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

# Cover Page

**Order ID :** O1232

**Project ID :** NYCDDC Phase II SCI Arthur Kill Road CEQR

**Client :** Louis Berger U.S., Inc., A WSP Company

| Lab Sample Number | Client Sample Number |
|---|---|
| O1232-01 | B-P-17A |
| O1232-02 | B-P-17B |
| O1232-03 | WC-17 |
| O1232-04 | B-P-18A |
| O1232-05 | B-P-18B |
| O1232-06 | B-P-19A |
| O1232-07 | B-P-19B |
| O1232-08 | B-P-35A |
| O1232-09 | B-P-35B |
| O1232-10 | DUP01 |

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

Signature : _____

Date: 1/31/2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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# DATA REPORTING QUALIFIERS- ORGANIC

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

| | |
|---|---|
| Value | If the result is a value greater than or equal to the detection limit, report the value |
| **U** | Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required. |
| **ND** | Indicates the analyte was analyzed for, but not detected |
| **J** | Indicates an estimated value**.** This flag is used:<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 #: O1232**

| | 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** | ✓ |

**1st Level QA Review Signature:** KETAN PATEL **Date:** 01/31/2023

**2nd Level QA Review Signature:** _____ **Date:** _____

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# LAB CHRONICLE

| | | | |
|---|---|---|---|
| **OrderID:** | O1232 | **OrderDate:** | 1/19/2023 1:44:00 PM |
| **Client:** | Louis Berger U.S., Inc., A WSP Company | **Project:** | NYCDDC Phase II SCI Arthur Kill Road CEQR |
| **Contact:** | Jonathan Ganz | **Location:** | N11,VOA Ref. #2 Soil |

| LabID | ClientID | Matrix | Test | Method | Sample Date | Prep Date | Anal Date | Received |
|---|---|---|---|---|---|---|---|---|
| **O1232-03** | **WC-17** | **SOIL** | | | **01/18/23** | | | **01/19/23** |
| | | | Diesel Range Organics | 8015D | | 01/20/23 | 01/20/23 | |
| | | | Gasoline Range Organics | 8015D | | | 01/20/23 | |

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# QC SUMMARY

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## SOIL GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: Chemtech Client: Louis Berger U.S., Inc., A WSP Company

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232

| EPA SAMPLE NO. | S1 AAA-TFT | S2 | S3 | S4 | TOT OUT |
|---|---|---|---|---|---|
| VBF0120S2 | 88 | | | | 0 |
| BSF0120S1 | 88 | | | | 0 |
| WC-17 | 88 | | | | 0 |
| WC-17MS | 102 | | | | 0 |
| WC-17MSD | 94 | | | | 0 |

QC LIMITS

AAA-TFT

For Water : 50-150
For Soil : 50-150

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

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## SOIL GASOLINE RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** Louis Berger U.S., Inc., A WSP Company

**Lab Code:** CHEM **Cas No:** O1232 **SAS No :** O1232 **SDG No:** O1232

**Client SampleID :** WC-17MS **Datafile:** FB029150.D

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE CONCENTRATION ug/kg | MS/MSD CONCENTRATION ug/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|---|
| GRO | 9692 | 847 | 10039 | 95% | | 50-150 |

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## SOIL GASOLINE RANGE ORGANICS MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

**Lab Name:** Chemtech **Client:** Louis Berger U.S., Inc., A WSP Company

**Lab Code:** CHEM **Cas No:** O1232 **SAS No :** O1232 **SDG No:** O1232

**Client SampleID :** WC-17MSD **Datafile:** FB029151.D

| COMPOUND | SPIKE ADDED ug/kg | SAMPLE CONCENTRATION ug/kg | MS/MSD CONCENTRATION ug/kg | % REC | Qual | QC LIMITS |
|---|---|---|---|---|---|---|
| GRO | 9847 | 847 | 9063 | 83% | | 50-150 |

**MS/MSD % Recovery RPD :** 12.8

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**SOIL GASOLINE RANGE ORGANICS LABORATORY CONTROL SPIKE/LABORATORY CONTROL SPIKE DUPLICATI**

**Lab Name:** Chemtech **Client:** Louis Berger U.S., Inc., A WSP Company

**Lab Code:** CHEM **Cas No:** O1232 **SAS No :** O1232 **SDG No:** O1232

**Matrix Spike - EPA Sample No :** BSF0120S1 **Datafile:** FB029144.D

| COMPOUND | SPIKE ADDED ug/kg | CONCENTRATION ug/kg | LCS/LCSD CONCENTRATION ug/kg | % REC | QC LIMITS |
|---|---|---|---|---|---|
| GRO | 180 | 0 | 177 | 98 | 50-150 |

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# METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBF0120S2

Lab Name: CHEMTECH Contract: loui01

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG NO.: O1232

Lab File ID: FB029143.D Lab Sample ID: VBF0120S2

Date Analyzed: 01/20/23 Time Analyzed: 11:18

GC Column: RTX-502.2 ID: 0.53 (mm) Heated Purge: (Y/N) Y

Instrument ID: FB

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

| EPA SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED |
|---|---|---|---|
| BSF0120S1 | BSF0120S1 | FB029144.D | 01/20/23 |
| WC-17 | O1232-03 | FB029149.D | 01/20/23 |
| WC-17MS | O1232-03MS | FB029150.D | 01/20/23 |
| WC-17MSD | O1232-03MSD | FB029151.D | 01/20/23 |

COMMENTS:

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# SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Louis Berger U.S., Inc., A WSP Company | Date Collected: | 01/18/23 |
| Project: | NYCDDC Phase II SCI Arthur Kill Road CEQR | Date Received: | 01/19/23 |
| Client Sample ID: | WC-17 | SDG No.: | O1232 |
| Lab Sample ID: | O1232-03 | Matrix: | SOIL |
| Analytical Method: | 8015D GRO | % Solid: | 91.4 Decanted: |
| Sample Wt/Vol: | 5 Units: g | Final Vol: | 5 mL |
| Soil Aliquot Vol: | uL | Test: | Gasoline Range Organics |
| Extraction Type: | | Injection Volume : | |
| GPC Factor : | PH : | | |
| Prep Method : | SW3541 | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed | Prep Batch ID |
|---|---|---|---|
| FB029149.D | 50 | 01/20/23 15:02 | FB012023 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units(Dry Weight) |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| GRO | GRO | 847 | J | 198 | 2460 | ug/kg |
| **SURROGATES** | | | | | | |
| 98-08-8 | Alpha,Alpha,Alpha-Trifluoroto | 17.7 | | 50 - 150 | 88% | SPK: 20 |

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029149.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:02
Operator : AJ/MA
Sample : O1232-03 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 9 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:02 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

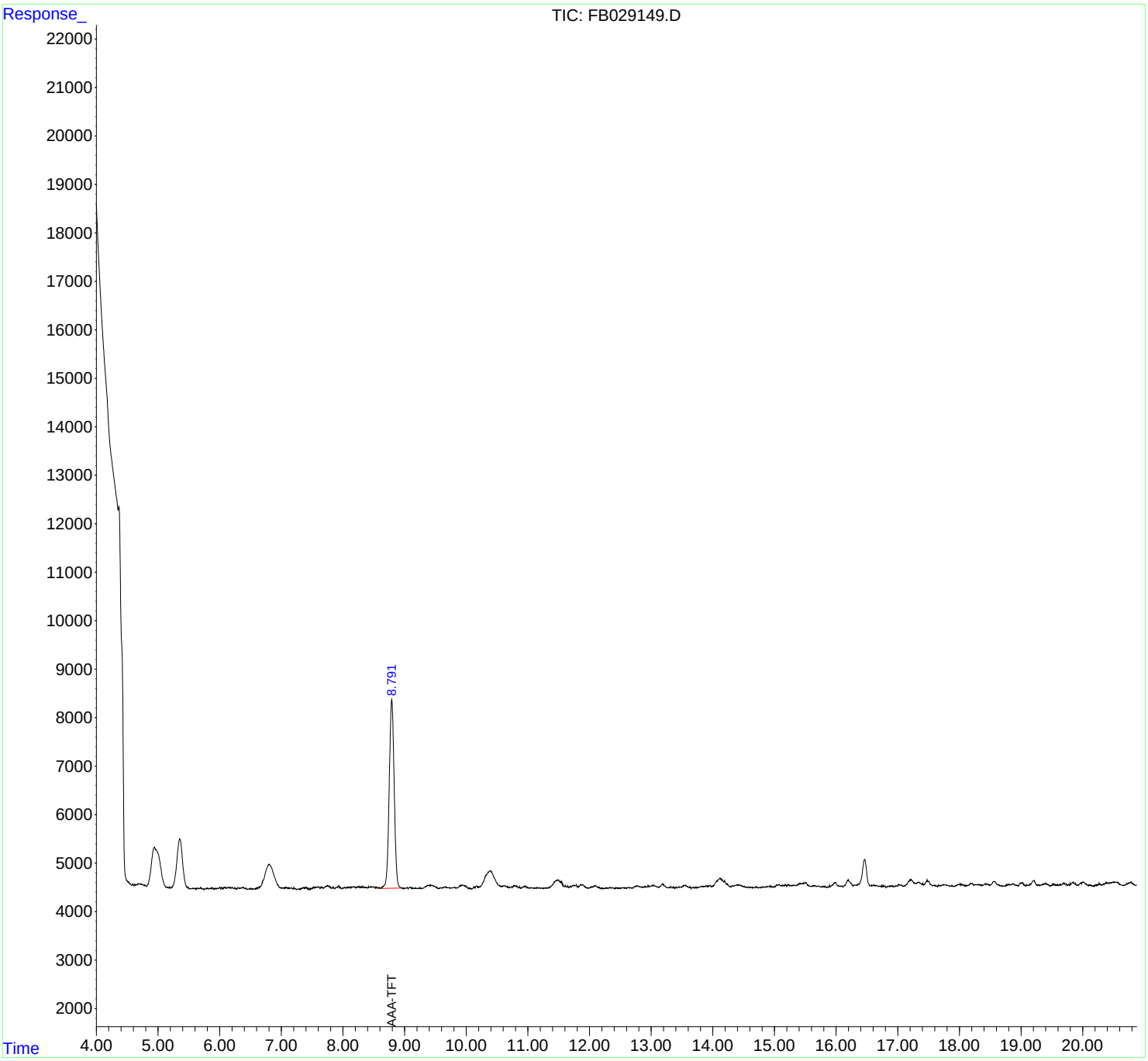
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 5) s AAA-TFT | 8.793 | 216009 | 17.677 ng/ml |
| Target Compounds | | | |

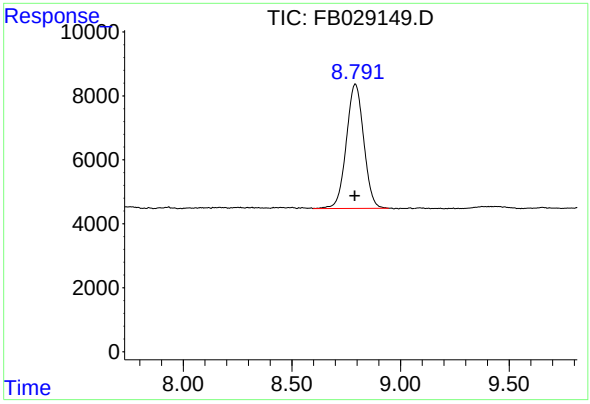
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029149.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:02
Operator : AJ/MA
Sample : 01232-03 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 9 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:02 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um






#5 AAA-TFT

| | |
|---|---|
| R.T.: | 8.793 min |
| Delta R.T.: | 0.003 min |
| Response: | 216009 |
| Conc: | 17.68 ng/ml |

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029149.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:02
Sample : O1232-03 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 9 Sample Multiplier: 1

Integration File: SAMPLE.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.551 | 4.504 | 4.574 | BV | 15 | 271 | 0.12% | 0.055% |
| 2 | 4.592 | 4.574 | 4.618 | PV | 34 | 373 | 0.17% | 0.076% |
| 3 | 4.679 | 4.618 | 4.818 | VV | 51 | 3624 | 1.64% | 0.740% |
| 4 | 5.188 | 5.172 | 5.219 | PV | 23 | 232 | 0.10% | 0.047% |
| 5 | 5.563 | 5.515 | 5.577 | PV | 16 | 335 | 0.15% | 0.068% |
| 6 | 5.592 | 5.577 | 5.621 | VV | 20 | 326 | 0.15% | 0.067% |
| 7 | 5.651 | 5.621 | 5.675 | VV | 24 | 540 | 0.24% | 0.110% |
| 8 | 5.693 | 5.675 | 5.754 | VV | 30 | 805 | 0.36% | 0.164% |
| 9 | 5.795 | 5.754 | 5.838 | PV | 35 | 971 | 0.44% | 0.198% |
| 10 | 5.883 | 5.838 | 5.905 | VV | 42 | 1049 | 0.47% | 0.214% |
| 11 | 6.004 | 5.905 | 6.120 | VV | 46 | 3663 | 1.65% | 0.748% |
| 12 | 6.144 | 6.120 | 6.165 | VV | 54 | 1136 | 0.51% | 0.232% |
| 13 | 6.184 | 6.165 | 6.233 | VV | 48 | 1391 | 0.63% | 0.284% |
| 14 | 6.249 | 6.233 | 6.345 | VV | 43 | 1672 | 0.76% | 0.341% |
| 15 | 6.375 | 6.345 | 6.451 | VV | 44 | 1778 | 0.80% | 0.363% |
| 16 | 6.504 | 6.451 | 6.595 | VV | 28 | 1085 | 0.49% | 0.222% |
| 17 | 7.036 | 7.010 | 7.054 | VV | 33 | 815 | 0.37% | 0.166% |
| 18 | 7.079 | 7.054 | 7.147 | VV | 46 | 1627 | 0.73% | 0.332% |
| 19 | 7.164 | 7.147 | 7.190 | VV | 34 | 674 | 0.30% | 0.138% |
| 20 | 7.207 | 7.190 | 7.248 | VV | 27 | 568 | 0.26% | 0.116% |
| 21 | 7.268 | 7.248 | 7.314 | PV | 9 | 280 | 0.13% | 0.057% |
| 22 | 7.363 | 7.314 | 7.449 | VV | 46 | 2067 | 0.93% | 0.422% |
| 23 | 7.598 | 7.449 | 7.629 | VV | 53 | 3464 | 1.56% | 0.707% |
| 24 | 7.661 | 7.629 | 7.680 | VV | 45 | 1145 | 0.52% | 0.234% |
| 25 | 7.739 | 7.680 | 7.866 | VV | 76 | 5323 | 2.40% | 1.087% |
| 26 | 7.931 | 7.866 | 7.991 | VV | 68 | 2804 | 1.27% | 0.573% |
| 27 | 8.028 | 7.991 | 8.048 | VV | 40 | 1054 | 0.48% | 0.215% |
| 28 | 8.082 | 8.048 | 8.098 | VV | 47 | 1192 | 0.54% | 0.243% |
| 29 | 8.168 | 8.098 | 8.215 | VV | 55 | 3096 | 1.40% | 0.632% |
| 30 | 8.251 | 8.215 | 8.283 | VV | 55 | 1905 | 0.86% | 0.389% |
| 31 | 8.316 | 8.283 | 8.401 | VV | 57 | 2899 | 1.31% | 0.592% |
| 32 | 8.451 | 8.401 | 8.472 | VV | 51 | 1892 | 0.85% | 0.386% |
| 33 | 8.501 | 8.472 | 8.523 | VV | 52 | 1327 | 0.60% | 0.271% |
| 34 | 8.550 | 8.523 | 8.573 | VV | 46 | 1035 | 0.47% | 0.211% |
| 35 | 8.588 | 8.573 | 8.611 | VV | 37 | 606 | 0.27% | 0.124% |
| 36 | 8.792 | 8.611 | 9.026 | VV | 3915 | 221373 | 100.00% | 45.206% |

