.350 | 6.386 | VV | 1016 | 10813 | 0.12% | 0.008% |
| 65 | 6.415 | 6.386 | 6.444 | VV | 630 | 14213 | 0.16% | 0.011% |
| 66 | 6.460 | 6.444 | 6.504 | VV | 662 | 14111 | 0.16% | 0.011% |
| 67 | 6.516 | 6.504 | 6.522 | VV | 464 | 3653 | 0.04% | 0.003% |
| 68 | 6.532 | 6.522 | 6.538 | VV | 586 | 4519 | 0.05% | 0.003% |
| 69 | 6.542 | 6.538 | 6.553 | VV | 462 | 3850 | 0.04% | 0.003% |
| 70 | 6.585 | 6.553 | 6.619 | VV | 1153 | 24243 | 0.28% | 0.018% |
| 71 | 6.660 | 6.619 | 6.678 | VV | 5320 | 81959 | 0.94% | 0.062% |
| 72 | 6.687 | 6.678 | 6.692 | VV | 2165 | 17259 | 0.20% | 0.013% |
| 73 | 6.705 | 6.692 | 6.718 | VV | 2433 | 33934 | 0.39% | 0.026% |
| 74 | 6.750 | 6.718 | 6.877 | VV | 582393 | 5744081 | 66.15% | 4.375% |
| 75 | 6.890 | 6.877 | 6.905 | VV | 1414 | 17754 | 0.20% | 0.014% |
| 76 | 6.924 | 6.905 | 6.940 | VV | 3348 | 41566 | 0.48% | 0.032% |
| 77 | 6.955 | 6.940 | 6.967 | VV | 1700 | 22463 | 0.26% | 0.017% |
| 78 | 6.980 | 6.967 | 7.011 | VV | 1316 | 24527 | 0.28% | 0.019% |
| 79 | 7.030 | 7.011 | 7.048 | VV | 1183 | 16854 | 0.19% | 0.013% |
| 80 | 7.065 | 7.048 | 7.087 | VV | 1533 | 19832 | 0.23% | 0.015% |
| 81 | 7.094 | 7.087 | 7.114 | VV | 439 | 6821 | 0.08% | 0.005% |
| 82 | 7.127 | 7.114 | 7.142 | VV | 703 | 8955 | 0.10% | 0.007% |
| 83 | 7.156 | 7.142 | 7.184 | VV | 961 | 9233 | 0.11% | 0.007% |
| 84 | 7.191 | 7.184 | 7.204 | VV | 179 | 1642 | 0.02% | 0.001% |
| 85 | 7.230 | 7.204 | 7.259 | VV | 661 | 8094 | 0.09% | 0.006% |
| 86 | 7.272 | 7.259 | 7.282 | VV | 282 | 2625 | 0.03% | 0.002% |
| 87 | 7.296 | 7.282 | 7.300 | VV | 470 | 4045 | 0.05% | 0.003% |
| 88 | 7.303 | 7.300 | 7.308 | VV | 534 | 1914 | 0.02% | 0.001% |
| 89 | 7.325 | 7.308 | 7.335 | VV | 1018 | 10619 | 0.12% | 0.008% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

rteres

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 90 | 7.365 | 7.335 | 7.457 | VV | 899226 | 8683191 | 100.00% | 6.614% |
| 91 | 7.475 | 7.457 | 7.534 | VV | 1513 | 38592 | | |
| 92 | 7.586 | 7.534 | 7.609 | VV | 505 | 13743 | | |
| 93 | 7.629 | 7.609 | 7.648 | VV | 963 | 10366 | | |
| 94 | 7.656 | 7.648 | 7.666 | VV | 338 | 3135 | | |
| 95 | 7.675 | 7.666 | 7.699 | VV | 504 | 7218 | | |
| 96 | 7.734 | 7.699 | 7.743 | VV | 535 | 10550 | 0.12% | 0.008% |
| 97 | 7.751 | 7.743 | 7.767 | VV | 492 | 3817 | 0.04% | 0.003% |
| 98 | 7.838 | 7.767 | 7.859 | PV | 1353 | 28523 | 0.33% | 0.022% |
| 99 | 7.872 | 7.859 | 7.891 | VV | 362 | 4752 | 0.05% | 0.004% |
| 100 | 7.897 | 7.891 | 7.904 | VV | 206 | 1017 | 0.01% | 0.001% |
| 101 | 7.931 | 7.904 | 7.971 | VV | 75590 | 763901 | 8.80% | 0.582% |
| 102 | 7.982 | 7.971 | 7.987 | VV | 592 | 4556 | 0.05% | 0.003% |
| 103 | 8.016 | 7.987 | 8.067 | VV | 597223 | 5868093 | 67.58% | 4.470% |
| 104 | 8.080 | 8.067 | 8.146 | VV | 2538 | 59775 | 0.69% | 0.046% |
| 105 | 8.160 | 8.146 | 8.187 | VV | 789 | 11149 | 0.13% | 0.008% |
| 106 | 8.215 | 8.187 | 8.282 | VV | 572153 | 5714804 | 65.81% | 4.353% |
| 107 | 8.312 | 8.282 | 8.375 | VV | 653957 | 6349566 | 73.12% | 4.837% |
| 108 | 8.381 | 8.375 | 8.397 | VV | 1506 | 16831 | 0.19% | 0.013% |
| 109 | 8.402 | 8.397 | 8.405 | VV | 1004 | 4525 | 0.05% | 0.003% |
| 110 | 8.423 | 8.405 | 8.446 | VV | 1195 | 24065 | 0.28% | 0.018% |
| 111 | 8.464 | 8.446 | 8.507 | VV | 1437 | 27401 | 0.32% | 0.021% |
| 112 | 8.524 | 8.507 | 8.540 | VV | 597 | 6812 | 0.08% | 0.005% |
| 113 | 8.559 | 8.540 | 8.568 | VV | 628 | 7298 | 0.08% | 0.006% |
| 114 | 8.595 | 8.568 | 8.625 | VV | 1599 | 29539 | 0.34% | 0.023% |
| 115 | 8.649 | 8.625 | 8.695 | VV | 44709 | 470384 | 5.42% | 0.358% |
| 116 | 8.711 | 8.695 | 8.734 | VV | 2242 | 29973 | 0.35% | 0.023% |
| 117 | 8.761 | 8.734 | 8.775 | VV | 2208 | 32166 | 0.37% | 0.025% |
| 118 | 8.786 | 8.775 | 8.815 | VV | 1533 | 22034 | 0.25% | 0.017% |
| 119 | 8.831 | 8.815 | 8.867 | VV | 523 | 5657 | 0.07% | 0.004% |
| 120 | 8.880 | 8.867 | 8.902 | VV | 585 | 6678 | 0.08% | 0.005% |
| 121 | 8.939 | 8.902 | 8.954 | VV | 840 | 13178 | 0.15% | 0.010% |
| 122 | 8.960 | 8.954 | 8.992 | VV | 599 | 5791 | 0.07% | 0.004% |
| 123 | 9.005 | 8.992 | 9.018 | VV | 235 | 1849 | 0.02% | 0.001% |
| 124 | 9.024 | 9.018 | 9.035 | VV | 283 | 1576 | 0.02% | 0.001% |
| 125 | 9.044 | 9.035 | 9.052 | VV | 256 | 1835 | 0.02% | 0.001% |
| 126 | 9.089 | 9.059 | 9.164 | VV | 614229 | 6164293 | 70.99% | 4.695% |
| 127 | 9.169 | 9.164 | 9.196 | VV | 1456 | 22969 | 0.26% | 0.017% |
| 128 | 9.214 | 9.196 | 9.228 | VV | 908 | 14476 | 0.17% | 0.011% |
| 129 | 9.246 | 9.228 | 9.267 | VV | 955 | 15985 | 0.18% | 0.012% |
| 130 | 9.303 | 9.267 | 9.326 | VV | 4781 | 68650 | 0.79% | 0.052% |
| 131 | 9.342 | 9.326 | 9.360 | VV | 1432 | 20962 | 0.24% | 0.016% |
| 132 | 9.378 | 9.360 | 9.427 | VV | 7676 | 127510 | 1.47% | 0.097% |
| 133 | 9.455 | 9.427 | 9.483 | VV | 1378 | 30834 | 0.36% | 0.023% |
| 134 | 9.518 | 9.483 | 9.552 | VV | 70589 | 757114 | 8.72% | 0.577% |
| 135 | 9.582 | 9.552 | 9.589 | VV | 741 | 12896 | 0.15% | 0.010% |
| 136 | 9.605 | 9.589 | 9.615 | VV | 688 | 9356 | 0.11% | 0.007% |
| 137 | 9.618 | 9.615 | 9.626 | VV | 538 | 2458 | 0.03% | 0.002% |
| 138 | 9.632 | 9.626 | 9.654 | VV | 573 | 2668 | 0.03% | 0.002% |
| 139 | 9.692 | 9.654 | 9.704 | PV | 565 | 8365 | 0.10% | 0.006% |
| 140 | 9.725 | 9.704 | 9.747 | VV | 668 | 9455 | 0.11% | 0.007% |
| 141 | 9.776 | 9.747 | 9.781 | VV | 302 | 3713 | 0.04% | 0.003% |

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rteres

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|---|---|---|---|---|---|---|---|---|
| 142 | 9.805 | 9.781 | 9.817 | VV | 320 | 4720 | 0.05% | 0.004% |
| 143 | 9.836 | 9.817 | 9.848 | VV | 546 | 6394 | | |
| 144 | 9.856 | 9.848 | 9.880 | VV | 395 | 5444 | | |
| 145 | 9.918 | 9.880 | 9.923 | VV | 511 | 10363 | | |
| 146 | 9.942 | 9.923 | 9.958 | VV | 804 | 12584 | | |
| 147 | 9.965 | 9.958 | 9.969 | VV | 713 | 4101 | | |
| 148 | 9.972 | 9.969 | 9.988 | VV | 675 | 4944 | 0.06% | 0.004% |
| 149 | 10.019 | 9.988 | 10.050 | VV | 1136 | 19841 | 0.23% | 0.015% |
| 150 | 10.098 | 10.050 | 10.120 | VV | 701 | 17607 | 0.20% | 0.013% |
| 151 | 10.136 | 10.120 | 10.147 | VV | 773 | 10071 | 0.12% | 0.008% |
| 152 | 10.153 | 10.147 | 10.159 | VV | 783 | 4186 | 0.05% | 0.003% |
| 153 | 10.172 | 10.159 | 10.177 | VV | 502 | 4880 | 0.06% | 0.004% |
| 154 | 10.207 | 10.177 | 10.232 | VV | 1235 | 24039 | 0.28% | 0.018% |
| 155 | 10.270 | 10.232 | 10.322 | VV | 9143 | 174740 | 2.01% | 0.133% |
| 156 | 10.333 | 10.322 | 10.345 | VV | 924 | 9726 | 0.11% | 0.007% |
| 157 | 10.379 | 10.345 | 10.401 | VV | 1079 | 20324 | 0.23% | 0.015% |
| 158 | 10.444 | 10.401 | 10.450 | PV | 3198 | 30639 | 0.35% | 0.023% |
| 159 | 10.478 | 10.450 | 10.523 | VV | 562666 | 5834361 | 67.19% | 4.444% |
| 160 | 10.553 | 10.523 | 10.625 | VV | 527632 | 5794983 | 66.74% | 4.414% |
| 161 | 10.637 | 10.625 | 10.658 | VV | 2399 | 40918 | 0.47% | 0.031% |
| 162 | 10.664 | 10.658 | 10.730 | VV | 1713 | 43120 | 0.50% | 0.033% |
| 163 | 10.754 | 10.730 | 10.772 | VV | 1004 | 15563 | 0.18% | 0.012% |
| 164 | 10.809 | 10.772 | 10.818 | VV | 886 | 15890 | 0.18% | 0.012% |
| 165 | 10.835 | 10.818 | 10.856 | VV | 759 | 12904 | 0.15% | 0.010% |
| 166 | 10.878 | 10.856 | 10.905 | VV | 795 | 15673 | 0.18% | 0.012% |
| 167 | 10.918 | 10.905 | 10.924 | VV | 723 | 6631 | 0.08% | 0.005% |
| 168 | 10.951 | 10.924 | 10.995 | VV | 66397 | 753072 | 8.67% | 0.574% |
| 169 | 11.001 | 10.995 | 11.006 | VV | 901 | 4737 | 0.05% | 0.004% |
| 170 | 11.012 | 11.006 | 11.018 | VV | 841 | 5566 | 0.06% | 0.004% |
| 171 | 11.024 | 11.018 | 11.045 | VV | 775 | 10272 | 0.12% | 0.008% |
| 172 | 11.052 | 11.045 | 11.056 | VV | 373 | 2184 | 0.03% | 0.002% |
| 173 | 11.071 | 11.056 | 11.083 | VV | 595 | 6205 | 0.07% | 0.005% |
| 174 | 11.089 | 11.083 | 11.096 | VV | 322 | 2001 | 0.02% | 0.002% |
| 175 | 11.119 | 11.096 | 11.127 | VV | 869 | 9502 | 0.11% | 0.007% |
| 176 | 11.135 | 11.127 | 11.159 | VV | 879 | 9129 | 0.11% | 0.007% |
| 177 | 11.184 | 11.159 | 11.207 | PV | 432 | 6454 | 0.07% | 0.005% |
| 178 | 11.248 | 11.207 | 11.277 | VV | 393397 | 4135170 | 47.62% | 3.150% |
| 179 | 11.282 | 11.277 | 11.301 | VV | 2227 | 23135 | 0.27% | 0.018% |
| 180 | 11.313 | 11.301 | 11.336 | VV | 2102 | 31044 | 0.36% | 0.024% |
| 181 | 11.340 | 11.336 | 11.353 | VV | 1177 | 9603 | 0.11% | 0.007% |
| 182 | 11.389 | 11.353 | 11.403 | VV | 1939 | 33722 | 0.39% | 0.026% |
| 183 | 11.422 | 11.403 | 11.441 | VV | 2334 | 37051 | 0.43% | 0.028% |
| 184 | 11.461 | 11.441 | 11.517 | VV | 2122 | 33989 | 0.39% | 0.026% |
| 185 | 11.535 | 11.517 | 11.553 | VV | 846 | 10253 | 0.12% | 0.008% |
| 186 | 11.580 | 11.553 | 11.595 | VV | 1252 | 22059 | 0.25% | 0.017% |
| 187 | 11.625 | 11.595 | 11.647 | VV | 1358 | 33506 | 0.39% | 0.026% |
| 188 | 11.669 | 11.647 | 11.692 | VV | 6396 | 78514 | 0.90% | 0.060% |
| 189 | 11.699 | 11.692 | 11.715 | VV | 961 | 9963 | 0.11% | 0.008% |
| 190 | 11.734 | 11.715 | 11.745 | VV | 871 | 12114 | 0.14% | 0.009% |
| 191 | 11.769 | 11.745 | 11.800 | VV | 1517 | 27678 | 0.32% | 0.021% |
| 192 | 11.833 | 11.800 | 11.844 | VV | 1340 | 22652 | 0.26% | 0.017% |
| 193 | 11.866 | 11.844 | 11.913 | VV | 21602 | 277664 | 3.20% | 0.212% |
| 194 | 11.918 | 11.913 | 11.931 | VV | 1173 | 11252 | 0.13% | 0.009% |

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|---|---|---|---|---|---|---|---|---|
| 195 | 11.939 | 11.931 | 11.974 | VV | 1468 | 24146 | 0.28% | 0.018% |
| 196 | 11.996 | 11.974 | 12.043 | VV | 1231 | 34629 | | |
| 197 | 12.066 | 12.043 | 12.099 | VV | 3192 | 53787 | | |
| 198 | 12.118 | 12.099 | 12.147 | VV | 3048 | 45526 | | |
| 199 | 12.172 | 12.147 | 12.186 | VV | 2380 | 35753 | | |
| 200 | 12.212 | 12.186 | 12.226 | VV | 3842 | 64123 | | |
| 201 | 12.253 | 12.226 | 12.261 | VV | 64594 | 664137 | 7.65% | 0.506% |
| 202 | 12.283 | 12.261 | 12.349 | VV | 510971 | 5665438 | 65.25% | 4.315% |
| 203 | 12.354 | 12.349 | 12.369 | VV | 1468 | 15167 | 0.17% | 0.012% |
| 204 | 12.380 | 12.369 | 12.389 | VV | 1179 | 12067 | 0.14% | 0.009% |
| 205 | 12.409 | 12.389 | 12.434 | VV | 1657 | 28748 | 0.33% | 0.022% |
| 206 | 12.464 | 12.434 | 12.496 | VV | 6283 | 91554 | 1.05% | 0.070% |
| 207 | 12.523 | 12.496 | 12.535 | VV | 1687 | 30851 | 0.36% | 0.023% |
| 208 | 12.577 | 12.535 | 12.614 | VV | 527897 | 5851738 | 67.39% | 4.457% |
| 209 | 12.637 | 12.614 | 12.663 | VV | 6443 | 116696 | 1.34% | 0.089% |
| 210 | 12.690 | 12.663 | 12.723 | VV | 92905 | 1097757 | 12.64% | 0.836% |
| 211 | 12.727 | 12.723 | 12.734 | VV | 2027 | 11637 | 0.13% | 0.009% |
| 212 | 12.739 | 12.734 | 12.747 | VV | 2356 | 18111 | 0.21% | 0.014% |
| 213 | 12.764 | 12.747 | 12.768 | VV | 2144 | 26065 | 0.30% | 0.020% |
| 214 | 12.778 | 12.768 | 12.799 | VV | 2229 | 33729 | 0.39% | 0.026% |
| 215 | 12.815 | 12.799 | 12.827 | VV | 1697 | 23420 | 0.27% | 0.018% |
| 216 | 12.861 | 12.827 | 12.893 | VV | 58727 | 720223 | 8.29% | 0.549% |
| 217 | 12.916 | 12.893 | 12.949 | VV | 4651 | 85166 | 0.98% | 0.065% |
| 218 | 12.979 | 12.949 | 13.019 | VV | 1631 | 47716 | 0.55% | 0.036% |
| 219 | 13.048 | 13.019 | 13.064 | VV | 1774 | 30337 | 0.35% | 0.023% |
| 220 | 13.090 | 13.064 | 13.131 | VV | 10126 | 163813 | 1.89% | 0.125% |
| 221 | 13.148 | 13.131 | 13.168 | VV | 1965 | 37585 | 0.43% | 0.029% |
| 222 | 13.174 | 13.168 | 13.181 | VV | 1811 | 13037 | 0.15% | 0.010% |
| 223 | 13.185 | 13.181 | 13.210 | VV | 1645 | 16450 | 0.19% | 0.013% |
| 224 | 13.240 | 13.210 | 13.246 | VV | 935 | 14198 | 0.16% | 0.011% |
| 225 | 13.249 | 13.246 | 13.256 | VV | 871 | 4474 | 0.05% | 0.003% |
| 226 | 13.279 | 13.256 | 13.290 | VV | 1456 | 21370 | 0.25% | 0.016% |
| 227 | 13.317 | 13.290 | 13.342 | VV | 3408 | 59896 | 0.69% | 0.046% |
| 228 | 13.352 | 13.342 | 13.365 | VV | 1496 | 16799 | 0.19% | 0.013% |
| 229 | 13.396 | 13.365 | 13.413 | VV | 2548 | 49591 | 0.57% | 0.038% |
| 230 | 13.444 | 13.413 | 13.471 | VV | 57142 | 712928 | 8.21% | 0.543% |
| 231 | 13.477 | 13.471 | 13.499 | VV | 1761 | 20183 | 0.23% | 0.015% |
| 232 | 13.511 | 13.499 | 13.517 | VV | 714 | 5377 | 0.06% | 0.004% |
| 233 | 13.523 | 13.517 | 13.528 | VV | 708 | 4150 | 0.05% | 0.003% |
| 234 | 13.541 | 13.528 | 13.552 | VV | 961 | 9991 | 0.12% | 0.008% |
| 235 | 13.576 | 13.552 | 13.590 | PV | 1150 | 16037 | 0.18% | 0.012% |
| 236 | 13.597 | 13.590 | 13.610 | VV | 671 | 6175 | 0.07% | 0.005% |
| 237 | 13.629 | 13.610 | 13.640 | VV | 1817 | 22132 | 0.25% | 0.017% |
| 238 | 13.652 | 13.640 | 13.659 | VV | 1074 | 9778 | 0.11% | 0.007% |
| 239 | 13.661 | 13.659 | 13.682 | VV | 940 | 10876 | 0.13% | 0.008% |
| 240 | 13.702 | 13.682 | 13.712 | VV | 1265 | 17793 | 0.20% | 0.014% |
| 241 | 13.737 | 13.712 | 13.761 | VV | 1546 | 27313 | 0.31% | 0.021% |
| 242 | 13.781 | 13.761 | 13.788 | VV | 541 | 6648 | 0.08% | 0.005% |
| 243 | 13.804 | 13.788 | 13.821 | VV | 1302 | 14915 | 0.17% | 0.011% |
| 244 | 13.828 | 13.821 | 13.834 | VV | 1161 | 7880 | 0.09% | 0.006% |
| 245 | 13.854 | 13.834 | 13.893 | VV | 3991 | 85059 | 0.98% | 0.065% |
| 246 | 13.898 | 13.893 | 13.916 | VV | 1440 | 18009 | 0.21% | 0.014% |

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rteres

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|---|---|---|---|---|---|---|---|---|
| 247 | 13.922 | 13.916 | 13.958 | VV | 1244 | 16835 | 0.19% | 0.013% |
| 248 | 13.963 | 13.958 | 13.977 | VV | 483 | 2926 | | |
| 249 | 13.999 | 13.977 | 14.018 | PV | 1374 | 19736 | | |
| 250 | 14.036 | 14.018 | 14.064 | VV | 1384 | 24565 | | |
| 251 | 14.089 | 14.064 | 14.110 | VV | 1646 | 31907 | | |
| 252 | 14.116 | 14.110 | 14.121 | VV | 955 | 5484 | | |
| 253 | 14.138 | 14.121 | 14.158 | VV | 1785 | 24359 | 0.28% | 0.019% |
| 254 | 14.168 | 14.158 | 14.178 | VV | 1024 | 7037 | 0.08% | 0.005% |
| 255 | 14.203 | 14.178 | 14.217 | VV | 1311 | 20256 | 0.23% | 0.015% |
| 256 | 14.250 | 14.217 | 14.256 | VV | 1245 | 18233 | 0.21% | 0.014% |
| 257 | 14.259 | 14.256 | 14.280 | VV | 1154 | 9127 | 0.11% | 0.007% |
| 258 | 14.299 | 14.286 | 14.320 | PV | 1049 | 10701 | 0.12% | 0.008% |
| 259 | 14.331 | 14.320 | 14.339 | PV | 678 | 5427 | 0.06% | 0.004% |
| 260 | 14.343 | 14.339 | 14.347 | VV | 357 | 1251 | 0.01% | 0.001% |
| 261 | 14.352 | 14.347 | 14.357 | VV | 493 | 1530 | 0.02% | 0.001% |
| 262 | 14.396 | 14.357 | 14.402 | PV | 997 | 13250 | 0.15% | 0.010% |
| 263 | 14.410 | 14.402 | 14.415 | VV | 1085 | 6523 | 0.08% | 0.005% |
| 264 | 14.447 | 14.415 | 14.466 | VV | 388008 | 4730253 | 54.48% | 3.603% |
| 265 | 14.489 | 14.466 | 14.518 | VV | 430593 | 4865838 | 56.04% | 3.706% |
| 266 | 14.542 | 14.518 | 14.582 | VV | 53284 | 715191 | 8.24% | 0.545% |
| 267 | 14.593 | 14.582 | 14.599 | VV | 2131 | 17596 | 0.20% | 0.013% |
| 268 | 14.613 | 14.599 | 14.634 | VV | 3025 | 41356 | 0.48% | 0.032% |
| 269 | 14.645 | 14.634 | 14.660 | VV | 1305 | 13058 | 0.15% | 0.010% |
| 270 | 14.667 | 14.660 | 14.675 | VV | 710 | 4415 | 0.05% | 0.003% |
| 271 | 14.695 | 14.675 | 14.710 | VV | 895 | 12519 | 0.14% | 0.010% |
| 272 | 14.716 | 14.710 | 14.724 | VV | 728 | 4567 | 0.05% | 0.003% |
| 273 | 14.728 | 14.724 | 14.734 | VV | 442 | 1984 | 0.02% | 0.002% |
| 274 | 14.772 | 14.734 | 14.787 | VV | 1324 | 27150 | 0.31% | 0.021% |
| 275 | 14.808 | 14.787 | 14.820 | VV | 999 | 12893 | 0.15% | 0.010% |
| 276 | 14.837 | 14.820 | 14.852 | VV | 983 | 11623 | 0.13% | 0.009% |
| 277 | 14.871 | 14.852 | 14.902 | PV | 2541 | 43396 | 0.50% | 0.033% |
| 278 | 14.921 | 14.902 | 14.953 | VV | 4426 | 83019 | 0.96% | 0.063% |
| 279 | 14.964 | 14.953 | 14.980 | VV | 1326 | 17615 | 0.20% | 0.013% |
| 280 | 14.999 | 14.980 | 15.009 | VV | 1092 | 16860 | 0.19% | 0.013% |
| 281 | 15.022 | 15.009 | 15.032 | VV | 1895 | 16671 | 0.19% | 0.013% |
| 282 | 15.037 | 15.032 | 15.052 | VV | 1200 | 11735 | 0.14% | 0.009% |
| 283 | 15.071 | 15.052 | 15.097 | VV | 2366 | 29274 | 0.34% | 0.022% |
| 284 | 15.123 | 15.097 | 15.139 | PV | 1446 | 24339 | 0.28% | 0.019% |
| 285 | 15.145 | 15.139 | 15.152 | VV | 973 | 6301 | 0.07% | 0.005% |
| 286 | 15.156 | 15.152 | 15.162 | VV | 720 | 3679 | 0.04% | 0.003% |
| 287 | 15.175 | 15.162 | 15.183 | VV | 1017 | 8046 | 0.09% | 0.006% |
| 288 | 15.199 | 15.183 | 15.212 | VV | 1331 | 11487 | 0.13% | 0.009% |
| 289 | 15.216 | 15.212 | 15.219 | VV | 678 | 2324 | 0.03% | 0.002% |
| 290 | 15.283 | 15.219 | 15.290 | VV | 2134 | 54067 | 0.62% | 0.041% |
| 291 | 15.295 | 15.290 | 15.314 | VV | 1520 | 14799 | 0.17% | 0.011% |
| 292 | 15.356 | 15.314 | 15.395 | PV | 1940 | 48851 | 0.56% | 0.037% |
| 293 | 15.411 | 15.395 | 15.423 | VV | 1015 | 11544 | 0.13% | 0.009% |
| 294 | 15.445 | 15.423 | 15.457 | VV | 1106 | 15337 | 0.18% | 0.012% |
| 295 | 15.475 | 15.457 | 15.507 | VV | 2395 | 36980 | 0.43% | 0.028% |
| 296 | 15.559 | 15.507 | 15.594 | VV | 47118 | 634778 | 7.31% | 0.484% |
| 297 | 15.618 | 15.594 | 15.623 | VV | 1818 | 19506 | 0.22% | 0.015% |
| 298 | 15.628 | 15.623 | 15.644 | VV | 1559 | 10328 | 0.12% | 0.008% |
| 299 | 15.649 | 15.644 | 15.662 | VV | 681 | 4517 | 0.05% | 0.003% |

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|---|---|---|---|---|---|---|---|---|
| 300 | 15.671 | 15.662 | 15.675 | VV | 436 | 2455 | 0.03% | 0.002% |
| 301 | 15.720 | 15.675 | 15.726 | PV | 1347 | 17172 | | |
| 302 | 15.731 | 15.726 | 15.749 | VV | 1452 | 12196 | | |
| 303 | 15.767 | 15.749 | 15.787 | VV | 1716 | 21218 | | |
| 304 | 15.811 | 15.787 | 15.816 | PV | 2409 | 21579 | | |
| 305 | 15.821 | 15.816 | 15.832 | VV | 2250 | 16499 | | |
| 306 | 15.837 | 15.832 | 15.845 | VV | 981 | 5068 | 0.06% | 0.004% |
| 307 | 15.851 | 15.845 | 15.865 | VV | 884 | 6862 | 0.08% | 0.005% |
| 308 | 15.924 | 15.865 | 15.946 | VV | 2598 | 53331 | 0.61% | 0.041% |
| 309 | 15.958 | 15.946 | 15.962 | VV | 980 | 4812 | 0.06% | 0.004% |
| 310 | 15.998 | 15.962 | 16.012 | VV | 346104 | 4395520 | 50.62% | 3.348% |
| 311 | 16.030 | 16.012 | 16.080 | VV | 384550 | 4476650 | 51.56% | 3.410% |
| 312 | 16.102 | 16.080 | 16.120 | VV | 3779 | 58796 | 0.68% | 0.045% |
| 313 | 16.137 | 16.120 | 16.150 | VV | 3155 | 46505 | 0.54% | 0.035% |
| 314 | 16.163 | 16.150 | 16.183 | VV | 3854 | 51198 | 0.59% | 0.039% |
| 315 | 16.201 | 16.183 | 16.215 | VV | 1538 | 20308 | 0.23% | 0.015% |
| 316 | 16.234 | 16.215 | 16.239 | VV | 1665 | 16090 | 0.19% | 0.012% |
| 317 | 16.246 | 16.239 | 16.267 | VV | 2209 | 24492 | 0.28% | 0.019% |
| 318 | 16.285 | 16.267 | 16.291 | VV | 2648 | 26978 | 0.31% | 0.021% |
| 319 | 16.294 | 16.291 | 16.301 | VV | 1950 | 8736 | 0.10% | 0.007% |
| 320 | 16.316 | 16.301 | 16.335 | VV | 3616 | 42341 | 0.49% | 0.032% |
| 321 | 16.373 | 16.335 | 16.440 | VV | 331138 | 4143981 | 47.72% | 3.157% |
| 322 | 16.503 | 16.440 | 16.528 | VV | 45989 | 701247 | 8.08% | 0.534% |
| 323 | 16.543 | 16.528 | 16.563 | VV | 7060 | 94723 | 1.09% | 0.072% |
| 324 | 16.575 | 16.563 | 16.590 | VV | 2799 | 23040 | 0.27% | 0.018% |
| 325 | 16.605 | 16.590 | 16.617 | VV | 2133 | 17937 | 0.21% | 0.014% |
| 326 | 16.634 | 16.617 | 16.647 | VV | 2235 | 24100 | 0.28% | 0.018% |
| 327 | 16.671 | 16.647 | 16.675 | PV | 2493 | 26942 | 0.31% | 0.021% |
| 328 | 16.679 | 16.675 | 16.682 | VV | 2423 | 8515 | 0.10% | 0.006% |
| 329 | 16.696 | 16.682 | 16.700 | VV | 2933 | 26491 | 0.31% | 0.020% |
| 330 | 16.707 | 16.700 | 16.712 | VV | 2866 | 16298 | 0.19% | 0.012% |
| 331 | 16.716 | 16.712 | 16.719 | VV | 2486 | 9625 | 0.11% | 0.007% |
| 332 | 16.746 | 16.719 | 16.756 | VV | 3027 | 57501 | 0.66% | 0.044% |
| 333 | 16.762 | 16.756 | 16.770 | VV | 3262 | 23718 | 0.27% | 0.018% |
| 334 | 16.788 | 16.770 | 16.810 | VV | 4283 | 70007 | 0.81% | 0.053% |
| 335 | 16.835 | 16.810 | 16.842 | VV | 2330 | 39128 | 0.45% | 0.030% |
| 336 | 16.875 | 16.842 | 16.893 | VV | 3713 | 78001 | 0.90% | 0.059% |
| 337 | 16.911 | 16.893 | 16.932 | VV | 2682 | 37194 | 0.43% | 0.028% |
| 338 | 16.960 | 16.932 | 16.978 | VV | 5300 | 104999 | 1.21% | 0.080% |
| 339 | 16.998 | 16.978 | 17.010 | VV | 3953 | 54921 | 0.63% | 0.042% |
| 340 | 17.014 | 17.010 | 17.017 | VV | 2658 | 10122 | 0.12% | 0.008% |
| 341 | 17.038 | 17.017 | 17.046 | VV | 3493 | 52926 | 0.61% | 0.040% |
| 342 | 17.064 | 17.046 | 17.077 | VV | 3802 | 53157 | 0.61% | 0.040% |
| 343 | 17.096 | 17.077 | 17.122 | VV | 7067 | 117193 | 1.35% | 0.089% |
| 344 | 17.143 | 17.122 | 17.155 | VV | 3811 | 57088 | 0.66% | 0.043% |
| 345 | 17.160 | 17.155 | 17.172 | VV | 3161 | 26326 | 0.30% | 0.020% |
| 346 | 17.189 | 17.172 | 17.209 | VV | 4589 | 75945 | 0.87% | 0.058% |
| 347 | 17.229 | 17.209 | 17.240 | VV | 3799 | 57002 | 0.66% | 0.043% |
| 348 | 17.256 | 17.240 | 17.260 | VV | 4131 | 40493 | 0.47% | 0.031% |
| 349 | 17.269 | 17.260 | 17.278 | VV | 4102 | 40493 | 0.47% | 0.031% |
| 350 | 17.286 | 17.278 | 17.293 | VV | 3366 | 25160 | 0.29% | 0.019% |
| 351 | 17.302 | 17.293 | 17.306 | VV | 3006 | 18326 | 0.21% | 0.014% |