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 9.044 | 9.026 | 9.060 | VV | 37 | 514 | 0.23% | 0.105% |
| 38 | 9.088 | 9.060 | 9.151 | VV | 39 | 1342 | 0.61% | 0.274% |
| 39 | 9.182 | 9.151 | 9.202 | VV | 26 | 558 | 0.25% | 0.114% |
| 40 | 9.380 | 9.202 | 9.399 | VV | 77 | 4189 | 1.89% | 0.855% |
| 41 | 9.417 | 9.399 | 9.568 | VV | 82 | 5325 | 2.41% | 1.087% |
| 42 | 9.653 | 9.568 | 9.743 | VV | 51 | 3184 | 1.44% | 0.650% |
| 43 | 9.814 | 9.743 | 9.831 | VV | 44 | 1454 | 0.66% | 0.297% |
| 44 | 9.934 | 9.831 | 10.097 | VV | 85 | 6949 | 3.14% | 1.419% |
| 45 | 10.129 | 10.097 | 10.144 | VV | 44 | 799 | 0.36% | 0.163% |
| 46 | 10.167 | 10.144 | 10.204 | VV | 61 | 1674 | 0.76% | 0.342% |
| 47 | 10.392 | 10.204 | 10.576 | VV | 379 | 43240 | 19.53% | 8.830% |
| 48 | 10.611 | 10.576 | 10.693 | VV | 70 | 3630 | 1.64% | 0.741% |
| 49 | 10.789 | 10.693 | 10.883 | VV | 68 | 4969 | 2.24% | 1.015% |
| 50 | 10.952 | 10.883 | 11.027 | VV | 56 | 2935 | 1.33% | 0.599% |
| 51 | 11.057 | 11.027 | 11.138 | VV | 27 | 1210 | 0.55% | 0.247% |
| 52 | 11.154 | 11.138 | 11.171 | VV | 25 | 369 | 0.17% | 0.075% |
| 53 | 11.184 | 11.171 | 11.241 | VV | 25 | 664 | 0.30% | 0.136% |
| 54 | 11.492 | 11.241 | 11.625 | VV | 189 | 19096 | 8.63% | 3.900% |
| 55 | 11.646 | 11.625 | 11.667 | VV | 49 | 1005 | 0.45% | 0.205% |
| 56 | 11.756 | 11.667 | 11.773 | VV | 74 | 3551 | 1.60% | 0.725% |
| 57 | 11.784 | 11.773 | 11.817 | VV | 75 | 1418 | 0.64% | 0.290% |
| 58 | 11.858 | 11.817 | 11.872 | VV | 88 | 2083 | 0.94% | 0.425% |
| 59 | 11.892 | 11.872 | 11.989 | VV | 84 | 3139 | 1.42% | 0.641% |
| 60 | 12.091 | 11.989 | 12.234 | VV | 65 | 4398 | 1.99% | 0.898% |
| 61 | 12.285 | 12.234 | 12.304 | PV | 17 | 499 | 0.23% | 0.102% |
| 62 | 12.344 | 12.304 | 12.403 | VV | 25 | 940 | 0.42% | 0.192% |
| 63 | 12.438 | 12.403 | 12.485 | VV | 14 | 492 | 0.22% | 0.100% |
| 64 | 12.536 | 12.485 | 12.597 | VV | 19 | 916 | 0.41% | 0.187% |
| 65 | 12.641 | 12.597 | 12.658 | VV | 26 | 673 | 0.30% | 0.137% |
| 66 | 12.670 | 12.658 | 12.685 | VV | 18 | 234 | 0.11% | 0.048% |
| 67 | 12.693 | 12.685 | 12.702 | VV | 22 | 161 | 0.07% | 0.033% |
| 68 | 12.775 | 12.702 | 12.880 | VV | 60 | 4007 | 1.81% | 0.818% |
| 69 | 12.901 | 12.880 | 12.970 | VV | 47 | 2031 | 0.92% | 0.415% |
| 70 | 13.042 | 12.970 | 13.120 | VV | 70 | 4287 | 1.94% | 0.875% |
| 71 | 13.183 | 13.120 | 13.291 | VV | 97 | 4625 | 2.09% | 0.944% |
| 72 | 13.321 | 13.291 | 13.419 | VV | 38 | 1377 | 0.62% | 0.281% |
| 73 | 13.446 | 13.419 | 13.468 | VV | 35 | 693 | 0.31% | 0.142% |
| 74 | 13.565 | 13.468 | 13.653 | VV | 62 | 3931 | 1.78% | 0.803% |
| 75 | 13.957 | 13.653 | 13.983 | VV | 59 | 5914 | 2.67% | 1.208% |
| 76 | 14.119 | 13.983 | 14.299 | VV | 199 | 21156 | 9.56% | 4.320% |
| 77 | 14.322 | 14.299 | 14.336 | VV | 46 | 900 | 0.41% | 0.184% |
| 78 | 14.396 | 14.336 | 14.413 | VV | 67 | 2597 | 1.17% | 0.530% |
| 79 | 14.425 | 14.413 | 14.534 | VV | 62 | 3139 | 1.42% | 0.641% |
| 80 | 14.579 | 14.534 | 14.595 | VV | 29 | 566 | 0.26% | 0.116% |
| 81 | 14.613 | 14.595 | 14.678 | VV | 15 | 539 | 0.24% | 0.110% |
| 82 | 14.694 | 14.678 | 14.713 | VV | 29 | 351 | 0.16% | 0.072% |
| 83 | 14.723 | 14.713 | 14.740 | VV | 19 | 125 | 0.06% | 0.026% |
| 84 | 14.935 | 14.740 | 14.978 | PV | 40 | 2816 | 1.27% | 0.575% |
| 85 | 15.072 | 14.978 | 15.104 | VV | 63 | 3283 | 1.48% | 0.670% |
| 86 | 15.226 | 15.104 | 15.359 | VV | 62 | 7101 | 3.21% | 1.450% |
| 87 | 15.501 | 15.359 | 15.613 | VV | 102 | 9884 | 4.46% | 2.018% |
| 88 | 15.660 | 15.613 | 15.682 | VV | 43 | 1241 | 0.56% | 0.254% |
| 89 | 15.721 | 15.682 | 15.751 | VV | 29 | 882 | 0.40% | 0.180% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | rteres | | | |
| 90 | 15.772 | 15.751 | 15.782 | VV | 19 | 221 | 0.10% | 0.045% |
| 91 | 15.793 | 15.782 | 15.845 | VV | 16 | 368 | 0.17% | 0.075% |
| 92 | 15.894 | 15.845 | 15.906 | PV | 26 | 282 | 0.13% | 0.058% |
| 93 | 15.984 | 15.906 | 16.111 | VV | 93 | 5262 | 2.38% | 1.074% |
| 94 | 16.200 | 16.111 | 16.271 | PV | 129 | 6112 | 2.76% | 1.248% |
| | | | Sum of corrected areas: | | | 489696 | | |

FB011723.M Sat Jan 21 02:59:50 2023

CHEMTECH

# CALIBRATION SUMMARY

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

## GASOLINE RANGE ORGANICS INITIAL CALIBRATION SUMMARY

Lab Name: Chemtech Contract: loui01

ProjectID: NYCDDC Phase II SCI Arthur Kill Road CEQR

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232

| Calibration Sequence : FB011723 | | Test : Gasoline Range Organics | |
|---|---|---|---|
| **Concentration (PPB)** | **Area Count** | **Reference Factor** | **File ID** |
| 45 | 622989 | 13844 | FB029115.D |
| 90 | 1667787 | 18531 | FB029116.D |
| 180 | 3442113 | 19123 | FB029117.D |
| 450 | 8424970 | 18722 | FB029118.D |
| 900 | 16352397 | 18169 | FB029119.D |
| **AVG RF :** 17678 | **% RSD : 12.279** | | **AVG RT : 8.7888** |

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## GASOLINE RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

### 20 PPB GRO STD

Lab Name: Chemtech Contract: loui01

ProjectID: NYCDDC Phase II SCI Arthur Kill Road CEQR

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232

DataFile: FB029141.D Analyst Name: AJ/MA Analyst Date: 01-20-2023

| Conc. (PPB) | Area Count | RF | Average RF | %D |
|---|---|---|---|---|
| 180 | 3112952 | 17294 | 17678 | 2.172 |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029141.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 10:04
Operator : AJ/MA
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:12 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

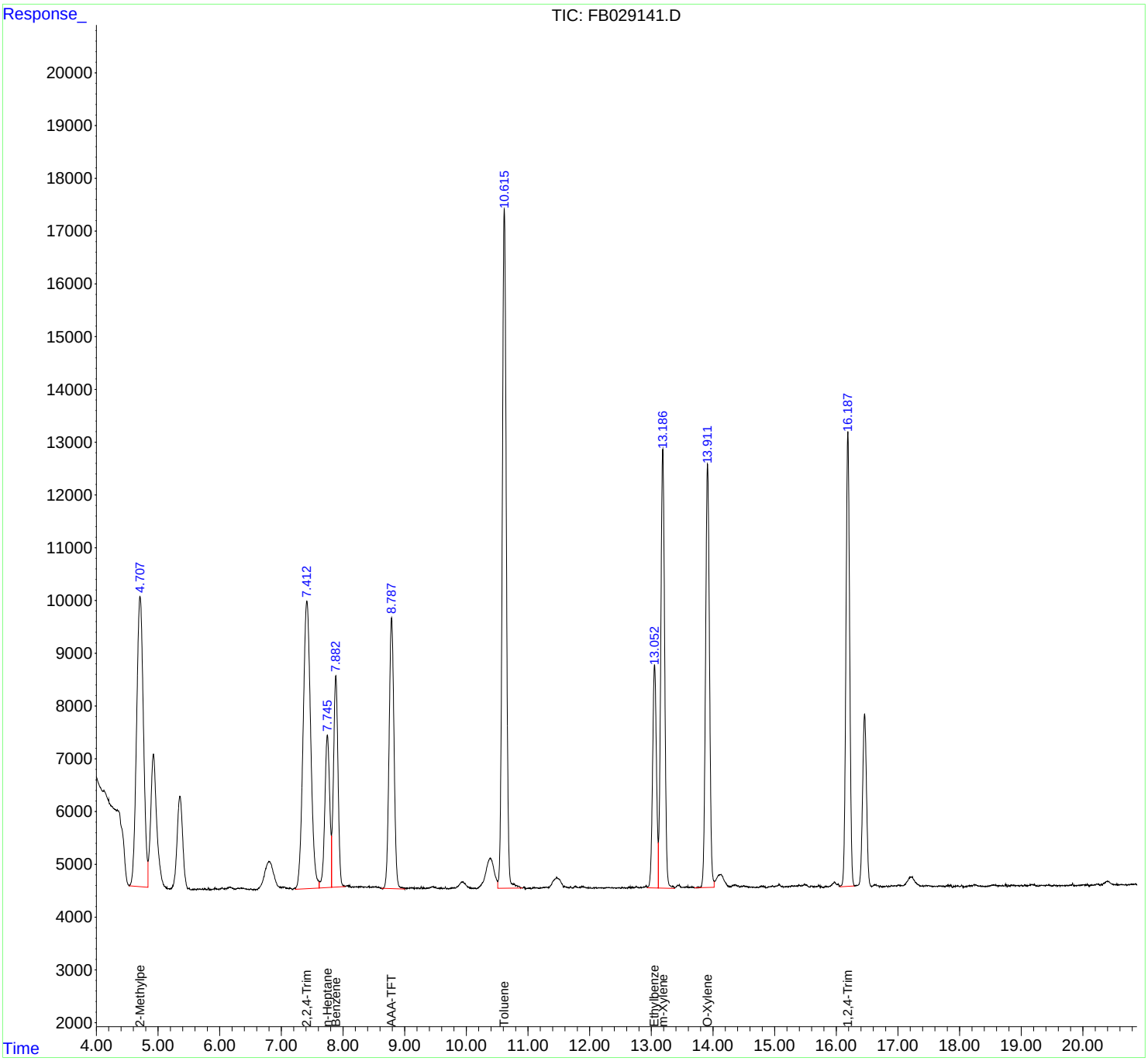
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | **System Monitoring Compounds** | | | | |
| 5) s | AAA-TFT | 8.789 | 282891 | 23.151 | ng/ml |
| | **Target Compounds** | | | | |
| 1) t | 2-Methylpentane | 4.709 | 424054 | 28.964 | ng/ml |
| 2) t | 2,2,4-Trimethylpentane | 7.414 | 463288 | 29.199 | ng/ml |
| 3) t | n-Heptane | 7.747 | 159664 | 9.556 | ng/ml |
| 4) t | Benzene | 7.884 | 204190 | 9.604 | ng/ml |
| 6) t | Toluene | 10.617 | 594454 | 29.493 | ng/ml |
| 7) t | Ethylbenzene | 13.054 | 184158 | 9.601 | ng/ml |
| 8) t | m-Xylene | 13.186 | 367171 | 19.625 | ng/ml |
| 9) t | O-Xylene | 13.913 | 354713 | 19.712 | ng/ml |
| 10) t | 1,2,4-Trimethylbenzene | 16.189 | 361260 | 20.264 | ng/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029141.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 10:04
Operator : AJ/MA
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:12 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029141.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 10:04
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: Calibration.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.709 | 4.535 | 4.838 | PV | 5498 | 424054 | 71.34% | 12.487% |
| 2 | 7.414 | 7.228 | 7.614 | VV | 5454 | 463288 | 77.94% | 13.643% |
| 3 | 7.747 | 7.614 | 7.813 | VV | 2893 | 159664 | 26.86% | 4.702% |
| 4 | 7.884 | 7.813 | 8.041 | VV | 4004 | 204190 | 34.35% | 6.013% |
| 5 | 8.789 | 8.620 | 9.002 | BV | 5133 | 282891 | 47.59% | 8.331% |
| 6 | 10.617 | 10.510 | 10.911 | VB | 12874 | 594454 | 100.00% | 17.505% |
| 7 | 13.054 | 12.937 | 13.115 | VV | 4227 | 184158 | 30.98% | 5.423% |
| 8 | 13.186 | 13.115 | 13.377 | VV | 8307 | 367171 | 61.77% | 10.812% |
| 9 | 13.913 | 13.700 | 14.020 | BV | 8027 | 354713 | 59.67% | 10.446% |
| 10 | 16.189 | 16.060 | 16.297 | VV | 8613 | 361260 | 60.77% | 10.638% |

Sum of corrected areas: 3395845

FB011723.M Sat Jan 21 02:57:59 2023

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## GASOLINE RANGE ORGANICS CONTINUING CALIBRATION SUMMARY

### 20 PPB GRO STD

Lab Name: Chemtech Contract: loui01

ProjectID: NYCDDC Phase II SCI Arthur Kill Road CEQR

Lab Code: CHEM Case No.: O1232 SAS No.: O1232 SDG No.: O1232

DataFile: FB029152.D Analyst Name: AJ/MA Analyst Date: 01-20-2023

| Conc. (PPB) | Area Count | RF | Average RF | %D |
|---|---|---|---|---|
| 180 | 2759829 | 15332 | 17678 | 13.271 |

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029152.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:54
Operator : AJ/MA
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:22 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

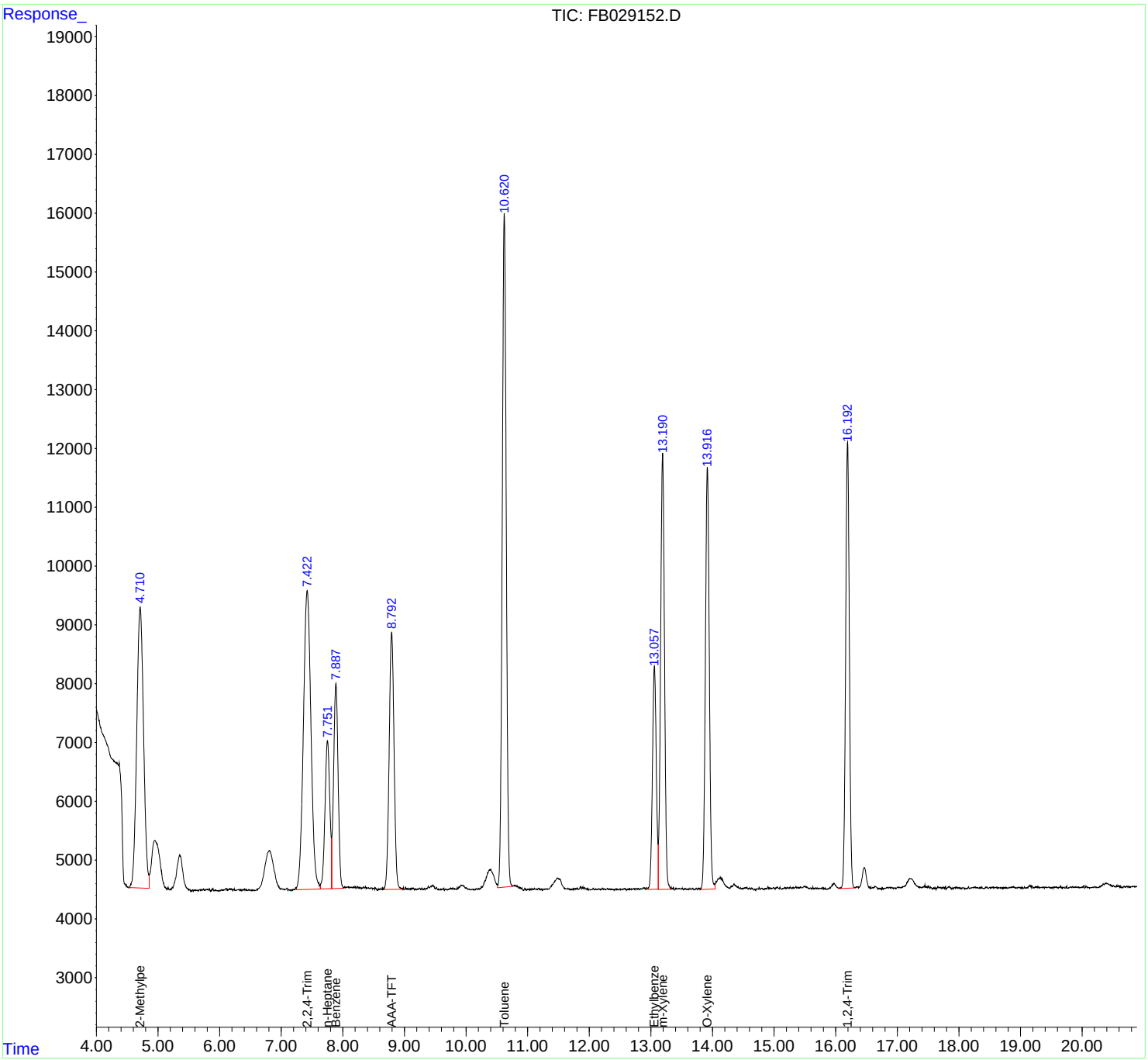
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | |
| 5) s | AAA-TFT | 8.793 | 240035 | 19.644 | ng/ml |
| | Target Compounds | | | | |
| 1) t | 2-Methylpentane | 4.711 | 367722 | 25.117 | ng/ml |
| 2) t | 2,2,4-Trimethylpentane | 7.423 | 432083 | 27.233 | ng/ml |
| 3) t | n-Heptane | 7.752 | 137388 | 8.222 | ng/ml |
| 4) t | Benzene | 7.889 | 177717 | 8.359 | ng/ml |
| 6) t | Toluene | 10.621 | 518016 | 25.701 | ng/ml |
| 7) t | Ethylbenzene | 13.057 | 164670 | 8.585 | ng/mlm |
| 8) t | m-Xylene | 13.191 | 326366 | 17.444 | ng/ml |
| 9) t | O-Xylene | 13.918 | 318490 | 17.699 | ng/ml |
| 10) t | 1,2,4-Trimethylbenzene | 16.193 | 317377 | 17.803 | ng/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029152.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:54
Operator : AJ/MA
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:22 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029152.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:54
Sample : 20 PPB GRO STD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Integration File: Calibration.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.711 | 4.523 | 4.857 | BV | 4772 | 367722 | 70.99% | 12.243% |
| 2 | 7.423 | 7.244 | 7.635 | VV | 5079 | 432083 | 83.41% | 14.385% |
| 3 | 7.752 | 7.635 | 7.819 | VV | 2518 | 137388 | 26.52% | 4.574% |
| 4 | 7.889 | 7.819 | 8.011 | VV | 3484 | 177717 | 34.31% | 5.917% |
| 5 | 8.793 | 8.668 | 8.974 | BV | 4368 | 240035 | 46.34% | 7.991% |
| 6 | 10.621 | 10.513 | 10.763 | VV | 11449 | 518016 | 100.00% | 17.246% |
| 7 | 13.058 | 12.612 | 13.120 | BV | 3795 | 168448 | 32.52% | 5.608% |
| 8 | 13.191 | 13.120 | 13.341 | VV | 7414 | 326366 | 63.00% | 10.866% |
| 9 | 13.918 | 13.811 | 14.042 | BV | 7170 | 318490 | 61.48% | 10.603% |
| 10 | 16.193 | 16.052 | 16.319 | VV | 7589 | 317377 | 61.27% | 10.566% |

Sum of corrected areas: 3003642

FB011723.M Sat Jan 21 02:59:11 2023

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# Analytical Sequence

**Client:** Louis Berger U.S., Inc., A WSP Company **SDG No.:** O1232

**Project:** NYCDDC Phase II SCI Arthur Kill Road CEQR **Instrument ID:** FID_B

**GC Column:** RTX-502.2 **ID:** 0.53 **(mm)**

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

**MEAN SUROGATE RT FROM INITIAL CALIBRATION** **8.7888**

| EPA SAMPLE NO. | LAB SAMPLE ID | DATE AND TIME ANALYZED | DATAFILE | RT | # |
|---|---|---|---|---|---|
| 20 PPB GRO STD | 20 PPB GRO STD | 20 Jan 2023 10:04 | FB029141.D | 8.789 | |
| VBF0120S2 | VBF0120S2 | 20 Jan 2023 11:18 | FB029143.D | 8.793 | |
| BSF0120S1 | BSF0120S1 | 20 Jan 2023 11:55 | FB029144.D | 8.792 | |
| WC-17 | O1232-03 | 20 Jan 2023 15:02 | FB029149.D | 8.792 | |
| WC-17MS | O1232-03MS | 20 Jan 2023 15:39 | FB029150.D | 8.791 | |
| WC-17MSD | O1232-03MSD | 20 Jan 2023 16:16 | FB029151.D | 8.796 | |
| 20 PPB GRO STD | 20 PPB GRO STD | 20 Jan 2023 16:54 | FB029152.D | 8.793 | |

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

| QC Limits | Lower Limit | Upper Limits |
|---|---|---|
| (± 0.10 minutes) | 8.6888 | 8.8888 |

CHEMTECH

# QC SAMPLE DATA

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# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Louis Berger U.S., Inc., A WSP Company | Date Collected: | |
| Project: | NYCDDC Phase II SCI Arthur Kill Road CEQR | Date Received: | |
| Client Sample ID: | VBF0120S2 | SDG No.: | O1232 |
| Lab Sample ID: | VBF0120S2 | Matrix: | SOIL |
| Analytical Method: | 8015D GRO | % Solid: | 100 Decanted: |
| Sample Wt/Vol: | 5 Units: g | Final Vol: | 5 mL |
| Soil Aliquot Vol: | uL | Test: | Gasoline Range Organics |
| Extraction Type: | | Injection Volume : | |
| GPC Factor : | PH : | | |
| Prep Method : | SW3541 | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed | Prep Batch ID |
|---|---|---|---|
| FB029143.D | 50 | 01/20/23 11:18 | FB012023 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units(Dry Weight) |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| GRO | GRO | 181 | U | 181 | 2250 | ug/kg |
| **SURROGATES** | | | | | | |
| 98-08-8 | Alpha,Alpha,Alpha-Trifluoroto | 17.6 | | 50 - 150 | 88% | SPK: 20 |

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029143.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:18
Operator : AJ/MA
Sample : VBF0120S2 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 3 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:25 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

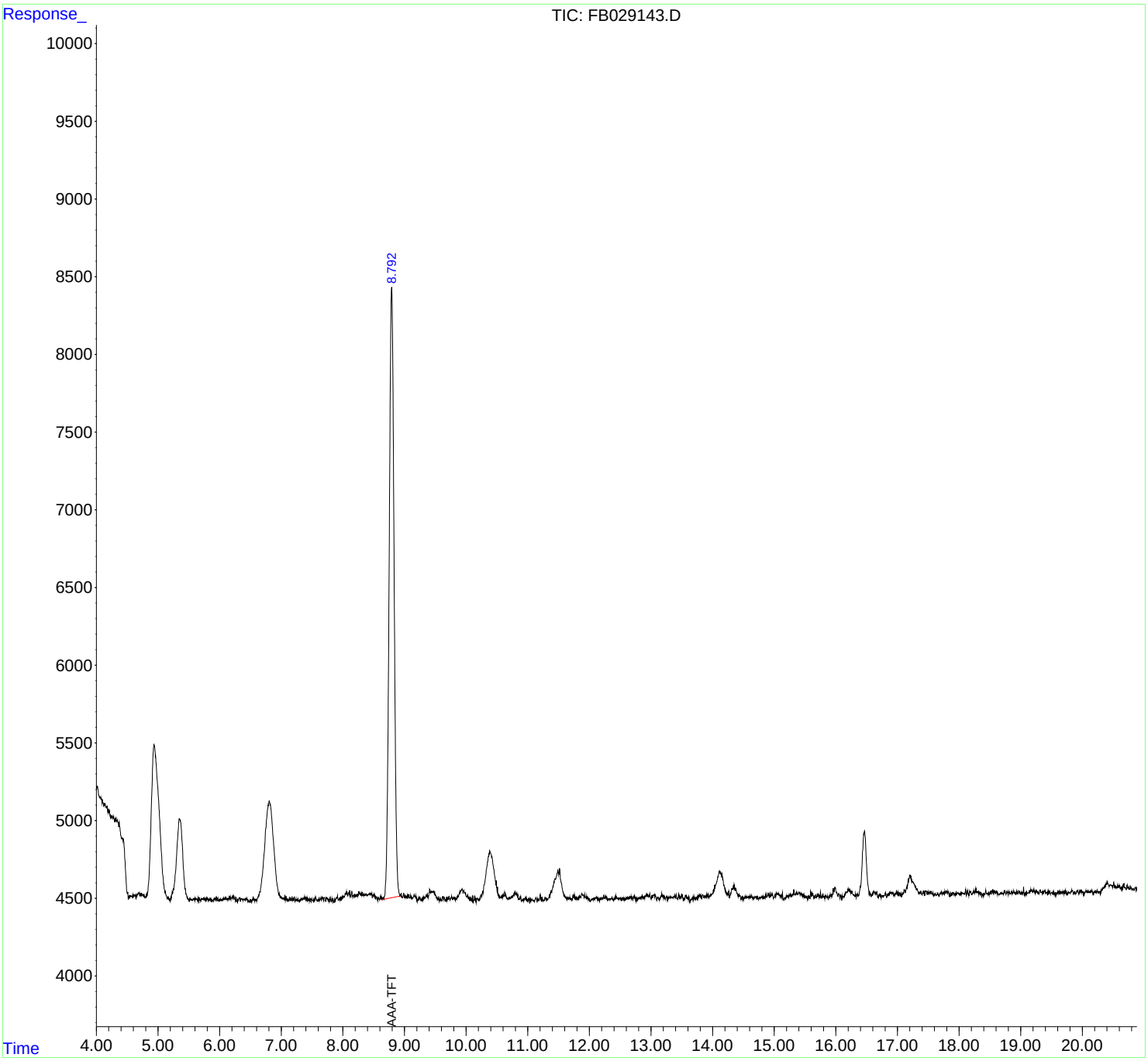
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 5) s AAA-TFT | 8.793 | 215488 | 17.635 ng/ml |
| Target Compounds | | | |

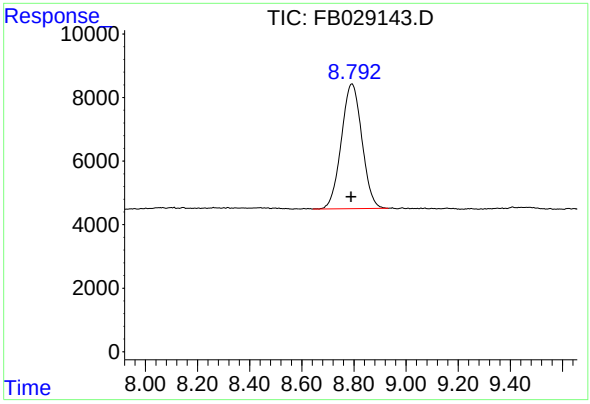
(f)=RT Delta > 1/2 Window (m)=manual int.