**Instrument :**
FID_D
**ClientSampleId :**
UST-1MSD

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 352 | 17.325 | 17.306 | 17.335 | VV | 4604 | 62761 | 0.72% | 0.048% |
| 353 | 17.387 | 17.335 | 17.430 | VV | 45994 | 767791 | 8 | |
| 354 | 17.448 | 17.430 | 17.461 | VV | 2976 | 35718 | 0 | |
| 355 | 17.487 | 17.461 | 17.492 | VV | 3128 | 38186 | 0 | |
| 356 | 17.495 | 17.492 | 17.498 | VV | 2857 | 8524 | 0 | |
| 357 | 17.531 | 17.498 | 17.544 | VV | 9125 | 146524 | 1 | |
| 358 | 17.552 | 17.544 | 17.557 | VV | 5176 | 31716 | 0.37% | 0.024% |
| 359 | 17.562 | 17.557 | 17.572 | VV | 4767 | 31339 | 0.36% | 0.024% |
| 360 | 17.579 | 17.572 | 17.587 | VV | 3038 | 21713 | 0.25% | 0.017% |
| 361 | 17.598 | 17.587 | 17.617 | VV | 4460 | 54605 | 0.63% | 0.042% |
| 362 | 17.622 | 17.617 | 17.626 | VV | 3054 | 13045 | 0.15% | 0.010% |
| 363 | 17.630 | 17.626 | 17.657 | VV | 2653 | 30379 | 0.35% | 0.023% |
| 364 | 17.744 | 17.657 | 17.760 | PV | 320328 | 4206551 | 48.44% | 3.204% |
| 365 | 17.780 | 17.760 | 17.835 | VV | 308609 | 4178731 | 48.12% | 3.183% |
| 366 | 17.856 | 17.835 | 17.868 | VV | 5048 | 71289 | 0.82% | 0.054% |
| 367 | 17.879 | 17.868 | 17.885 | VV | 3577 | 32927 | 0.38% | 0.025% |
| 368 | 17.892 | 17.885 | 17.897 | VV | 2926 | 18033 | 0.21% | 0.014% |
| 369 | 17.918 | 17.897 | 17.940 | VV | 9623 | 174640 | 2.01% | 0.133% |
| 370 | 17.945 | 17.940 | 17.951 | VV | 8318 | 45987 | 0.53% | 0.035% |
| 371 | 17.953 | 17.951 | 17.961 | VV | 6145 | 31932 | 0.37% | 0.024% |
| 372 | 17.995 | 17.961 | 18.027 | VV | 286759 | 3740153 | 43.07% | 2.849% |
| 373 | 18.032 | 18.027 | 18.067 | VV | 5309 | 94498 | 1.09% | 0.072% |
| 374 | 18.077 | 18.067 | 18.087 | VV | 2355 | 23226 | 0.27% | 0.018% |
| 375 | 18.108 | 18.087 | 18.118 | VV | 2349 | 32055 | 0.37% | 0.024% |
| 376 | 18.146 | 18.118 | 18.163 | VV | 3853 | 69226 | 0.80% | 0.053% |
| 377 | 18.215 | 18.163 | 18.252 | VV | 38175 | 630450 | 7.26% | 0.480% |
| 378 | 18.257 | 18.252 | 18.264 | VV | 2117 | 8153 | 0.09% | 0.006% |
| 379 | 18.275 | 18.264 | 18.291 | PV | 2323 | 13224 | 0.15% | 0.010% |

Sum of corrected areas: 131281446

Aromatic EPH 121024.M Thu Dec 12 05:55:55 2024

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | UST-1MSD | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01MSD | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|
| 12/11/24 09:12 | 12/11/24 23:45 | PB165557 |

| CAS Number | Parameter | Conc. | Qualifier | Dilution | MDL | LOQ / CRQL | Units(Dry Weight) | Datafile |
|---|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | 4.88 | | 1 | 0.43 | 1.13 | mg/kg | FC067990.D |
| Aliphatic C12-C16 | Aliphatic C12-C16 | 4.54 | | 1 | 0.27 | 0.76 | mg/kg | FC067990.D |
| Aliphatic C16-C21 | Aliphatic C16-C21 | 11.4 | | 1 | 0.34 | 1.13 | mg/kg | FC067990.D |
| Aliphatic C21-C28 | Aliphatic C21-C28 | 12.4 | | 1 | 0.91 | 1.51 | mg/kg | FC067990.D |
| Aliphatic C28-C40 | Aliphatic C28-C40 | 59.4 | E | 1 | 2.04 | 2.27 | mg/kg | FC067990.D |
| Aromatic C10-C12 | Aromatic C10-C12 | 5.08 | | 1 | 0.34 | 0.76 | mg/kg | FD048879.D |
| Aromatic C12-C16 | Aromatic C12-C16 | 11.8 | | 1 | 0.39 | 1.13 | mg/kg | FD048879.D |
| Aromatic C16-C21 | Aromatic C16-C21 | 15.3 | | 1 | 1.09 | 1.89 | mg/kg | FD048879.D |
| Aromatic C21-C36 | Aromatic C21-C36 | 23.8 | | 1 | 2.27 | 3.03 | mg/kg | FD048879.D |
| Total AliphaticEPH | Total AliphaticEPH | 92.6 | | | 3.99 | 6.80 | mg/kg | |
| Total AromaticEPH | Total AromaticEPH | 56.0 | | | 4.09 | 6.81 | mg/kg | |
| Total EPH | Total EPH | 149 | | | 8.08 | 13.6 | mg/kg | |

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | JPCL Engineering | Date Collected: | |
| Project: | 1454 to 1460 Haddon Avenue, Camden, NJ | Date Received: | |
| Client Sample ID: | UST-1MSD | SDG No.: | P5194 |
| Lab Sample ID: | P5194-01MSD | Matrix: | Solid |
| Analytical Method: | NJEPH | % Solid: | 88.1 |
| Sample Wt/Vol: | 30.01 Units: g | Final Vol: | 2000 uL |
| Soil Aliquot Vol: | uL | Test: | EPH |
| Prep Method : | | | |

| File ID : | Dilution: | Prep Date : | Date Analyzed : | Prep Batch ID |
|---|---|---|---|---|
| FC067990.D | 1 | 12/11/24 | 12/11/24 | PB165557 |

| CAS Number | Parameter | | Conc. | Qualifier | MDL | LOQ / CRQL | Units |
|---|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | | |
| Aliphatic C9-C12 | Aliphatic C9-C12 | | 4.88 | | 0.43 | 1.13 | mg/kg |
| Aliphatic C12-C16 | Aliphatic C12-C16 | | 4.54 | | 0.27 | 0.76 | mg/kg |
| Aliphatic C16-C21 | Aliphatic C16-C21 | | 11.4 | | 0.34 | 1.13 | mg/kg |
| Aliphatic C21-C28 | Aliphatic C21-C28 | | 12.4 | | 0.91 | 1.51 | mg/kg |
| Aliphatic C28-C40 | Aliphatic C28-C40 | | 59.4 | E | 2.04 | 2.27 | mg/kg |
| **SURROGATES** | | | | | | | |
| 3383-33-2 | 1-chlorooctadecane (SURR) | | 45.6 | | 40 - 140 | 91% | SPK: 50 |
| 84-15-1 | ortho-Terphenyl (SURR) | | 0.00 | | 40 - 140 | 0% | SPK: 50 |

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

# Quantitation Report For Aliphatic EPH Range.

| | | | |
|---|---|---|---|
| Lab Sample ID: | P5194-01MSD | Acq On: | 11 Dec 2024 23:45 |
| Client Sample ID: | UST-1MSD | Operator: | YP/AJ |
| Data file: | FC067990.D | Misc: | |
| Instrument: | FID_C | ALS Vial: | 17 |
| Dilution Factor: | 1 | Sample Multiplier: | 1.00 |

| Compound | R.T. | | Response | Conc | highest_standard | Units |
|---|---|---|---|---|---|---|
| Aliphatic C9-C12 | 3.151 | 6.428 | 10205703 | 64.47 | 300 | ug/ml |
| Aliphatic C12-C16 | 6.429 | 9.820 | 9624862 | 60.052 | 200 | ug/ml |
| Aliphatic C16-C21 | 9.821 | 13.180 | 22960327 | 150.695 | 300 | ug/ml |
| Aliphatic C21-C28 | 13.181 | 16.836 | 22310893 | 163.589 | 400 | ug/ml |
| Aliphatic C28-C40 | 16.837 | 21.674 | 83261524 | 785.748 | 600 | ug/ml |
| Aliphatic EPH | 3.151 | 21.674 | 148363309 | 1220 | | ug/ml |
| ortho-Terphenyl (SURR) | 0.000 | 0.000 | 0 | 0 | | ug/ml |
| 1-chlorooctadecane (SURR) | 12.913 | 12.913 | 5821680 | 45.63 | | ug/ml |
| Aliphatic C9-C28 | 3.151 | 16.836 | 65101785 | 438.806 | 1200 | ug/ml |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067990.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:45
Operator : YP/AJ
Sample : P5194-01MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:34:38 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um

| | Compound | R.T. | Response | Conc Units |
|---|---|---|---|---|
| | System Monitoring Compounds | | | |
| 12) S | 1-chlorooctadecane (S... | 12.913 | 5821680 | 45.627 ug/ml |
| Spiked Amount | 50.000 | | Recovery = | 91.25% |
| | Target Compounds | | | |
| 1) T | n-Nonane (C9) | 3.251 | 2499893 | 16.090 ug/ml |
| 2) T | n-Decane (C10) | 4.313 | 3156197 | 19.910 ug/mlm |
| 4) T | n-Dodecane (C12) | 6.329 | 3787179 | 23.521 ug/ml |
| 6) T | n-Tetradecane (C14) | 8.122 | 4195291 | 26.386 ug/ml |
| 7) T | n-Hexadecane (C16) | 9.721 | 4359664 | 26.986 ug/ml |
| 8) T | n-Octadecane (C18) | 11.161 | 4404243 | 27.433 ug/ml |
| 10) T | n-Eicosane (C20) | 12.469 | 4370734 | 29.055 ug/ml |
| 11) T | n-Heneicosane (C21) | 13.081 | 4167431 | 28.521 ug/ml |
| 13) T | n-Docosane (C22) | 13.666 | 4121681 | 28.794 ug/ml |
| 14) T | n-Tetracosane (C24) | 14.768 | 3972969 | 28.593 ug/ml |
| 15) T | n-Hexacosane (C26) | 15.788 | 3843771 | 28.743 ug/ml |
| 16) T | n-Octacosane (C28) | 16.737 | 3854553 | 29.716 ug/ml |
| 17) T | n-Tricontane (C30) | 17.622 | 3774652 | 29.138 ug/ml |
| 18) T | n-Dotriacontane (C32) | 18.454 | 3625414 | 29.264 ug/ml |
| 19) T | n-Tetratriacontane (C34) | 19.237 | 3672933 | 33.651 ug/ml |
| 20) T | n-Hexatriacontane (C36) | 19.978 | 3699181 | 39.100 ug/ml |
| 21) T | n-Octatriacontane (C38) | 20.699 | 4210788 | 46.547 ug/mlm |
| 22) T | n-Tetracontane (C40) | 21.579 | 4386657 | 49.770 ug/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC121124AL\
Data File : FC067990.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:45
Operator : YP/AJ
Sample : P5194-01MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

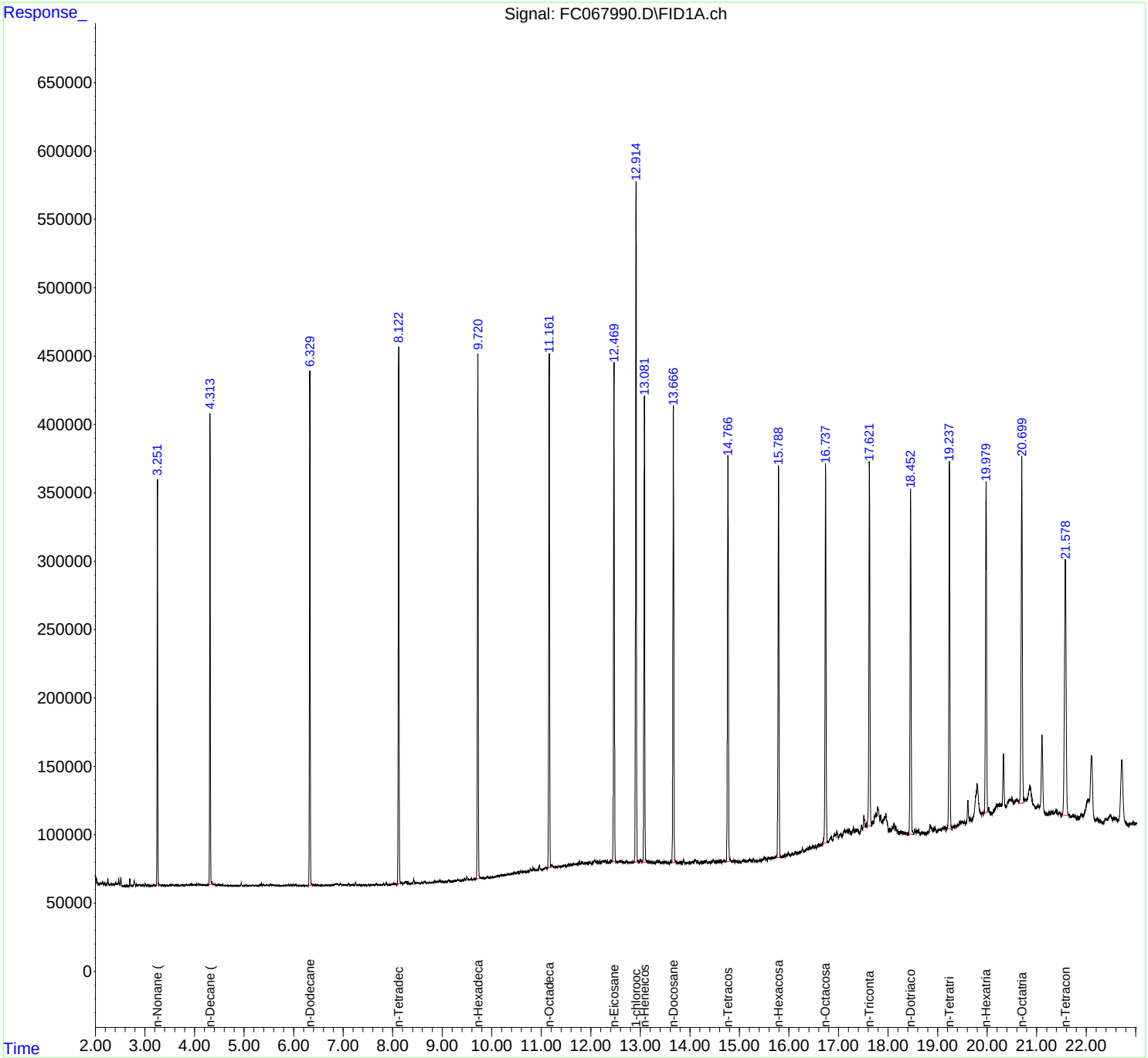
**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

**Manual Integrations APPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Integration File: autoint1.e
Quant Time: Dec 12 03:34:38 2024
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Quant Title : GC Extractables
QLast Update : Tue Dec 10 07:59:10 2024
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 1 ul
Signal Phase : Rxi-1ms
Signal Info : 20M x 0.18mm x 0.18um



**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

rteres

Area Percent Report

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_C\Data\FC12112
Data File : FC067990.D
Signal(s) : FID1A.ch
Acq On : 11 Dec 2024 23:45
Sample : P5194-01MSD
Misc :
ALS Vial : 17 Sample Multiplier: 1

Integration File: sample.E

Method : Z:\pestpcbsrv\HPCHEM1\FID_C\Method\Aliphatic EPH 121024.M
Title : GC Extractables

Signal : FID1A.ch

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3.251 | 3.204 | 3.355 | BV | 295661 | 2506440 | 39.15% | 1.621% |
| 2 | 3.373 | 3.355 | 3.415 | VV | 250 | 5980 | 0.09% | 0.004% |
| 3 | 3.451 | 3.415 | 3.474 | VV | 253 | 4729 | 0.07% | 0.003% |
| 4 | 3.513 | 3.474 | 3.541 | VV | 365 | 8476 | 0.13% | 0.005% |
| 5 | 3.560 | 3.541 | 3.594 | VV | 309 | 7383 | 0.12% | 0.005% |
| 6 | 3.622 | 3.594 | 3.701 | VV | 380 | 14070 | 0.22% | 0.009% |
| 7 | 3.708 | 3.701 | 3.721 | VV | 216 | 2092 | 0.03% | 0.001% |
| 8 | 3.743 | 3.721 | 3.804 | VV | 574 | 15973 | 0.25% | 0.010% |
| 9 | 3.831 | 3.804 | 3.871 | VV | 784 | 19041 | 0.30% | 0.012% |
| 10 | 3.878 | 3.871 | 3.886 | VV | 440 | 3742 | 0.06% | 0.002% |
| 11 | 3.917 | 3.886 | 3.928 | VV | 837 | 15032 | 0.23% | 0.010% |
| 12 | 3.944 | 3.928 | 3.986 | VV | 1086 | 24332 | 0.38% | 0.016% |
| 13 | 4.008 | 3.986 | 4.038 | VV | 792 | 18058 | 0.28% | 0.012% |
| 14 | 4.078 | 4.038 | 4.104 | VV | 1389 | 32075 | 0.50% | 0.021% |
| 15 | 4.115 | 4.104 | 4.162 | VV | 773 | 22411 | 0.35% | 0.014% |
| 16 | 4.175 | 4.162 | 4.194 | VV | 651 | 12038 | 0.19% | 0.008% |
| 17 | 4.200 | 4.194 | 4.238 | VV | 701 | 16777 | 0.26% | 0.011% |
| 18 | 4.248 | 4.238 | 4.271 | VV | 765 | 13782 | 0.22% | 0.009% |
| 19 | 4.313 | 4.271 | 4.342 | VV | 344810 | 3192483 | 49.87% | 2.065% |
| 20 | 4.353 | 4.342 | 4.394 | VV | 3081 | 53812 | 0.84% | 0.035% |
| 21 | 4.410 | 4.394 | 4.443 | VV | 1340 | 24689 | 0.39% | 0.016% |
| 22 | 4.479 | 4.443 | 4.523 | VV | 964 | 29654 | 0.46% | 0.019% |
| 23 | 4.535 | 4.523 | 4.550 | VV | 721 | 8907 | 0.14% | 0.006% |
| 24 | 4.567 | 4.550 | 4.611 | VV | 1108 | 16878 | 0.26% | 0.011% |
| 25 | 4.632 | 4.611 | 4.661 | VV | 313 | 6539 | 0.10% | 0.004% |
| 26 | 4.666 | 4.661 | 4.679 | VV | 262 | 2067 | 0.03% | 0.001% |
| 27 | 4.689 | 4.679 | 4.721 | VV | 283 | 4704 | 0.07% | 0.003% |
| 28 | 4.731 | 4.721 | 4.745 | VV | 262 | 2531 | 0.04% | 0.002% |
| 29 | 4.763 | 4.745 | 4.811 | VV | 225 | 4974 | 0.08% | 0.003% |
| 30 | 4.839 | 4.811 | 4.850 | PV | 195 | 1681 | 0.03% | 0.001% |
| 31 | 4.864 | 4.850 | 4.885 | VV | 158 | 1709 | 0.03% | 0.001% |
| 32 | 4.945 | 4.885 | 4.975 | PV | 1980 | 25214 | 0.39% | 0.016% |
| 33 | 5.000 | 4.975 | 5.015 | VV | 409 | 5084 | 0.08% | 0.003% |
| 34 | 5.031 | 5.015 | 5.098 | VV | 458 | 10785 | 0.17% | 0.007% |
| 35 | 5.114 | 5.098 | 5.127 | VV | 194 | 2509 | 0.04% | 0.002% |
| 36 | 5.168 | 5.127 | 5.201 | VV | 414 | 9817 | 0.15% | 0.006% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

| | | | | | rteres | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 5.231 | 5.201 | 5.284 | VV | 308 | 10459 | 0.16% | 0.007% |
| 38 | 5.308 | 5.284 | 5.326 | VV | 297 | 5902 | | |
| 39 | 5.347 | 5.326 | 5.367 | VV | 1706 | 20390 | | |
| 40 | 5.385 | 5.367 | 5.413 | VV | 1009 | 16043 | | |
| 41 | 5.447 | 5.413 | 5.486 | VV | 488 | 17129 | | |
| 42 | 5.527 | 5.486 | 5.574 | VV | 954 | 32490 | | |
| 43 | 5.586 | 5.574 | 5.611 | VV | 491 | 9150 | 0.14% | 0.006% |
| 44 | 5.626 | 5.611 | 5.662 | VV | 421 | 11081 | 0.17% | 0.007% |
| 45 | 5.680 | 5.662 | 5.731 | VV | 392 | 10935 | 0.17% | 0.007% |
| 46 | 5.812 | 5.731 | 5.828 | VV | 374 | 14909 | 0.23% | 0.010% |
| 47 | 5.852 | 5.828 | 5.868 | VV | 449 | 8395 | 0.13% | 0.005% |
| 48 | 5.894 | 5.868 | 5.923 | VV | 1035 | 19614 | 0.31% | 0.013% |
| 49 | 5.944 | 5.923 | 5.968 | VV | 575 | 12417 | 0.19% | 0.008% |
| 50 | 5.987 | 5.968 | 6.018 | VV | 929 | 16620 | 0.26% | 0.011% |
| 51 | 6.048 | 6.018 | 6.090 | VV | 766 | 19263 | 0.30% | 0.012% |
| 52 | 6.100 | 6.090 | 6.158 | VV | 256 | 7762 | 0.12% | 0.005% |
| 53 | 6.174 | 6.158 | 6.194 | VV | 359 | 4482 | 0.07% | 0.003% |
| 54 | 6.217 | 6.194 | 6.235 | VV | 275 | 4355 | 0.07% | 0.003% |
| 55 | 6.251 | 6.235 | 6.285 | VV | 208 | 3616 | 0.06% | 0.002% |
| 56 | 6.329 | 6.285 | 6.392 | PV | 375088 | 3803168 | 59.41% | 2.460% |
| 57 | 6.408 | 6.392 | 6.428 | VV | 630 | 11055 | 0.17% | 0.007% |
| 58 | 6.445 | 6.428 | 6.458 | VV | 567 | 8155 | 0.13% | 0.005% |
| 59 | 6.476 | 6.458 | 6.498 | VV | 925 | 13004 | 0.20% | 0.008% |
| 60 | 6.512 | 6.498 | 6.538 | VV | 424 | 6501 | 0.10% | 0.004% |
| 61 | 6.548 | 6.538 | 6.563 | VV | 388 | 4520 | 0.07% | 0.003% |
| 62 | 6.580 | 6.563 | 6.623 | VV | 337 | 8809 | 0.14% | 0.006% |
| 63 | 6.645 | 6.623 | 6.663 | VV | 337 | 6176 | 0.10% | 0.004% |
| 64 | 6.682 | 6.663 | 6.692 | VV | 287 | 4115 | 0.06% | 0.003% |
| 65 | 6.699 | 6.692 | 6.705 | VV | 237 | 1500 | 0.02% | 0.001% |
| 66 | 6.718 | 6.705 | 6.750 | VV | 325 | 6125 | 0.10% | 0.004% |
| 67 | 6.770 | 6.750 | 6.788 | VV | 545 | 8196 | 0.13% | 0.005% |
| 68 | 6.881 | 6.788 | 6.913 | VV | 1239 | 60183 | 0.94% | 0.039% |
| 69 | 6.948 | 6.913 | 7.011 | VV | 1123 | 32608 | 0.51% | 0.021% |
| 70 | 7.029 | 7.011 | 7.078 | VV | 444 | 10904 | 0.17% | 0.007% |
| 71 | 7.085 | 7.078 | 7.090 | VV | 179 | 1153 | 0.02% | 0.001% |
| 72 | 7.111 | 7.090 | 7.195 | VV | 1398 | 27830 | 0.43% | 0.018% |
| 73 | 7.251 | 7.195 | 7.278 | VV | 2394 | 33667 | 0.53% | 0.022% |
| 74 | 7.314 | 7.278 | 7.327 | VV | 345 | 5791 | 0.09% | 0.004% |
| 75 | 7.341 | 7.327 | 7.357 | VV | 308 | 2935 | 0.05% | 0.002% |
| 76 | 7.370 | 7.357 | 7.393 | VV | 184 | 2416 | 0.04% | 0.002% |
| 77 | 7.412 | 7.393 | 7.421 | PV | 184 | 2193 | 0.03% | 0.001% |
| 78 | 7.429 | 7.421 | 7.444 | VV | 179 | 1677 | 0.03% | 0.001% |
| 79 | 7.458 | 7.444 | 7.479 | VV | 103 | 1027 | 0.02% | 0.001% |
| 80 | 7.511 | 7.479 | 7.540 | VV | 483 | 6829 | 0.11% | 0.004% |
| 81 | 7.558 | 7.540 | 7.568 | VV | 119 | 1368 | 0.02% | 0.001% |
| 82 | 7.607 | 7.568 | 7.634 | VV | 227 | 6608 | 0.10% | 0.004% |
| 83 | 7.668 | 7.634 | 7.698 | VV | 756 | 15590 | 0.24% | 0.010% |
| 84 | 7.707 | 7.698 | 7.754 | VV | 247 | 5313 | 0.08% | 0.003% |
| 85 | 7.771 | 7.754 | 7.791 | PV | 240 | 3457 | 0.05% | 0.002% |
| 86 | 7.816 | 7.791 | 7.838 | VV | 1089 | 13002 | 0.20% | 0.008% |
| 87 | 7.873 | 7.838 | 7.901 | PV | 1977 | 24314 | 0.38% | 0.016% |
| 88 | 7.914 | 7.901 | 7.929 | VV | 140 | 1407 | 0.02% | 0.001% |
| 89 | 7.946 | 7.929 | 7.955 | PV | 199 | 2146 | 0.03% | 0.001% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

rteres

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|---|---|---|---|---|---|---|---|---|
| 90 | 8.026 | 7.955 | 8.074 | VV | 1079 | 27588 | 0.43% | 0.018% |
| 91 | 8.122 | 8.074 | 8.201 | VV | 391781 | 4223758 | 65 | |
| 92 | 8.259 | 8.201 | 8.293 | VV | 1580 | 55739 | | |
| 93 | 8.310 | 8.293 | 8.332 | VV | 1287 | 17309 | | |
| 94 | 8.350 | 8.332 | 8.368 | VV | 425 | 6460 | | |
| 95 | 8.380 | 8.368 | 8.404 | VV | 409 | 7097 | | |
| 96 | 8.424 | 8.404 | 8.457 | VV | 3444 | 47964 | 0.75% | 0.031% |
| 97 | 8.478 | 8.457 | 8.497 | VV | 722 | 14720 | 0.23% | 0.010% |
| 98 | 8.509 | 8.497 | 8.558 | VV | 761 | 15987 | 0.25% | 0.010% |
| 99 | 8.584 | 8.558 | 8.597 | VV | 679 | 10524 | 0.16% | 0.007% |
| 100 | 8.638 | 8.597 | 8.693 | VV | 1267 | 40959 | 0.64% | 0.026% |
| 101 | 8.708 | 8.693 | 8.718 | PV | 236 | 2180 | 0.03% | 0.001% |
| 102 | 8.738 | 8.718 | 8.758 | VV | 374 | 5041 | 0.08% | 0.003% |
| 103 | 8.769 | 8.758 | 8.783 | VV | 390 | 3547 | 0.06% | 0.002% |
| 104 | 8.811 | 8.783 | 8.823 | VV | 502 | 6916 | 0.11% | 0.004% |
| 105 | 8.841 | 8.823 | 8.853 | VV | 961 | 11763 | 0.18% | 0.008% |
| 106 | 8.873 | 8.853 | 8.889 | VV | 1060 | 18136 | 0.28% | 0.012% |
| 107 | 8.903 | 8.889 | 8.921 | VV | 812 | 13506 | 0.21% | 0.009% |
| 108 | 8.949 | 8.921 | 8.981 | VV | 1447 | 34381 | 0.54% | 0.022% |
| 109 | 9.001 | 8.981 | 9.050 | VV | 568 | 16325 | 0.25% | 0.011% |
| 110 | 9.072 | 9.050 | 9.091 | PV | 410 | 5154 | 0.08% | 0.003% |
| 111 | 9.128 | 9.091 | 9.154 | VV | 1387 | 26377 | 0.41% | 0.017% |
| 112 | 9.182 | 9.154 | 9.191 | VV | 424 | 7659 | 0.12% | 0.005% |
| 113 | 9.199 | 9.191 | 9.214 | VV | 390 | 3596 | 0.06% | 0.002% |
| 114 | 9.242 | 9.214 | 9.254 | VV | 763 | 11058 | 0.17% | 0.007% |
| 115 | 9.272 | 9.254 | 9.291 | VV | 644 | 10888 | 0.17% | 0.007% |
| 116 | 9.317 | 9.291 | 9.342 | VV | 1326 | 25781 | 0.40% | 0.017% |
| 117 | 9.360 | 9.342 | 9.382 | VV | 827 | 12849 | 0.20% | 0.008% |
| 118 | 9.409 | 9.382 | 9.424 | VV | 948 | 14696 | 0.23% | 0.010% |
| 119 | 9.460 | 9.424 | 9.481 | VV | 1104 | 30847 | 0.48% | 0.020% |
| 120 | 9.499 | 9.481 | 9.518 | VV | 3045 | 39651 | 0.62% | 0.026% |
| 121 | 9.529 | 9.518 | 9.554 | VV | 869 | 15989 | 0.25% | 0.010% |
| 122 | 9.591 | 9.554 | 9.623 | VV | 1324 | 34223 | 0.53% | 0.022% |
| 123 | 9.656 | 9.623 | 9.672 | VV | 1262 | 27315 | 0.43% | 0.018% |
| 124 | 9.721 | 9.672 | 9.774 | VV | 383245 | 4421073 | 69.06% | 2.860% |
| 125 | 9.788 | 9.774 | 9.808 | VV | 1617 | 28287 | 0.44% | 0.018% |
| 126 | 9.828 | 9.808 | 9.851 | VV | 1372 | 30710 | 0.48% | 0.020% |
| 127 | 9.912 | 9.851 | 9.958 | VV | 1950 | 84285 | 1.32% | 0.055% |
| 128 | 9.975 | 9.958 | 9.989 | VV | 1432 | 24309 | 0.38% | 0.016% |
| 129 | 10.005 | 9.989 | 10.018 | VV | 1428 | 23029 | 0.36% | 0.015% |
| 130 | 10.109 | 10.018 | 10.134 | VV | 2150 | 117651 | 1.84% | 0.076% |
| 131 | 10.147 | 10.134 | 10.162 | VV | 2484 | 35078 | 0.55% | 0.023% |
| 132 | 10.189 | 10.162 | 10.209 | VV | 2628 | 64418 | 1.01% | 0.042% |
| 133 | 10.217 | 10.209 | 10.234 | VV | 2273 | 32682 | 0.51% | 0.021% |
| 134 | 10.266 | 10.234 | 10.278 | VV | 2353 | 57240 | 0.89% | 0.037% |
| 135 | 10.315 | 10.278 | 10.332 | VV | 3003 | 80479 | 1.26% | 0.052% |
| 136 | 10.454 | 10.332 | 10.484 | VV | 3753 | 274522 | 4.29% | 0.178% |
| 137 | 10.533 | 10.484 | 10.552 | VV | 4011 | 141405 | 2.21% | 0.091% |
| 138 | 10.583 | 10.552 | 10.600 | VV | 4305 | 105626 | 1.65% | 0.068% |
| 139 | 10.620 | 10.600 | 10.631 | VV | 3964 | 68201 | 1.07% | 0.044% |
| 140 | 10.671 | 10.631 | 10.707 | VV | 3975 | 170278 | 2.66% | 0.110% |
| 141 | 10.736 | 10.707 | 10.754 | VV | 4049 | 107315 | 1.68% | 0.069% |

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rteres

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|---|---|---|---|---|---|---|---|---|
| 142 | 10.780 | 10.754 | 10.808 | VV | 5388 | 146875 | 2.29% | 0.095% |
| 143 | 10.834 | 10.808 | 10.861 | VV | 6008 | 158734 | 2 | |
| 144 | 10.869 | 10.861 | 10.891 | VV | 4870 | 81058 | 1 | |
| 145 | 10.911 | 10.891 | 10.927 | VV | 4660 | 95250 | 1 | |
| 146 | 10.964 | 10.927 | 11.017 | VV | 8032 | 285095 | 4 | |
| 147 | 11.054 | 11.017 | 11.066 | VV | 5090 | 141161 | 2 | |
| 148 | 11.090 | 11.066 | 11.120 | VV | 6111 | 173658 | 2.71% | 0.112% |
| 149 | 11.161 | 11.120 | 11.198 | VV | 380210 | 4670978 | 72.96% | 3.021% |
| 150 | 11.219 | 11.198 | 11.241 | VV | 7067 | 169222 | 2.64% | 0.109% |
| 151 | 11.250 | 11.241 | 11.274 | VV | 6006 | 114880 | 1.79% | 0.074% |
| 152 | 11.294 | 11.274 | 11.309 | VV | 5994 | 117895 | 1.84% | 0.076% |
| 153 | 11.353 | 11.309 | 11.380 | VV | 6233 | 247021 | 3.86% | 0.160% |
| 154 | 11.448 | 11.380 | 11.468 | VV | 6322 | 314610 | 4.91% | 0.203% |
| 155 | 11.479 | 11.468 | 11.504 | VV | 6378 | 130596 | 2.04% | 0.084% |
| 156 | 11.549 | 11.504 | 11.592 | VV | 7207 | 343283 | 5.36% | 0.222% |
| 157 | 11.611 | 11.592 | 11.624 | VV | 6559 | 126692 | 1.98% | 0.082% |
| 158 | 11.642 | 11.624 | 11.659 | VV | 7412 | 145088 | 2.27% | 0.094% |
| 159 | 11.682 | 11.659 | 11.694 | VV | 7206 | 144648 | 2.26% | 0.094% |
| 160 | 11.705 | 11.694 | 11.711 | VV | 7094 | 67451 | 1.05% | 0.044% |
| 161 | 11.718 | 11.711 | 11.743 | VV | 7116 | 132590 | 2.07% | 0.086% |
| 162 | 11.770 | 11.743 | 11.788 | VV | 8353 | 196903 | 3.08% | 0.127% |
| 163 | 11.827 | 11.788 | 11.864 | VV | 8405 | 337662 | 5.27% | 0.218% |
| 164 | 11.881 | 11.864 | 11.897 | VV | 7592 | 140377 | 2.19% | 0.091% |
| 165 | 11.924 | 11.897 | 11.937 | VV | 7400 | 166251 | 2.60% | 0.108% |
| 166 | 11.966 | 11.937 | 12.021 | VV | 7572 | 350016 | 5.47% | 0.226% |
| 167 | 12.075 | 12.021 | 12.109 | VV | 8734 | 393392 | 6.14% | 0.254% |
| 168 | 12.116 | 12.109 | 12.145 | VV | 7641 | 158445 | 2.47% | 0.102% |
| 169 | 12.158 | 12.145 | 12.167 | VV | 7251 | 92587 | 1.45% | 0.060% |
| 170 | 12.179 | 12.167 | 12.198 | VV | 7473 | 130309 | 2.04% | 0.084% |
| 171 | 12.238 | 12.198 | 12.274 | VV | 7972 | 338981 | 5.29% | 0.219% |
| 172 | 12.291 | 12.274 | 12.314 | VV | 8325 | 180462 | 2.82% | 0.117% |
| 173 | 12.329 | 12.314 | 12.361 | VV | 7456 | 191755 | 3.00% | 0.124% |
| 174 | 12.408 | 12.361 | 12.427 | VV | 7536 | 272773 | 4.26% | 0.176% |
| 175 | 12.469 | 12.427 | 12.554 | VV | 364823 | 4877934 | 76.19% | 3.155% |
| 176 | 12.586 | 12.554 | 12.654 | VV | 6972 | 379884 | 5.93% | 0.246% |
| 177 | 12.669 | 12.654 | 12.687 | VV | 5842 | 108922 | 1.70% | 0.070% |
| 178 | 12.722 | 12.687 | 12.744 | VV | 6531 | 203746 | 3.18% | 0.132% |
| 179 | 12.754 | 12.744 | 12.768 | VV | 5758 | 78175 | 1.22% | 0.051% |
| 180 | 12.800 | 12.768 | 12.811 | VV | 5751 | 138369 | 2.16% | 0.090% |
| 181 | 12.830 | 12.811 | 12.844 | VV | 6036 | 112820 | 1.76% | 0.073% |
| 182 | 12.913 | 12.844 | 12.972 | VV | 505091 | 6237531 | 97.43% | 4.035% |
| 183 | 13.005 | 12.972 | 13.031 | VV | 6866 | 210157 | 3.28% | 0.136% |
| 184 | 13.081 | 13.031 | 13.204 | VV | 345026 | 4676394 | 73.05% | 3.025% |
| 185 | 13.236 | 13.204 | 13.269 | VV | 4906 | 173135 | 2.70% | 0.112% |
| 186 | 13.282 | 13.269 | 13.311 | VV | 4324 | 103165 | 1.61% | 0.067% |
| 187 | 13.332 | 13.311 | 13.367 | VV | 5174 | 153492 | 2.40% | 0.099% |
| 188 | 13.380 | 13.367 | 13.423 | VV | 5146 | 143608 | 2.24% | 0.093% |
| 189 | 13.467 | 13.423 | 13.478 | VV | 4202 | 124416 | 1.94% | 0.080% |
| 190 | 13.504 | 13.478 | 13.548 | VV | 4376 | 159462 | 2.49% | 0.103% |
| 191 | 13.570 | 13.548 | 13.581 | VV | 3292 | 64128 | 1.00% | 0.041% |
| 192 | 13.609 | 13.581 | 13.628 | VV | 4579 | 105838 | 1.65% | 0.068% |
| 193 | 13.666 | 13.628 | 13.744 | VV | 335434 | 4338681 | 67.77% | 2.806% |
| 194 | 13.762 | 13.744 | 13.799 | VV | 3069 | 92058 | 1.44% | 0.060% |

**Instrument :**
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rteres

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|---|---|---|---|---|---|---|---|---|
| 195 | 13.823 | 13.799 | 13.844 | VV | 3539 | 78572 | 1.23% | 0.051% |
| 196 | 13.869 | 13.844 | 13.902 | VV | 4590 | 111887 | | |
| 197 | 13.925 | 13.902 | 13.941 | VV | 2751 | 53432 | | |
| 198 | 13.967 | 13.941 | 13.989 | VV | 2767 | 67695 | | |
| 199 | 14.014 | 13.989 | 14.024 | VV | 2715 | 48354 | | |
| 200 | 14.041 | 14.024 | 14.052 | VV | 2489 | 39507 | | |
| 201 | 14.066 | 14.052 | 14.081 | VV | 2899 | 45178 | 0.71% | 0.029% |
| 202 | 14.104 | 14.081 | 14.144 | VV | 4623 | 122464 | 1.91% | 0.079% |
| 203 | 14.161 | 14.144 | 14.201 | VV | 3174 | 72517 | 1.13% | 0.047% |
| 204 | 14.224 | 14.201 | 14.247 | VV | 2898 | 57062 | 0.89% | 0.037% |
| 205 | 14.280 | 14.247 | 14.294 | VV | 2260 | 57020 | 0.89% | 0.037% |
| 206 | 14.335 | 14.294 | 14.367 | VV | 2831 | 94011 | 1.47% | 0.061% |
| 207 | 14.392 | 14.367 | 14.441 | VV | 2179 | 73654 | 1.15% | 0.048% |
| 208 | 14.470 | 14.441 | 14.518 | VV | 3697 | 100829 | 1.57% | 0.065% |
| 209 | 14.529 | 14.518 | 14.538 | VV | 1862 | 18437 | 0.29% | 0.012% |
| 210 | 14.540 | 14.538 | 14.548 | VV | 1778 | 9199 | 0.14% | 0.006% |
| 211 | 14.565 | 14.548 | 14.581 | VV | 1901 | 30840 | 0.48% | 0.020% |
| 212 | 14.619 | 14.581 | 14.640 | VV | 2115 | 62316 | 0.97% | 0.040% |
| 213 | 14.689 | 14.640 | 14.728 | VV | 2355 | 90368 | 1.41% | 0.058% |
| 214 | 14.768 | 14.728 | 14.844 | VV | 296736 | 4068078 | 63.54% | 2.631% |
| 215 | 14.852 | 14.844 | 14.857 | VV | 1304 | 8266 | 0.13% | 0.005% |
| 216 | 14.865 | 14.857 | 14.872 | VV | 1663 | 12107 | 0.19% | 0.008% |
| 217 | 14.890 | 14.872 | 14.910 | VV | 2075 | 30793 | 0.48% | 0.020% |
| 218 | 14.922 | 14.910 | 14.964 | VV | 1311 | 28487 | 0.44% | 0.018% |
| 219 | 14.991 | 14.964 | 15.034 | VV | 963 | 26571 | 0.42% | 0.017% |
| 220 | 15.071 | 15.034 | 15.151 | VV | 1487 | 65543 | 1.02% | 0.042% |
| 221 | 15.178 | 15.151 | 15.187 | PV | 1204 | 15770 | 0.25% | 0.010% |
| 222 | 15.201 | 15.187 | 15.211 | VV | 1195 | 15711 | 0.25% | 0.010% |
| 223 | 15.224 | 15.211 | 15.253 | VV | 1484 | 19097 | 0.30% | 0.012% |
| 224 | 15.286 | 15.253 | 15.338 | VV | 1928 | 39094 | 0.61% | 0.025% |
| 225 | 15.348 | 15.338 | 15.364 | VV | 717 | 4874 | 0.08% | 0.003% |
| 226 | 15.465 | 15.364 | 15.477 | VV | 946 | 31406 | 0.49% | 0.020% |
| 227 | 15.500 | 15.477 | 15.518 | VV | 2722 | 46179 | 0.72% | 0.030% |
| 228 | 15.534 | 15.518 | 15.557 | VV | 1886 | 27455 | 0.43% | 0.018% |
| 229 | 15.596 | 15.557 | 15.621 | VV | 2049 | 52925 | 0.83% | 0.034% |
| 230 | 15.668 | 15.621 | 15.717 | VV | 2270 | 91952 | 1.44% | 0.059% |
| 231 | 15.788 | 15.717 | 15.838 | VV | 286911 | 3965341 | 61.94% | 2.565% |
| 232 | 15.846 | 15.838 | 15.850 | VV | 2074 | 13062 | 0.20% | 0.008% |
| 233 | 15.872 | 15.850 | 15.898 | VV | 2445 | 63167 | 0.99% | 0.041% |
| 234 | 15.921 | 15.898 | 15.960 | VV | 2913 | 100825 | 1.57% | 0.065% |
| 235 | 15.985 | 15.960 | 16.027 | VV | 4643 | 129817 | 2.03% | 0.084% |
| 236 | 16.072 | 16.027 | 16.088 | VV | 3835 | 116680 | 1.82% | 0.075% |
| 237 | 16.121 | 16.088 | 16.154 | VV | 5077 | 154409 | 2.41% | 0.100% |
| 238 | 16.162 | 16.154 | 16.182 | VV | 4151 | 62469 | 0.98% | 0.040% |
| 239 | 16.202 | 16.182 | 16.210 | VV | 4155 | 62303 | 0.97% | 0.040% |
| 240 | 16.270 | 16.210 | 16.298 | VV | 6969 | 263975 | 4.12% | 0.171% |
| 241 | 16.389 | 16.298 | 16.451 | VV | 7275 | 559415 | 8.74% | 0.362% |
| 242 | 16.493 | 16.451 | 16.512 | VV | 8299 | 274528 | 4.29% | 0.178% |
| 243 | 16.536 | 16.512 | 16.558 | VV | 8524 | 207268 | 3.24% | 0.134% |
| 244 | 16.622 | 16.558 | 16.641 | VV | 8694 | 408278 | 6.38% | 0.264% |
| 245 | 16.737 | 16.641 | 16.781 | VV | 286983 | 4653723 | 72.69% | 3.010% |
| 246 | 16.843 | 16.781 | 16.880 | VV | 13283 | 698812 | 10.92% | 0.452% |

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|---|---|---|---|---|---|---|---|---|
| 247 | 16.927 | 16.880 | 16.944 | VV | 15461 | 528586 | 8.26% | 0.342% |
| 248 | 16.967 | 16.944 | 17.003 | VV | 17414 | 539615 | 8 | |
| 249 | 17.031 | 17.003 | 17.076 | VV | 15002 | 634162 | 9 | |
| 250 | 17.123 | 17.076 | 17.146 | VV | 18183 | 688339 | 10 | |
| 251 | 17.182 | 17.146 | 17.204 | VV | 17899 | 595841 | 9 | |
| 252 | 17.214 | 17.204 | 17.232 | VV | 18261 | 283717 | 4 | |
| 253 | 17.246 | 17.232 | 17.258 | VV | 16978 | 248539 | 3.88% | 0.161% |
| 254 | 17.299 | 17.258 | 17.321 | VV | 18542 | 647640 | 10.12% | 0.419% |
| 255 | 17.346 | 17.321 | 17.359 | VV | 18009 | 388104 | 6.06% | 0.251% |
| 256 | 17.371 | 17.359 | 17.431 | VV | 17981 | 706582 | 11.04% | 0.457% |
| 257 | 17.466 | 17.431 | 17.486 | VV | 20803 | 593746 | 9.27% | 0.384% |
| 258 | 17.512 | 17.486 | 17.540 | VV | 27524 | 731825 | 11.43% | 0.473% |
| 259 | 17.557 | 17.540 | 17.568 | VV | 20727 | 333822 | 5.21% | 0.216% |
| 260 | 17.622 | 17.568 | 17.666 | VV | 285704 | 4945666 | 77.25% | 3.199% |
| 261 | 17.685 | 17.666 | 17.708 | VV | 22481 | 542318 | 8.47% | 0.351% |
| 262 | 17.790 | 17.708 | 17.837 | VV | 32410 | 2118818 | 33.10% | 1.371% |
| 263 | 17.850 | 17.837 | 17.874 | VV | 27072 | 553847 | 8.65% | 0.358% |
| 264 | 17.932 | 17.874 | 17.939 | VV | 25479 | 913202 | 14.26% | 0.591% |
| 265 | 17.954 | 17.939 | 18.017 | VV | 27075 | 993057 | 15.51% | 0.642% |
| 266 | 18.043 | 18.017 | 18.061 | VV | 16651 | 408938 | 6.39% | 0.265% |
| 267 | 18.118 | 18.061 | 18.141 | VV | 20462 | 816491 | 12.75% | 0.528% |
| 268 | 18.155 | 18.141 | 18.206 | VV | 18141 | 602486 | 9.41% | 0.390% |
| 269 | 18.227 | 18.206 | 18.247 | VV | 14048 | 323799 | 5.06% | 0.209% |
| 270 | 18.270 | 18.247 | 18.328 | VV | 14243 | 639733 | 9.99% | 0.414% |
| 271 | 18.339 | 18.328 | 18.394 | VV | 13171 | 487437 | 7.61% | 0.315% |
| 272 | 18.454 | 18.394 | 18.514 | VV | 261988 | 4451596 | 69.53% | 2.879% |
| 273 | 18.540 | 18.514 | 18.561 | VV | 14872 | 365238 | 5.71% | 0.236% |
| 274 | 18.585 | 18.561 | 18.608 | VV | 14124 | 366943 | 5.73% | 0.237% |
| 275 | 18.616 | 18.608 | 18.658 | VV | 13796 | 367986 | 5.75% | 0.238% |
| 276 | 18.679 | 18.658 | 18.705 | VV | 12045 | 323953 | 5.06% | 0.210% |
| 277 | 18.717 | 18.705 | 18.743 | VV | 11992 | 259203 | 4.05% | 0.168% |
| 278 | 18.757 | 18.743 | 18.770 | VV | 11821 | 184522 | 2.88% | 0.119% |
| 279 | 18.850 | 18.770 | 18.926 | VV | 16585 | 1235795 | 19.30% | 0.799% |
| 280 | 18.939 | 18.926 | 18.988 | VV | 14096 | 484024 | 7.56% | 0.313% |
| 281 | 19.034 | 18.988 | 19.077 | VV | 13668 | 687932 | 10.75% | 0.445% |
| 282 | 19.108 | 19.077 | 19.117 | VV | 14176 | 322754 | 5.04% | 0.209% |
| 283 | 19.152 | 19.117 | 19.173 | VV | 14638 | 476179 | 7.44% | 0.308% |
| 284 | 19.237 | 19.173 | 19.298 | VV | 279894 | 4674707 | 73.02% | 3.024% |
| 285 | 19.318 | 19.298 | 19.337 | VV | 14783 | 332778 | 5.20% | 0.215% |
| 286 | 19.356 | 19.337 | 19.381 | VV | 15340 | 388788 | 6.07% | 0.251% |
| 287 | 19.402 | 19.381 | 19.421 | VV | 16318 | 364169 | 5.69% | 0.236% |
| 288 | 19.444 | 19.421 | 19.457 | VV | 17574 | 361340 | 5.64% | 0.234% |
| 289 | 19.485 | 19.457 | 19.532 | VV | 17929 | 772278 | 12.06% | 0.500% |
| 290 | 19.543 | 19.532 | 19.563 | VV | 17378 | 311390 | 4.86% | 0.201% |
| 291 | 19.611 | 19.563 | 19.644 | VV | 33224 | 1067051 | 16.67% | 0.690% |
| 292 | 19.664 | 19.644 | 19.684 | VV | 19858 | 456279 | 7.13% | 0.295% |
| 293 | 19.688 | 19.684 | 19.694 | VV | 18769 | 110314 | 1.72% | 0.071% |
| 294 | 19.799 | 19.694 | 19.884 | VV | 44567 | 3300580 | 51.56% | 2.135% |
| 295 | 19.907 | 19.884 | 19.918 | VV | 23165 | 457688 | 7.15% | 0.296% |
| 296 | 19.978 | 19.918 | 20.015 | VV | 261475 | 5039993 | 78.72% | 3.260% |
| 297 | 20.033 | 20.015 | 20.064 | VV | 26851 | 722963 | 11.29% | 0.468% |
| 298 | 20.079 | 20.064 | 20.091 | VV | 23071 | 350986 | 5.48% | 0.227% |
| 299 | 20.189 | 20.091 | 20.207 | VV | 27970 | 1729578 | 27.02% | 1.119% |

**Instrument :**
FID_C
**ClientSampleId :**
UST-1MSD

**Manual IntegrationsAPPROVED**

Reviewed By :Yogesh Patel 12/12/2024
Supervised By :Ankita Jodhani 12/12/2024

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 300 | 20.225 | 20.207 | 20.241 | VV | 28268 | 573955 | 8.97% | 0.371% |
| 301 | 20.249 | 20.241 | 20.271 | VV | 29196 | 507365 | 7 | |
| 302 | 20.281 | 20.271 | 20.293 | VV | 28328 | 364193 | 5 | |
| 303 | 20.329 | 20.293 | 20.383 | VV | 65259 | 2045978 | 31 | |
| 304 | 20.459 | 20.383 | 20.469 | VV | 31368 | 1531138 | 23 | |
| 305 | 20.502 | 20.469 | 20.548 | VV | 32213 | 1430600 | 22 | |
| 306 | 20.599 | 20.548 | 20.640 | VV | 31125 | 1650835 | 25.79% | 1.068% |
| 307 | 20.699 | 20.640 | 20.741 | VV | 278069 | 5915290 | 92.40% | 3.826% |
| 308 | 20.750 | 20.741 | 20.768 | VV | 30998 | 485027 | 7.58% | 0.314% |
| 309 | 20.778 | 20.768 | 20.800 | VV | 30927 | 579277 | 9.05% | 0.375% |
| 310 | 20.860 | 20.800 | 20.989 | VV | 40978 | 3479663 | 54.35% | 2.251% |
| 311 | 21.027 | 20.989 | 21.038 | VV | 25796 | 737545 | 11.52% | 0.477% |
| 312 | 21.107 | 21.038 | 21.208 | VV | 76512 | 3254527 | 50.84% | 2.105% |
| 313 | 21.255 | 21.208 | 21.284 | VV | 19701 | 866571 | 13.54% | 0.561% |
| 314 | 21.306 | 21.284 | 21.338 | VV | 19917 | 621866 | 9.71% | 0.402% |
| 315 | 21.399 | 21.338 | 21.431 | VV | 21224 | 1095196 | 17.11% | 0.708% |
| 316 | 21.452 | 21.431 | 21.503 | VV | 18974 | 788321 | 12.31% | 0.510% |
| 317 | 21.579 | 21.503 | 21.701 | VBA | 202532 | 6402048 | 100.00% | 4.141% |

Sum of corrected areas: 154600835

Aliphatic EPH 121024.M Thu Dec 12 04:04:39 2024

Alliance TECHNICAL GROUP
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# Manual Integration Report

| Sequence: | FC121024AL | Instrument | FID_c |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| 20 PPM ALIPHATIC HC | FC067971.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:30 AM | Ankita | 12/11/2024 9:05:13 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067971.D | n-Tetracontane (C40) | yogesh | 12/11/2024 8:10:30 AM | Ankita | 12/11/2024 9:05:13 | Peak Integrated by Software |
| PB165523BS | FC067973.D | 1-chlorooctadecane (SURR) | yogesh | 12/11/2024 8:10:31 AM | Ankita | 12/11/2024 9:05:25 | Peak Integrated by Software |
| PB165523BS | FC067973.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:31 AM | Ankita | 12/11/2024 9:05:25 | Peak Integrated by Software |
| PB165523BS | FC067973.D | n-Hexatriacontane (C36) | yogesh | 12/11/2024 8:10:31 AM | Ankita | 12/11/2024 9:05:25 | Peak Integrated by Software |
| PB165523BS | FC067973.D | n-Tetracosane (C24) | yogesh | 12/11/2024 8:10:31 AM | Ankita | 12/11/2024 9:05:25 | Peak Integrated by Software |
| PB165523BSD | FC067974.D | 1-chlorooctadecane (SURR) | yogesh | 12/11/2024 8:10:33 AM | Ankita | 12/11/2024 9:05:15 | Peak Integrated by Software |
| PB165523BSD | FC067974.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:33 AM | Ankita | 12/11/2024 9:05:15 | Peak Integrated by Software |
| PB165523BSD | FC067974.D | n-Tetracosane (C24) | yogesh | 12/11/2024 8:10:33 AM | Ankita | 12/11/2024 9:05:15 | Peak Integrated by Software |
| P5216-09MS | FC067977.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:34 AM | Ankita | 12/11/2024 9:05:17 | Peak Integrated by Software |
| P5216-09MS | FC067977.D | n-Octacosane (C28) | yogesh | 12/11/2024 8:10:34 AM | Ankita | 12/11/2024 9:05:17 | Peak Integrated by Software |
| P5216-09MS | FC067977.D | n-Tetracosane (C24) | yogesh | 12/11/2024 8:10:34 AM | Ankita | 12/11/2024 9:05:17 | Peak Integrated by Software |
| P5216-09MSD | FC067978.D | 1-chlorooctadecane (SURR) | yogesh | 12/11/2024 8:10:35 AM | Ankita | 12/11/2024 9:05:18 | Peak Integrated by Software |

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# Manual Integration Report

| Sequence: | FC121024AL | Instrument | FID_c |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| P5216-09MSD | FC067978.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:35 AM | Ankita | 12/11/2024 9:05:18 | Peak Integrated by Software |
| P5216-09MSD | FC067978.D | n-Octacosane (C28) | yogesh | 12/11/2024 8:10:35 AM | Ankita | 12/11/2024 9:05:18 | Peak Integrated by Software |
| P5216-09MSD | FC067978.D | n-Tetracosane (C24) | yogesh | 12/11/2024 8:10:35 AM | Ankita | 12/11/2024 9:05:18 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067980.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/11/2024 8:10:37 AM | Ankita | 12/11/2024 9:05:19 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067980.D | n-Tetracontane (C40) | yogesh | 12/11/2024 8:10:37 AM | Ankita | 12/11/2024 9:05:19 | Peak Integrated by Software |

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# Manual Integration Report

| Sequence: | FC121124AL | Instrument | FID_c |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| 20 PPM ALIPHATIC HC | FC067983.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/12/2024 8:48:50 AM | Ankita | 12/12/2024 10:47:34 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067983.D | n-Octatriacontane (C38) | yogesh | 12/12/2024 8:48:50 AM | Ankita | 12/12/2024 10:47:34 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067983.D | n-Tetracontane (C40) | yogesh | 12/12/2024 8:48:50 AM | Ankita | 12/12/2024 10:47:34 | Peak Integrated by Software |
| P5194-01MS | FC067989.D | n-Decane (C10) | yogesh | 12/12/2024 8:48:52 AM | Ankita | 12/12/2024 10:47:36 | Peak Integrated by Software |
| P5194-01MSD | FC067990.D | n-Decane (C10) | yogesh | 12/12/2024 8:48:53 AM | Ankita | 12/12/2024 10:47:37 | Peak Integrated by Software |
| P5194-01MSD | FC067990.D | n-Octatriacontane (C38) | yogesh | 12/12/2024 8:48:53 AM | Ankita | 12/12/2024 10:47:37 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067993.D | A~2-methylnaphthalene (C12.89) | yogesh | 12/12/2024 8:48:55 AM | Ankita | 12/12/2024 10:47:39 | Peak Integrated by Software |
| 20 PPM ALIPHATIC HC | FC067993.D | n-Tetracontane (C40) | yogesh | 12/12/2024 8:48:55 AM | Ankita | 12/12/2024 10:47:39 | Peak Integrated by Software |

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# Manual Integration Report

| Sequence: | FD121024AR | Instrument | FID_d |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| 100 PPM AROMATIC HC | FD048862.D | Bnezo[k]fluoranthene (C30.14) | yogesh | 12/10/2024 8:36:02 AM | Ankita | 12/10/2024 10:25:17 | Peak Integrated by Software |
| 10 PPM AROMATIC HC | FD048865.D | Naphthalene (C11.7) | yogesh | 12/10/2024 8:36:04 AM | Ankita | 12/10/2024 10:25:18 | Peak Integrated by Software |
| 5 PPM AROMATIC HC | FD048866.D | Dibenz[a,h]anthracene (C30.36) | yogesh | 12/10/2024 8:36:05 AM | Ankita | 12/10/2024 10:25:20 | Peak Integrated by Software |
| 5 PPM AROMATIC HC | FD048866.D | Naphthalene (C11.7) | yogesh | 12/10/2024 8:36:05 AM | Ankita | 12/10/2024 10:25:20 | Peak Integrated by Software |
| 20 PPM AROMATIC HC | FD048867.D | benzo[b]fluoranthene (C30.41) | yogesh | 12/10/2024 8:36:07 AM | Ankita | 12/10/2024 10:25:22 | Peak Integrated by Software |
| 20 PPM AROMATIC HC | FD048867.D | Bnezo[k]fluoranthene (C30.14) | yogesh | 12/10/2024 8:36:07 AM | Ankita | 12/10/2024 10:25:22 | Peak Integrated by Software |

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# Manual Integration Report

| Sequence: | FD121124AR | Instrument | FID_d |
|---|---|---|---|

| Sample ID | File ID | Parameter | Review By | Review On | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| PB165557BS | FD048874.D | 1,2,3-Trimethylbenzene (C10.1) | yogesh | 12/12/2024 8:49:08 AM | Ankita | 12/12/2024 10:47:53 | Peak Integrated by Software |
| PB165557BS | FD048874.D | Fluoranthene (C21.85) | yogesh | 12/12/2024 8:49:08 AM | Ankita | 12/12/2024 10:47:53 | Peak Integrated by Software |
| PB165557BSD | FD048875.D | Fluoranthene (C21.85) | yogesh | 12/12/2024 8:49:10 AM | Ankita | 12/12/2024 10:47:54 | Peak Integrated by Software |
| P5194-01MS | FD048878.D | Benzo[a]pyrene (C31.34) | yogesh | 12/12/2024 8:49:11 AM | Ankita | 12/12/2024 10:47:55 | Peak Integrated by Software |
| P5194-01MS | FD048878.D | Fluoranthene (C21.85) | yogesh | 12/12/2024 8:49:11 AM | Ankita | 12/12/2024 10:47:55 | Peak Integrated by Software |
| P5194-01MSD | FD048879.D | benzo[b]fluoranthene (C30.41) | yogesh | 12/12/2024 8:49:13 AM | Ankita | 12/12/2024 10:47:58 | Peak Integrated by Software |
| P5194-01MSD | FD048879.D | Fluoranthene (C21.85) | yogesh | 12/12/2024 8:49:13 AM | Ankita | 12/12/2024 10:47:58 | Peak Integrated by Software |