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029143.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:18
Operator : AJ/MA
Sample : VBF0120S2 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 3 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:25 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um






#5 AAA-TFT

| | |
|---|---|
| R.T.: | 8.793 min |
| Delta R.T.: | 0.003 min |
| Response: | 215488 |
| Conc: | 17.63 ng/ml |

rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029143.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:18
Sample : VBF0120S2 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 3 Sample Multiplier: 1

Integration File: Calibration.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 8.793 | 8.642 | 8.932 | PV | 3926 | 215488 | 100.00% | 100.000% |

Sum of corrected areas: 215488

FB011723.M Sat Jan 21 02:58:25 2023

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Louis Berger U.S., Inc., A WSP Company | Date Collected: | |
| Project: | NYCDDC Phase II SCI Arthur Kill Road CEQR | Date Received: | |
| Client Sample ID: | BSF0120S1 | SDG No.: | O1232 |
| Lab Sample ID: | BSF0120S1 | Matrix: | SOIL |
| Analytical Method: | 8015D GRO | % Solid: | 100 Decanted: |
| Sample Wt/Vol: | 5 Units: g | Final Vol: | 5 mL |
| Soil Aliquot Vol: | uL | Test: | Gasoline Range Organics |
| Extraction Type: | | Injection Volume : | |
| GPC Factor : | PH : | | |
| Prep Method : | SW3541 | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed | Prep Batch ID |
|---|---|---|---|
| FB029144.D | 1 | 01/20/23 11:55 | FB012023 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units(Dry Weight) |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| GRO | GRO | 177 | | 4.00 | 45.0 | ug/kg |
| **SURROGATES** | | | | | | |
| 98-08-8 | Alpha,Alpha,Alpha-Trifluoroto | 17.5 | | 50 - 150 | 88% | SPK: 20 |

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029144.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:55
Operator : AJ/MA
Sample : BSF0120S1
Misc : 5.00G/5.00 ML DI WATER
ALS Vial : 4 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:31 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

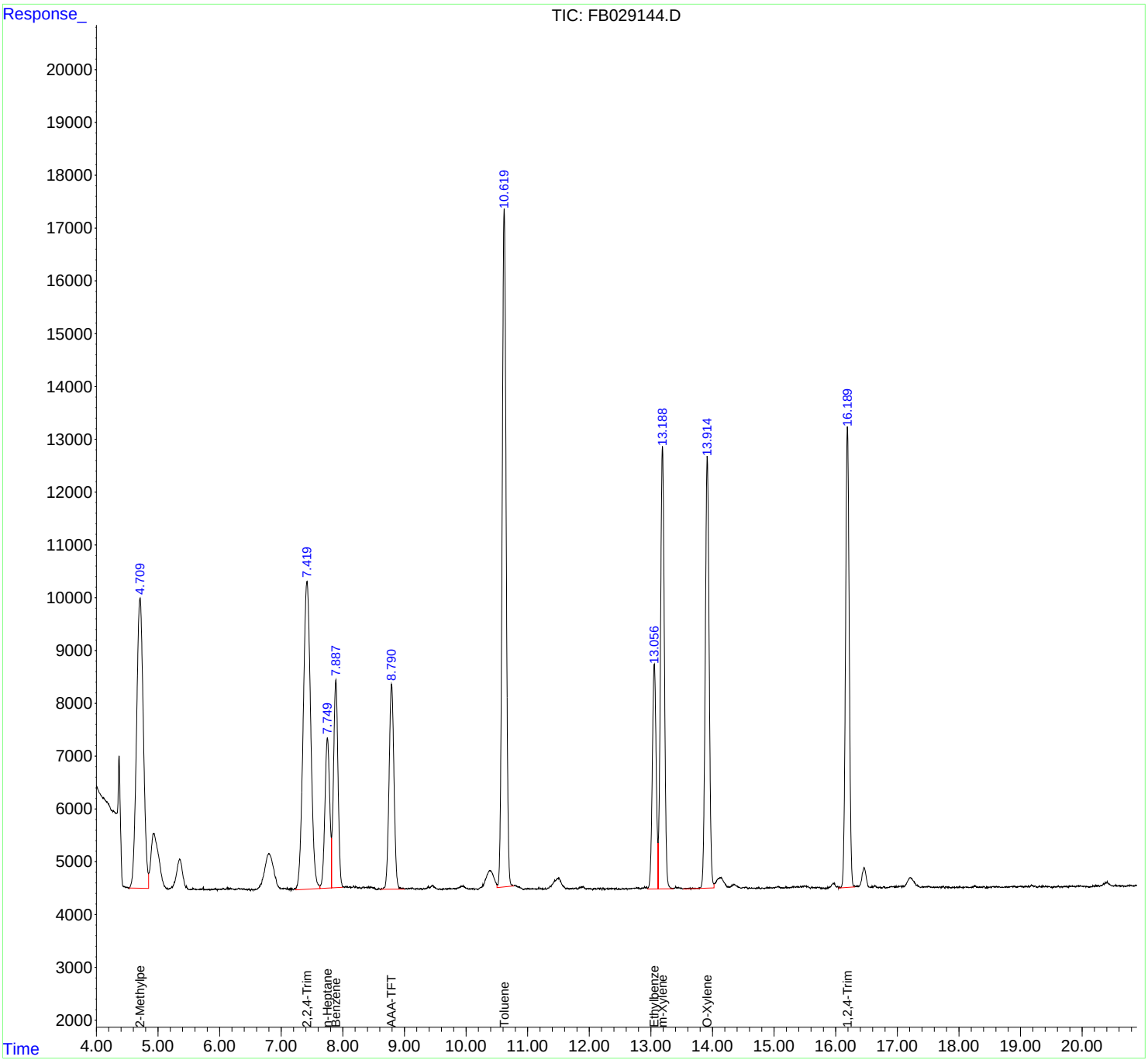
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | |
| 5) s | AAA-TFT | 8.792 | 214078 | 17.519 | ng/ml |
| | Target Compounds | | | | |
| 1) t | 2-Methylpentane | 4.711 | 420254 | 28.705 | ng/ml |
| 2) t | 2,2,4-Trimethylpentane | 7.420 | 489217 | 30.834 | ng/ml |
| 3) t | n-Heptane | 7.750 | 154315 | 9.235 | ng/ml |
| 4) t | Benzene | 7.888 | 199435 | 9.380 | ng/ml |
| 6) t | Toluene | 10.620 | 583085 | 28.929 | ng/ml |
| 7) t | Ethylbenzene | 13.057 | 184956 | 9.643 | ng/ml |
| 8) t | m-Xylene | 13.189 | 368213 | 19.680 | ng/ml |
| 9) t | O-Xylene | 13.916 | 360044 | 20.008 | ng/ml |
| 10) t | 1,2,4-Trimethylbenzene | 16.191 | 364144 | 20.426 | ng/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029144.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:55
Operator : AJ/MA
Sample : BSF0120S1
Misc : 5.00G/5.00 ML DI WATER
ALS Vial : 4 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:05:31 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um



rteres

Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029144.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 11:55
Sample : BSF0120S1
Misc : 5.00G/5.00 ML DI WATER
ALS Vial : 4 Sample Multiplier: 1

Integration File: Calibration.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.711 | 4.526 | 4.848 | BV | 5493 | 420254 | 72.07% | 12.591% |
| 2 | 7.420 | 7.237 | 7.627 | VV | 5833 | 489217 | 83.90% | 14.657% |
| 3 | 7.750 | 7.627 | 7.817 | VV | 2849 | 154315 | 26.47% | 4.623% |
| 4 | 7.888 | 7.817 | 8.000 | VV | 3933 | 199435 | 34.20% | 5.975% |
| 5 | 8.792 | 8.609 | 9.002 | BV | 3874 | 214078 | 36.71% | 6.414% |
| 6 | 10.620 | 10.502 | 10.777 | VV | 12847 | 583085 | 100.00% | 17.469% |
| 7 | 13.057 | 12.951 | 13.118 | VV | 4259 | 184956 | 31.72% | 5.541% |
| 8 | 13.189 | 13.118 | 13.369 | VV | 8375 | 368213 | 63.15% | 11.032% |
| 9 | 13.916 | 13.525 | 14.026 | BV | 8161 | 360044 | 61.75% | 10.787% |
| 10 | 16.191 | 16.049 | 16.313 | PV | 8720 | 364144 | 62.45% | 10.910% |

Sum of corrected areas: 3337741

FB011723.M Sat Jan 21 02:58:44 2023

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Louis Berger U.S., Inc., A WSP Company | Date Collected: | 01/18/23 |
| Project: | NYCDDC Phase II SCI Arthur Kill Road CEQR | Date Received: | 01/19/23 |
| Client Sample ID: | WC-17MS | SDG No.: | O1232 |
| Lab Sample ID: | O1232-03MS | Matrix: | SOIL |
| Analytical Method: | 8015D GRO | % Solid: | 91.4 Decanted: |
| Sample Wt/Vol: | 5.08 Units: g | Final Vol: | 5 mL |
| Soil Aliquot Vol: | uL | Test: | Gasoline Range Organics |
| Extraction Type: | | Injection Volume : | |
| GPC Factor : | PH : | | |
| Prep Method : | SW3541 | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed | Prep Batch ID |
|---|---|---|---|
| FB029150.D | 50 | 01/20/23 15:39 | FB012023 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units(Dry Weight) |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| GRO | GRO | 10000 | | 195 | 2420 | ug/kg |
| **SURROGATES** | | | | | | |
| 98-08-8 | Alpha,Alpha,Alpha-Trifluoroto | 20.4 | | 50 - 150 | 102% | SPK: 20 |

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029150.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:39
Operator : AJ/MA
Sample : 01232-03MS 50X
Misc : 5.08G/5.00 ML MEOH
ALS Vial : 10 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:08 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | |
| 5) s | AAA-TFT | 8.791 | 248766 | 20.358 | ng/ml |
| | Target Compounds | | | | |
| 1) t | 2-Methylpentane | 4.705 | 362278 | 24.745 | ng/mlm |
| 2) t | 2,2,4-Trimethylpentane | 7.421 | 446513 | 28.142 | ng/ml |
| 3) t | n-Heptane | 7.751 | 149333 | 8.937 | ng/ml |
| 4) t | Benzene | 7.886 | 209035 | 9.832 | ng/ml |
| 6) t | Toluene | 10.620 | 596333 | 29.587 | ng/ml |
| 7) t | Ethylbenzene | 13.057 | 184216 | 9.604 | ng/ml |
| 8) t | m-Xylene | 13.190 | 365402 | 19.530 | ng/ml |
| 9) t | O-Xylene | 13.917 | 352428 | 19.585 | ng/ml |
| 10) t | 1,2,4-Trimethylbenzene | 16.192 | 324097 | 18.180 | ng/ml |

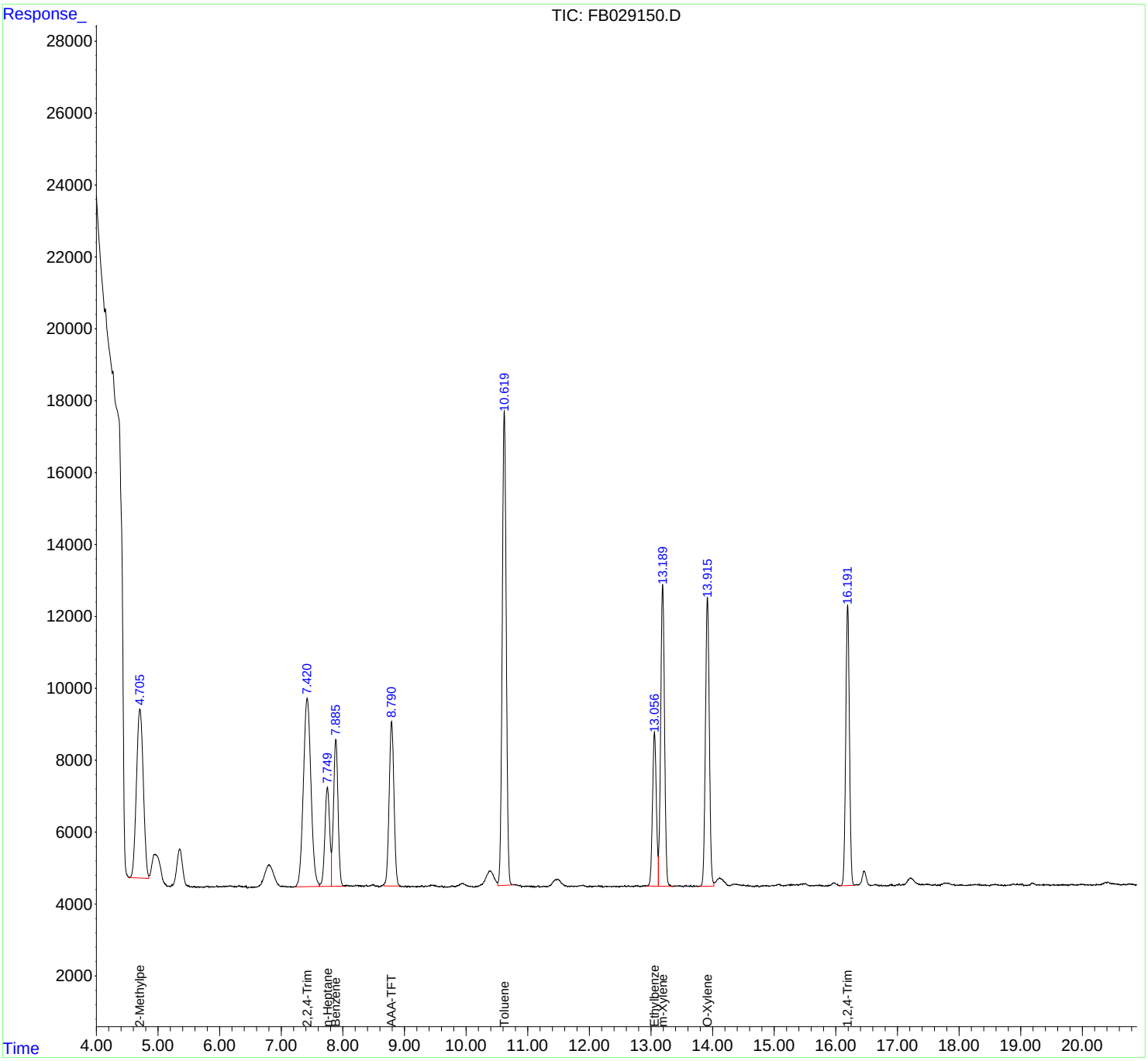
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029150.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:39
Operator : AJ/MA
Sample : 01232-03MS 50X
Misc : 5.08G/5.00 ML MEOH
ALS Vial : 10 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:08 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um



Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029150.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 15:39
Sample : O1232-03MS 50X
Misc : 5.08G/5.00 ML MEOH
ALS Vial : 10 Sample Multiplier: 1