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**Instrument ID: FID_C**

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121024AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:27:54 PM | | |
| Supervise By | Ankita | Supervise On | 12/11/2024 9:05:29 AM | | |
| SubDirectory | FC121024AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | MECL2 | FC067959.D | 10 Dec 2024 03:35 | YP/AJ | Ok |
| 2 | I.BLK | FC067960.D | 10 Dec 2024 04:12 | YP/AJ | Ok |
| 3 | 100 PPM ALIPHATIC HC STD1 | FC067961.D | 10 Dec 2024 04:48 | YP/AJ | Ok |
| 4 | 50 PPM ALIPHATIC HC STD2 | FC067962.D | 10 Dec 2024 05:24 | YP/AJ | Ok |
| 5 | 20 PPM ALIPHATIC HC STD3 | FC067963.D | 10 Dec 2024 06:01 | YP/AJ | Ok |
| 6 | 10 PPM ALIPHATIC HC STD4 | FC067964.D | 10 Dec 2024 06:37 | YP/AJ | Ok |
| 7 | 5 PPM ALIPHATIC HC STD5 | FC067965.D | 10 Dec 2024 07:14 | YP/AJ | Ok |
| 8 | 20 PPM ALIPHATIC HC STD ICV | FC067966.D | 10 Dec 2024 07:51 | YP/AJ | Ok |
| 9 | I.BLK | FC067967.D | 10 Dec 2024 09:03 | YP/AJ | Ok |
| 10 | 20 PPM ALIPHATIC HC STD | FC067968.D | 10 Dec 2024 09:40 | YP/AJ | Ok |
| 11 | P5145-01DL | FC067969.D | 10 Dec 2024 10:16 | YP/AJ | Ok |
| 12 | I.BLK | FC067970.D | 10 Dec 2024 11:29 | YP/AJ | Ok |
| 13 | 20 PPM ALIPHATIC HC STD | FC067971.D | 10 Dec 2024 12:59 | YP/AJ | Ok,M |
| 14 | PB165523BL | FC067972.D | 10 Dec 2024 13:36 | YP/AJ | Ok |
| 15 | PB165523BS | FC067973.D | 10 Dec 2024 14:12 | YP/AJ | Ok,M |
| 16 | PB165523BSD | FC067974.D | 10 Dec 2024 14:49 | YP/AJ | Ok,M |
| 17 | P5216-09 | FC067975.D | 10 Dec 2024 15:25 | YP/AJ | Ok |
| 18 | P5216-09D | FC067976.D | 10 Dec 2024 16:02 | YP/AJ | Ok |
| 19 | P5216-09MS | FC067977.D | 10 Dec 2024 16:38 | YP/AJ | Ok,M |
| 20 | P5216-09MSD | FC067978.D | 10 Dec 2024 17:14 | YP/AJ | Ok,M |
| 21 | I.BLK | FC067979.D | 10 Dec 2024 17:50 | YP/AJ | Ok |

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**Instrument ID: FID_C**

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121024AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:27:54 PM | | |
| Supervise By | Ankita | Supervise On | 12/11/2024 9:05:29 AM | | |
| SubDirectory | FC121024AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | |
|---|---|---|---|---|---|
| 22 | 20 PPM ALIPHATIC HC STD | FC067980.D | 10 Dec 2024 19:03 | YP/AJ | Ok,M |

M : Manual Integration

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**Instrument ID: FID_C**

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121124AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/11/2024 12:31:28 PM | | |
| Supervise By | Ankita | Supervise On | 12/12/2024 10:47:43 AM | | |
| SubDirectory | FC121124AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | MECL2 | FC067981.D | 11 Dec 2024 11:06 | YP/AJ | Ok |
| 2 | I.BLK | FC067982.D | 11 Dec 2024 11:43 | YP/AJ | Ok |
| 3 | 20 PPM ALIPHATIC HC STD | FC067983.D | 11 Dec 2024 13:37 | YP/AJ | Ok,M |
| 4 | PB165557BL | FC067984.D | 11 Dec 2024 16:23 | YP/AJ | Ok |
| 5 | PB165557BS | FC067985.D | 11 Dec 2024 20:45 | YP/AJ | Ok |
| 6 | PB165557BSD | FC067986.D | 11 Dec 2024 21:20 | YP/AJ | Ok |
| 7 | P5194-01 | FC067987.D | 11 Dec 2024 21:57 | YP/AJ | Ok |
| 8 | P5194-01D | FC067988.D | 11 Dec 2024 22:32 | YP/AJ | Ok |
| 9 | P5194-01MS | FC067989.D | 11 Dec 2024 23:09 | YP/AJ | Ok,M |
| 10 | P5194-01MSD | FC067990.D | 11 Dec 2024 23:45 | YP/AJ | Ok,M |
| 11 | P5194-02 | FC067991.D | 12 Dec 2024 00:21 | YP/AJ | Ok |
| 12 | I.BLK | FC067992.D | 12 Dec 2024 01:35 | YP/AJ | Ok |
| 13 | 20 PPM ALIPHATIC HC STD | FC067993.D | 12 Dec 2024 02:11 | YP/AJ | Ok,M |

M : Manual Integration

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**Instrument ID: FID_D**

## Daily Analysis Runlog For Sequence/QCBatch ID # FD121024AR

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:28:57 PM | | |
| Supervise By | Ankita | Supervise On | 12/10/2024 10:25:25 AM | | |
| SubDirectory | FD121024AR | HP Acquire Method | | HP Processing Method | FD121024AR |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23968,PP23970,PP23971,PP23972,PP23973 |
| CCC | PP23971 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23969,PP23974 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | MECL2 | FD048860.D | 10 Dec 2024 01:46 | YP/AJ | Ok |
| 2 | I.BLK | FD048861.D | 10 Dec 2024 02:22 | YP/AJ | Ok |
| 3 | 100 PPM AROMATIC HC STD1 | FD048862.D | 10 Dec 2024 02:58 | YP/AJ | Ok,M |
| 4 | 50 PPM AROMATIC HC STD2 | FD048863.D | 10 Dec 2024 03:35 | YP/AJ | Ok |
| 5 | 20 PPM AROMATIC HC STD3 | FD048864.D | 10 Dec 2024 04:12 | YP/AJ | Ok |
| 6 | 10 PPM AROMATIC HC STD4 | FD048865.D | 10 Dec 2024 04:48 | YP/AJ | Ok,M |
| 7 | 5 PPM AROMATIC HC STD5 | FD048866.D | 10 Dec 2024 05:24 | YP/AJ | Ok,M |
| 8 | 20 PPM AROMATIC HC STD ICV | FD048867.D | 10 Dec 2024 06:01 | YP/AJ | Ok,M |
| 9 | I.BLK | FD048868.D | 10 Dec 2024 07:14 | YP/AJ | Ok |
| 10 | 20 PPM AROMATIC HC STD | FD048869.D | 10 Dec 2024 07:51 | YP/AJ | Ok |

M : Manual Integration

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

**Instrument ID: FID_D**

## Daily Analysis Runlog For Sequence/QCBatch ID # FD121124AR

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/11/2024 12:32:31 PM | | |
| Supervise By | Ankita | Supervise On | 12/12/2024 10:48:02 AM | | |
| SubDirectory | FD121124AR | HP Acquire Method | | HP Processing Method | FD121024AR |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23968,PP23970,PP23971,PP23972,PP23973 |
| CCC | PP23971 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23969,PP23974 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | MECL2 | FD048870.D | 11 Dec 2024 11:06 | YP/AJ | Ok |
| 2 | I.BLK | FD048871.D | 11 Dec 2024 11:43 | YP/AJ | Ok |
| 3 | 20 PPM AROMATIC HC STD | FD048872.D | 11 Dec 2024 13:37 | YP/AJ | Ok |
| 4 | PB165557BL | FD048873.D | 11 Dec 2024 16:23 | YP/AJ | Ok |
| 5 | PB165557BS | FD048874.D | 11 Dec 2024 20:45 | YP/AJ | Ok,M |
| 6 | PB165557BSD | FD048875.D | 11 Dec 2024 21:20 | YP/AJ | Ok,M |
| 7 | P5194-01 | FD048876.D | 11 Dec 2024 21:57 | YP/AJ | Ok |
| 8 | P5194-01D | FD048877.D | 11 Dec 2024 22:32 | YP/AJ | Ok |
| 9 | P5194-01MS | FD048878.D | 11 Dec 2024 23:09 | YP/AJ | Ok,M |
| 10 | P5194-01MSD | FD048879.D | 11 Dec 2024 23:45 | YP/AJ | Ok,M |
| 11 | P5194-02 | FD048880.D | 12 Dec 2024 00:21 | YP/AJ | Ok |
| 12 | I.BLK | FD048881.D | 12 Dec 2024 01:35 | YP/AJ | Ok |
| 13 | 20 PPM AROMATIC HC STD | FD048882.D | 12 Dec 2024 02:11 | YP/AJ | Ok |

M : Manual Integration

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

**Instrument ID:** FID_C

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121024AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:27:54 PM | | |
| Supervise By | Ankita | Supervise On | 12/11/2024 9:05:29 AM | | |
| SubDirectory | FC121024AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | MECL2 | MECL2 | FC067959.D | 10 Dec 2024 03:35 | | YP/AJ | Ok |
| 2 | I.BLK | I.BLK | FC067960.D | 10 Dec 2024 04:12 | | YP/AJ | Ok |
| 3 | 100 PPM ALIPHATIC H | 100 PPM ALIPHATIC H | FC067961.D | 10 Dec 2024 04:48 | | YP/AJ | Ok |
| 4 | 50 PPM ALIPHATIC HC | 50 PPM ALIPHATIC HC | FC067962.D | 10 Dec 2024 05:24 | | YP/AJ | Ok |
| 5 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067963.D | 10 Dec 2024 06:01 | | YP/AJ | Ok |
| 6 | 10 PPM ALIPHATIC HC | 10 PPM ALIPHATIC HC | FC067964.D | 10 Dec 2024 06:37 | | YP/AJ | Ok |
| 7 | 5 PPM ALIPHATIC HC | 5 PPM ALIPHATIC HC | FC067965.D | 10 Dec 2024 07:14 | | YP/AJ | Ok |
| 8 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067966.D | 10 Dec 2024 07:51 | | YP/AJ | Ok |
| 9 | I.BLK | I.BLK | FC067967.D | 10 Dec 2024 09:03 | | YP/AJ | Ok |
| 10 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067968.D | 10 Dec 2024 09:40 | | YP/AJ | Ok |
| 11 | P5145-01DL | 286085DL | FC067969.D | 10 Dec 2024 10:16 | | YP/AJ | Ok |
| 12 | I.BLK | I.BLK | FC067970.D | 10 Dec 2024 11:29 | | YP/AJ | Ok |
| 13 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067971.D | 10 Dec 2024 12:59 | | YP/AJ | Ok,M |
| 14 | PB165523BL | PB165523BL | FC067972.D | 10 Dec 2024 13:36 | | YP/AJ | Ok |
| 15 | PB165523BS | PB165523BS | FC067973.D | 10 Dec 2024 14:12 | | YP/AJ | Ok,M |
| 16 | PB165523BSD | PB165523BSD | FC067974.D | 10 Dec 2024 14:49 | | YP/AJ | Ok,M |
| 17 | P5216-09 | MH-744 | FC067975.D | 10 Dec 2024 15:25 | | YP/AJ | Ok |
| 18 | P5216-09D | P5216-09D | FC067976.D | 10 Dec 2024 16:02 | | YP/AJ | Ok |

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

**Instrument ID:** FID_C

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121024AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:27:54 PM | | |
| Supervise By | Ankita | Supervise On | 12/11/2024 9:05:29 AM | | |
| SubDirectory | FC121024AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 19 | P5216-09MS | MH-744MS | FC067977.D | 10 Dec 2024 16:38 | FC067975.D | YP/AJ | Ok,M |
| 20 | P5216-09MSD | MH-744MSD | FC067978.D | 10 Dec 2024 17:14 | FC067975.D!FC067977.D | YP/AJ | Ok,M |
| 21 | I.BLK | I.BLK | FC067979.D | 10 Dec 2024 17:50 | | YP/AJ | Ok |
| 22 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067980.D | 10 Dec 2024 19:03 | | YP/AJ | Ok,M |

M : Manual Integration

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**Instrument ID:** FID_C

## Daily Analysis Runlog For Sequence/QCBatch ID # FC121124AL

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/11/2024 12:31:28 PM | | |
| Supervise By | Ankita | Supervise On | 12/12/2024 10:47:43 AM | | |
| SubDirectory | FC121124AL | HP Acquire Method | | HP Processing Method | FC121024AL |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23644,PP23646,PP23647,PP23648,PP23649 |
| CCC | PP23647 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23645,PP23650 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | MECL2 | MECL2 | FC067981.D | 11 Dec 2024 11:06 | | YP/AJ | Ok |
| 2 | I.BLK | I.BLK | FC067982.D | 11 Dec 2024 11:43 | | YP/AJ | Ok |
| 3 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067983.D | 11 Dec 2024 13:37 | | YP/AJ | Ok,M |
| 4 | PB165557BL | PB165557BL | FC067984.D | 11 Dec 2024 16:23 | | YP/AJ | Ok |
| 5 | PB165557BS | PB165557BS | FC067985.D | 11 Dec 2024 20:45 | | YP/AJ | Ok |
| 6 | PB165557BSD | PB165557BSD | FC067986.D | 11 Dec 2024 21:20 | | YP/AJ | Ok |
| 7 | P5194-01 | UST-1 | FC067987.D | 11 Dec 2024 21:57 | | YP/AJ | Ok |
| 8 | P5194-01D | P5194-01D | FC067988.D | 11 Dec 2024 22:32 | | YP/AJ | Ok |
| 9 | P5194-01MS | UST-1MS | FC067989.D | 11 Dec 2024 23:09 | FC067987.D | YP/AJ | Ok,M |
| 10 | P5194-01MSD | UST-1MSD | FC067990.D | 11 Dec 2024 23:45 | FC067987.D!FC067989.D | YP/AJ | Ok,M |
| 11 | P5194-02 | UST-2 | FC067991.D | 12 Dec 2024 00:21 | | YP/AJ | Ok |
| 12 | I.BLK | I.BLK | FC067992.D | 12 Dec 2024 01:35 | | YP/AJ | Ok |
| 13 | 20 PPM ALIPHATIC HC | 20 PPM ALIPHATIC HC | FC067993.D | 12 Dec 2024 02:11 | | YP/AJ | Ok,M |

M : Manual Integration

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Fax : 908 789 8922

**Instrument ID:** FID_D

## Daily Analysis Runlog For Sequence/QCBatch ID # FD121024AR

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/9/2024 4:28:57 PM | | |
| Supervise By | Ankita | Supervise On | 12/10/2024 10:25:25 AM | | |
| SubDirectory | FD121024AR | HP Acquire Method | | HP Processing Method | FD121024AR |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23968,PP23970,PP23971,PP23972,PP23973 |
| CCC | PP23971 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23969,PP23974 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | MECL2 | MECL2 | FD048860.D | 10 Dec 2024 01:46 | | YP/AJ | Ok |
| 2 | I.BLK | I.BLK | FD048861.D | 10 Dec 2024 02:22 | | YP/AJ | Ok |
| 3 | 100 PPM AROMATIC H | 100 PPM AROMATIC H | FD048862.D | 10 Dec 2024 02:58 | | YP/AJ | Ok,M |
| 4 | 50 PPM AROMATIC HC | 50 PPM AROMATIC HC | FD048863.D | 10 Dec 2024 03:35 | | YP/AJ | Ok |
| 5 | 20 PPM AROMATIC HC | 20 PPM AROMATIC HC | FD048864.D | 10 Dec 2024 04:12 | | YP/AJ | Ok |
| 6 | 10 PPM AROMATIC HC | 10 PPM AROMATIC HC | FD048865.D | 10 Dec 2024 04:48 | | YP/AJ | Ok,M |
| 7 | 5 PPM AROMATIC HC | 5 PPM AROMATIC HC | FD048866.D | 10 Dec 2024 05:24 | | YP/AJ | Ok,M |
| 8 | 20 PPM AROMATIC HC | 20 PPM AROMATIC HC | FD048867.D | 10 Dec 2024 06:01 | | YP/AJ | Ok,M |
| 9 | I.BLK | I.BLK | FD048868.D | 10 Dec 2024 07:14 | | YP/AJ | Ok |
| 10 | 20 PPM AROMATIC HC | 20 PPM AROMATIC HC | FD048869.D | 10 Dec 2024 07:51 | | YP/AJ | Ok |

M : Manual Integration

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

**Instrument ID:** FID_D

## Daily Analysis Runlog For Sequence/QCBatch ID # FD121124AR

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 12/11/2024 12:32:31 PM | | |
| Supervise By | Ankita | Supervise On | 12/12/2024 10:48:02 AM | | |
| SubDirectory | FD121124AR | HP Acquire Method | | HP Processing Method | FD121024AR |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP23968,PP23970,PP23971,PP23972,PP23973 |
| CCC | PP23971 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP23969,PP23974 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | MECL2 | MECL2 | FD048870.D | 11 Dec 2024 11:06 | | YP/AJ | Ok |
| 2 | I.BLK | I.BLK | FD048871.D | 11 Dec 2024 11:43 | | YP/AJ | Ok |
| 3 | 20 PPM AROMATIC HC | 20 PPM AROMATIC HC | FD048872.D | 11 Dec 2024 13:37 | | YP/AJ | Ok |
| 4 | PB165557BL | PB165557BL | FD048873.D | 11 Dec 2024 16:23 | | YP/AJ | Ok |
| 5 | PB165557BS | PB165557BS | FD048874.D | 11 Dec 2024 20:45 | | YP/AJ | Ok,M |
| 6 | PB165557BSD | PB165557BSD | FD048875.D | 11 Dec 2024 21:20 | | YP/AJ | Ok,M |
| 7 | P5194-01 | UST-1 | FD048876.D | 11 Dec 2024 21:57 | | YP/AJ | Ok |
| 8 | P5194-01D | P5194-01D | FD048877.D | 11 Dec 2024 22:32 | | YP/AJ | Ok |
| 9 | P5194-01MS | UST-1MS | FD048878.D | 11 Dec 2024 23:09 | FD048876.D | YP/AJ | Ok,M |
| 10 | P5194-01MSD | UST-1MSD | FD048879.D | 11 Dec 2024 23:45 | FD048876.D!FD048878.D | YP/AJ | Ok,M |
| 11 | P5194-02 | UST-2 | FD048880.D | 12 Dec 2024 00:21 | | YP/AJ | Ok |
| 12 | I.BLK | I.BLK | FD048881.D | 12 Dec 2024 01:35 | | YP/AJ | Ok |
| 13 | 20 PPM AROMATIC HC | 20 PPM AROMATIC HC | FD048882.D | 12 Dec 2024 02:11 | | YP/AJ | Ok |

M : Manual Integration

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 12/9/2024

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:25
**In Date:** 12/06/2024
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN#1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:22
**Out Date:** 12/07/2024
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** % SOLID- OVEN

**QC:** LB133796

| 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 |
|---|---|---|---|---|---|---|---|---|
| P5123-01 | 1439-BIDS-WHITE-WINDOW-1A-1B-1C | 1 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | caluk |
| P5123-02 | 1939-1915-BIDS-2A-2B-2C-BUILDING-CONCRETE | 2 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | caluk |
| P5159-01 | COMP-A-B | 3 | 1.15 | 8.81 | 9.96 | 6.61 | 62.0 | |
| P5159-02 | 102824-A | 4 | 1.18 | 8.81 | 9.99 | 6.29 | 58.0 | |
| P5159-03 | 102824-B | 5 | 1.14 | 8.64 | 9.78 | 7.00 | 67.8 | |
| P5162-01 | 120624-A | 6 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | wipe sample |
| P5162-02 | 120624-B | 7 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | wipe sample |
| P5162-03 | 120624-C | 8 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | wipe sample |
| P5174-01 | ROLL-OFF-COMP | 9 | 1.16 | 8.49 | 9.65 | 8.11 | 81.9 | |
| P5175-01 | OK-01-12062024 | 10 | 1.15 | 8.81 | 9.96 | 9.36 | 93.2 | |
| P5175-02 | OK-01-12062024-E2 | 11 | 1.16 | 8.47 | 9.63 | 8.88 | 91.1 | |
| P5176-01 | EO-02-12062024 | 12 | 1.15 | 8.40 | 9.55 | 8.88 | 92.0 | |
| P5176-02 | EO-02-12062024-E2 | 13 | 1.13 | 8.70 | 9.83 | 9.31 | 94.0 | |
| P5176-03 | EO-03-12062024 | 14 | 1.16 | 8.51 | 9.67 | 8.89 | 90.8 | |
| P5176-04 | EO-03-12062024-E2 | 15 | 1.13 | 8.74 | 9.87 | 8.1 | 79.7 | |
| P5193-05 | SVOC-GPC-BLANK | 16 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-06 | PEST-GPC-BLANK | 17 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-07 | PEST-GPC-BLANK-SPIKE | 18 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-08 | PCB-GPC-BLANK | 19 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-09 | PCB-GPC-BLANK-SPIKE | 20 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-10 | SVOC-GPC2-BLANK | 21 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-11 | PEST-GPC2-BLANK | 22 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-12 | PEST-GPC2-BLANK-SPIKE | 23 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-13 | PCB-GPC2-BLANK | 24 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5193-14 | PCB-GPC2-BLANK-SPIKE | 25 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| P5194-01 | UST-1 | 26 | 1.16 | 8.48 | 9.64 | 8.63 | 88.1 | |
| P5194-02 | UST-2 | 27 | 1.12 | 8.71 | 9.83 | 9.06 | 91.2 | |

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 12/9/2024

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:25
**In Date:** 12/06/2024
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN#1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:22
**Out Date:** 12/07/2024
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** % SOLID- OVEN

**QC:** LB133796

| 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 |
|---|---|---|---|---|---|---|---|---|
| P5194-03 | WP-1 | 28 | 1.18 | 8.44 | 9.62 | 9.4 | 97.4 | |
| P5194-04 | WP-2 | 29 | 1.12 | 8.54 | 9.66 | 9.17 | 94.3 | |
| P5194-05 | WP-3 | 30 | 1.17 | 8.80 | 9.97 | 9.00 | 89.0 | |
| P5194-06 | WP-4 | 31 | 1.13 | 7.67 | 8.8 | 8.6 | 97.4 | |
| P5196-01 | MH-761 | 32 | 1.15 | 8.68 | 9.83 | 8.54 | 85.1 | |
| P5196-02 | MH-761-EPH | 33 | 1.15 | 8.84 | 9.99 | 9.05 | 89.4 | |
| P5196-03 | MH-761-VOC | 34 | 1.15 | 8.84 | 9.99 | 9.11 | 90.0 | |

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

# WORKLIST(Hardcopy Internal Chain)

VB 133796

**WorkList Name :** %1-120624 **WorkList ID :** 186038 **Department :** Wet-Chemistry **Date :** 12-06-2024 08:18:25

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| P5123-01 | 1439-BIDS-WHITE-WINDOW-1. | Solid | Percent Solids | Cool 4 deg C | ATCE02 | M11 | 11/23/2024 | Chemtech -SO |
| P5123-02 | 1939-1915-BIDS-2A-2B-2C-BUI | Solid | Percent Solids | Cool 4 deg C | ATCE02 | M11 | 11/23/2024 | Chemtech -SO |
| P5159-01 | COMP-A-B | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5159-02 | 102824-A | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5159-03 | 102824-B | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5162-01 | 120624-A | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5162-02 | 120624-B | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5162-03 | 120624-C | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5174-01 | ROLL-OFF-COMP | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L61 | 12/06/2024 | Chemtech -SO |
| P5175-01 | OK-01-12062024 | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L51 | 12/06/2024 | Chemtech -SO |
| P5175-02 | OK-01-12062024-E2 | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5176-01 | EO-02-12062024 | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5176-02 | EO-02-12062024-E2 | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5176-03 | EO-03-12062024 | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5176-04 | EO-03-12062024-E2 | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5193-05 | SVOC-GPC-BLANK | Solid | Percent Solids | Cool 4 deg C | PSEG05 | L51 | 12/06/2024 | Chemtech -SO |
| P5193-06 | PEST-GPC-BLANK | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-07 | PEST-GPC-BLANK-SPIKE | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-08 | PCB-GPC-BLANK | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-09 | PCB-GPC-BLANK-SPIKE | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-10 | SVOC-GPC2-BLANK | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |

**Date/Time** 12/06/24 1625

**Raw Sample Received by:** [signature]

**Raw Sample Relinquished by:** [signature]

**Date/Time** 12-06-24 1735

**Raw Sample Received by:** [signature]

**Raw Sample Relinquished by:** [signature]

# WORKLIST(Hardcopy Internal Chain)

VB 133796

**WorkList Name :** %1-120624 **WorkList ID :** 186038 **Department :** Wet-Chemistry **Date :** 12-06-2024 08:18:25

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| P5193-11 | PEST-GPC2-BLANK | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-12 | PEST-GPC2-BLANK-SPIKE | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-13 | PCB-GPC2-BLANK | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5193-14 | PCB-GPC2-BLANK-SPIKE | Solid | Percent Solids | Cool 4 deg C | CHEM02 | M11 | 12/02/2024 | Chemtech -SO |
| P5194-01 | UST-1 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5194-02 | UST-2 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5194-03 | WP-1 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5194-04 | WP-2 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5194-05 | WP-3 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5194-06 | WP-4 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5196-01 | MH-761 | Solid | Percent Solids | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | Chemtech -SO |
| P5196-02 | MH-761-EPH | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L51 | 12/06/2024 | Chemtech -SO |
| P5196-03 | MH-761-VOC | Solid | Percent Solids | Cool 4 deg C | PSEG03 | L51 | 12/06/2024 | Chemtech -SO |

**Date/Time** 12/06/24 16:25

**Raw Sample Received by:** JB WC

**Raw Sample Relinquished by:** CSM

**Date/Time** 12/06/24 17:35

**Raw Sample Received by:** CSM

**Raw Sample Relinquished by:** JB WC

Alliance TECHNICAL GROUP

**EXTRACTION LOGPAGE**

PB165557

| | | | | | |
|---|---|---|---|---|---|
| **SOP ID:** | MNJDEP-EPH-7 | | | | |
| **Clean Up SOP #:** | N/A | | | **Extraction Start Date :** | 12/11/2024 |
| **Matrix :** | Solid | | | **Extraction Start Time :** | 09:12 |
| **Weigh By:** | RJ | **Extraction By:** | RJ | **Extraction End Date :** | 12/11/2024 |
| **Balance check:** | RJ | **Filter By:** | RJ | **Extraction End Time :** | 16:15 |
| **Balance ID:** | EX-SC-2 | **pH Meter ID:** | N/A | **Concentration By:** | EH |
| **pH Strip Lot#:** | N/A | **Hood ID:** | 3,7 | **Supervisor By :** | rajesh |

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

| Standared Name | MLS USED | Concentration ug/mL | STD REF. # FROM LOG |
|---|---|---|---|
| Spike Sol 1 | 1.0ML | 100 PPM | PP23988 |
| Surrogate | 1.0ML | 100 PPM | PP23989 |
| Fractionation Surrogate | 1.0ML | 100 PPM | PP24006 |
| 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 | EP2560 |
| Baked Na2SO4 | N/A | EP2570 |
| Sand | N/A | E2865 |
| Hexane | N/A | E3844 |
| 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:**

N/A

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

| Date / Time | Prepped Sample Relinquished By/Location | Received By/Location |
|---|---|---|
| 12/11/24 | RP (Ext. Lab) | Y.P. PEST1 PCB. |
| 16:20 | **Preparation Group** | **Analysis Group** |

Alliance TECHNICAL GROUP

**EXTRACTION LOGPAGE**

**PrepBatch ID : PB165557**

**Analytical Method:** MNJDEP-EPH-7

**Concentration Date:** 12/11/2024

| Sample ID | Client Sample ID | Test | g / mL | PH | Surr/Spike By: | | Final Vol. (mL) | JarID | Comments | Prep Pos |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | AddedBy | VerifiedBy | | | | |
| PB165557BL | PB165557BL | EPH | 30.01 | N/A | ritesh | Evelyn | 2 | | | U6-1 |
| PB165557BS | PB165557BS | EPH | 30.03 | N/A | ritesh | Evelyn | 2 | | | 2 |
| PB165557BSD | PB165557BSD | EPH | 30.01 | N/A | ritesh | Evelyn | 2 | | | 3 |
| P5194-01 | UST-1 | EPH | 30.09 | N/A | ritesh | Evelyn | 2 | B | | 4 |
| P5194-01DUP | UST-1DUP | EPH | 30.07 | N/A | ritesh | Evelyn | 2 | B | | 5 |
| P5194-01MS | UST-1MS | EPH | 30.03 | N/A | ritesh | Evelyn | 2 | B | | 6 |
| P5194-01MSD | UST-1MSD | EPH | 30.01 | N/A | ritesh | Evelyn | 2 | B | | U7-1 |
| P5194-02 | UST-2 | EPH | 30.07 | N/A | ritesh | Evelyn | 2 | B | | 2 |

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

12/11/24

6757
9.12 EM

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** P5194 **WorkList ID :** 186222 **Department :** Extraction **Date :** 12-11-2024 08:09:44

| Sample | Customer Sample | Matrix | Test | Preservative | Customer | Raw Sample Storage Location | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|
| P5194-01 | UST-1 | Solid | Diesel Range Organics | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | 8015D |
| P5194-01 | UST-1 | Solid | EPH | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | NJEPH |
| P5194-02 | UST-2 | Solid | Diesel Range Organics | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | 8015D |
| P5194-02 | UST-2 | Solid | EPH | Cool 4 deg C | JPCL01 | L41 | 12/05/2024 | NJEPH |

**Date/Time** 12/11/24
**Raw Sample Received by:** RJ (Set log)
**Raw Sample Relinquished by:** E. Cole



**Date/Time** 12/11/24
**Raw Sample Received by:** E. Cole
**Raw Sample Relinquished by:** RJ (Set log)

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# Prep Standard - Chemical Standard Summary

**Order ID :** P5194

**Test :** EPH

**Prepbatch ID :** PB165557,

**Sequence ID/Qc Batch ID:** FC121124AL,FD121124AR,

**Standard ID :**
EP2560,EP2570,PP23644,PP23645,PP23646,PP23647,PP23648,PP23649,PP23650,PP23968,PP23969,PP23970,PP23971,PP23972,PP23973,PP23974,PP23988,PP23989,PP24006,

**Chemical ID :**
E2865,E3551,E3789,E3826,E3827,E3828,E3844,P10260,P11139,P12362,P12972,P13017,P13278,P13465,P13472,P13599,P13600,P13604,P13622,P13628,P13629,P13630,P13631,P13632,P13633,P13634,P13635,P13637,P13643,P13646,P13647,P13648,P13649,P13656,P13689,P13718,P13719,P13720,P13721,P13722,P13723,P13724,P13725,P13726,P13727,P13761,P13763,P13771,P13772,W3110,

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# Extractions STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2017 | 1:1 ACETONE/METHYLENE CHLORIDE | EP2560 | 11/14/2024 | 05/08/2025 | Rajesh Parikh | None | None | RUPESHKUMAR SHAH 11/14/2024 |

**FROM** 8000.00000ml of E3827 + 8000.00000ml of E3828 = Final Quantity: 16000.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3923 | Baked Sodium Sulfate | EP2570 | 12/02/2024 | 01/03/2025 | Rajesh Parikh | Extraction_SCALE_2 (EX-SC-2) | None | RUPESHKUMAR SHAH 12/02/2024 |

**FROM** 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 781 | 100 PPM Aliphatic HC Working STD (Restek) | PP23644 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.25000ml of P12972 + 0.25000ml of P13017 + 1.25000ml of P12362 + 23.25000ml of E3789 = Final Quantity: 25.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2900 | 100 PPM Aliphatic HC STD (Absolute) | PP23645 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.25000ml of P12972 + 0.25000ml of P13017 + 2.50000ml of P13278 + 22.00000ml of E3789 = Final Quantity: 25.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 783 | 50 PPM Aliphatic HC STD | PP23646 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.50000ml of E3789 + 0.50000ml of PP23644 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 784 | 20 PPM Aliphatic HC STD | PP23647 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.80000ml of E3789 + 0.20000ml of PP23644 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 785 | 10 PPM Aliphatic HC STD | PP23648 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.90000ml of E3789 + 0.10000ml of PP23644 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 786 | 5 PPM Aliphatic HC STD | PP23649 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.90000ml of E3789 + 0.10000ml of PP23646 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2901 | 20 PPM Aliphaitic HC STD ICV (Absolute) | PP23650 | 09/09/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 09/10/2024 |

**FROM** 0.80000ml of E3789 + 0.20000ml of PP23645 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 782 | 100 PPM Aromatic HC Working STD | PP23968 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.25000ml of P13646 + 0.62500ml of P13465 + 1.25000ml of P10260 + 22.87500ml of E3828 = Final Quantity: 25.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2945 | 100 PPM Aromatic HC Working STD (Absolute) | PP23969 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.25000ml of P13647 + 0.62500ml of P13472 + 1.25000ml of P11139 + 22.87500ml of E3828 = Final Quantity: 25.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 787 | 50 PPM Aromatic HC STD | PP23970 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.50000ml of E3828 + 0.50000ml of PP23968 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 788 | 20 PPM Aromatic HC STD | PP23971 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.80000ml of E3828 + 0.20000ml of PP23968 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 789 | 10 PPM Aromatic HC STD | PP23972 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.90000ml of E3828 + 0.10000ml of PP23968 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 790 | 5 PPM Aromatic HC STD | PP23973 | 11/14/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.90000ml of E3828 + 0.10000ml of PP23970 = Final Quantity: 1.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 2901 | 20 PPM Aliphaitic HC STD ICV (Absolute) | PP23974 | 11/14/2024 | 02/13/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 0.80000ml of W3110 + 0.20000ml of PP23645 = Final Quantity: 1.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1330 | 100 PPM NJEPH Spike Solution | PP23988 | 11/18/2024 | 04/25/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 5.00000ml of P13628 + 5.00000ml of P13629 + 5.00000ml of P13630 + 5.00000ml of P13631 + 5.00000ml of P13632 + 5.00000ml of P13633 + 5.00000ml of P13634 + 5.00000ml of P13635 + 5.00000ml of P13637 + 5.00000ml of P13643 + 5.00000ml of P13718 + 5.00000ml of P13719 + 5.00000ml of P13720 + 5.00000ml of P13721 + 5.00000ml of P13722 + 5.00000ml of P13723 + 5.00000ml of P13724 + 5.00000ml of P13725 + 5.00000ml of P13726 + 5.00000ml of P13727 = Final Quantity: 100.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1339 | 100 PPM NJEPH Surrogate Spike | PP23989 | 11/18/2024 | 05/08/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 1.25000ml of P13599 + 1.25000ml of P13600 + 1.25000ml of P13604 + 1.25000ml of P13622 + 1.25000ml of P13648 + 1.25000ml of P13649 + 1.25000ml of P13656 + 1.25000ml of P13689 + 490.00000ml of E3827 = Final Quantity: 500.000 ml

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# Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 1331 | 100 PPM NJEPH Fractionating Surrogate | PP24006 | 11/20/2024 | 05/09/2025 | Yogesh Patel | None | None | Ankita Jodhani 11/21/2024 |

**FROM** 1.25000ml of P13761 + 1.25000ml of P13763 + 1.25000ml of P13771 + 1.25000ml of P13772 + 195.00000ml of E3826 = Final Quantity: 200.000 ml

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-3382-05 / Sand, Purified (cs/4x2.5kg) | 0000243821 | 12/31/2024 | 04/30/2020 / RAJESH | 04/28/2020 / RAJESH | E2865 |

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

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24C1862008 | 02/13/2025 | 08/13/2024 / Rajesh | 08/13/2024 / Rajesh | E3789 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 05/09/2025 | 11/09/2024 / Rajesh | 11/07/2024 / Rajesh | E3826 |

| 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 | 05/08/2025 | 11/08/2024 / Rajesh | 11/07/2024 / Rajesh | E3827 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9644-A4 / Methylene Chloride,U-Resi, Cycle-Tainer (215L) | 24G0862003 | 05/09/2025 | 11/09/2024 / Rajesh | 11/04/2024 / Rajesh | E3828 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 24G1962003 | 06/09/2025 | 12/09/2024 / Rajesh | 12/05/2024 / Rajesh | E3844 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30541 / Custom NJEPH Aromatics Calibration Standard | A0165529 | 05/14/2025 | 11/14/2024 / yogesh | 01/26/2021 / dhaval | P10260 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Absolute Standards, Inc. | 95709 / NJ EPH Aromatic Hydrocarbons, 2000 PPM | 060420 | 05/14/2025 | 11/14/2024 / yogesh | 10/29/2021 / Abdul | P11139 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30540 / Custom NJEPH Aliphatics Calibration Standard | A0190424 | 03/09/2025 | 09/09/2024 / yogesh | 03/16/2023 / Yogesh | P12362 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31098 / 1-Chlorooctadecane Standard | A0204989 | 03/09/2025 | 09/09/2024 / yogesh | 12/20/2023 / Yogesh | P12972 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0204177 | 03/09/2025 | 09/09/2024 / yogesh | 12/21/2023 / Yogesh | P13017 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Absolute Standards, Inc. | 95899 / NJ EPH Aliphatic n-Hydrocarbons-Revised, 1000 PPM | 040524 | 03/09/2025 | 09/09/2024 / yogesh | 04/11/2024 / yogesh | P13278 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0210831 | 05/14/2025 | 11/14/2024 / yogesh | 07/23/2024 / yogesh | P13465 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0210831 | 05/14/2025 | 11/14/2024 / yogesh | 07/23/2024 / yogesh | P13472 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31098 / 1-Chlorooctadecane Standard | A0213283 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13599 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31098 / 1-Chlorooctadecane Standard | A0213283 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13600 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31098 / 1-Chlorooctadecane Standard | A0213283 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13604 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31098 / 1-Chlorooctadecane Standard | A0213283 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13622 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13628 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13629 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13630 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13631 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13632 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13633 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13634 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13635 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13637 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30542 / Custom NJEPH Aliphatics Matrix Spike Mix | A0211112 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13643 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/14/2025 | 11/14/2024 / yogesh | 10/16/2024 / yogesh | P13646 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/14/2025 | 11/14/2024 / yogesh | 10/16/2024 / yogesh | P13647 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13648 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13649 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13656 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31097 / o-Terphenyl Standard | A0216631 | 05/18/2025 | 11/18/2024 / yogesh | 10/16/2024 / yogesh | P13689 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13718 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13719 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13720 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13721 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13722 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13723 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13724 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13725 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13726 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30543 / Custom NJEPH Aromatics Matrix Spike Mix | A0217838 | 04/25/2025 | 10/25/2024 / yogesh | 10/24/2024 / yogesh | P13727 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0214879 | 05/20/2025 | 11/20/2024 / yogesh | 11/01/2024 / yogesh | P13761 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0214879 | 05/20/2025 | 11/20/2024 / yogesh | 11/01/2024 / yogesh | P13763 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0214879 | 05/20/2025 | 11/20/2024 / yogesh | 11/01/2024 / yogesh | P13771 |

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# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 31480 / MA Fractionation Surrogate Spike Mix | A0214879 | 05/20/2025 | 11/20/2024 / yogesh | 11/01/2024 / yogesh | P13772 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L) | 235898 | 02/28/2029 | 06/27/2024 / jignesh | 06/26/2024 / jignesh | W3110 |

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Bellefonte, PA 16823-8812
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# CERTIFIED REFERENCE MATERIAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

# 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.*

DD
06/17/2021

**Catalog No. :** 30541 **Lot No.:** A0172403

**Description :** NJEPH Aromatics Calibration Standard

NJEPH Aromatics Calibration Standard 2,000µg/mL, Methylene Chloride, 1mL/ampul

P10758 to P10762 -(5)

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

**Expiration Date :** April 30, 2027 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene<br>**CAS #** 526-73-8 (Lot 8776.10-36)<br>**Purity** 98% | 2,010.0 µg/mL | +/- 11.7957 µg/mL<br>+/- 90.5449 µg/mL<br>+/- 100.4678 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | Naphthalene<br>**CAS #** 91-20-3 (Lot MKBZ8680V)<br>**Purity** 99% | 2,006.0 µg/mL | +/- 11.7723 µg/mL<br>+/- 90.3656 µg/mL<br>+/- 100.2689 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | 2-Methylnaphthalene<br>**CAS #** 91-57-6 (Lot STBG8884)<br>**Purity** 99% | 2,008.0 µg/mL | +/- 11.7841 µg/mL<br>+/- 90.4557 µg/mL<br>+/- 100.3688 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Acenaphthylene<br>**CAS #** 208-96-8 (Lot N19U)<br>**Purity** 95% | 2,002.6 µg/mL | +/- 11.7524 µg/mL<br>+/- 90.2125 µg/mL<br>+/- 100.0989 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Acenaphthene<br>**CAS #** 83-32-9 (Lot MKCN0610)<br>**Purity** 99% | 2,000.0 µg/mL | +/- 11.7371 µg/mL<br>+/- 90.0953 µg/mL<br>+/- 99.9689 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Fluorene<br>**CAS #** 86-73-7 (Lot 10217947)<br>**Purity** 99% | 2,016.0 µg/mL | +/- 11.8310 µg/mL<br>+/- 90.8161 µg/mL<br>+/- 100.7687 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | Phenanthrene<br>**CAS #** 85-01-8 (Lot MKCL7390)<br>**Purity** 99% | 2,012.0 µg/mL | +/- 11.8075 µg/mL<br>+/- 90.6359 µg/mL<br>+/- 100.5688 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | Anthracene | | 2,002.0 | µg/mL | +/- | 11.7489 | µg/mL | Gravimetric |
| | **CAS #** 120-12-7 | (Lot MKCM0015) | | | +/- | 90.1854 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.0689 | µg/mL | Stressed |
| 9 | Fluoranthene | | 2,003.0 | µg/mL | +/- | 11.7547 | µg/mL | Gravimetric |
| | **CAS #** 206-44-0 | (Lot MKCF7378) | | | +/- | 90.2305 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.1189 | µg/mL | Stressed |
| 10 | Pyrene | | 2,011.0 | µg/mL | +/- | 11.8017 | µg/mL | Gravimetric |
| | **CAS #** 129-00-0 | (Lot BCCB9880) | | | +/- | 90.5909 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.5188 | µg/mL | Stressed |
| 11 | Benz(a)anthracene | | 2,011.0 | µg/mL | +/- | 11.8014 | µg/mL | Gravimetric |
| | **CAS #** 56-55-3 | (Lot P0022018-0505) | | | +/- | 90.5890 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- | 100.5168 | µg/mL | Stressed |
| 12 | Chrysene | | 2,000.0 | µg/mL | +/- | 11.7371 | µg/mL | Gravimetric |
| | **CAS #** 218-01-9 | (Lot STBJ8094) | | | +/- | 90.0953 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 99.9689 | µg/mL | Stressed |
| 13 | Benzo(b)fluoranthene | | 2,006.0 | µg/mL | +/- | 11.7721 | µg/mL | Gravimetric |
| | **CAS #** 205-99-2 | (Lot 012012B) | | | +/- | 90.3638 | µg/mL | Unstressed |
| | **Purity** 97% | | | | +/- | 100.2669 | µg/mL | Stressed |
| 14 | Benzo(k)fluoranthene | | 2,010.0 | µg/mL | +/- | 11.7958 | µg/mL | Gravimetric |
| | **CAS #** 207-08-9 | (Lot 012019K) | | | +/- | 90.5458 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.4688 | µg/mL | Stressed |
| 15 | Benzo(a)pyrene | | 2,004.0 | µg/mL | +/- | 11.7606 | µg/mL | Gravimetric |
| | **CAS #** 50-32-8 | (Lot RP210113) | | | +/- | 90.2755 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.1689 | µg/mL | Stressed |
| 16 | Indeno(1,2,3-cd)pyrene | | 2,010.0 | µg/mL | +/- | 11.7958 | µg/mL | Gravimetric |
| | **CAS #** 193-39-5 | (Lot 1-RAK-33-4) | | | +/- | 90.5458 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.4688 | µg/mL | Stressed |
| 17 | Dibenz(a,h)anthracene | | 2,017.0 | µg/mL | +/- | 11.8369 | µg/mL | Gravimetric |
| | **CAS #** 53-70-3 | (Lot ER032211-01) | | | +/- | 90.8611 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.8187 | µg/mL | Stressed |
| 18 | Benzo(g,h,i)perylene | | 2,003.0 | µg/mL | +/- | 11.7547 | µg/mL | Gravimetric |
| | **CAS #** 191-24-2 | (Lot 8GFYJ) | | | +/- | 90.2305 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- | 100.1189 | µg/mL | Stressed |

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

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

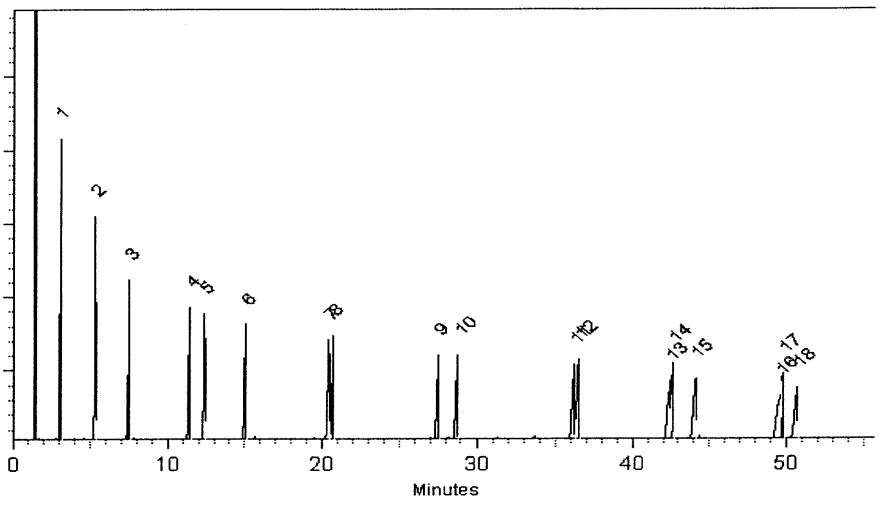
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 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.

Lane Kibe - Mix Technician

**Date Mixed:** 14-May-2021 **Balance:** B345965662

Alexis Shelow - Operations Tech I

**Date Passed:** 18-May-2021

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

**General Certified Reference Material Notes**

**Expiration Notes:**

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

**Purity Notes:**

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

**Certified Uncertainty Value Notes:**

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

Sand
Purified
Washed and Ignited

avantor™ | J.T.Baker®

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

# Certificate of Analysis

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

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

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

E 2865

James T Ethier

Jamie Ethier
Vice President Global Quality

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

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

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

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| PRODUCT : | SODIUM SULFATE CRYSTALS ANHYDROUS | | |
| QUALITY : | ACS (CODE RMB3375) | FORMULA : | $Na_2SO_4$ |
| SPECIFICATION NUMBER : | 6399 | RELEASE DATE: | ABR/21/2023 |
| LOT NUMBER : | 313201 | | |

| TEST | SPECIFICATIONS | LOT VALUES |
|---|---|---|
| Assay ($Na_2SO_4$) | Min. 99.0% | 99.7 % |
| pH of a 5% solution at 25°C | 5.2 - 9.2 | 6.1 |
| Insoluble matter | Max. 0.01% | 0.005 % |
| Loss on ignition | Max. 0.5% | 0.1 % |
| Chloride (Cl) | Max. 0.001% | <0.001 % |
| Nitrogen compounds (as N) | Max. 5 ppm | <5 ppm |
| Phosphate ($PO_4$) | Max. 0.001% | <0.001 % |
| Heavy metals (as Pb) | Max. 5 ppm | <5 ppm |
| Iron (Fe) | Max. 0.001% | <0.001 % |
| Calcium (Ca) | Max. 0.01% | 0.002 % |
| Magnesium (Mg) | Max. 0.005% | 0.001 % |
| Potassium (K) | Max. 0.008% | 0.003 % |
| Extraction-concentration suitability | Passes test | Passes test |
| Appearance | Passes test | Passes test |
| Identification | Passes test | Passes test |
| Solubility and foreing matter | Passes test | Passes test |
| Retained on US Standard No. 10 sieve | Max. 1% | 0.1 % |
| Retained on US Standard No. 60 sieve | Min. 94% | 97.3 % |
| Through US Standard No. 60 sieve | Max. 5% | 2.5 % |
| Through US Standard No. 100 sieve | Max. 10% | 0.1 % |

COMMENTS

QC: PhC Irma Belmares

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

Recd. by RB on 7/24/23 E3551

Hexanes (95% n-hexane)
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor | J.T.B

Material No.: 926
Batch No.: 24C186
Manufactured Date: 2024-0
Expiration Date: 2025-0
Revision N

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | < 1 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) – Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.4 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

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

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 8/13/24

E3789

JCroak

Jamie Croak
Director Quality Operations, Bioscience Product

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

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 3 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.1 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

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

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

E3826

Rec'd by RP on 11/7/24

Jamie Croak
Director Quality Operations, Bioscience Production

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H1462005
Manufactured Date: 2024-05-24
Expiration Date:2027-05-24
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| Assay ($(CH_3)_2CO$) (by GC, corrected forwater) | >= 99.4 % | 99.8 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.2 ppm |
| Substances Reducing Permanganate | Passes Test | Passes Test |
| Titrable Acid (µeq/g) | <= 0.3 | 0.2 |
| Titrable Base (µeq/g) | <= 0.6 | <0.1 |
| Water ($H_2O$) | <= 0.5 % | 0.2 % |
| FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL) | <= 5 | <1 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | <= 10 | 1 |

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

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

E3827

Recd. by RP on ~~11/6~~ 11/7/24
RP
11/7

JCroak
Jamie Croak
Director Quality Operations, Bioscience Production

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

avantor™ | J.T.Baker

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

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL) | <= 5 | 2 |
| ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL) | <= 10 | 1 |
| Assay ($CH_2Cl_2$) (by GC, exclusive of preservative, corrected for water) | >= 99.8 % | 100.0 % |
| Color (APHA) | <= 10 | 5 |
| Residue after Evaporation | <= 1.0 ppm | 0.2 ppm |
| Titrable Acid (µeq/g) | <= 0.3 | <0.1 |
| Chloride (Cl) | <= 10 ppm | <5 ppm |
| Water (by KF, coulometric) | <= 0.02 % | <0.01 % |

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

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

E 3828

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL) | ≤ 5 | 3 |
| ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL) | ≤ 10 | 1 |
| ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL) | ≤ 5 | 1 |
| Assay (Total Saturated $C_6$ Isomers) (by GC, corrected for water) | ≥ 99.5 % | 99.7 % |
| Assay (as n-Hexane) (by GC, corrected for water) | ≥ 95 % | 98 % |
| Color (APHA) | ≤ 10 | 5 |
| Residue after Evaporation | ≤ 1.0 ppm | 0.1 ppm |
| Substances Darkened by $H_2SO_4$ | Passes Test | Passes Test |
| Water (by KF, coulometric) | ≤ 0.05 % | < 0.01 % |

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

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Recd. by RP on 121524

E 3844

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

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

***Certified Reference Material CRM***

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

## CERTIFIED WEIGHT REPORT

**Part Number:** 95709
Lot Number: 060420
Description: NJ EPH Aromatic Hydrocarbons
18 components
Expiration Date: 060425
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 23060

| Solvent(s): | Lot# |
|---|---|
| Methylene chloride | 104929 |

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

| | |
|---|---|
| Formulated By: Benson Chan | 060420 DATE |
| Reviewed By: Pedro L. Rentas | 060420 DATE |

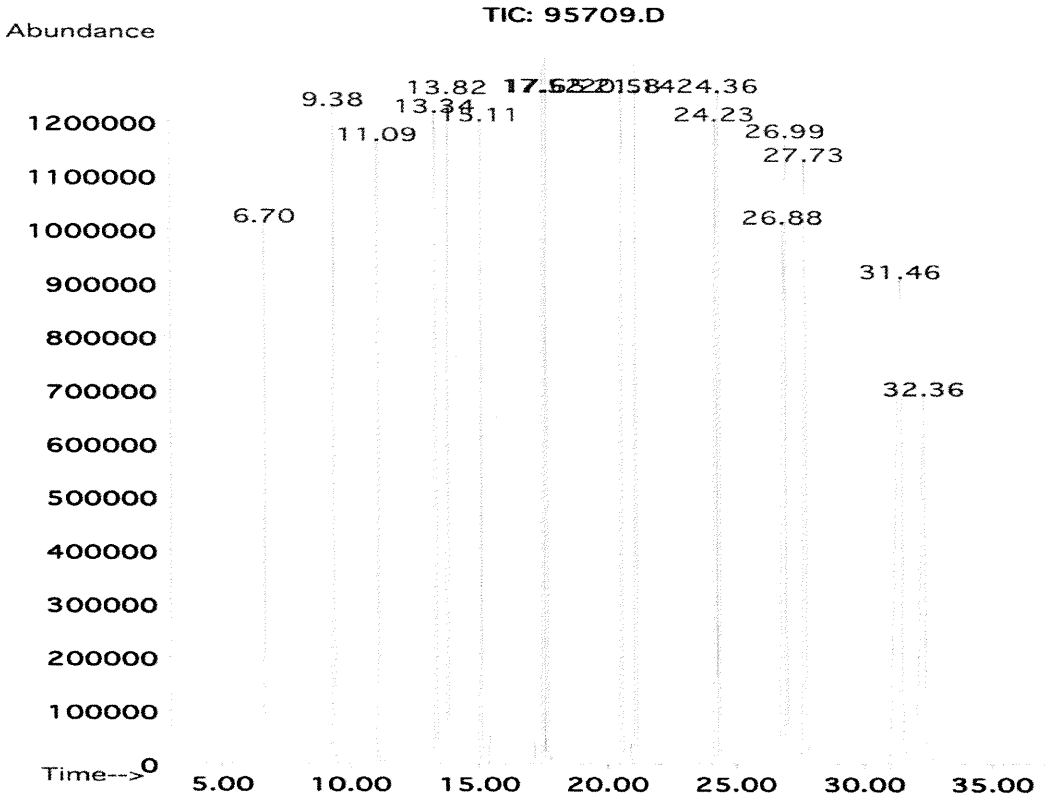
| | Compound | RM# | Lot Number | Nominal Conc (µg/mL) | Purity (%) | Uncertainty Purity | Target Weight(g) | Actual Weight(g) | Actual Conc (µg/mL) | Expanded Uncertainty (+/-) (µg/mL) | SDS Information (Solvent Safety Info. On Attached pg.) CAS# | OSHA PEL (TWA) | LD50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Acenaphthene | 1 | MKBJ4871V | 2000 | 99 | 0.2 | 1.01003 | 1.01010 | 2000.1 | 8.1 | 83-32-9 | N/A | ipr-rat 600mg/kg |
| 2. | Acenaphthylene | 3 | 012014 | 2000 | 98 | 0.2 | 1.02033 | 1.02053 | 2000.4 | 8.2 | 208-96-8 | N/A | N/A |
| 3. | Anthracene | 13 | A0210580 | 2000 | 99 | 0.2 | 1.01003 | 1.01009 | 2000.1 | 8.1 | 120-12-7 | 0.2mg/m3 (8H) | ipr-mus 430mg/kg |
| 4. | Benzo(a)anthracene | 28 | JY2TD-JT | 2000 | 98 | 0.2 | 1.02033 | 1.02051 | 2000.3 | 8.2 | 56-55-3 | N/A | N/A |
| 5. | Benzo(a)pyrene | 30 | 012012 | 2000 | 99.5 | 0.2 | 1.00495 | 1.00511 | 2000.3 | 8.1 | 50-32-8 | 0.2mg/m3 (8H) | scu-rat 50mg/kg |
| 6. | Benzo(b)fluoranthene | 31 | 012012b | 2000 | 99 | 0.2 | 1.01003 | 1.01012 | 2000.2 | 8.1 | 205-99-2 | N/A | N/A |
| 7. | Benzo(k)fluoranthene | 33 | 012012k | 2000 | 99 | 0.2 | 1.01003 | 1.01018 | 2000.3 | 8.1 | 207-08-9 | N/A | N/A |
| 8. | Benzo(g,h,i)perylene | 32 | 012018 | 2000 | 99 | 0.2 | 1.01003 | 1.01019 | 2000.3 | 8.1 | 191-24-2 | N/A | N/A |
| 9. | Chrysene | 91 | 012015 | 2000 | 98 | 0.2 | 1.02033 | 1.02040 | 2000.1 | 8.2 | 218-01-9 | 0.2mg/m3 | N/A |
| 10. | Dibenzo(a,h)anthracene | 112 | 012011 | 2000 | 98 | 0.2 | 1.02033 | 1.02050 | 2000.3 | 8.2 | 53-70-3 | 0.2mg/m3 | N/A |
| 11. | Fluoranthene | 183 | 04221PV | 2000 | 98 | 0.2 | 1.02033 | 1.02050 | 2000.3 | 8.2 | 206-44-0 | N/A | orl-rat 2000mg/kg |
| 12. | Fluorene | 184 | 07211MV | 2000 | 98 | 0.2 | 1.02033 | 1.02047 | 2000.3 | 8.2 | 86-73-7 | N/A | ipr-mus 2 g/kg |
| 13. | Indeno(1,2,3-cd)pyrene | 202 | 012014 | 2000 | 99.9 | 0.2 | 1.00093 | 1.00119 | 2000.5 | 8.0 | 193-39-5 | N/A | N/A |
| 14. | 2-Methylnaphthalene | 214 | MKBF3783V | 2000 | 97 | 0.2 | 1.03085 | 1.03090 | 2000.1 | 8.3 | 91-57-6 | N/A | orl-rat 1630mg/kg |
| 15. | Naphthalene | 222 | MKBZ8680V | 2000 | 100 | 0.2 | 0.99993 | 0.99999 | 2000.1 | 8.0 | 91-20-3 | 10 ppm (50mg/m3/8H) | orl-rat 490mg/kg |
| 16. | Phenanthrene | 248 | 03410PV | 2000 | 99 | 0.2 | 1.01003 | 1.01030 | 2000.5 | 8.1 | 85-01-8 | 0.2mg/m3/8H | orl-mus 700mg/kg |
| 17. | Pyrene | 259 | 010197 | 2000 | 98 | 0.2 | 1.02033 | 1.02042 | 2000.2 | 8.2 | 129-00-0 | 0.2mg/m3/8H | orl-rat 2700mg/kg |
| 18. | 1,2,3-Trimethylbenzene | 944 | 031097 | 2000 | 99 | 0.2 | 1.01003 | 1.01025 | 2000.4 | 8.1 | 526-73-8 | N/A | N/A |

P11137
&
P11141

AR 11/02/21

- 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 certifed (+/-) 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).