Integration File: SAMPLE.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.707 | 4.504 | 4.854 | BV | 4738 | 368260 | 60.74% | 10.388% |
| 2 | 5.176 | 5.160 | 5.186 | PV | 14 | 93 | 0.02% | 0.003% |
| 3 | 5.194 | 5.186 | 5.203 | PV | 12 | 58 | 0.01% | 0.002% |
| 4 | 5.228 | 5.203 | 5.236 | PV | 51 | 560 | 0.09% | 0.016% |
| 5 | 5.503 | 5.490 | 5.521 | VV | 42 | 484 | 0.08% | 0.014% |
| 6 | 5.541 | 5.521 | 5.559 | VV | 29 | 310 | 0.05% | 0.009% |
| 7 | 5.584 | 5.559 | 5.623 | VV | 28 | 520 | 0.09% | 0.015% |
| 8 | 5.647 | 5.623 | 5.667 | PV | 30 | 404 | 0.07% | 0.011% |
| 9 | 5.687 | 5.667 | 5.696 | VV | 21 | 258 | 0.04% | 0.007% |
| 10 | 5.720 | 5.696 | 5.733 | VV | 23 | 359 | 0.06% | 0.010% |
| 11 | 5.785 | 5.733 | 5.795 | PV | 37 | 778 | 0.13% | 0.022% |
| 12 | 5.806 | 5.795 | 5.829 | VV | 42 | 631 | 0.10% | 0.018% |
| 13 | 5.835 | 5.829 | 5.859 | VV | 35 | 464 | 0.08% | 0.013% |
| 14 | 5.869 | 5.859 | 5.897 | VV | 32 | 568 | 0.09% | 0.016% |
| 15 | 5.908 | 5.897 | 5.917 | VV | 30 | 291 | 0.05% | 0.008% |
| 16 | 5.955 | 5.917 | 5.973 | VV | 50 | 1033 | 0.17% | 0.029% |
| 17 | 5.987 | 5.973 | 5.999 | VV | 39 | 434 | 0.07% | 0.012% |
| 18 | 6.021 | 5.999 | 6.053 | VV | 38 | 1022 | 0.17% | 0.029% |
| 19 | 6.072 | 6.053 | 6.083 | VV | 51 | 659 | 0.11% | 0.019% |
| 20 | 6.161 | 6.083 | 6.238 | VV | 61 | 4188 | 0.69% | 0.118% |
| 21 | 6.249 | 6.238 | 6.258 | VV | 48 | 455 | 0.07% | 0.013% |
| 22 | 6.267 | 6.258 | 6.279 | VV | 36 | 428 | 0.07% | 0.012% |
| 23 | 6.323 | 6.279 | 6.333 | VV | 63 | 1591 | 0.26% | 0.045% |
| 24 | 6.339 | 6.333 | 6.350 | VV | 53 | 443 | 0.07% | 0.012% |
| 25 | 6.361 | 6.350 | 6.370 | VV | 51 | 479 | 0.08% | 0.014% |
| 26 | 6.379 | 6.370 | 6.388 | VV | 44 | 368 | 0.06% | 0.010% |
| 27 | 6.436 | 6.388 | 6.459 | VV | 57 | 1447 | 0.24% | 0.041% |
| 28 | 6.489 | 6.459 | 6.496 | PV | 25 | 389 | 0.06% | 0.011% |
| 29 | 6.540 | 6.496 | 6.569 | VV | 34 | 1067 | 0.18% | 0.030% |
| 30 | 6.576 | 6.569 | 6.583 | VV | 31 | 221 | 0.04% | 0.006% |
| 31 | 6.597 | 6.583 | 6.604 | VV | 32 | 362 | 0.06% | 0.010% |
| 32 | 7.014 | 6.993 | 7.028 | VV | 65 | 1019 | 0.17% | 0.029% |
| 33 | 7.047 | 7.028 | 7.062 | VV | 55 | 942 | 0.16% | 0.027% |
| 34 | 7.070 | 7.062 | 7.105 | VV | 46 | 950 | 0.16% | 0.027% |
| 35 | 7.118 | 7.105 | 7.133 | VV | 44 | 573 | 0.09% | 0.016% |
| 36 | 7.149 | 7.133 | 7.159 | VV | 36 | 500 | 0.08% | 0.014% |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 7.167 | 7.159 | 7.185 | VV | 35 | 446 | 0.07% | 0.013% |
| 38 | 7.421 | 7.185 | 7.629 | VV | 5281 | 456804 | 75.34% | 12.886% |
| 39 | 7.750 | 7.629 | 7.815 | VV | 2800 | 153838 | 25.37% | 4.340% |
| 40 | 7.887 | 7.815 | 8.049 | VV | 4136 | 215747 | 35.58% | 6.086% |
| 41 | 8.066 | 8.049 | 8.114 | VV | 67 | 2350 | 0.39% | 0.066% |
| 42 | 8.137 | 8.114 | 8.153 | VV | 60 | 1287 | 0.21% | 0.036% |
| 43 | 8.167 | 8.153 | 8.183 | VV | 49 | 896 | 0.15% | 0.025% |
| 44 | 8.247 | 8.183 | 8.261 | VV | 77 | 2843 | 0.47% | 0.080% |
| 45 | 8.274 | 8.261 | 8.298 | VV | 61 | 1226 | 0.20% | 0.035% |
| 46 | 8.311 | 8.298 | 8.341 | VV | 57 | 1298 | 0.21% | 0.037% |
| 47 | 8.381 | 8.341 | 8.405 | VV | 80 | 2102 | 0.35% | 0.059% |
| 48 | 8.499 | 8.405 | 8.588 | VV | 93 | 6349 | 1.05% | 0.179% |
| 49 | 8.791 | 8.588 | 8.954 | VV | 4615 | 259982 | 42.88% | 7.334% |
| 50 | 8.977 | 8.954 | 8.995 | VV | 41 | 816 | 0.13% | 0.023% |
| 51 | 9.014 | 8.995 | 9.043 | VV | 43 | 990 | 0.16% | 0.028% |
| 52 | 9.058 | 9.043 | 9.099 | VV | 49 | 1123 | 0.19% | 0.032% |
| 53 | 9.123 | 9.099 | 9.216 | VV | 42 | 2305 | 0.38% | 0.065% |
| 54 | 9.232 | 9.216 | 9.252 | VV | 43 | 713 | 0.12% | 0.020% |
| 55 | 9.284 | 9.252 | 9.316 | VV | 51 | 1494 | 0.25% | 0.042% |
| 56 | 9.342 | 9.316 | 9.359 | VV | 54 | 1024 | 0.17% | 0.029% |
| 57 | 9.399 | 9.359 | 9.416 | VV | 59 | 1516 | 0.25% | 0.043% |
| 58 | 9.430 | 9.416 | 9.545 | VV | 77 | 4401 | 0.73% | 0.124% |
| 59 | 9.613 | 9.545 | 9.635 | VV | 47 | 1556 | 0.26% | 0.044% |
| 60 | 9.655 | 9.635 | 9.670 | VV | 25 | 390 | 0.06% | 0.011% |
| 61 | 9.687 | 9.670 | 9.699 | VV | 22 | 302 | 0.05% | 0.009% |
| 62 | 9.776 | 9.699 | 9.810 | VV | 52 | 2063 | 0.34% | 0.058% |
| 63 | 9.950 | 9.810 | 10.132 | VV | 115 | 11319 | 1.87% | 0.319% |
| 64 | 10.390 | 10.132 | 10.516 | VV | 458 | 47829 | 7.89% | 1.349% |
| 65 | 10.620 | 10.516 | 10.777 | VV | 13237 | 606301 | 100.00% | 17.103% |
| 66 | 10.788 | 10.777 | 10.902 | VV | 87 | 4509 | 0.74% | 0.127% |
| 67 | 10.990 | 10.902 | 11.087 | VV | 43 | 3493 | 0.58% | 0.099% |
| 68 | 11.165 | 11.087 | 11.199 | VV | 46 | 1692 | 0.28% | 0.048% |
| 69 | 11.220 | 11.199 | 11.242 | VV | 26 | 530 | 0.09% | 0.015% |
| 70 | 11.261 | 11.242 | 11.324 | VV | 38 | 1280 | 0.21% | 0.036% |
| 71 | 11.488 | 11.324 | 11.645 | VV | 235 | 23175 | 3.82% | 0.654% |
| 72 | 11.661 | 11.645 | 11.688 | VV | 37 | 694 | 0.11% | 0.020% |
| 73 | 11.718 | 11.688 | 11.743 | VV | 37 | 1016 | 0.17% | 0.029% |
| 74 | 11.761 | 11.743 | 11.798 | VV | 36 | 973 | 0.16% | 0.027% |
| 75 | 11.819 | 11.798 | 11.827 | VV | 37 | 570 | 0.09% | 0.016% |
| 76 | 11.902 | 11.827 | 11.974 | VV | 58 | 3471 | 0.57% | 0.098% |
| 77 | 12.014 | 11.974 | 12.037 | VV | 36 | 914 | 0.15% | 0.026% |
| 78 | 12.098 | 12.037 | 12.126 | VV | 32 | 1429 | 0.24% | 0.040% |
| 79 | 12.152 | 12.126 | 12.190 | VV | 41 | 1173 | 0.19% | 0.033% |
| 80 | 12.200 | 12.190 | 12.234 | VV | 42 | 589 | 0.10% | 0.017% |
| 81 | 12.265 | 12.234 | 12.279 | VV | 27 | 532 | 0.09% | 0.015% |
| 82 | 12.308 | 12.279 | 12.325 | VV | 27 | 631 | 0.10% | 0.018% |
| 83 | 12.405 | 12.325 | 12.424 | VV | 28 | 1315 | 0.22% | 0.037% |
| 84 | 12.446 | 12.424 | 12.496 | VV | 28 | 827 | 0.14% | 0.023% |
| 85 | 12.525 | 12.496 | 12.555 | VV | 29 | 884 | 0.15% | 0.025% |
| 86 | 12.572 | 12.555 | 12.605 | VV | 43 | 839 | 0.14% | 0.024% |
| 87 | 12.641 | 12.605 | 12.669 | VV | 41 | 1106 | 0.18% | 0.031% |
| 88 | 12.698 | 12.669 | 12.724 | VV | 28 | 759 | 0.13% | 0.021% |
| 89 | 12.777 | 12.724 | 12.825 | VV | 45 | 1977 | 0.33% | 0.056% |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 90 | 12.842 | 12.825 | 12.853 | VV | 35 | 402 | 0.07% | 0.011% |
| 91 | 13.057 | 12.853 | 13.119 | VV | 4304 | 189386 | 31.24% | 5.342% |
| 92 | 13.190 | 13.119 | 13.364 | VV | 8408 | 368764 | 60.82% | 10.403% |
| 93 | 13.399 | 13.364 | 13.420 | VV | 35 | 1006 | 0.17% | 0.028% |
| 94 | 13.473 | 13.420 | 13.493 | VV | 45 | 1395 | 0.23% | 0.039% |
| 95 | 13.510 | 13.493 | 13.528 | VV | 33 | 448 | 0.07% | 0.013% |
| 96 | 13.570 | 13.528 | 13.627 | VV | 50 | 1668 | 0.28% | 0.047% |
| 97 | 13.647 | 13.627 | 13.668 | VV | 43 | 686 | 0.11% | 0.019% |
| 98 | 13.692 | 13.668 | 13.723 | VV | 35 | 731 | 0.12% | 0.021% |
| 99 | 13.738 | 13.723 | 13.771 | VV | 32 | 669 | 0.11% | 0.019% |
| 100 | 13.917 | 13.771 | 14.024 | VV | 8060 | 356187 | 58.75% | 10.048% |
| 101 | 14.116 | 14.024 | 14.281 | VV | 248 | 23411 | 3.86% | 0.660% |
| 102 | 14.346 | 14.281 | 14.435 | VV | 80 | 6085 | 1.00% | 0.172% |
| 103 | 14.449 | 14.435 | 14.483 | VV | 61 | 1452 | 0.24% | 0.041% |
| 104 | 14.497 | 14.483 | 14.561 | VV | 52 | 1884 | 0.31% | 0.053% |
| 105 | 14.571 | 14.561 | 14.595 | VV | 39 | 643 | 0.11% | 0.018% |
| 106 | 14.610 | 14.595 | 14.655 | VV | 33 | 887 | 0.15% | 0.025% |
| 107 | 14.671 | 14.655 | 14.685 | VV | 28 | 373 | 0.06% | 0.011% |
| 108 | 14.702 | 14.685 | 14.715 | VV | 27 | 401 | 0.07% | 0.011% |
| 109 | 14.733 | 14.715 | 14.762 | VV | 41 | 564 | 0.09% | 0.016% |
| 110 | 14.811 | 14.762 | 14.834 | PV | 40 | 1068 | 0.18% | 0.030% |
| 111 | 14.865 | 14.834 | 14.938 | VV | 39 | 1711 | 0.28% | 0.048% |
| 112 | 14.974 | 14.938 | 14.999 | VV | 39 | 1131 | 0.19% | 0.032% |
| 113 | 15.085 | 14.999 | 15.146 | VV | 70 | 3907 | 0.64% | 0.110% |
| 114 | 15.163 | 15.146 | 15.175 | VV | 33 | 505 | 0.08% | 0.014% |
| 115 | 15.287 | 15.175 | 15.302 | VV | 65 | 3276 | 0.54% | 0.092% |
| 116 | 15.449 | 15.302 | 15.461 | VV | 67 | 4910 | 0.81% | 0.139% |
| 117 | 15.478 | 15.461 | 15.628 | VV | 76 | 4186 | 0.69% | 0.118% |
| 118 | 15.682 | 15.628 | 15.697 | VV | 25 | 801 | 0.13% | 0.023% |
| 119 | 15.740 | 15.697 | 15.805 | VV | 41 | 1231 | 0.20% | 0.035% |
| 120 | 15.842 | 15.805 | 15.864 | PV | 11 | 175 | 0.03% | 0.005% |
| 121 | 15.967 | 15.864 | 16.068 | VV | 88 | 4564 | 0.75% | 0.129% |
| 122 | 16.192 | 16.068 | 16.309 | PV | 7807 | 323883 | 53.42% | 9.137% |
| 123 | 16.328 | 16.309 | 16.343 | PV | 14 | 163 | 0.03% | 0.005% |
| 124 | 16.354 | 16.343 | 16.376 | VV | 12 | 92 | 0.02% | 0.003% |
| | | | Sum of corrected areas: | | | 3544934 | | |

FB011723.M Sat Jan 21 03:00:51 2023

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

# Report of Analysis

| | | | |
|---|---|---|---|
| Client: | Louis Berger U.S., Inc., A WSP Company | Date Collected: | 01/18/23 |
| Project: | NYCDDC Phase II SCI Arthur Kill Road CEQR | Date Received: | 01/19/23 |
| Client Sample ID: | WC-17MSD | SDG No.: | O1232 |
| Lab Sample ID: | O1232-03MSD | Matrix: | SOIL |
| Analytical Method: | 8015D GRO | % Solid: | 91.4 Decanted: |
| Sample Wt/Vol: | 5 Units: g | Final Vol: | 5 mL |
| Soil Aliquot Vol: | uL | Test: | Gasoline Range Organics |
| Extraction Type: | | Injection Volume : | |
| GPC Factor : | PH : | | |
| Prep Method : | SW3541 | | |

| File ID/Qc Batch: | Dilution: | Date Analyzed | Prep Batch ID |
|---|---|---|---|
| FB029151.D | 50 | 01/20/23 16:16 | FB012023 |

| CAS Number | Parameter | Conc. | Qualifier | MDL | LOQ / CRQL | Units(Dry Weight) |
|---|---|---|---|---|---|---|
| **TARGETS** | | | | | | |
| GRO | GRO | 9060 | | 198 | 2460 | ug/kg |
| **SURROGATES** | | | | | | |
| 98-08-8 | Alpha,Alpha,Alpha-Trifluoroto | 18.8 | | 50 - 150 | 94% | SPK: 20 |

Comments:

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

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

Quantitation Report (QT Reviewed)

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029151.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:16
Operator : AJ/MA
Sample : 01232-03MSD 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 11 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:15 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um

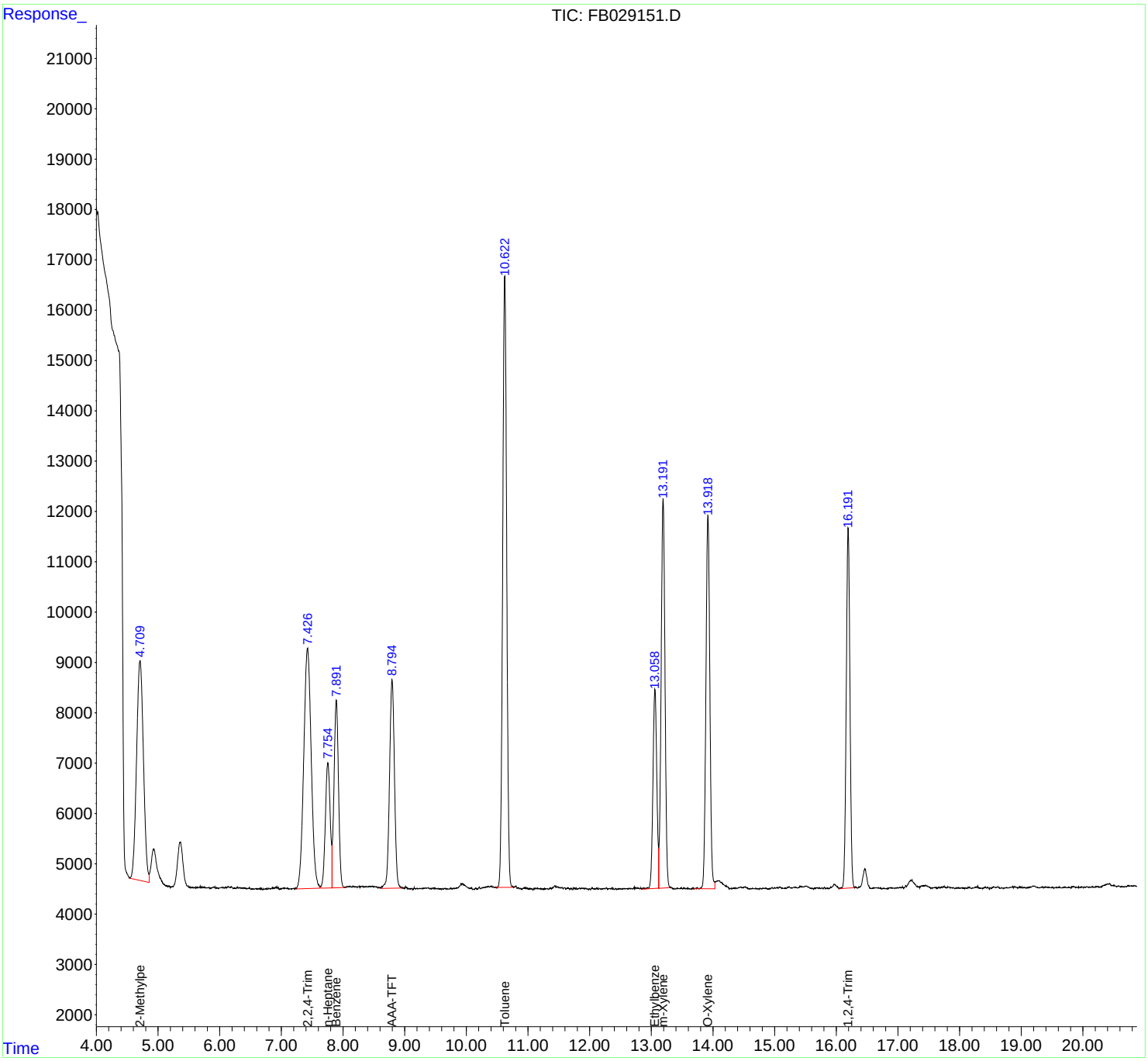
| | Compound | R.T. | Response | Conc | Units |
|---|---|---|---|---|---|
| | System Monitoring Compounds | | | | |
| 5) s | AAA-TFT | 8.796 | 229747 | 18.802 | ng/ml |
| | Target Compounds | | | | |
| 1) t | 2-Methylpentane | 4.710 | 337452 | 23.049 | ng/ml |
| 2) t | 2,2,4-Trimethylpentane | 7.426 | 400819 | 25.262 | ng/ml |
| 3) t | n-Heptane | 7.756 | 134499 | 8.049 | ng/ml |
| 4) t | Benzene | 7.892 | 189364 | 8.907 | ng/ml |
| 6) t | Toluene | 10.623 | 548640 | 27.220 | ng/ml |
| 7) t | Ethylbenzene | 13.060 | 171777 | 8.956 | ng/ml |
| 8) t | m-Xylene | 13.192 | 335598 | 17.937 | ng/ml |
| 9) t | O-Xylene | 13.919 | 328192 | 18.238 | ng/ml |
| 10) t | 1,2,4-Trimethylbenzene | 16.193 | 297507 | 16.688 | ng/ml |

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

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029151.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:16
Operator : AJ/MA
Sample : 01232-03MSD 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 11 Sample Multiplier: 1

Integration File: Calibration.e
Quant Time: Jan 21 02:06:15 2023
Quant Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Quant Title :
QLast Update : Tue Jan 17 12:59:31 2023
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 5 g/ml
Signal Phase : RTX-502.2
Signal Info : 60mx0.53mmx3.00um



Area Percent Report

Data Path : Z:\pestpcbsrv\HPCHEM1\FID_B\Data\FB012023\
Data File : FB029151.D
Signal(s) : FID2B.CH
Acq On : 20 Jan 2023 16:16
Sample : O1232-03MSD 50X
Misc : 5.00G/5.00 ML MEOH
ALS Vial : 11 Sample Multiplier: 1

Integration File: SAMPLE.e

Method : Z:\pestpcbsrv\HPCHEM1\FID_B\Method\FB011723.M
Title :

Signal : FID2B.CH

| peak # | R.T. min | Start min | End min | PK TY | peak height | peak area | peak % max. | % of total |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.710 | 4.504 | 4.857 | BV | 4329 | 330057 | 59.28% | 10.450% |
| 2 | 5.148 | 5.141 | 5.166 | VV | 13 | 104 | 0.02% | 0.003% |
| 3 | 5.173 | 5.166 | 5.203 | VV | 22 | 347 | 0.06% | 0.011% |
| 4 | 5.228 | 5.203 | 5.236 | PV | 23 | 302 | 0.05% | 0.010% |
| 5 | 5.517 | 5.504 | 5.527 | VV | 26 | 170 | 0.03% | 0.005% |
| 6 | 5.538 | 5.527 | 5.572 | VV | 15 | 289 | 0.05% | 0.009% |
| 7 | 5.583 | 5.572 | 5.606 | VV | 16 | 236 | 0.04% | 0.007% |
| 8 | 5.622 | 5.606 | 5.662 | VV | 25 | 544 | 0.10% | 0.017% |
| 9 | 5.683 | 5.662 | 5.693 | VV | 48 | 369 | 0.07% | 0.012% |
| 10 | 5.706 | 5.693 | 5.727 | VV | 34 | 387 | 0.07% | 0.012% |
| 11 | 5.764 | 5.727 | 5.779 | VV | 30 | 669 | 0.12% | 0.021% |
| 12 | 5.791 | 5.779 | 5.858 | VV | 20 | 661 | 0.12% | 0.021% |
| 13 | 5.902 | 5.858 | 5.910 | PV | 36 | 681 | 0.12% | 0.022% |
| 14 | 5.919 | 5.910 | 5.930 | VV | 35 | 352 | 0.06% | 0.011% |
| 15 | 5.936 | 5.930 | 5.959 | VV | 26 | 280 | 0.05% | 0.009% |
| 16 | 5.970 | 5.959 | 5.981 | VV | 25 | 205 | 0.04% | 0.006% |
| 17 | 6.009 | 5.981 | 6.021 | VV | 26 | 467 | 0.08% | 0.015% |
| 18 | 6.040 | 6.021 | 6.075 | VV | 33 | 903 | 0.16% | 0.029% |
| 19 | 6.096 | 6.075 | 6.104 | VV | 39 | 485 | 0.09% | 0.015% |
| 20 | 6.134 | 6.104 | 6.146 | VV | 51 | 919 | 0.16% | 0.029% |
| 21 | 6.152 | 6.146 | 6.166 | VV | 45 | 463 | 0.08% | 0.015% |
| 22 | 6.190 | 6.166 | 6.221 | VV | 49 | 1065 | 0.19% | 0.034% |
| 23 | 6.231 | 6.221 | 6.267 | VV | 23 | 504 | 0.09% | 0.016% |
| 24 | 6.283 | 6.267 | 6.302 | VV | 47 | 622 | 0.11% | 0.020% |
| 25 | 6.314 | 6.302 | 6.324 | VV | 33 | 380 | 0.07% | 0.012% |
| 26 | 6.332 | 6.324 | 6.344 | VV | 38 | 312 | 0.06% | 0.010% |
| 27 | 6.350 | 6.344 | 6.357 | VV | 28 | 198 | 0.04% | 0.006% |
| 28 | 6.369 | 6.357 | 6.378 | VV | 30 | 303 | 0.05% | 0.010% |
| 29 | 6.390 | 6.378 | 6.402 | VV | 30 | 368 | 0.07% | 0.012% |
| 30 | 6.406 | 6.402 | 6.415 | VV | 27 | 189 | 0.03% | 0.006% |
| 31 | 6.422 | 6.415 | 6.436 | VV | 29 | 243 | 0.04% | 0.008% |
| 32 | 6.447 | 6.436 | 6.462 | VV | 21 | 280 | 0.05% | 0.009% |
| 33 | 6.485 | 6.462 | 6.505 | VV | 33 | 503 | 0.09% | 0.016% |
| 34 | 6.538 | 6.505 | 6.546 | VV | 17 | 264 | 0.05% | 0.008% |
| 35 | 6.553 | 6.546 | 6.562 | VV | 15 | 97 | 0.02% | 0.003% |
| 36 | 6.585 | 6.562 | 6.603 | VV | 25 | 383 | 0.07% | 0.012% |

rteres

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 37 | 6.611 | 6.603 | 6.625 | VV | 14 | 157 | 0.03% | 0.005% |
| 38 | 6.653 | 6.625 | 6.663 | VV | 31 | 399 | 0.07% | 0.013% |
| 39 | 6.673 | 6.663 | 6.721 | PV | 34 | 442 | 0.08% | 0.014% |
| 40 | 6.738 | 6.721 | 6.761 | VV | 24 | 347 | 0.06% | 0.011% |
| 41 | 6.771 | 6.761 | 6.782 | VV | 35 | 251 | 0.04% | 0.008% |
| 42 | 6.798 | 6.782 | 6.820 | VV | 29 | 439 | 0.08% | 0.014% |
| 43 | 6.853 | 6.820 | 6.869 | VV | 41 | 806 | 0.14% | 0.026% |
| 44 | 6.882 | 6.869 | 6.895 | VV | 38 | 479 | 0.09% | 0.015% |
| 45 | 6.914 | 6.895 | 6.932 | VV | 54 | 928 | 0.17% | 0.029% |
| 46 | 6.937 | 6.932 | 6.971 | VV | 49 | 692 | 0.12% | 0.022% |
| 47 | 7.035 | 6.971 | 7.092 | VV | 36 | 1773 | 0.32% | 0.056% |
| 48 | 7.098 | 7.092 | 7.127 | VV | 34 | 502 | 0.09% | 0.016% |
| 49 | 7.136 | 7.127 | 7.185 | VV | 20 | 627 | 0.11% | 0.020% |
| 50 | 7.200 | 7.185 | 7.209 | VV | 31 | 317 | 0.06% | 0.010% |
| 51 | 7.216 | 7.209 | 7.222 | VV | 24 | 153 | 0.03% | 0.005% |
| 52 | 7.234 | 7.222 | 7.244 | VV | 40 | 386 | 0.07% | 0.012% |
| 53 | 7.426 | 7.244 | 7.621 | VV | 4794 | 406230 | 72.96% | 12.862% |
| 54 | 7.755 | 7.621 | 7.821 | VV | 2527 | 138904 | 24.95% | 4.398% |
| 55 | 7.892 | 7.821 | 8.039 | VV | 3769 | 195011 | 35.02% | 6.174% |

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

# Manual Integration Report

| Sample ID | ClientId ID | File ID | Sequence ID | Parameter | Supervised By | Supervised On | Reason |
|---|---|---|---|---|---|---|---|
| O1232-03MS | | FB029150.D | FB012023 | 2-Methylpentane | Ankita | 1/23/2023 9:00:42 AM | Peak Integrated by Software incorrectly |
| 20 PPB GRO STD | | FB029152.D | FB012023 | Ethylbenzene | Ankita | 1/23/2023 9:00:44 AM | Peak Integrated by Software incorrectly |
| | | | | | | | |

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

**Instrument ID: FID_B**

## Daily Analysis Runlog For Sequence/QCBatch ID # FB011723

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 1/17/2023 1:50:45 PM | | |
| Supervise By | Ankita | Supervise On | 1/17/2023 3:06:42 PM | | |
| SubDirectory | FB011723 | HP Acquire Method | | HP Processing Method | FB011723 |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP21302,PP21485,PP21486,PP21487,PP21488,PP21489 |
| CCC | |
| Internal Standard/PEM | |
| ICV/I.BLK | PP21303,PP21490 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | 5 GRO STD | FB029115.D | 17 Jan 2023 9:03 | AJ/MA | Ok |
| 2 | 10 GRO STD | FB029116.D | 17 Jan 2023 9:44 | AJ/MA | Ok |
| 3 | 20 GRO STD | FB029117.D | 17 Jan 2023 10:30 | AJ/MA | Ok |
| 4 | 50 GRO STD | FB029118.D | 17 Jan 2023 11:29 | AJ/MA | Ok |
| 5 | 100 GRO STD | FB029119.D | 17 Jan 2023 12:11 | AJ/MA | Ok |
| 6 | FB011723GROICV | FB029120.D | 17 Jan 2023 13:28 | AJ/MA | Ok |

M : Manual Integration

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

**Instrument ID: FID_B**

## Daily Analysis Runlog For Sequence/QCBatch ID # FB012023

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 1/20/2023 3:06:20 PM | | |
| Supervise By | Ankita | Supervise On | 1/23/2023 9:00:50 AM | | |
| SubDirectory | FB012023 | HP Acquire Method | | HP Processing Method | FB011723 |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP21302,PP21485,PP21486,PP21487,PP21488,PP21489 |
| CCC | PP21504,PP21505,PP21506 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP21303,PP21490 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | Data File Name | Date-Time | Operator | Status |
|---|---|---|---|---|---|
| 1 | 20 PPB GRO STD | FB029141.D | 20 Jan 2023 10:04 | AJ/MA | Ok |
| 2 | VBF0120S1 | FB029142.D | 20 Jan 2023 10:41 | AJ/MA | Ok |
| 3 | VBF0120S2 | FB029143.D | 20 Jan 2023 11:18 | AJ/MA | Ok |
| 4 | BSF0120S1 | FB029144.D | 20 Jan 2023 11:55 | AJ/MA | Ok |
| 5 | O1232-03 | FB029145.D | 20 Jan 2023 12:32 | AJ/MA | Not Ok |
| 6 | O1232-03 | FB029146.D | 20 Jan 2023 13:11 | AJ/MA | Not Ok |
| 7 | O1233-10 | FB029147.D | 20 Jan 2023 13:48 | AJ/MA | Not Ok |
| 8 | O1233-10 | FB029148.D | 20 Jan 2023 14:25 | AJ/MA | Not Ok |
| 9 | O1232-03 | FB029149.D | 20 Jan 2023 15:02 | AJ/MA | Ok |
| 10 | O1232-03MS | FB029150.D | 20 Jan 2023 15:39 | AJ/MA | Ok,M |
| 11 | O1232-03MSD | FB029151.D | 20 Jan 2023 16:16 | AJ/MA | Ok |
| 12 | 20 PPB GRO STD | FB029152.D | 20 Jan 2023 16:54 | AJ/MA | Ok,M |
| 13 | O1233-10 | FB029153.D | 20 Jan 2023 18:08 | AJ/MA | Dilution |
| 14 | 20 PPB GRO STD | FB029154.D | 20 Jan 2023 18:45 | AJ/MA | Ok |