**Method GC8MSD-2.M:** Column:SPB-5 (30m X 0.25mm ID X 0.25μm film thickness) Temp 1 = 50°C (1min.), Temp 2 = 300°C (14min.), Rate = 10°C/min., Injector B= 250°C, Detector B = 275°C, Split Ratio = 100:1, Scan Rate = 2. Analysis performed by: Melissa Stonier.




| Peak No. | Name | MSD RT (min.) |
|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 6.70 |
| 2 | Naphthalene | 9.38 |
| 3 | 2-Methylnaphthalene | 11.09 |
| 4 | Acenaphthylene | 13.34 |
| 5 | Acenaphthene | 13.82 |
| 6 | Fluorene | 15.11 |
| 7 | Phenanthrene | 17.52 |
| 8 | Anthracene | 17.65 |
| 9 | Fluoranthene | 20.58 |
| 10 | Pyrene | 21.14 |
| 11 | Chrysene | 24.23 |
| 12 | Benzo(a)anthracene | 24.36 |
| 13 | Benzo(b)fluoranthene/Benzo(k)fluoranthene | 26.98 |
| 14 | Benzo(a)pyrene | 27.73 |
| 15 | Indeno(1,2,3-cd)pyrene/Dibenzo(a,h)anthracene | 31.46 |
| 16 | Benzo(g,h,i)perylene | 32.36 |

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

www.restek.com

# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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

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

P12361 ↓ P12370 } Y.P. 03/16/23

**Catalog No. :** 30540 **Lot No.:** A0190424

**Description :** NJEPH Aliphatics Calibration Standard

Aliphatics Calibration Standard 2000µg/mL, Hexane/Carbon Disulfide (80:20), 1mL/ampul

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

**Expiration Date :** November 30, 2029 **Storage:** 25°C nominal

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

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | |
|---|---|---|---|---|
| 1 | n-Nonane (C9)<br>**CAS #** 111-84-2 (Lot SHBN5361)<br>**Purity** 99% | 2,014.0 µg/mL | +/- 11.8193 µg/mL<br>+/- 50.0027 µg/mL<br>+/- 59.9491 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 2 | n-Decane (C10)<br>**CAS #** 124-18-5 (Lot SHBN8619)<br>**Purity** 99% | 2,014.7 µg/mL | +/- 11.8232 µg/mL<br>+/- 50.0193 µg/mL<br>+/- 59.9689 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 3 | Naphthalene<br>**CAS #** 91-20-3 (Lot MKCH0219)<br>**Purity** 99% | 2,015.3 µg/mL | +/- 11.8271 µg/mL<br>+/- 50.0358 µg/mL<br>+/- 59.9888 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 4 | n-Dodecane (C12)<br>**CAS #** 112-40-3 (Lot SHBN7174)<br>**Purity** 99% | 2,008.0 µg/mL | +/- 11.7841 µg/mL<br>+/- 49.8538 µg/mL<br>+/- 59.7705 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 5 | 2-Methylnaphthalene<br>**CAS #** 91-57-6 (Lot STBK0259)<br>**Purity** 96% | 2,007.0 µg/mL | +/- 11.7784 µg/mL<br>+/- 49.8299 µg/mL<br>+/- 59.7419 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 6 | n-Tetradecane (C14)<br>**CAS #** 629-59-4 (Lot STBK2282)<br>**Purity** 99% | 2,016.7 µg/mL | +/- 11.8349 µg/mL<br>+/- 50.0689 µg/mL<br>+/- 60.0284 µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 7 | n-Hexadecane (C16)<br>**CAS #** 544-76-3 (Lot SHBM4146)<br>**Purity** 98% | 2,014.9 µg/mL | +/- 11.8244 µg/mL<br>+/- 50.0246 µg/mL<br>+/- 59.9753 µg/mL | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 | n-Octadecane (C18)<br>**CAS #** 593-45-3<br>**Purity** 97% | (Lot VZKOJ) | 2,004.7 | µg/mL | +/- 11.7645<br>+/- 49.7710<br>+/- 59.6712 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 9 | n-Eicosane (C20)<br>**CAS #** 112-95-8<br>**Purity** 99% | (Lot MKCF7888) | 2,018.0 | µg/mL | +/- 11.8428<br>+/- 50.1020<br>+/- 60.0681 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 10 | n-Heneicosane (C21)<br>**CAS #** 629-94-7<br>**Purity** 99% | (Lot MKCL3226) | 2,000.7 | µg/mL | +/- 11.7410<br>+/- 49.6717<br>+/- 59.5522 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 11 | n-Docosane (C22)<br>**CAS #** 629-97-0<br>**Purity** 99% | (Lot MKCL8918) | 2,005.3 | µg/mL | +/- 11.7684<br>+/- 49.7876<br>+/- 59.6911 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 12 | n-Tetracosane (C24)<br>**CAS #** 646-31-1<br>**Purity** 99% | (Lot MKCN2863) | 2,018.0 | µg/mL | +/- 11.8428<br>+/- 50.1020<br>+/- 60.0681 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 13 | n-Hexacosane (C26)<br>**CAS #** 630-01-3<br>**Purity** 99% | (Lot MKCD4540) | 2,014.0 | µg/mL | +/- 11.8193<br>+/- 50.0027<br>+/- 59.9491 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 14 | n-Octacosane (C28)<br>**CAS #** 630-02-4<br>**Purity** 99% | (Lot BCCG0084) | 2,002.0 | µg/mL | +/- 11.7489<br>+/- 49.7048<br>+/- 59.5919 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 15 | n-Triacontane (C30)<br>**CAS #** 638-68-6<br>**Purity** 97% | (Lot MKCQ9436) | 2,011.1 | µg/mL | +/- 11.8025<br>+/- 49.9316<br>+/- 59.8637 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 16 | n-Dotriacontane (C32)<br>**CAS #** 544-85-4<br>**Purity** 99% | (Lot BCBW0661) | 2,012.0 | µg/mL | +/- 11.8075<br>+/- 49.9531<br>+/- 59.8895 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 17 | n-Tetratriacontane (C34)<br>**CAS #** 14167-59-0<br>**Purity** 99% | (Lot OML4N) | 2,006.7 | µg/mL | +/- 11.7762<br>+/- 49.8207<br>+/- 59.7308 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 18 | n-Hexatriacontane (C36)<br>**CAS #** 630-06-8<br>**Purity** 99% | (Lot Z27H018) | 2,017.3 | µg/mL | +/- 11.8388<br>+/- 50.0855<br>+/- 60.0483 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 19 | n-Octatriacontane (C38)<br>**CAS #** 7194-85-6<br>**Purity** 96% | (Lot 0000145137) | 2,017.3 | µg/mL | +/- 11.8385<br>+/- 50.0842<br>+/- 60.0467 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |
| 20 | n-Tetracontane (C40)<br>**CAS #** 4181-95-7<br>**Purity** 99% | (Lot BSBME) | 2,008.7 | µg/mL | +/- 11.7880<br>+/- 49.8703<br>+/- 59.7903 | µg/mL<br>µg/mL<br>µg/mL | Gravimetric<br>Unstressed<br>Stressed |

**Solvent:** Hexane/Carbon disulfide (80:20)
**CAS #** 110-54-3/75-15-0
**Purity** 99%

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

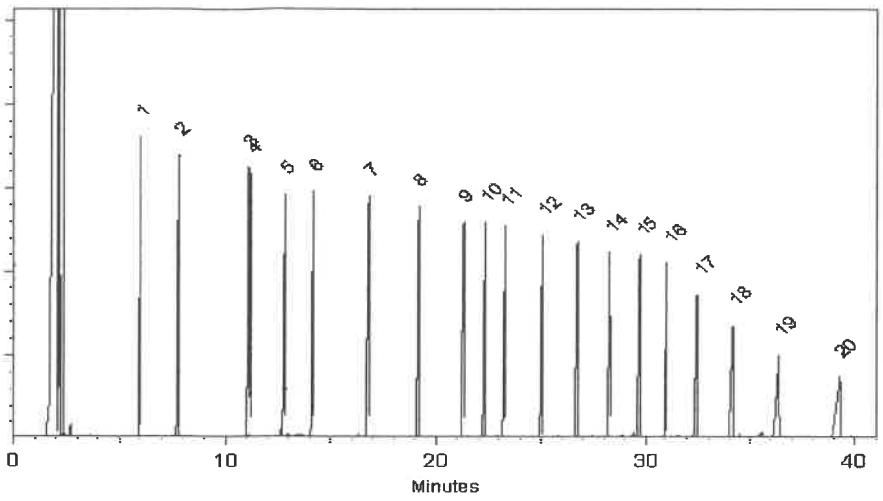
**Carrier Gas:**
hydrogen-constant pressure 10 psi.

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

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID




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

Morgan Craighead - Mix Technician

**Date Mixed:** 10-Oct-2022 **Balance:** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 20-Oct-2022

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

**General Certified Reference Material Notes**

**Expiration Notes:**

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

**Purity Notes:**

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

**Certified Uncertainty Value Notes:**

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

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

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

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

| Label Conditions | Standard Conditions | Non-Standard Conditions |
|---|---|---|
| 25°C Nominal (Room Temperature) | < 60°C | ≥ 60°C up to 7 days |
| 10°C or colder (Refrigerate) | < 40°C | ≥ 40°C up to 7 days |
| 0°C or colder (Freezer)<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.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

**Manufacturing Notes:**

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

**Handling Notes:**

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

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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

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

P12960 & P12991 Y.P. 12/21/2023

**Catalog No. :** 31098 **Lot No.:** A0204989

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** January 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1-Chlorooctadecane | 3386-33-2 | 14738400 | 99% | 10,097.3 µg/mL | +/- 567.2675 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

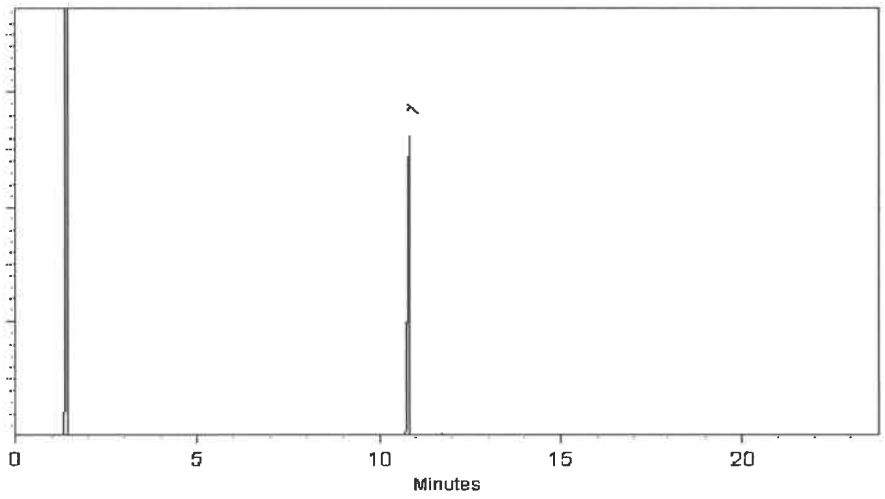
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Peter Robbins - Operations Technician I

**Date Mixed:** 02-Dec-2023 **Balance Serial #** B345965662

Christie Mills - Operations Lead Tech - ARM QC

**Date Passed:** 08-Dec-2023

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

### Manufacturing Notes:

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

### Handling Notes:

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

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P12992 ↓ P13031 } Y.P. 12/21/2023

**Catalog No. :** 31097 **Lot No.:** A0204177

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** June 30, 2027 **Storage:** 10°C or colder

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

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,000.5 µg/mL | +/- 450.4278 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

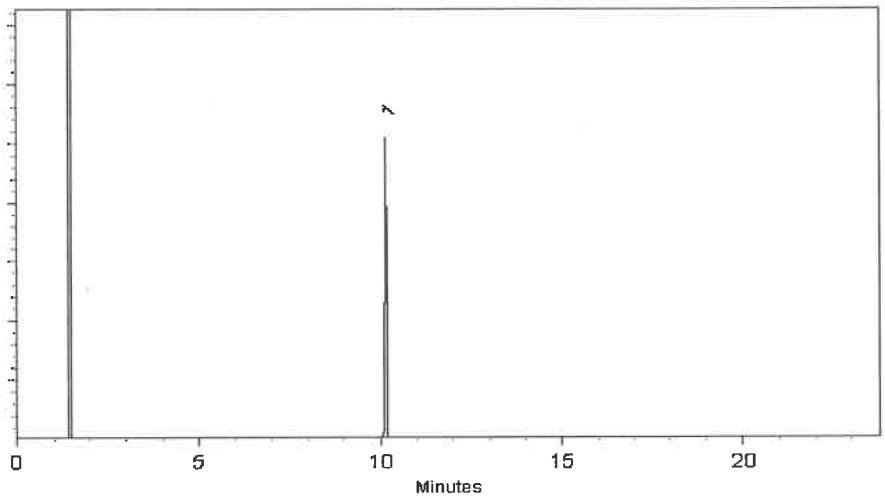
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-Nov-2023 **Balance Serial #** 1128360905

Dillan Murphy - Operations Technician I

**Date Passed:** 09-Nov-2023

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

## General Certified Reference Material Notes

### Expiration Notes:

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

### Purity Notes:

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

### Certified Uncertainty Value Notes:

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

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

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

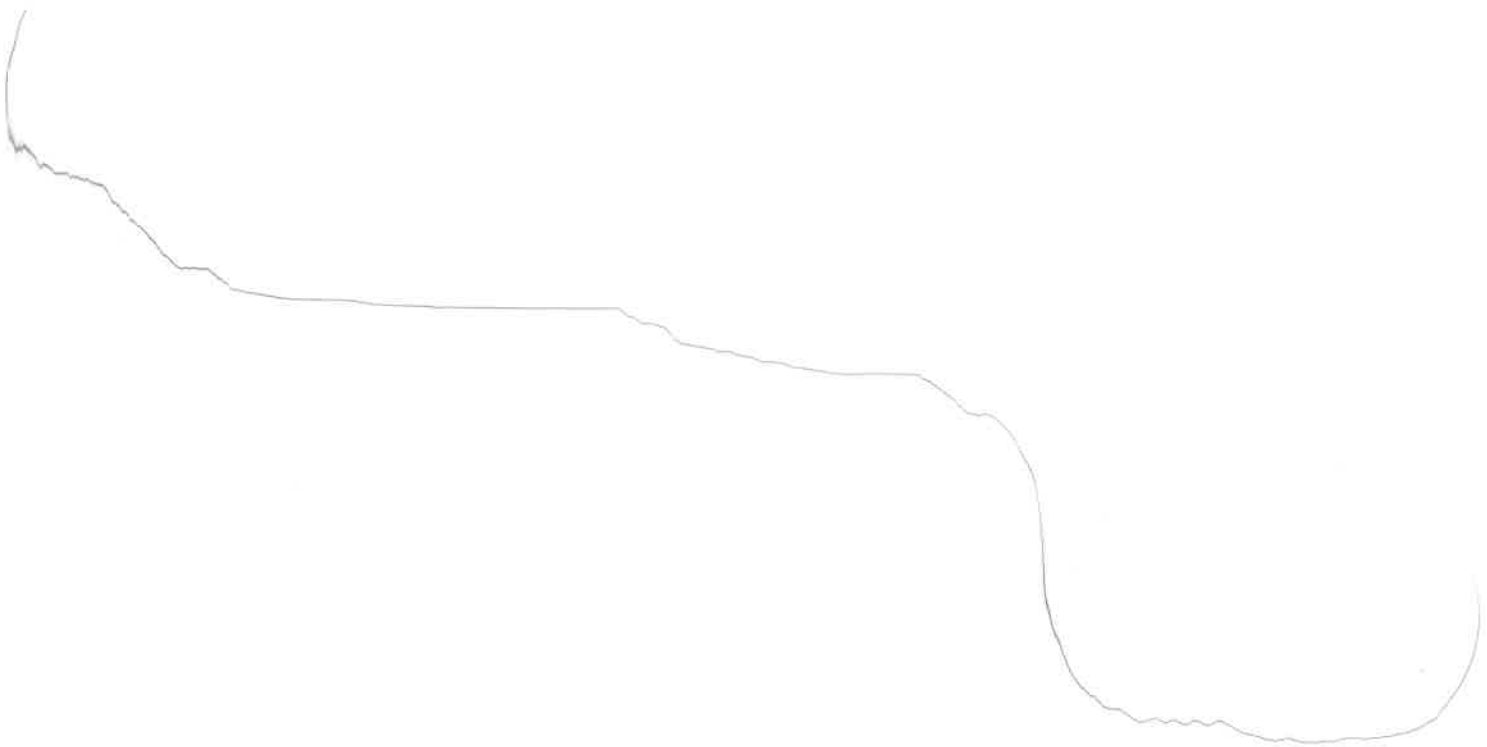
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

### Manufacturing Notes:

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

### Handling Notes:

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



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www.absolutestandards.com

*Certified Reference Material CRM*

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

CERTIFIED WEIGHT REPORT

**Part Number:** 95899
Lot Number: 040524
Description: NJ EPH Aliphatic n-Hydrocarbons - Revised
20 components
Expiration Date: 040534
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test ID#: 6UTB

| Solvent(s): | Lot# |
|---|---|
| Cyclohexane | 28930 |

P13278 & P13287 } Y.P. 04111124

| | | |
|---|---|---|
| Formulated By: | Anthony Mahoney | 040524 DATE |
| Reviewed By: | Pedro L. Rentas | 040524 DATE |

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 25.0 0.001 Flask Uncertainty
**CAUTION: Sonicate Before Use**

| | Compound | (RM#) Part Number | Lot Number | Dil. Factor | Initial Vol. (mL) | Initial Conc.(ug/mL) | Nominal Conc (µg/mL) | Purity (%) | Purity Uncertainty | Uncertainty Pipette | 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. | 2-Methylnaphthalene | (0214) | MKBF3783V | NA | NA | NA | 1000 | 97 | 0.2 | NA | 0.02579 | 0.02594 | 1005.7 | 5.7 | 91-57-6 | N/A | orl-rat 1630mg/kg |
| 2. | Naphthalene | (0222) | MKBZ8680V | NA | NA | NA | 1000 | 100 | 0.2 | NA | 0.02502 | 0.02511 | 1003.7 | 5.7 | 91-20-3 | 10 ppm (50mg/m3/8H) | orl-rat 490mg/kg |
| 3. | n-Nonane | 95708 | 120222 | 1.00 | 25.00 | 1000.7 | 1000 | NA | NA | 0.013 | NA | NA | 1000.0 | 4.2 | 111-84-2 | 200 ppm (1050mg/m3/8H) | ivn-mus 218mg/kg |
| 4. | n-Decane | 95708 | **120222** | 1.00 | 25.00 | 1000.9 | 1000 | NA | NA | 0.013 | NA | NA | 1000.2 | 4.2 | 124-18-5 | N/A | N/A |
| 5. | n-Dodecane | 95708 | 120222 | 1.00 | 25.00 | 1000.7 | 1000 | NA | NA | 0.013 | NA | NA | 1000.0 | 4.2 | 112-40-3 | N/A | ivn-mus 3494mg/kg |
| 6. | n-Tetradecane | 95708 | 120222 | 1.00 | 25.00 | 1002.1 | 1000 | NA | NA | 0.013 | NA | NA | 1001.3 | 4.2 | 629-59-4 | N/A | N/A |
| 7. | n-Hexadecane | 95708 | 120222 | 1.00 | 25.00 | 1000.5 | 1000 | NA | NA | 0.013 | NA | NA | 999.7 | 4.2 | 544-76-3 | N/A | N/A |
| 8. | n-Octadecane | 95708 | 120222 | 1.00 | 25.00 | 1001.0 | 1000 | NA | NA | 0.013 | NA | NA | 1000.3 | 4.1 | 593-45-3 | N/A | N/A |
| 9. | n-Eicosane | 95708 | 120222 | 1.00 | 25.00 | 1001.0 | 1000 | NA | NA | 0.013 | NA | NA | 1000.3 | 4.2 | 112-95-8 | N/A | N/A |
| 10. | n-Heneicosane | 95708 | 120222 | 1.00 | 25.00 | 1002.4 | 1000 | NA | NA | 0.013 | NA | NA | 1001.6 | 4.2 | 629-94-7 | N/A | N/A |
| 11. | n-Docosane | 95708 | 120222 | 1.00 | 25.00 | 1001.9 | 1000 | NA | NA | 0.013 | NA | NA | 1001.2 | 4.2 | 629-97-0 | N/A | N/A |
| 12. | n-Tetracosane | 95708 | 120222 | 1.00 | 25.00 | 1000.8 | 1000 | NA | NA | 0.013 | NA | NA | 1000.1 | 4.2 | 646-31-1 | N/A | N/A |
| 13. | n-Hexacosane | 95708 | 120222 | 1.00 | 25.00 | 1001.2 | 1000 | NA | NA | 0.013 | NA | NA | 1000.4 | 4.2 | 630-01-3 | N/A | N/A |
| 14. | n-Octacosane | 95708 | 120222 | 1.00 | 25.00 | 1000.5 | 1000 | NA | NA | 0.013 | NA | NA | 999.8 | 4.2 | 630-02-4 | N/A | N/A |
| 15. | n-Triacontane | 95708 | 120222 | 1.00 | 25.00 | 1000.5 | 1000 | NA | NA | 0.013 | NA | NA | 999.8 | 4.2 | 638-68-6 | N/A | N/A |
| 16. | n-Dotriacontane | 95708 | 120222 | 1.00 | 25.00 | 1000.5 | 1000 | NA | NA | 0.013 | NA | NA | 999.8 | 4.3 | 544-85-4 | N/A | ivn-mus 100mg/kg |
| 17. | n-Tetratriacontane | 95708 | 120222 | 1.00 | 25.00 | 1000.4 | 1000 | NA | NA | 0.013 | NA | NA | 999.7 | 4.2 | 14167-59-0 | N/A | N/A |
| 18. | n-Hexatriacontane | 95708 | 120222 | 1.00 | 25.00 | 1001.5 | 1000 | NA | NA | 0.013 | NA | NA | 1000.8 | 4.2 | 630-06-8 | N/A | N/A |
| 19. | n-Octatriacontane | 95708 | 120222 | 1.00 | 25.00 | 1000.3 | 1000 | NA | NA | 0.013 | NA | NA | 999.6 | 4.3 | 7194-85-6 | N/A | N/A |
| 20. | n-Tetracontane | 95708 | 120222 | 1.00 | 25.00 | 1000.6 | 1000 | NA | NA | 0.013 | NA | NA | 999.9 | 4.3 | 4181-95-7 | N/A | N/A |

- 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).

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.02

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

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

**Catalog No. :** 31480 **Lot No.:** A0210831

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** March 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13457 ↓ P13476 } Y.P. 07/23/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,031.0 µg/mL | +/- 181.5871 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,037.5 µg/mL | +/- 181.8799 |

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

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

# Quality Confirmation Test

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

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

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

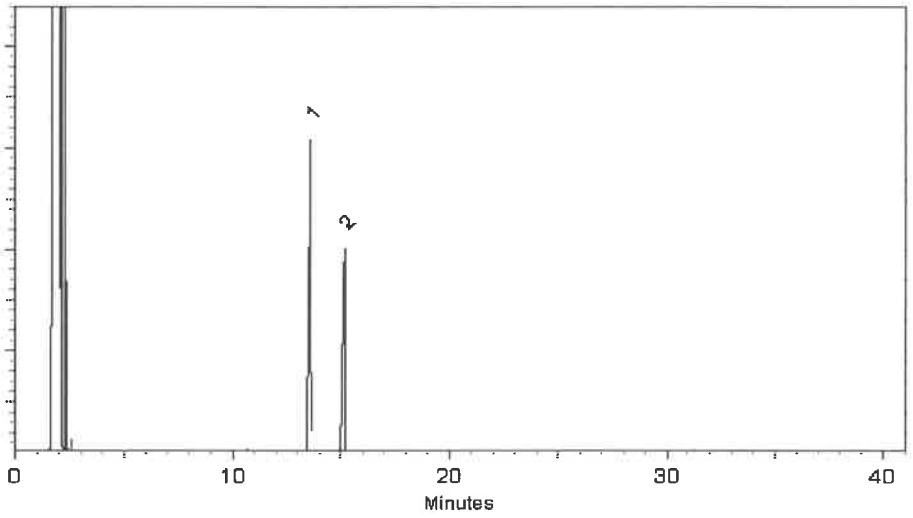
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Stacey Wanner - Operations Technician I

**Date Mixed:** 29-Apr-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 30-Apr-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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*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. :** 31480 **Lot No.:** A0210831

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** March 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13457 ↓ P13476 } Y.P. 07/23/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,031.0 µg/mL | +/- 181.5871 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,037.5 µg/mL | +/- 181.8799 |

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

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

# Quality Confirmation Test

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

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

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

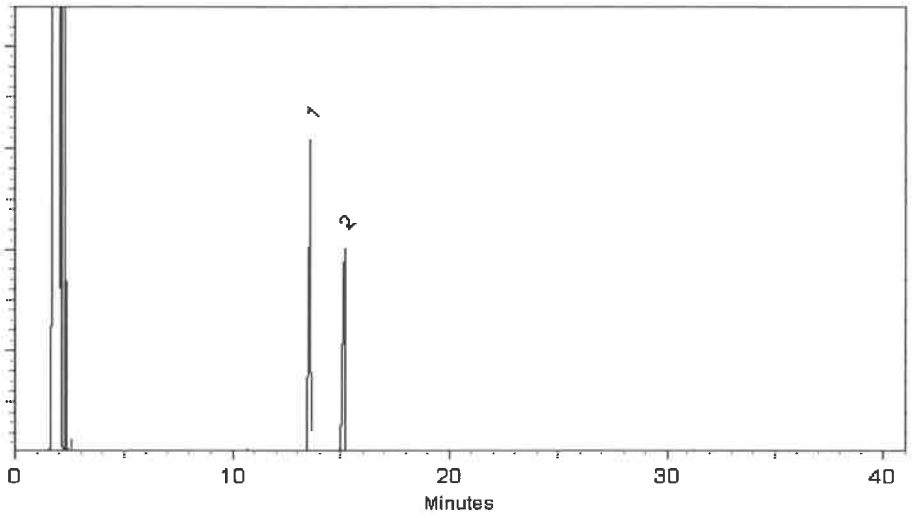
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Stacey Wanner - Operations Technician I

**Date Mixed:** 29-Apr-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 30-Apr-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

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

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

**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. :** 31098 **Lot No.:** A0213283

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** July 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

P13595 ↓ P13624 } Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1-Chlorooctadecane | 3386-33-2 | 15018900 | 99% | 10,058.0 µg/mL | +/- 565.0578 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

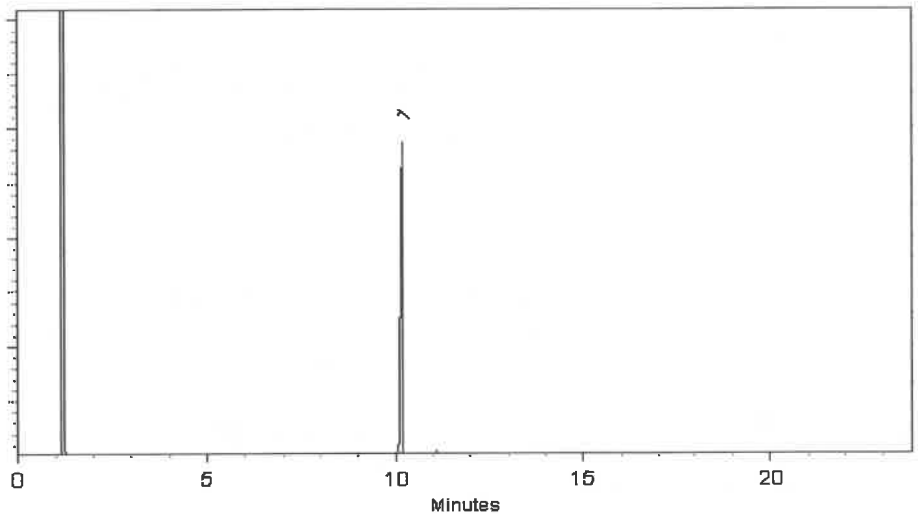
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Stacey Wanner - Operations Technician I

**Date Mixed:** 28-Jun-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 01-Jul-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

# Certificate of Analysis

***chromatographic plus***

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

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

**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. :** 31098 **Lot No.:** A0213283

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** July 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

P13595 ↓ P13624 } Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1-Chlorooctadecane | 3386-33-2 | 15018900 | 99% | 10,058.0 µg/mL | +/- 565.0578 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

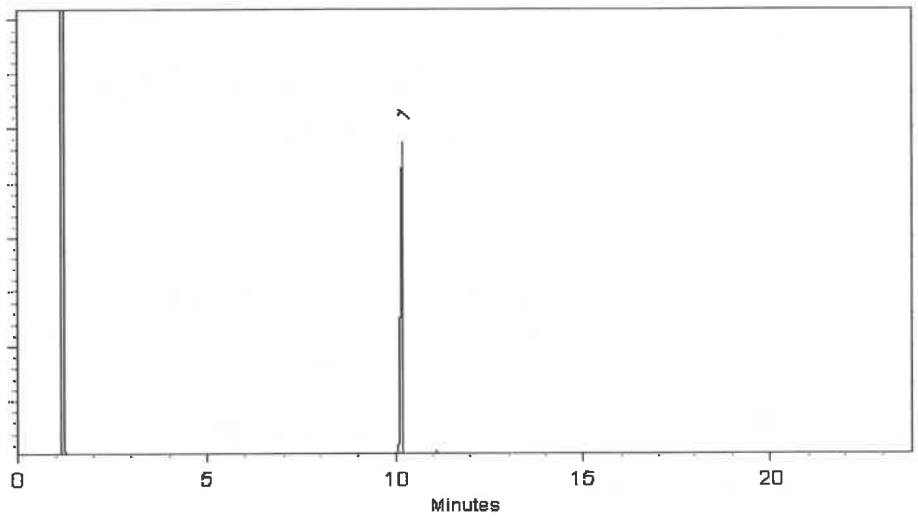
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl

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Stacey Wanner - Operations Technician I

**Date Mixed:** 28-Jun-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 01-Jul-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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- Purity values are rounded to the nearest whole number.

## Certified Uncertainty Value Notes:

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

***chromatographic plus***

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**Catalog No. :** 31098 **Lot No.:** A0213283

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** July 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

P13595 ↓ P13624 } Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1-Chlorooctadecane | 3386-33-2 | 15018900 | 99% | 10,058.0 µg/mL | +/- 565.0578 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

**Column:**
30m x 0.25mm x 0.25µm
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hydrogen-constant pressure 10 psi.

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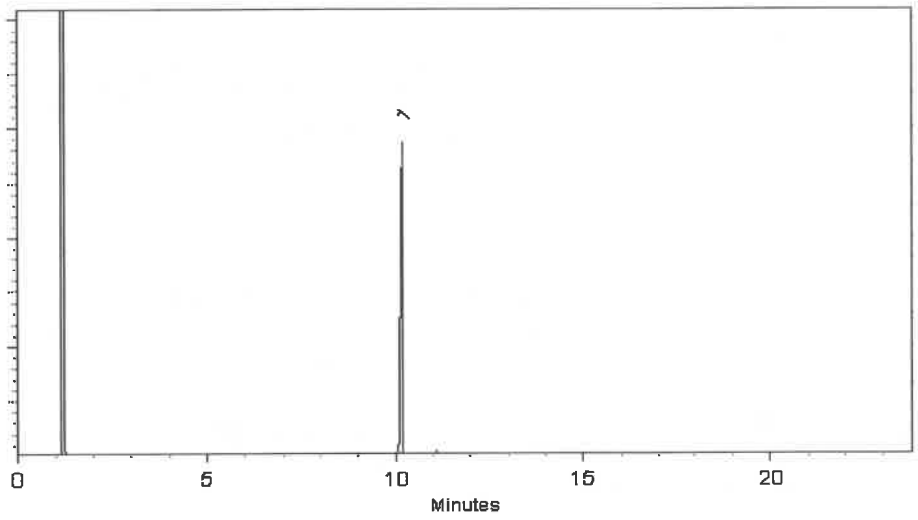
**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl

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Stacey Wanner - Operations Technician I

**Date Mixed:** 28-Jun-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 01-Jul-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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## Certified Uncertainty Value Notes:

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

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## CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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**Catalog No. :** 31098 **Lot No.:** A0213283

**Description :** 1-Chlorooctadecane Standard

1-Chlorooctadecane Standard 10,000µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** July 31, 2031 **Storage:** 10°C or colder

**Ship:** Ambient

P13595 ↓ P13624 } Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1-Chlorooctadecane | 3386-33-2 | 15018900 | 99% | 10,058.0 µg/mL | +/- 565.0578 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

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

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hydrogen-constant pressure 10 psi.