M : Manual Integration

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

**Instrument ID:** FID_B

## Daily Analysis Runlog For Sequence/QCBatch ID # FB011723

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 1/17/2023 1:50:45 PM | | |
| Supervise By | Ankita | Supervise On | 1/17/2023 3:06:42 PM | | |
| SubDirectory | FB011723 | HP Acquire Method | | HP Processing Method | FB011723 |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP21302,PP21485,PP21486,PP21487,PP21488,PP21489 |
| CCC | |
| Internal Standard/PEM | |
| ICV/I.BLK | PP21303,PP21490 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | 5 GRO STD | | FB029115.D | 17 Jan 2023 9:03 | | AJ/MA | Ok |
| 2 | 10 GRO STD | | FB029116.D | 17 Jan 2023 9:44 | | AJ/MA | Ok |
| 3 | 20 GRO STD | | FB029117.D | 17 Jan 2023 10:30 | | AJ/MA | Ok |
| 4 | 50 GRO STD | | FB029118.D | 17 Jan 2023 11:29 | | AJ/MA | Ok |
| 5 | 100 GRO STD | | FB029119.D | 17 Jan 2023 12:11 | | AJ/MA | Ok |
| 6 | FB011723GROICV | | FB029120.D | 17 Jan 2023 13:28 | | AJ/MA | Ok |

M : Manual Integration

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

**Instrument ID:** FID_B

## Daily Analysis Runlog For Sequence/QCBatch ID # FB012023

| | | | | | |
|---|---|---|---|---|---|
| Review By | yogesh | Review On | 1/20/2023 3:06:20 PM | | |
| Supervise By | Ankita | Supervise On | 1/23/2023 9:00:50 AM | | |
| SubDirectory | FB012023 | HP Acquire Method | | HP Processing Method | FB011723 |

| STD. NAME | STD REF.# |
|---|---|
| Tune/Reschk | |
| Initial Calibration Stds | PP21302,PP21485,PP21486,PP21487,PP21488,PP21489 |
| CCC | PP21504,PP21505,PP21506 |
| Internal Standard/PEM | |
| ICV/I.BLK | PP21303,PP21490 |
| Surrogate Standard | |
| MS/MSD Standard | |
| LCS Standard | |

| Sr# | SampleId | ClientID | Data File Name | Date-Time | Comment | Operator | Status |
|---|---|---|---|---|---|---|---|
| 1 | 20 PPB GRO STD | | FB029141.D | 20 Jan 2023 10:04 | | AJ/MA | Ok |
| 2 | VBF0120S1 | | FB029142.D | 20 Jan 2023 10:41 | | AJ/MA | Ok |
| 3 | VBF0120S2 | | FB029143.D | 20 Jan 2023 11:18 | | AJ/MA | Ok |
| 4 | BSF0120S1 | | FB029144.D | 20 Jan 2023 11:55 | | AJ/MA | Ok |
| 5 | O1232-03 | | FB029145.D | 20 Jan 2023 12:32 | vial-A , not purged | AJ/MA | Not Ok |
| 6 | O1232-03 | | FB029146.D | 20 Jan 2023 13:11 | vial-B , not purged | AJ/MA | Not Ok |
| 7 | O1233-10 | | FB029147.D | 20 Jan 2023 13:48 | vial-A , not purged | AJ/MA | Not Ok |
| 8 | O1233-10 | | FB029148.D | 20 Jan 2023 14:25 | vial-B , not purged | AJ/MA | Not Ok |
| 9 | O1232-03 | | FB029149.D | 20 Jan 2023 15:02 | vial-C | AJ/MA | Ok |
| 10 | O1232-03MS | | FB029150.D | 20 Jan 2023 15:39 | | AJ/MA | Ok,M |
| 11 | O1232-03MSD | | FB029151.D | 20 Jan 2023 16:16 | | AJ/MA | Ok |
| 12 | 20 PPB GRO STD | | FB029152.D | 20 Jan 2023 16:54 | | AJ/MA | Ok,M |
| 13 | O1233-10 | | FB029153.D | 20 Jan 2023 18:08 | vial-C , Need 10X | AJ/MA | Dilution |
| 14 | 20 PPB GRO STD | | FB029154.D | 20 Jan 2023 18:45 | | AJ/MA | Ok |

M : Manual Integration

CHEMTECH

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 1/23/2023

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:15
**In Date:** 01/20/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN-1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:30
**Out Date:** 01/21/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** %SOLIDS-OVEN

**QC:** LB123747

| 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 |
|---|---|---|---|---|---|---|---|---|
| O1229-01 | OK-02-011923 | 1 | 1.12 | 8.72 | 9.84 | 8.73 | 87.3 | |
| O1229-02 | OK-02-011923-EPH-2 | 2 | 1.12 | 8.72 | 9.84 | 8.73 | 87.3 | |
| O1230-01 | BBC | 3 | 1.15 | 8.45 | 9.6 | 9.47 | 98.5 | |
| O1231-01 | BBC | 4 | 1.19 | 8.53 | 9.72 | 9.57 | 98.2 | |
| O1232-01 | B-P-17A | 18 | 1.15 | 8.78 | 9.93 | 9.00 | 89.4 | |
| O1232-02 | B-P-17B | 19 | 1.15 | 8.41 | 9.56 | 8.46 | 86.9 | |
| O1232-03 | WC-17 | 20 | 1.13 | 8.64 | 9.77 | 9.03 | 91.4 | |
| O1232-04 | B-P-18A | 21 | 1.13 | 8.57 | 9.7 | 8.63 | 87.5 | |
| O1232-05 | B-P-18B | 22 | 1.15 | 8.83 | 9.98 | 9.22 | 91.4 | |
| O1232-06 | B-P-19A | 23 | 1.12 | 8.57 | 9.69 | 8.68 | 88.2 | |
| O1232-07 | B-P-19B | 24 | 1.18 | 8.35 | 9.53 | 8.53 | 88.0 | |
| O1232-08 | B-P-35A | 25 | 1.13 | 8.62 | 9.75 | 9.00 | 91.3 | |
| O1232-09 | B-P-35B | 26 | 1.17 | 8.53 | 9.7 | 9.13 | 93.3 | |
| O1232-10 | DUP01 | 27 | 1.15 | 8.80 | 9.95 | 9.08 | 90.1 | |
| O1233-02 | B-P34A | 28 | 1.13 | 8.76 | 9.89 | 8.6 | 85.3 | |
| O1233-03 | B-P34B | 29 | 1.13 | 8.71 | 9.84 | 9.03 | 90.7 | |
| O1233-04 | B-P36A | 30 | 1.16 | 8.75 | 9.91 | 9.00 | 89.6 | |
| O1233-05 | B-P36B | 31 | 1.13 | 8.84 | 9.97 | 9.12 | 90.4 | |
| O1233-06 | B-P37A | 32 | 1.18 | 8.60 | 9.78 | 8.74 | 87.9 | |
| O1233-07 | B-P37B | 33 | 1.18 | 8.38 | 9.56 | 8.18 | 83.5 | |
| O1233-08 | B-P38A | 34 | 1.12 | 8.66 | 9.78 | 8.85 | 89.3 | |
| O1233-09 | B-P38B | 35 | 1.15 | 8.81 | 9.96 | 8.26 | 80.7 | |
| O1233-10 | WC-38 | 36 | 1.18 | 8.59 | 9.77 | 8.47 | 84.9 | |
| O1233-11 | B-P38C | 37 | 1.15 | 8.82 | 9.97 | 8.73 | 85.9 | |
| O1234-01 | EO-02-11923 | 5 | 1.14 | 8.82 | 9.96 | 8.72 | 85.9 | |
| O1234-02 | EO-02-11923 | 6 | 1.12 | 8.54 | 9.66 | 8.48 | 86.2 | |
| O1235-04 | 12X52 | 7 | 1.12 | 7.08 | 8.2 | 6.57 | 77.0 | |
| O1235-05 | 12X53 | 8 | 1.16 | 5.17 | 6.33 | 5.91 | 91.9 | |

CHEMTECH

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 1/23/2023

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:15
**In Date:** 01/20/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN-1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:30
**Out Date:** 01/21/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** %SOLIDS-OVEN

**QC:** LB123747

| 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 |
|---|---|---|---|---|---|---|---|---|
| O1235-06 | 12X54 | 9 | 1.11 | 8.50 | 9.61 | 5.73 | 54.4 | |
| O1235-07 | 12X55 | 10 | 1.13 | 8.43 | 9.56 | 7.14 | 71.3 | |
| O1237-01 | COMP-1-2-3A | 11 | 1.18 | 8.72 | 9.9 | 9.24 | 92.4 | |
| O1237-02 | 3A | 12 | 1.13 | 8.44 | 9.57 | 9.33 | 97.2 | |
| O1238-01 | RBRB22281-OILY-DEBRIS | 13 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | OILY DEBRIS |
| O1239-01 | BORING-3 | 14 | 1.17 | 8.73 | 9.9 | 8.29 | 81.6 | |
| O1239-03 | BORING-3-EPH-2 | 15 | 1.13 | 8.64 | 9.77 | 8.31 | 83.1 | |
| O1240-01 | TR-05-011923 | 16 | 1.18 | 8.50 | 9.68 | 8.38 | 84.7 | |
| O1240-02 | TR-05-011923-EPH-2 | 17 | 1.17 | 8.67 | 9.84 | 8.73 | 87.2 | |
| O1241-01 | 34326-FRONT | 38 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-02 | 34326-BACK | 39 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-03 | 34327-FRONT | 40 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-04 | 34327-BACK | 41 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-05 | 34328-FRONT | 42 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-06 | 34328BACK | 43 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-07 | 343269-FRONT | 44 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1241-08 | 34329-BACK | 45 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | PILC REEL |
| O1243-01 | TJRC-11823-B4-0-10 | 60 | 1.12 | 8.65 | 9.77 | 8.54 | 85.8 | |
| O1243-02 | TJRC-11823-B4-0-10 | 61 | 1.14 | 8.45 | 9.59 | 8.02 | 81.4 | |
| O1243-03 | TJRC-11823-B4-10-20 | 62 | 1.15 | 8.81 | 9.96 | 8.85 | 87.4 | |
| O1243-04 | TJRC-11823-B4-10-20 | 63 | 1.17 | 8.57 | 9.74 | 8.16 | 81.6 | |
| O1243-05 | TJRC-11923-B4-20-30 | 64 | 1.15 | 8.75 | 9.9 | 8.28 | 81.5 | |
| O1243-06 | TJRC-11923-B4-20-30 | 65 | 1.13 | 8.70 | 9.83 | 8.43 | 83.9 | |
| O1243-07 | TJRC-11923-B4-30-40 | 66 | 1.16 | 8.77 | 9.93 | 8.29 | 81.3 | |
| O1243-08 | TJRC-11923-B4-30-40 | 67 | 1.14 | 8.83 | 9.97 | 8.47 | 83.0 | |
| O1244-01 | VNJ-223 | 46 | 1.12 | 8.62 | 9.74 | 8.59 | 86.7 | |
| O1244-02 | VNJ-223 | 47 | 1.16 | 8.80 | 9.96 | 8.62 | 84.8 | |
| O1248-05 | SVOC-GPC-BLANK | 50 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |

CHEMTECH

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 1/23/2023

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:15
**In Date:** 01/20/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN-1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:30
**Out Date:** 01/21/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** %SOLIDS-OVEN

**QC:** LB123747

| 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 |
|---|---|---|---|---|---|---|---|---|
| O1248-06 | PEST-GPC-BLANK | 51 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-07 | PEST-GPC-BLANK-SPIKE | 52 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-08 | PCB-GPC-BLANK | 53 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-09 | PCB-GPC-BLANK-SPIKE | 54 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-10 | SVOC-GPC2-BLANK | 55 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-11 | PEST-GPC2-BLANK | 56 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-12 | PEST-GPC2-BLANK-SPIKE | 57 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-13 | PCB-GCP2-BLANK | 58 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1248-14 | PCB-GCP2-BLANK-SPIKE | 59 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | |
| O1251-01 | COMP-1 | 68 | 1.13 | 8.43 | 9.56 | 8.44 | 86.7 | |
| O1251-03 | EPH-1 | 69 | 1.11 | 8.51 | 9.62 | 8.47 | 86.5 | |
| O1251-05 | TOT-VOC-1 | 70 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | no jar |
| O1251-06 | TOT-VOC-2 | 71 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | no jar |
| O1251-07 | COMP-2 | 72 | 1.12 | 8.74 | 9.86 | 8.75 | 87.3 | |
| O1251-09 | EPH-2 | 73 | 1.14 | 8.80 | 9.94 | 8.8 | 87.0 | |
| O1251-11 | TOT-VOC-3 | 74 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | no jar |
| O1251-12 | TOT-VOC-4 | 75 | 1.00 | 1.00 | 2.00 | 2.00 | 100.0 | no jar |
| O1252-01 | MH-9 | 48 | 1.14 | 8.84 | 9.98 | 9.47 | 94.2 | |
| O1252-02 | MH-9-EPH | 49 | 1.12 | 8.46 | 9.58 | 8.67 | 89.2 | |
| O1253-01 | SU-04-012023 | 79 | 1.12 | 8.47 | 9.59 | 8.99 | 92.9 | |
| O1253-02 | SU-04-012023-EPH-2 | 80 | 1.18 | 8.69 | 9.87 | 9.17 | 91.9 | |
| O1254-01 | HR-04-012023 | 81 | 1.13 | 8.66 | 9.79 | 9.09 | 91.9 | |
| O1254-02 | HR-04-012023-EPH-2 | 82 | 1.16 | 8.69 | 9.85 | 8.95 | 89.6 | |
| O1255-01 | BORING-1 | 76 | 1.18 | 8.61 | 9.79 | 8.32 | 82.9 | |
| O1255-03 | BORING-1-EPH-2 | 77 | 1.11 | 8.78 | 9.89 | 8.35 | 82.5 | |
| O1256-01 | OR-02-012023 | 83 | 1.15 | 8.81 | 9.96 | 9.09 | 90.1 | |
| O1256-02 | OR-02-012023-EPH-2 | 84 | 1.1 | 8.87 | 9.97 | 8.66 | 85.2 | |

CHEMTECH

# PERCENT SOLID

**Supervisor:** Iwona
**Analyst:** jignesh
**Date:** 1/23/2023

**OVENTEMP IN Celsius(°C):** 107
**Time IN:** 17:15
**In Date:** 01/20/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**OvenID:** M OVEN-1

**OVENTEMP OUT Celsius(°C):** 103
**Time OUT:** 08:30
**Out Date:** 01/21/2023
**Weight Check 1.0g:** 1.00
**Weight Check 10g:** 10.00
**BalanceID:** M SC-4
**Thermometer ID:** %SOLIDS-OVEN

**QC:** LB123747

| 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 |
|---|---|---|---|---|---|---|---|---|
| O1258-01 | WASTE-VOA-2 | 78 | 1.12 | 8.58 | 9.7 | 8.62 | 87.4 | |