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75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

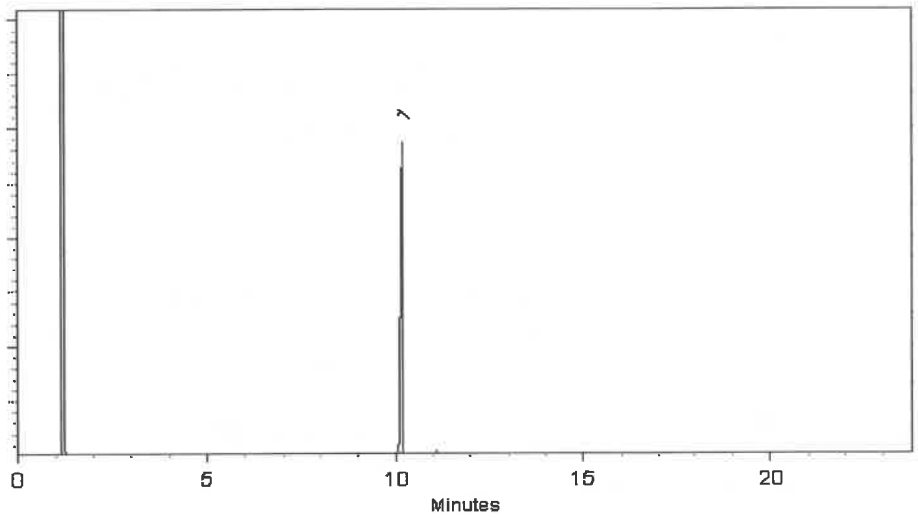
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl

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Stacey Wanner - Operations Technician I

**Date Mixed:** 28-Jun-2024 **Balance Serial #** B345965662

Dillan Murphy - Operations Technician I

**Date Passed:** 01-Jul-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

## Certified Uncertainty Value Notes:

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

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

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**CERTIFIED REFERENCE MATERIAL**

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# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

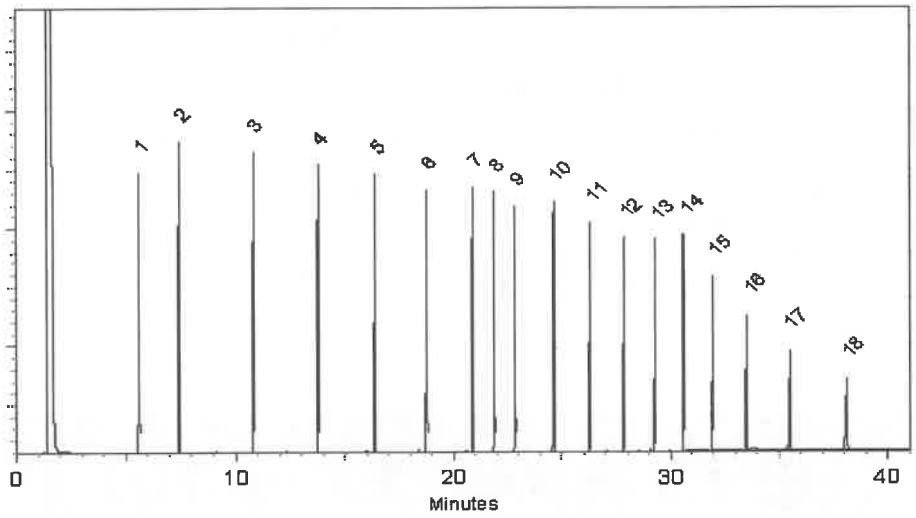
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

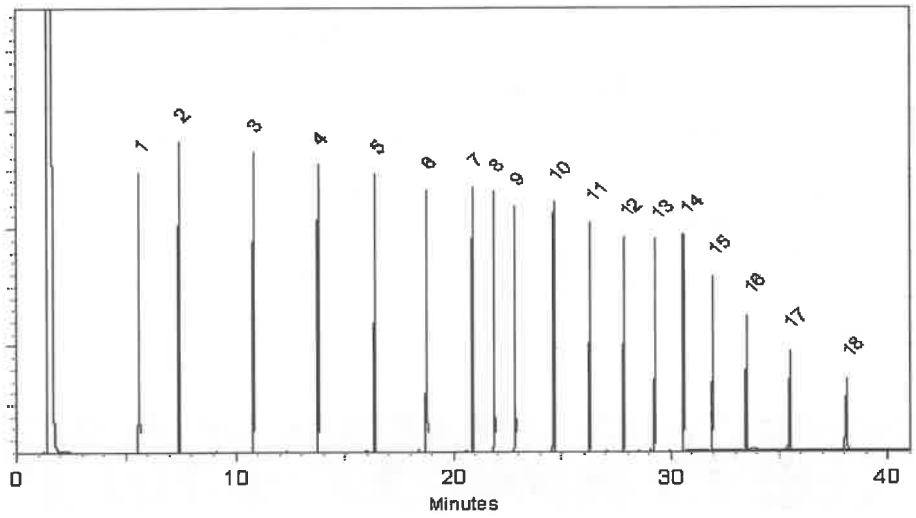
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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- 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.
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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

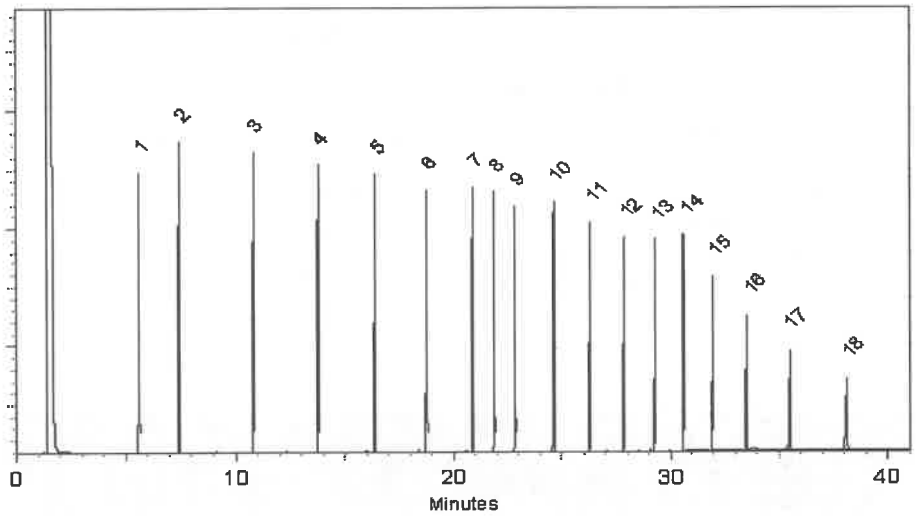
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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- 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.
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- Purity of isomeric compounds is reported as the sum of the isomers.
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## Certified Uncertainty Value Notes:

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

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

***chromatographic plus***

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**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

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|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

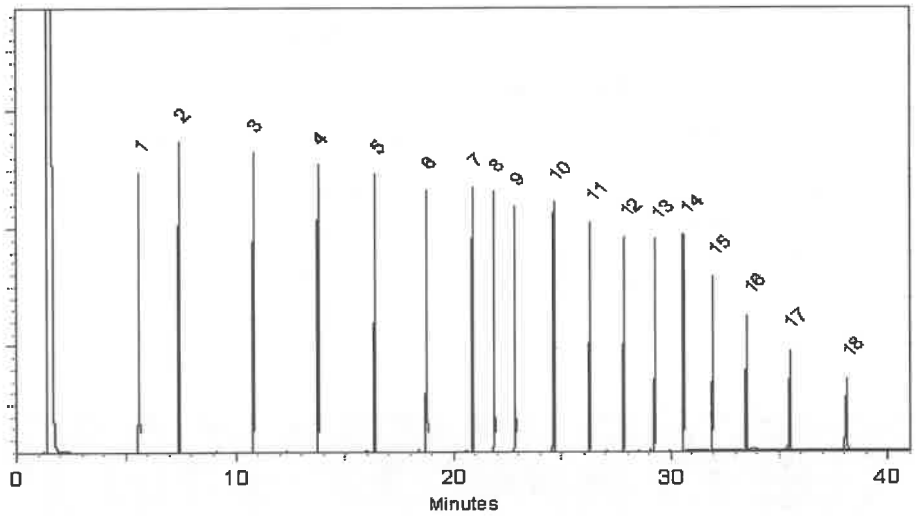
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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**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. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

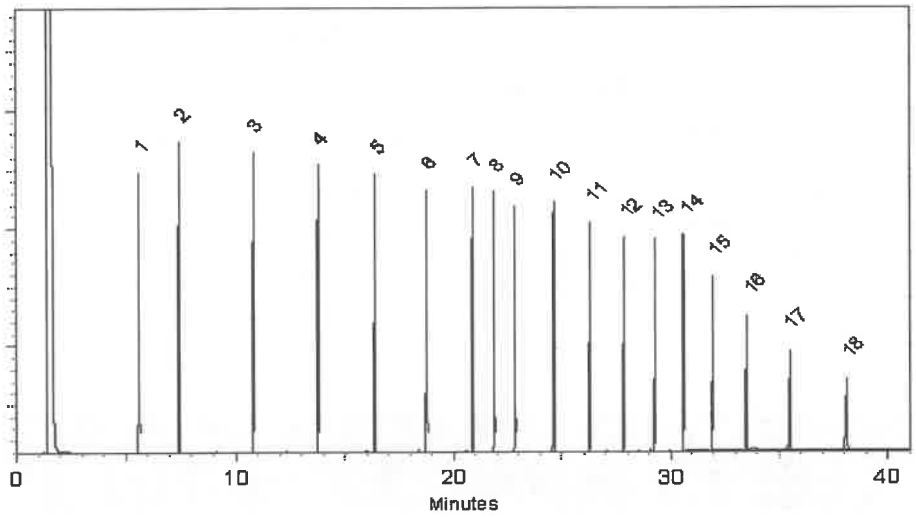
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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

www.restek.com

**CERTIFIED REFERENCE MATERIAL**

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Reference Material Producer
Certificate #3222.01

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

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
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P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

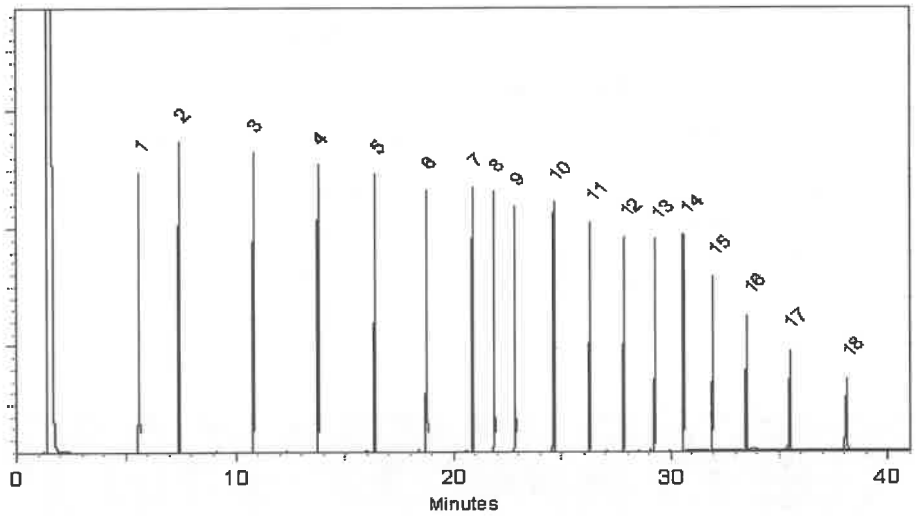
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

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

## Manufacturing Notes:

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

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# Certificate of Analysis

***chromatographic plus***

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**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
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P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

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| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
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| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
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| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

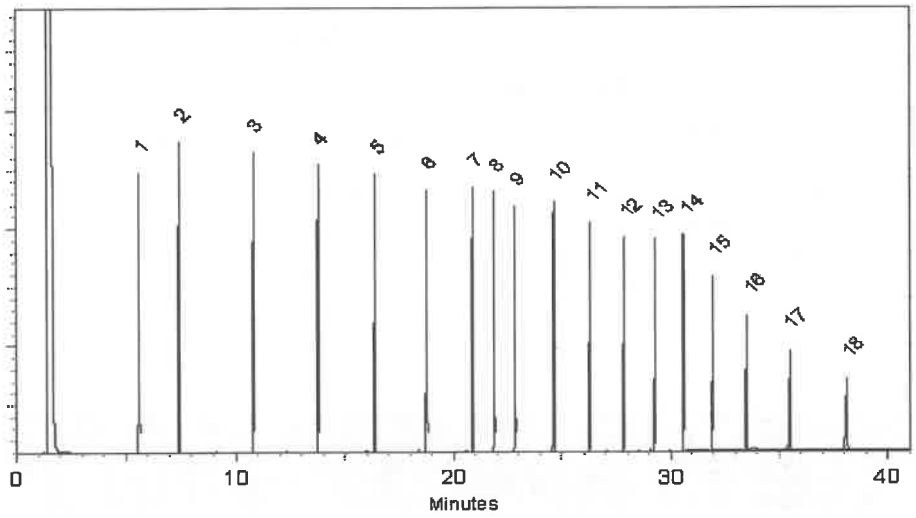
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

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**CERTIFIED REFERENCE MATERIAL**

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Certificate #3222.01

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# Certificate of Analysis

***chromatographic plus***

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**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
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P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
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| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
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| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

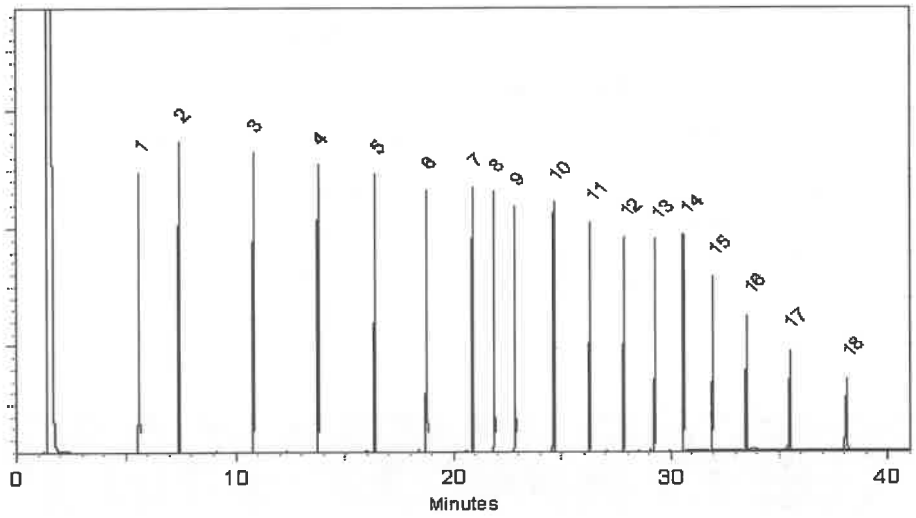
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

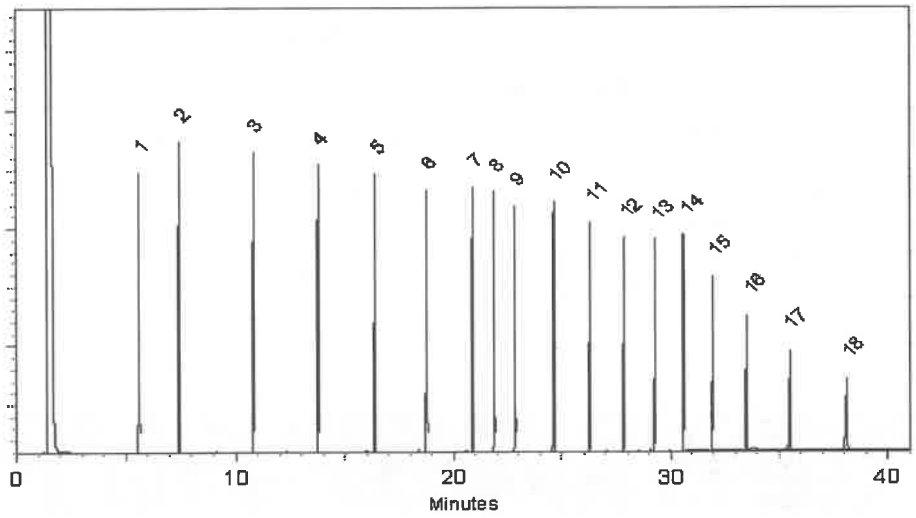
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
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## Certified Uncertainty Value Notes:

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

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

***chromatographic plus***

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

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

**Catalog No. :** 30542 **Lot No.:** A0211112

**Description :** NJEPH Aliphatics Matrix Spike Mix

NJEPH Aliphatics Matrix Spike Mix 200 µg/mL, n-Pentane, 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** June 30, 2031 **Storage:** 10°C or colder

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

P13625
↓
P13644
Y.P. 10/16/24

**CERTIFIED VALUES**

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | n-Nonane (C9) | 111-84-2 | SHBP9752 | 99% | 200.9 µg/mL | +/- 5.1891 |
| 2 | n-Decane (C10) | 124-18-5 | SHBQ1342 | 99% | 200.7 µg/mL | +/- 5.1857 |
| 3 | n-Dodecane (C12) | 112-40-3 | SHBP7054 | 99% | 200.4 µg/mL | +/- 5.1771 |
| 4 | n-Tetradecane (C14) | 629-59-4 | STBK5437 | 99% | 200.7 µg/mL | +/- 5.1839 |
| 5 | n-Hexadecane (C16) | 544-76-3 | SHBR0669 | 99% | 200.6 µg/mL | +/- 5.1822 |
| 6 | n-Octadecane (C18) | 593-45-3 | UE5NG | 98% | 200.4 µg/mL | +/- 5.1782 |
| 7 | n-Eicosane (C20) | 112-95-8 | MKCN8767 | 97% | 200.4 µg/mL | +/- 5.1771 |
| 8 | n-Heneicosane (C21) | 629-94-7 | MKCL3226 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 9 | n-Docosane (C22) | 629-97-0 | MKCQ3882 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 10 | n-Tetracosane (C24) | 646-31-1 | MKCS9978 | 99% | 200.5 µg/mL | +/- 5.1805 |
| 11 | n-Hexacosane (C26) | 630-01-3 | MKCQ4814 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 12 | n-Octacosane (C28) | 630-02-4 | BCCG0084 | 99% | 200.5 µg/mL | +/- 5.1796 |
| 13 | n-Triacontane (C30) | 638-68-6 | MKCQ9436 | 97% | 200.4 µg/mL | +/- 5.1763 |
| 14 | n-Dotriacontane (C32) | 544-85-4 | BCBW0661 | 99% | 200.4 µg/mL | +/- 5.1779 |
| 15 | n-Tetratriacontane (C34) | 14167-59-0 | D3MZN | 99% | 200.5 µg/mL | +/- 5.1805 |
| 16 | n-Hexatriacontane (C36) | 630-06-8 | Z27H018 | 99% | 200.6 µg/mL | +/- 5.1814 |
| 17 | n-Octatriacontane (C38) | 7194-85-6 | 0000145137 | 96% | 200.5 µg/mL | +/- 5.1808 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | n-Tetracontane (C40) | 4181-95-7 | OKEGA | 99% | 200.5 µg/mL | +/- 5.1805 |

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

**Solvent:** n-Pentane
**CAS #** 109-66-0
**Purity** 99%

## Quality Confirmation Test

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

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

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

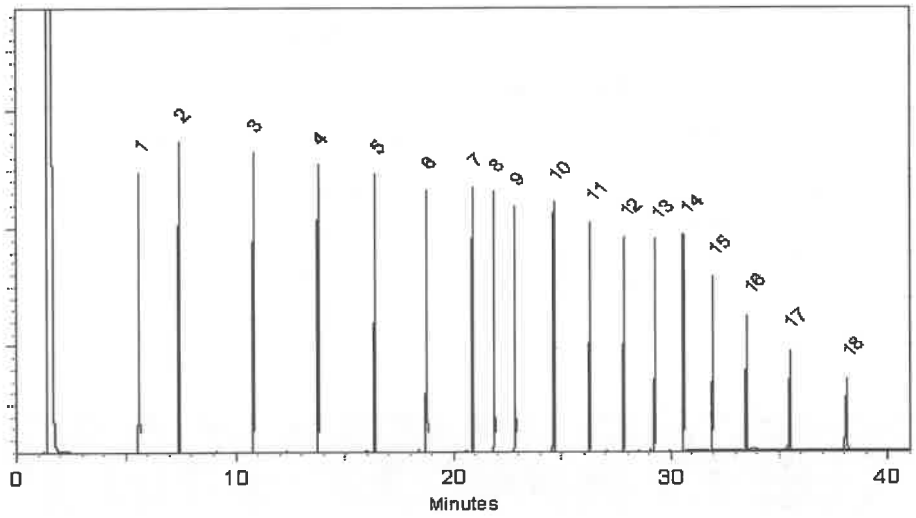
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Laith Clemente - Operations Technician I

**Date Mixed:** 07-May-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 09-May-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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# Certificate of Analysis

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Certificate #3222.02

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

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

**Catalog No. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
↓
P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

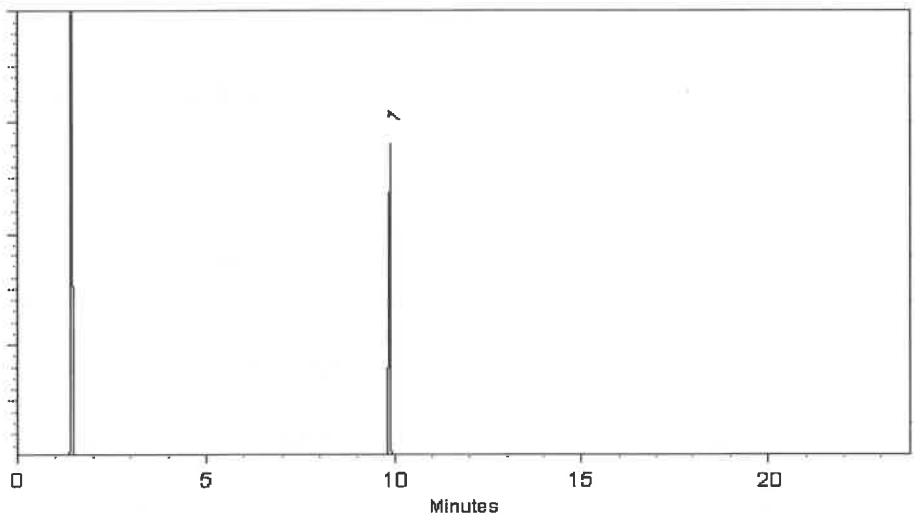
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
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## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

# Certificate of Analysis

***chromatographic plus***

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
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Testing Laboratory
Certificate #3222.02

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

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

**Catalog No. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
↓
P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

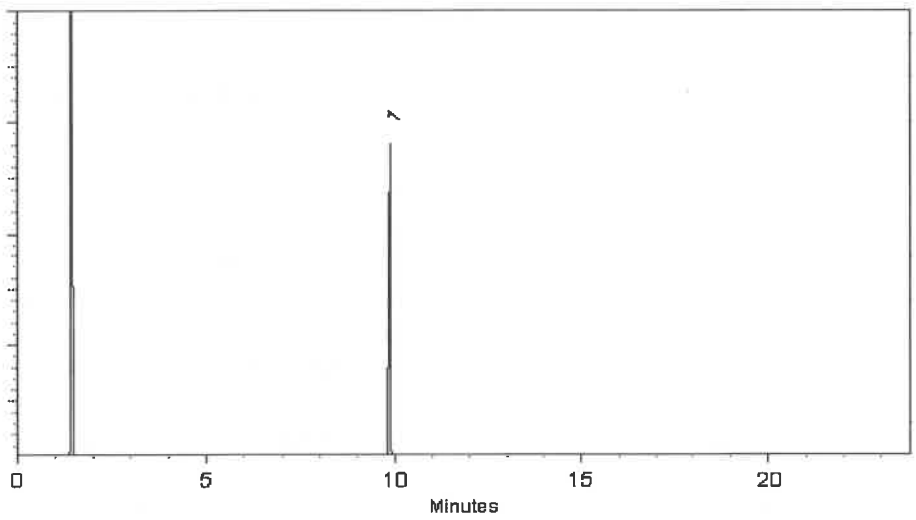
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

## Certified Uncertainty Value Notes:

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

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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# Certificate of Analysis

***chromatographic plus***

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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

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

**Catalog No. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
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P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

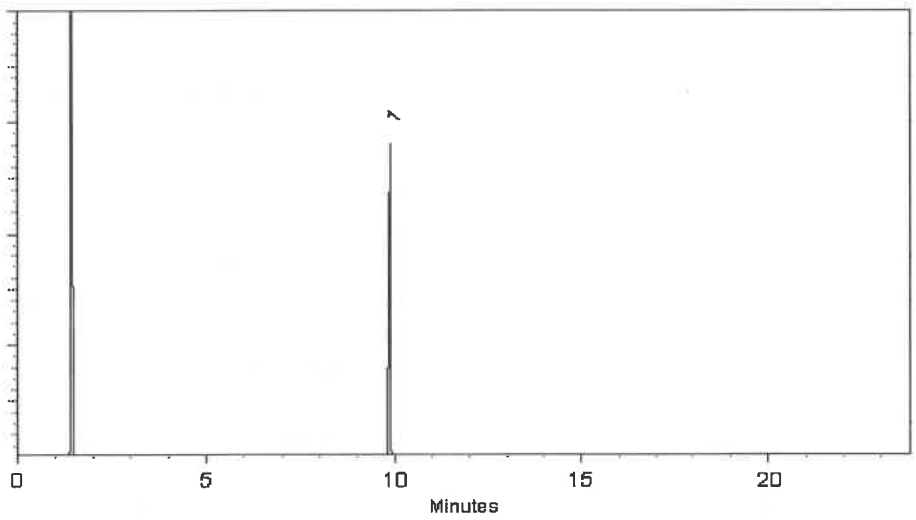
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

# Certificate of Analysis

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Certificate #3222.02

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

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

**Catalog No. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
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P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

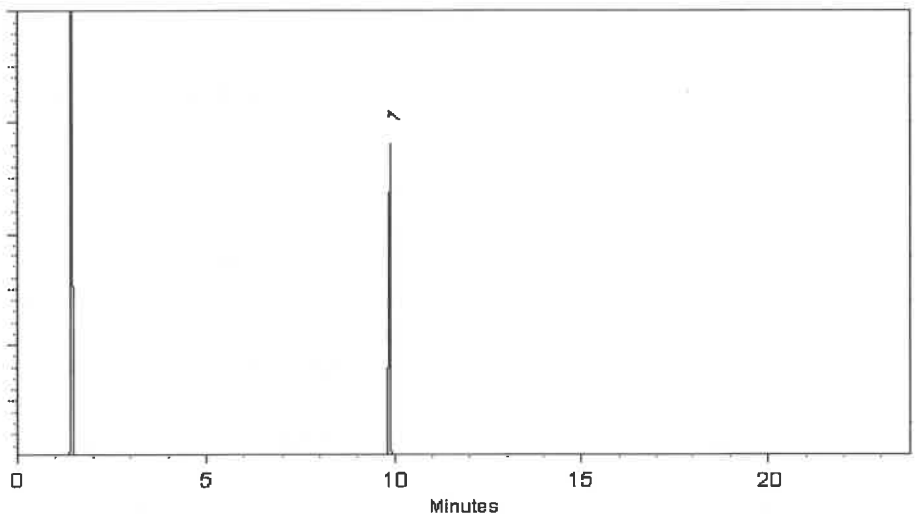
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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# Certificate of Analysis

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**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. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
↓
P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

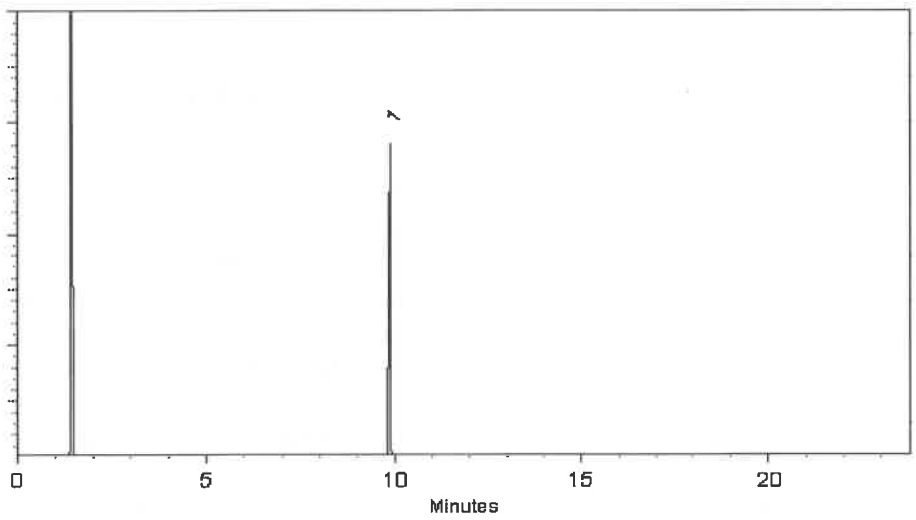
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl

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Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

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# Certificate of Analysis

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Certificate #3222.02

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

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

**Catalog No. :** 31097 **Lot No.:** A0216631

**Description :** o-Terphenyl Standard

o-Terphenyl Standard 10,000 µg/mL, Methylene Chloride, 1mL/ampul

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

**Expiration Date :** April 30, 2028 **Storage:** 10°C or colder

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

P13645
↓
P13694
Y.P.
10/16/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | o-Terphenyl | 84-15-1 | GKSSA | 99% | 10,065.0 µg/mL | +/- 453.3336 |

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

**Solvent:** Methylene chloride
**CAS #** 75-09-2
**Purity** 99%

# Quality Confirmation Test

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

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

**Temp. Program:**
75°C (hold 1 min.) to 330°C
@ 20°C/min. (hold 10 min.)

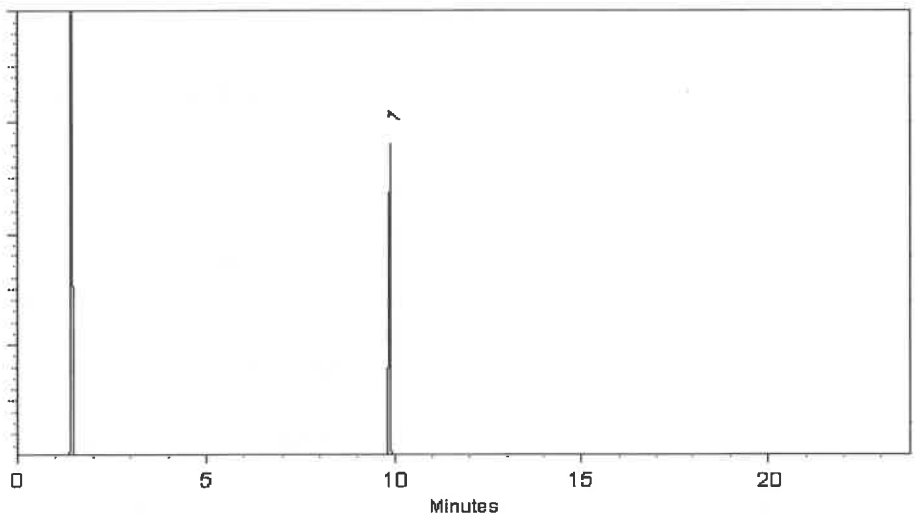
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
10 ml/min.

**Inj. Vol**
1µl




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

Ven Kelley - Operations Tech I

**Date Mixed:** 17-Sep-2024 **Balance Serial #** 1128353505

Dillan Murphy - Operations Technician I

**Date Passed:** 23-Sep-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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## Handling Notes:

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# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

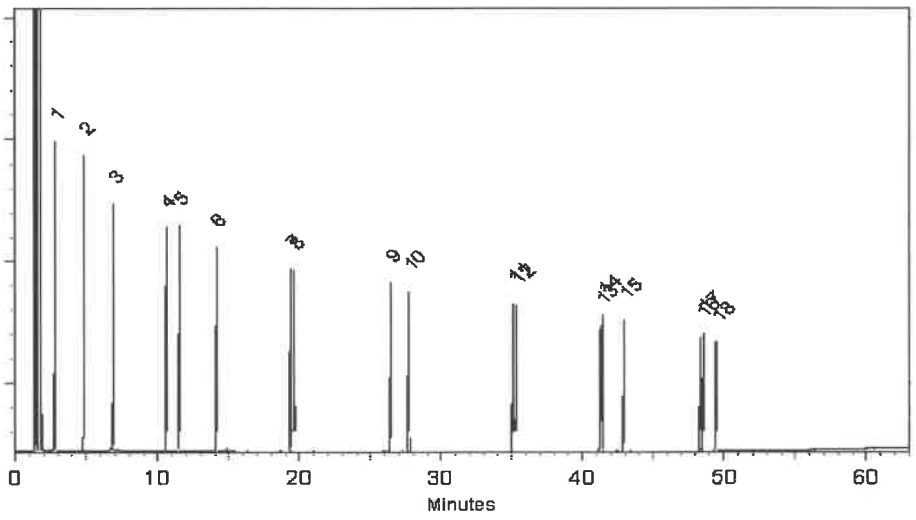
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl

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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

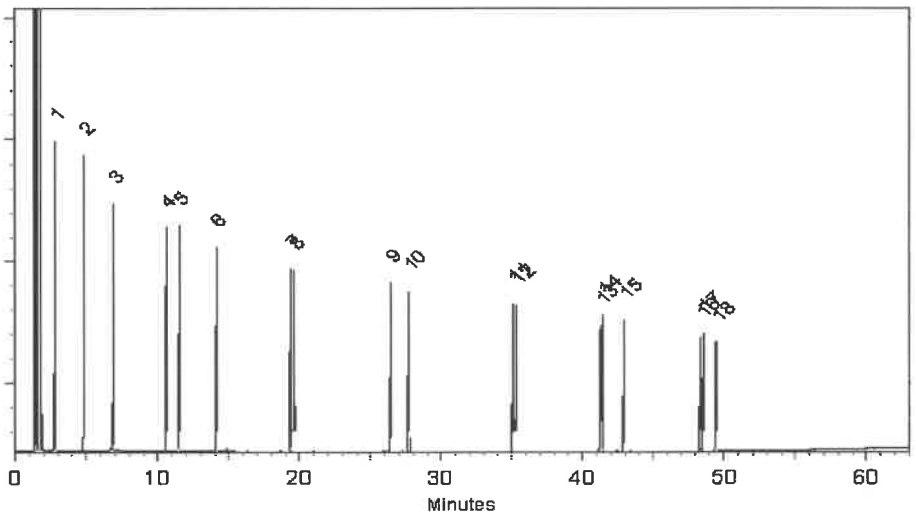
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl




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

Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

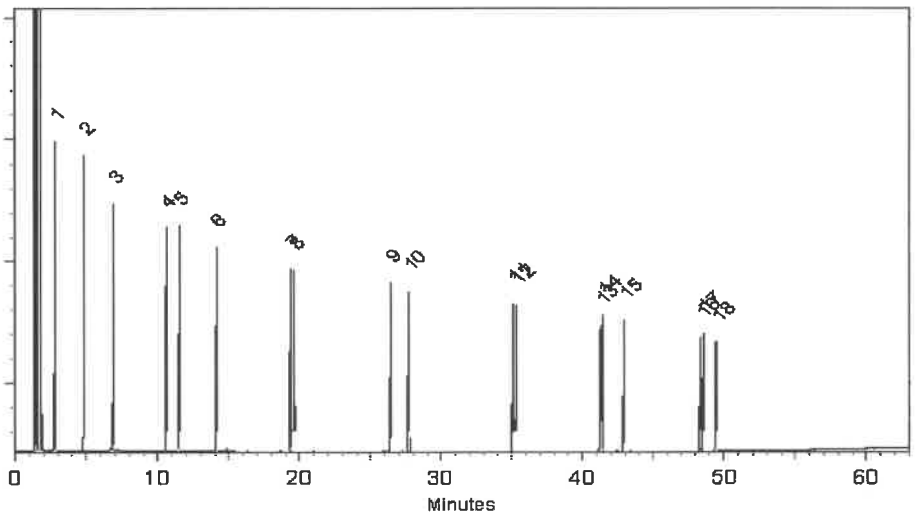
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl




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

Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

***chromatographic plus***

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*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. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

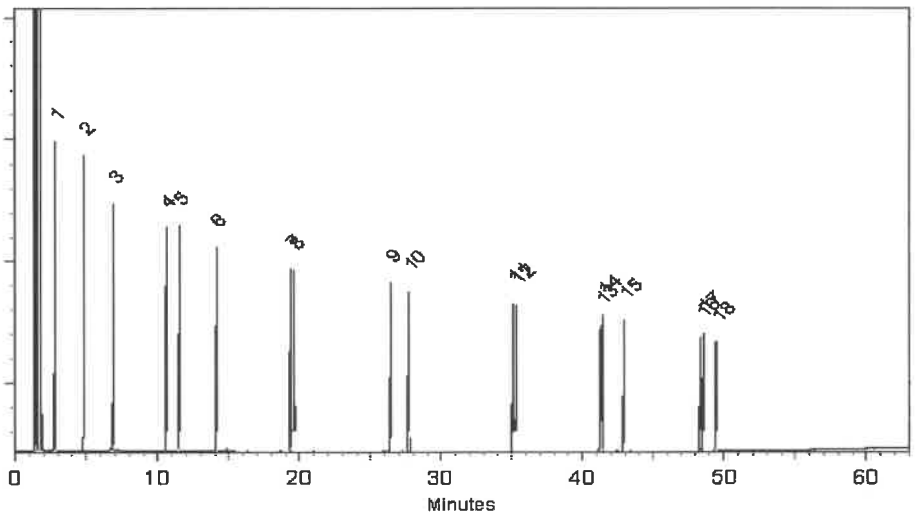
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl

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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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- Purity values are rounded to the nearest whole number.

## Certified Uncertainty Value Notes:

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# Certificate of Analysis

***chromatographic plus***

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**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

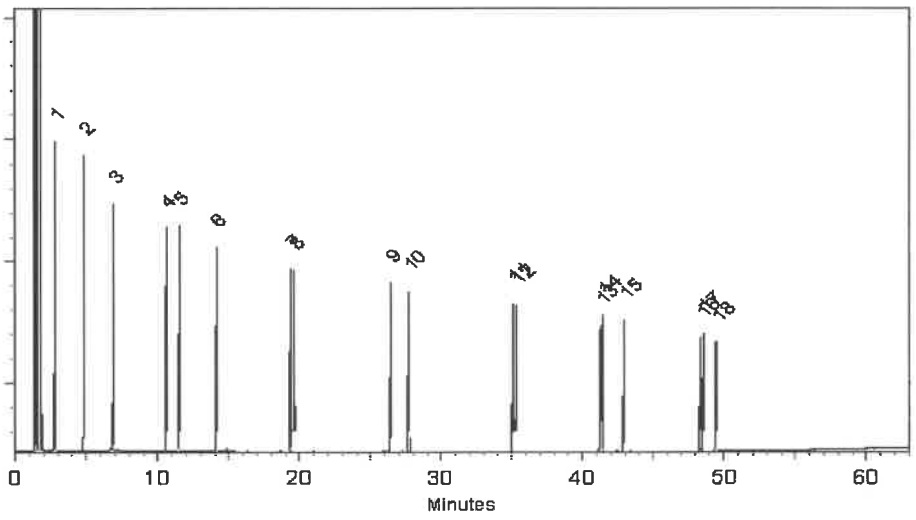
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl

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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

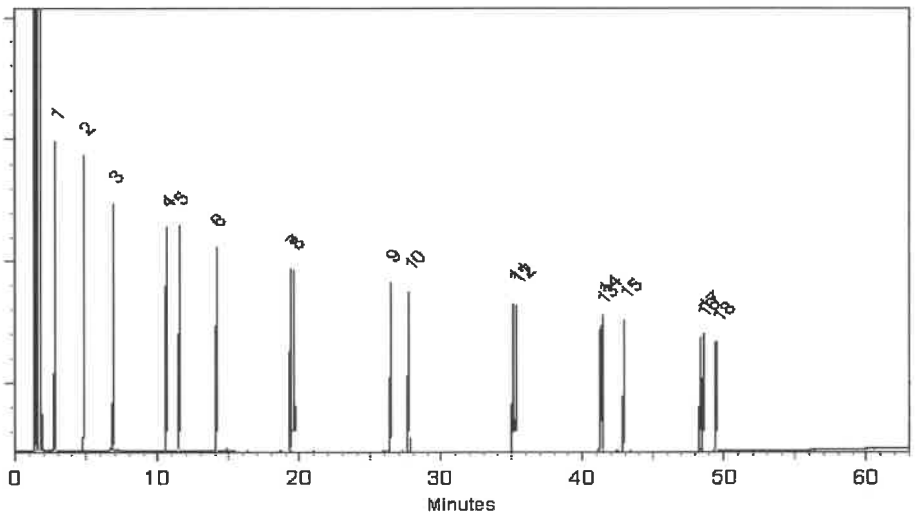
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl

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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

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## Handling Notes:

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# Certificate of Analysis

***chromatographic plus***

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**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
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| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

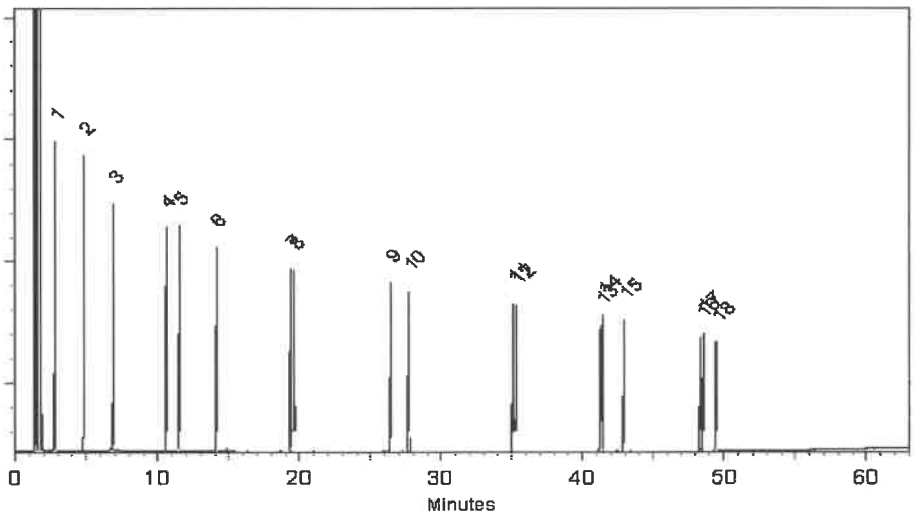
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl

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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

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## Manufacturing Notes:

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## Handling Notes:

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# Certificate of Analysis

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**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
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| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
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* Expanded Uncertainty displayed in same units as Grav. Conc.

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
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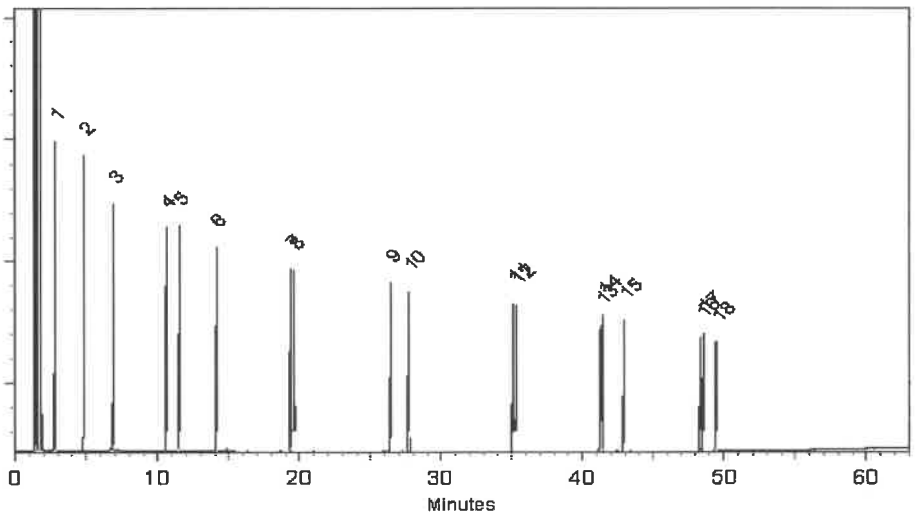


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Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

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| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

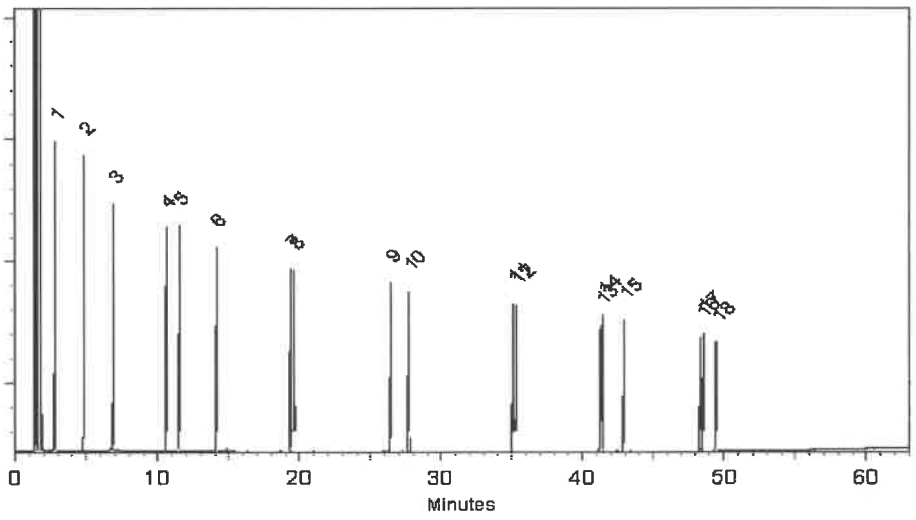
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl




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

Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

# Certificate of Analysis

***chromatographic plus***

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

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

**Catalog No. :** 30543 **Lot No.:** A0217838

**Description :** NJEPH Aromatics Matrix Spike Mix

NJEPH Aromatics Matrix Spike Mix 200µg/mL, Acetone/Toluene (50:50), 5mL/ampul

**Container Size :** 5 mL **Pkg Amt:** > 5 mL

**Expiration Date :** September 30, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13717 ↓ P13727 Y.P 10/24/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 1,2,3-Trimethylbenzene | 526-73-8 | 8776.10-38 | 99% | 201.6 µg/mL | +/- 9.0835 |
| 2 | Naphthalene | 91-20-3 | STBL1057 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 3 | 2-Methylnaphthalene | 91-57-6 | STBL3028 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 4 | Acenaphthylene | 208-96-8 | 214935V18H | 95% | 199.1 µg/mL | +/- 8.9717 |
| 5 | Acenaphthene | 83-32-9 | MKCR7169 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 6 | Fluorene | 86-73-7 | 10246250 | 98% | 201.5 µg/mL | +/- 9.0784 |
| 7 | Phenanthrene | 85-01-8 | MKCT3391 | 99% | 201.2 µg/mL | +/- 9.0655 |
| 8 | Anthracene | 120-12-7 | 101492T18R | 99% | 200.0 µg/mL | +/- 9.0114 |
| 9 | Fluoranthene | 206-44-0 | MKCQ4728 | 99% | 200.4 µg/mL | +/- 9.0294 |
| 10 | Pyrene | 129-00-0 | BCCK2592 | 99% | 200.0 µg/mL | +/- 9.0114 |
| 11 | Benz(a)anthracene | 56-55-3 | I60012022BAA | 99% | 200.0 µg/mL | +/- 9.0114 |
| 12 | Chrysene | 218-01-9 | RP240627ECS | 99% | 200.4 µg/mL | +/- 9.0294 |
| 13 | Benzo(b)fluoranthene | 205-99-2 | 052013B | 99% | 201.2 µg/mL | +/- 9.0655 |
| 14 | Benzo(k)fluoranthene | 207-08-9 | 012022K | 99% | 201.6 µg/mL | +/- 9.0835 |
| 15 | Benzo(a)pyrene | 50-32-8 | NQLXA | 98% | 199.9 µg/mL | +/- 9.0078 |
| 16 | Indeno(1,2,3-cd)pyrene | 193-39-5 | 12-JKL-118-9 | 97% | 199.0 µg/mL | +/- 8.9683 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | Dibenz(a,h)anthracene | 53-70-3 | 2-ASA-59-1 | 99% | 200.0 | µg/mL | +/- 9.0114 |
| 18 | Benzo(g,h,i)perylene | 191-24-2 | RP240625RSR | 97% | 199.0 | µg/mL | +/- 8.9683 |

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

**Solvent:** Acetone/Toluene (50:50)
**CAS #** 67-64-1/108-88-3
**Purity** 99%

## Quality Confirmation Test

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

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

**Temp. Program:**
100°C (hold 1 min.) to 330°C
@ 4°C/min. (hold 5 min.)

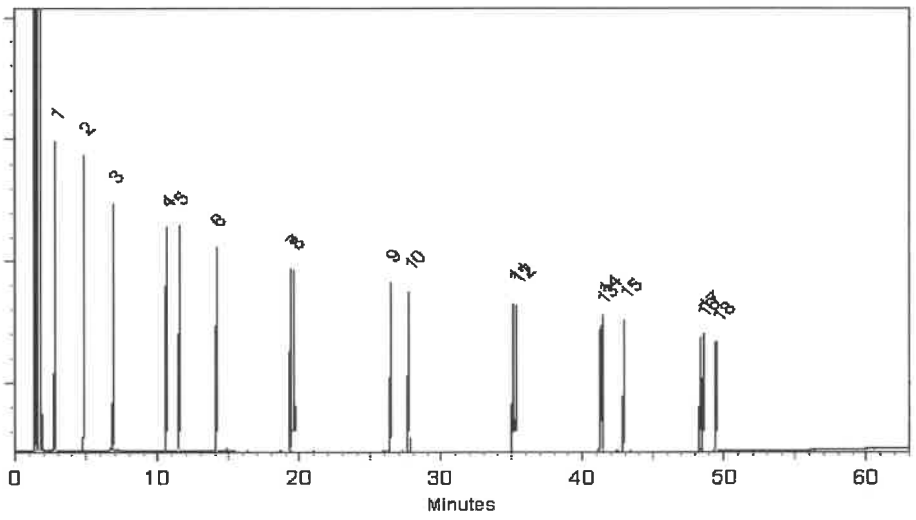
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
20 ml/min.

**Inj. Vol**
1µl




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

Rebecca Gingerich - Operations Tech II

**Date Mixed:** 14-Oct-2024 **Balance Serial #** 1128360905

Brittany Federinko - Operations Tech I

**Date Passed:** 21-Oct-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

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

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

**Catalog No. :** 31480 **Lot No.:** A0214879

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** July 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743 ↓ P13772 } Y.P. 11/01/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,009.0 µg/mL | +/- 180.5961 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,008.5 µg/mL | +/- 180.5736 |

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

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

# Quality Confirmation Test

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

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

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

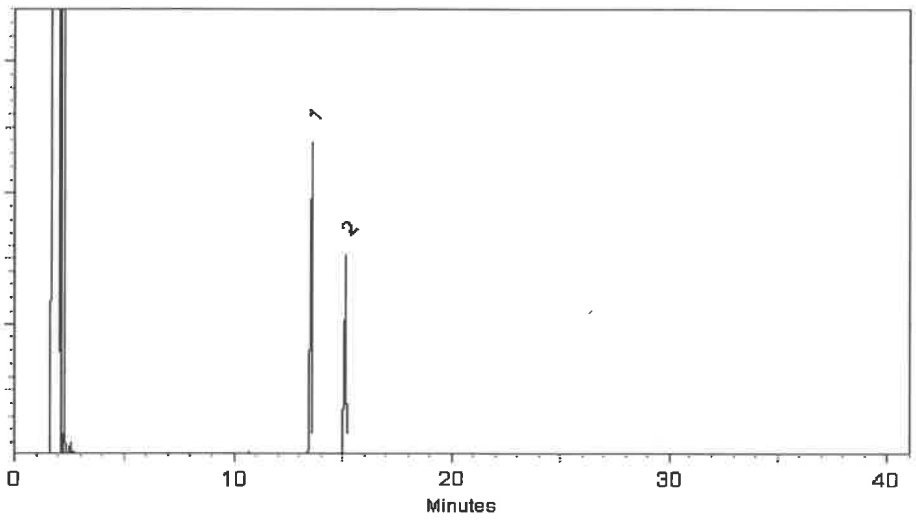
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Scott McNeil - Operations Tech I

**Date Mixed:** 06-Aug-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 14-Aug-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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**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. :** 31480 **Lot No.:** A0214879

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** July 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743 ↓ P13772 } Y.P. 11/01/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,009.0 µg/mL | +/- 180.5961 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,008.5 µg/mL | +/- 180.5736 |

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

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

# Quality Confirmation Test

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

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

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

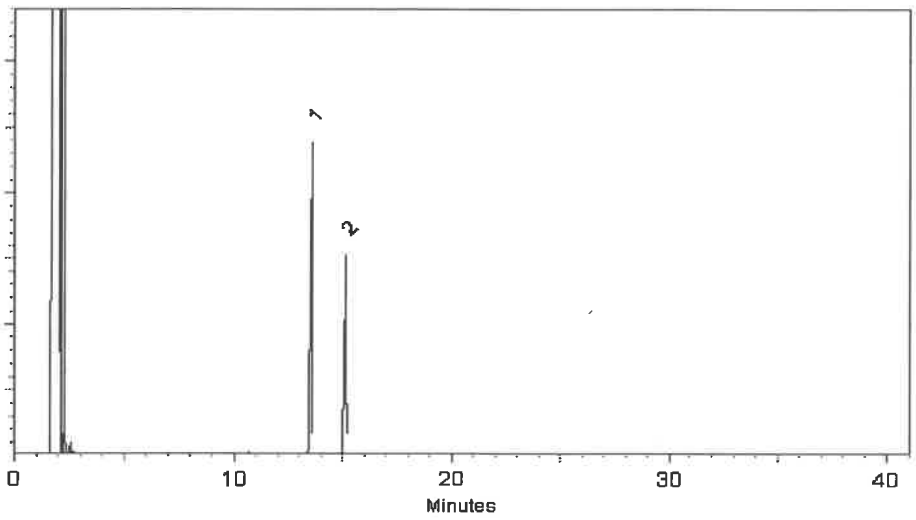
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Scott McNeil - Operations Tech I

**Date Mixed:** 06-Aug-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 14-Aug-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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- 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:

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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**Catalog No. :** 31480 **Lot No.:** A0214879

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** July 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743 ↓ P13772 } Y.P. 11/01/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,009.0 µg/mL | +/- 180.5961 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,008.5 µg/mL | +/- 180.5736 |

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

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

# Quality Confirmation Test

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

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

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

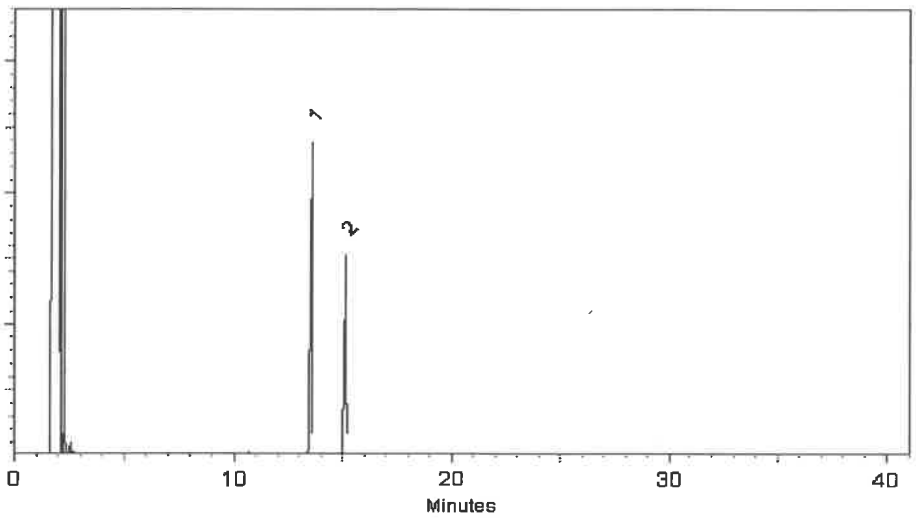
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl

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Scott McNeil - Operations Tech I

**Date Mixed:** 06-Aug-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 14-Aug-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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- Purity of isomeric compounds is reported as the sum of the isomers.
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## Certified Uncertainty Value Notes:

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  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

*chromatographic plus*

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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

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

**Catalog No. :** 31480 **Lot No.:** A0214879

**Description :** MA Fractionation Surrogate Spike Mix

MA Fractionation Surrogate Spike Mix 4000µg/mL, Hexane, 1mL/ampul

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

**Expiration Date :** July 31, 2030 **Storage:** 10°C or colder

**Handling:** Sonication required. Mix is photosensitive. **Ship:** Ambient

P13743 ↓ P13772 } Y.P. 11/01/24

CERTIFIED VALUES

| Elution Order | Compound | CAS # | Lot # | Purity | Grav. Conc. (weight/volume) | Expanded Uncertainty * (95% C.L.; K=2) |
|---|---|---|---|---|---|---|
| 1 | 2-Fluorobiphenyl | 321-60-8 | 00021384 | 99% | 4,009.0 µg/mL | +/- 180.5961 |
| 2 | 2-Bromonaphthalene | 580-13-2 | STBC5362V | 99% | 4,008.5 µg/mL | +/- 180.5736 |

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

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

# Quality Confirmation Test

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

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

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

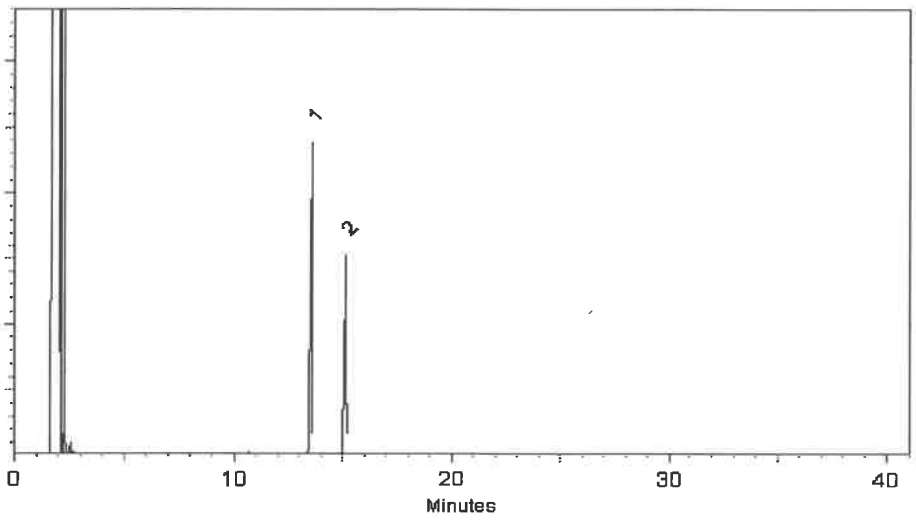
**Inj. Temp:**
250°C

**Det. Temp:**
330°C

**Det. Type:**
FID

**Split Vent:**
2 ml/min.

**Inj. Vol**
1µl




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

Scott McNeil - Operations Tech I

**Date Mixed:** 06-Aug-2024 **Balance Serial #** 1128360905

Jennifer Pollino - Operations Tech III - ARM QC

**Date Passed:** 14-Aug-2024

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

# General Certified Reference Material Notes

## Expiration Notes:

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

## Purity Notes:

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

## Certified Uncertainty Value Notes:

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

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

  $k$ is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

## Manufacturing Notes:

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

## Handling Notes:

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

Certificate of Analysis
ThermoFisher SCIENTIFIC

W3110 SP update: 06/27/2024

# Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

| | | | |
|---|---|---|---|
| Catalog Number | H303 | Quality Test / Release Date | 02/23/2024 |
| Lot Number | 235898 | | |
| Description | HEXANES - OPTIMA | | |
| Country of Origin | United States | Suggested Retest Date | Feb/2029 |
| Chemical Origin | Organic - non animal | | |
| BSE/TSE Comment | No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product. | | |

| N/A | | | |
|---|---|---|---|
| Result Name | Units | Specifications | Test Value |
| APPEARANCE | | REPORT | Clear, colorless liquid |
| ASSAY (N-HEXANE) | % | >= 60 | 73 |
| ASSAY (SUM C6 HYDROCARBONS) | % | >= 99.9 | >99.9 |
| COLOR | APHA | <= 5 | <5 |
| DENSITY AT 25 DEGREES C | GM/ML | Inclusive Between 0.653 - 0.673 | 0.670 |
| EVAPORATION RESIDUE | ppm | <= 1 | 0.3 |
| FLUORESCENCE BACKGROUND | ppb | <= 1 | <1 |
| IDENTIFICATION | PASS/FAIL | = PASS TEST | PASS TEST |
| OPTICAL ABS AT 195 NM | ABS. UNITS | <= 1 | 0.64 |
| OPTICAL ABS AT 210 NM | ABS. UNITS | <= 0.25 | 0.16 |
| OPTICAL ABS AT 220 NM | ABS. UNITS | <= 0.07 | 0.06 |
| OPTICAL ABS AT 254 NM | ABS. UNITS | <= 0.005 | 0.002 |
| PESTICIDE RESIDUE ANALYSIS | NG/L | <= 10 | <10 |
| REFRACTIVE INDEX @ 25 DEG C | | Inclusive Between 1.375 - 1.385 | 1.380 |
| SUITABILITY FOR GC/MS | | = PASS TEST | PASS TEST |
| SULFUR COMPOUNDS | % | <= 0.005 | <0.005 |
| THIOPHENE | PASS/FAIL | = PASS TEST | PASS TEST |
| WATER (H2O) | % | <= 0.01 | <0.01 |
| WATER-SOLUBLE TITRABLE ACID | MEQ/G | <= 0.0003 | 0.0001 |

Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

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

CHEMTECH PROJECT NO. P5194
QUOTE NO.
COC Number 2041877

### CLIENT INFORMATION
REPORT TO BE SENT TO:
COMPANY: JPCL Engineering, LLC
ADDRESS: 2 Clerico Ln, Bldg 1
CITY Hillsborough STATE: NJ ZIP: 08844
ATTENTION: Paul Rotondi
PHONE: 609 203-3846 FAX: 609 460-4355

### CLIENT PROJECT INFORMATION
PROJECT NAME: 1454-1460 Haddon Ave
PROJECT NO.: LOCATION: Camden, NJ
PROJECT MANAGER: P. Rotondi
e-mail: protondi@JPCLENGINEERING.com
PHONE: 609 203-3846 FAX:

### CLIENT BILLING INFORMATION
BILL TO: See Client PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

### DATA TURNAROUND INFORMATION
FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

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

### ANALYSIS
1: EPH/DRO
2: VOC+10
3–9:

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # OF BOTTLES | PRESERVATIVES 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | UST-1 | Soil | | X | 12/5 | 11:02 | 2 | 2 | | | | | | | | | |
| 2. | UST-2 | Soil | | X | 12/5 | 11:02 | 2 | 2 | | | | | | | | | |
| 3. | WP-1 | Soil | | X | 12/5 | 9:44 | 3 | | 3 | | | | | | | | |
| 4. | WP-2 | Soil | | X | " | 10:57 | 3 | | 3 | | | | | | | | |
| 5. | WP-3 | Soil | | X | " | 11:11 | 3 | | 3 | | | | | | | | |
| 6. | WP-4 | Soil | | X | " | 11:31 | 3 | | 3 | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

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

| RELINQUISHED BY SAMPLER: | DATE/TIME: | RECEIVED BY: |
|---|---|---|
| 1. | 12/6/13 8:00A | 1. |
| 2. | | 2. |
| 3. | | 3. |

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.1 °C
Comments: 5-DAY TAT PLEASE FRCa bt 1

Page 1 of 1

CLIENT: X Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

# Laboratory Certification

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

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

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** P5194 JPCL01
**Client Name :** JPCL Engineering
**Client Contact :** Paul Rotondi
**Invoice Name :** JPCL Engineering
**Invoice Contact :** Paul Rotondi

**Order Date :** 12/6/2024 3:08:24 PM
**Project Name :** 1454 to 1460 Haddon Aven
**Receive DateTime :** 12/6/2024 1:00:00 PM
**Purchase Order :**

**Project Mgr :** Yazmeen
**Report Type :** NJ Reduced
**EDD Type :** Excel NY
**Hard Copy Date :**
**Date Signoff :** 12/6/2024 4:13:46 PM

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| P5194-03 | WP-1 | Solid | 12/05/2024 | 09:44 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 5 Bus. Days |
| P5194-04 | WP-2 | Solid | 12/05/2024 | 10:37 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 5 Bus. Days |
| P5194-05 | WP-3 | Solid | 12/05/2024 | 11:11 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 5 Bus. Days |
| P5194-06 | WP-4 | Solid | 12/05/2024 | 11:31 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 5 Bus. Days |

**Relinguished By :**
**Date / Time :** 12-10-24 14:48

**Received By :**
**Date / Time :** 12.10.24 14:48

**Storage Area :** VOA Refridgerator Room