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

# WORKLIST(Hardcopy Internal Chain)

VB 123747

**WorkList Name :** %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

| Due Date | Matrix | Sample | Test | Preservative | Customer | Raw Sample Storage Location | Customer Sample | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|---|
| 01/24/2023 | Solid | O1229-01 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | OK-02-011923 | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1229-02 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | OK-02-011923-EPH-2 | 01/19/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1230-01 | Percent Solids | Cool 4 deg C | EART12 | N11 | BBC | 01/19/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1231-01 | Percent Solids | Cool 4 deg C | EART12 | N11 | BBC | 01/19/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-01 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-17A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-02 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-17B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-03 | Percent Solids | Cool 4 deg C | loui01 | N11 | WC-17 | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-04 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-18A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-05 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-18B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-06 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-19A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-07 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-19B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-08 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-35A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-09 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P-35B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1232-10 | Percent Solids | Cool 4 deg C | loui01 | N11 | DUP01 | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-02 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P34A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-03 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P34B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-04 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P36A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-05 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P36B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-06 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P37A | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-07 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P37B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-08 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P38A | 01/18/2023 | Chemtech -SO |

**Date/Time** 01.20.23 15:45

**Raw Sample Received by:** JD (WC)

**Raw Sample Relinquished by:** JD (CSM)

**Date/Time** 01.20.23 17:25

**Raw Sample Received by:** JD CSM

**Raw Sample Relinquished by:** JD (WC)

123747

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

| Due Date | Matrix | Sample | Test | Preservative | Customer | Raw Sample Storage Location | Customer Sample | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|---|
| 01/26/2023 | Solid | O1233-09 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P38B | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-10 | Percent Solids | Cool 4 deg C | loui01 | N11 | WC-38 | 01/18/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1233-11 | Percent Solids | Cool 4 deg C | loui01 | N11 | B-P38C | 01/18/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1234-01 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | EO-02-11923 | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1234-02 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | EO-02-11923 | 01/19/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1235-04 | Percent Solids | Cool 4 deg C | ATCE02 | N11 | 12X52 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1235-05 | Percent Solids | Cool 4 deg C | ATCE02 | N11 | 12X53 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1235-06 | Percent Solids | Cool 4 deg C | ATCE02 | N11 | 12X54 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1235-07 | Percent Solids | Cool 4 deg C | ATCE02 | N11 | 12X55 | 01/18/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1237-01 | Percent Solids | Cool 4 deg C | PSEG03 | N12 | COMP-1-2-3A | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1237-02 | Percent Solids | Cool 4 deg C | PSEG03 | N12 | 3A | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1238-01 | Percent Solids | Cool 4 deg C | PSEG03 | N12 | RBRB22281-OILY-DEBRIS | 01/19/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1239-01 | Percent Solids | Cool 4 deg C | PSEG03 | N12 | BORING-3 | 01/19/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1239-03 | Percent Solids | Cool 4 deg C | PSEG03 | N12 | BORING-3-EPH-2 | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1240-01 | Percent Solids | Cool 4 deg C | PSEG05 | N12 | TR-05-011923 | 01/19/2023 | Chemtech -SO |
| 01/24/2023 | Solid | O1240-02 | Percent Solids | Cool 4 deg C | PSEG05 | N12 | TR-05-011923-EPH-2 | 01/19/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-01 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34326-FRONT | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-02 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34326-BACK | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-03 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34327-FRONT | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-04 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34327-BACK | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-05 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34328-FRONT | 01/20/2023 | Chemtech -SO |

**Date/Time** 01.20.23 15:45

**Raw Sample Received by:** JP (WC)

**Raw Sample Relinquished by:** JD CSM)

**Date/Time** 01.20.23 17:25

**Raw Sample Received by:** JD CSM)

**Raw Sample Relinquished by:** JP (WC)

UB 123747

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

| Due Date | Matrix | Sample | Test | Preservative | Customer | Raw Sample Storage Location | Customer Sample | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|---|
| 01/27/2023 | Solid | O1241-06 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34328BACK | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-07 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 343269-FRONT | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1241-08 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | 34329-BACK | 01/20/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1243-01 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-0-10 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1243-02 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-0-10 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1243-03 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-10-20 | 01/18/2023 | Chemtech -SO |
| 01/28/2023 | Solid | O1243-04 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-10-20 | 01/18/2023 | Chemtech -SO |
| 01/29/2023 | Solid | O1243-05 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-20-30 | 01/19/2023 | Chemtech -SO |
| 01/29/2023 | Solid | O1243-06 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-20-30 | 01/19/2023 | Chemtech -SO |
| 01/29/2023 | Solid | O1243-07 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-30-40 | 01/19/2023 | Chemtech -SO |
| 01/29/2023 | Solid | O1243-08 | Percent Solids | Cool 4 deg C | ENTE01 | N11 | TJRC-11823-B4-30-40 | 01/19/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1244-01 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | VNJ-223 | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1244-02 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | VNJ-223 | 01/20/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-05 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | SVOC-GPC-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-06 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PEST-GPC-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-07 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PEST-GPC-BLANK-SPIKE | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-08 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PCB-GPC-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-09 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PCB-GPC-BLANK-SPIKE | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-10 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | SVOC-GPC2-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-11 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PEST-GPC2-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-12 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PEST-GPC2-BLANK-SPIKE | 01/13/2023 | Chemtech -SO |

**Date/Time** 01.20.23 15:45

**Raw Sample Received by:** JP (WC)

**Raw Sample Relinquished by:** JD CSM

**Date/Time** 01.20.23 17:25

**Raw Sample Received by:** JD CSM

**Raw Sample Relinquished by:** JP (WC)

1P223747

# WORKLIST(Hardcopy Internal Chain)

**WorkList Name :** %1-012023 **WorkList ID :** 166715 **Department :** Wet-Chemistry **Date :** 01-20-2023 09:10:27

| Due Date | Matrix | Sample | Test | Preservative | Customer | Raw Sample Storage Location | Customer Sample | Collect Date | Method |
|---|---|---|---|---|---|---|---|---|---|
| 01/23/2023 | Solid | O1248-13 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PCB-GCP2-BLANK | 01/13/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1248-14 | Percent Solids | Cool 4 deg C | CHEM02 | N11 | PCB-GCP2-BLANK-SPIKE | 01/13/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-01 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | COMP-1 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-03 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | EPH-1 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-05 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | TOT-VOC-1 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-06 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | TOT-VOC-2 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-07 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | COMP-2 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-09 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | EPH-2 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-11 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | TOT-VOC-3 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1251-12 | Percent Solids | Cool 4 deg C | SOUN03 | N11 | TOT-VOC-4 | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1252-01 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | MH-9 | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1252-02 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | MH-9-EPH | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1253-01 | Percent Solids | Cool 4 deg C | PSEG05 | N13 | SU-04-012023 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1253-02 | Percent Solids | Cool 4 deg C | PSEG05 | N13 | SU-04-012023-EPH-2 | 01/20/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1254-01 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | HR-04-012023 | 01/20/2023 | Chemtech -SO |
| 01/26/2023 | Solid | O1254-02 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | HR-04-012023-EPH-2 | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1255-01 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | BORING-1 | 01/20/2023 | Chemtech -SO |
| 01/27/2023 | Solid | O1255-03 | Percent Solids | Cool 4 deg C | PSEG03 | N11 | BORING-1-EPH-2 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1256-01 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | OR-02-012023 | 01/20/2023 | Chemtech -SO |
| 01/25/2023 | Solid | O1256-02 | Percent Solids | Cool 4 deg C | PSEG05 | N11 | OR-02-012023-EPH-2 | 01/20/2023 | Chemtech -SO |
| 01/23/2023 | Solid | O1258-01 | Percent Solids | Cool 4 deg C | RMJE02 | N11 | WASTE-VOA-2 | 01/20/2023 | Chemtech -SO |

**Date/Time** 01.20.23 15:45
**Raw Sample Received by:** JP (WC)
**Raw Sample Relinquished by:** JD CSM



**Date/Time** 01.20.23 17:25
**Raw Sample Received by:** JD CSM
**Raw Sample Relinquished by:** JP (WC)

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

# Prep Standard - Chemical Standard Summary

**Order ID :** O1232

**Test :** Gasoline Range Organics

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** FB012023,

**Standard ID :**
PP21302,PP21303,PP21304,PP21485,PP21486,PP21487,PP21488,PP21489,PP21490,PP21504,PP21505,PP21506,

**Chemical ID :**
P9822,P9823,V11250,V13214,W2606,

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 231 | 10 PPM GRO STD 1ST SOURCE | PP21302 | 12/19/2022 | 06/19/2023 | Yogesh Patel | None | None | Ankita Jodhani 12/20/2022 |

**FROM** 0.11100ml of P9822 + 9.89000ml of V13214 = Final Quantity: 10.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 233 | 10 PPM GRO STD 2nd SOURCE | PP21303 | 12/19/2022 | 06/19/2023 | Yogesh Patel | None | None | Ankita Jodhani 12/20/2022 |

**FROM** 0.11100ml of P9823 + 9.89000ml of V13214 = Final Quantity: 10.000 ml

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 3619 | 25 PPM AAA-TFT Surg | PP21304 | 12/19/2022 | 06/12/2023 | Yogesh Patel | None | None | Ankita Jodhani 12/20/2022 |

**FROM** 0.10000ml of V11250 + 9.90000ml of V13214 = Final Quantity: 10.000 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 238 | 5 PPB ICC GRO STD | PP21485 | 01/17/2023 | 02/17/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00100ml of PP21304 + 0.00250ml of PP21302 = Final Quantity: 5.004 ml

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 237 | 10 PPB ICC GRO STD | PP21486 | 01/17/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00200ml of PP21304 + 0.00500ml of PP21302 = Final Quantity: 5.007 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 239 | 20 PPB ICC GRO STD | PP21487 | 01/17/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 235 | 50 PPB ICC GRO STD | PP21488 | 01/17/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.01000ml of PP21304 + 0.02500ml of PP21302 = Final Quantity: 5.035 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 234 | 100 PPB ICC GRO STD | PP21489 | 01/17/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.02000ml of PP21304 + 0.05000ml of PP21302 = Final Quantity: 5.070 ml

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 240 | 20 PPB ICV GRO STD | PP21490 | 01/17/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21303 = Final Quantity: 5.014 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 241 | 20 PPB CCC GRO STD | PP21504 | 01/20/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

# CHEMTECH

**284, Sheffield Street, Mountainside NJ 07092 (908) 789 - 8900**

## Pest/Pcb STANDARD PREPARATION LOG

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 241 | 20 PPB CCC GRO STD | PP21505 | 01/20/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

| Recipe ID | NAME | NO. | Prep Date | Expiration Date | Prepared By | ScaleID | PipetteID | Supervised By |
|---|---|---|---|---|---|---|---|---|
| 241 | 20 PPB CCC GRO STD | PP21506 | 01/20/2023 | 06/12/2023 | Yogesh Patel | None | None | |

**FROM** 5.00000ml of W2606 + 0.00400ml of PP21304 + 0.01000ml of PP21302 = Final Quantity: 5.014 ml

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

# CHEMICAL RECEIPT LOG BOOK

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30065 / GRO Mix (EPA) | A0155991 | 01/07/2023 | 07/07/2022 / yogesh | 09/11/2020 / DHAVAL | P9822 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30065 / GRO Mix (EPA) | A0155991 | 01/07/2023 | 07/07/2022 / yogesh | 09/11/2020 / DHAVAL | P9823 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Restek | 30068 / VOA Mix, a, a, a-triflurotoluene 2500uq/ml, P&T methanol, 1ml | A0158026 | 06/19/2023 | 03/08/2022 / Ankita | 09/11/2020 / DHAVAL | V11250 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | BA9077-02 / Methanol, Purge/Trap (cs=6x1L) | 22C2362001 | 06/12/2023 | 12/12/2022 / SAM | 09/13/2022 / SAM | V13214 |

| Supplier | ItemCode / ItemName | Lot # | Expiration Date | Date Opened / Opened By | Received Date / Received By | Chemtech Lot # |
|---|---|---|---|---|---|---|
| Seidler Chemical | DIW / DI Water | Daily Lab-Certified | 10/24/2024 | 10/24/2019 / apatel | 10/24/2019 / apatel | W2606 |

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 22C2362001
Manufactured Date: 2022-02-15
Expiration Date: 2025-02-14
Revision No.: 0

# Certificate of Analysis

| Test | Specification | Result |
|---|---|---|
| Assay ($CH_3OH$) (by GC, corrected for water) | ≥ 99.9 % | 100.0 % |
| Residue after Evaporation | ≤ 1.0 ppm | < 0.1 ppm |
| Titrable Acid (µeq/g) | ≤ 0.3 | 0.3 |
| Titrable Base (µeq/g) | ≤ 0.10 | 0.03 |
| Water (by KF, coulometric) | ≤ 0.08 % | < 0.01 % |
| Volatile Organic Trace Analysis – Below EPA 8260B CRQL | Conforms | Conforms |

For Laboratory,Research,or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

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

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Fax: (814)353-1309

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# CERTIFIED REFERENCE MATERIAL

# Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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

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

1st source
DD
P9817 To P9826 (10)

**Catalog No. :** 30065 **Lot No.:** A0155991

**Description :** Gasoline Range Organics Mix (EPA)

Gasoline Range Organics Mix (EPA) 500 - 1500µg/mL, P&T Methanol, 1mL/ampul

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

**Expiration Date :** January 31, 2027 **Storage:** 0°C or colder

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 2-Methylpentane<br>**CAS #** 107-83-5<br>**Purity** 98% | (Lot MKCB1674V) | 1,505.3 µg/mL | +/- 8.9409 µg/mL<br>+/- 84.4194 µg/mL<br>+/- 86.3938 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 2,2,4-Trimethylpentane ( isooctane )<br>**CAS #** 540-84-1<br>**Purity** 99% | (Lot SHBD2922V) | 1,504.0 µg/mL | +/- 8.9333 µg/mL<br>+/- 84.3476 µg/mL<br>+/- 86.3203 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | n-Heptane (C7)<br>**CAS #** 142-82-5<br>**Purity** 98% | (Lot SHBK8626) | 500.8 µg/mL | +/- 2.9745 µg/mL<br>+/- 28.0848 µg/mL<br>+/- 28.7417 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Benzene<br>**CAS #** 71-43-2<br>**Purity** 99% | (Lot SHBK5679) | 501.0 µg/mL | +/- 2.9758 µg/mL<br>+/- 28.0972 µg/mL<br>+/- 28.7543 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Toluene<br>**CAS #** 108-88-3<br>**Purity** 99% | (Lot MKCH9232) | 1,505.0 µg/mL | +/- 8.9392 µg/mL<br>+/- 84.4037 µg/mL<br>+/- 86.3777 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Ethylbenzene<br>**CAS #** 100-41-4<br>**Purity** 99% | (Lot SHBJ4278) | 502.0 µg/mL | +/- 2.9817 µg/mL<br>+/- 28.1533 µg/mL<br>+/- 28.8117 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 7 | m-Xylene<br>**CAS #** 108-38-3<br>**Purity** 99% | (Lot SHBJ8743) | 1,004.0 µg/mL | +/- 5.9635 µg/mL<br>+/- 56.3065 µg/mL<br>+/- 57.6234 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | o-Xylene | | 1,008.0 | µg/mL | +/- 5.9872 | µg/mL | Gravimetric |
| | **CAS #** 95-47-6 | (Lot SHBK7739) | | | +/- 56.5308 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 57.8530 | µg/mL | Stressed |
| 9 | 1,2,4-Trimethylbenzene | | 1,004.5 | µg/mL | +/- 5.9664 | µg/mL | Gravimetric |
| | **CAS #** 95-63-6 | (Lot MKBJ6229V) | | | +/- 56.3345 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 57.6521 | µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

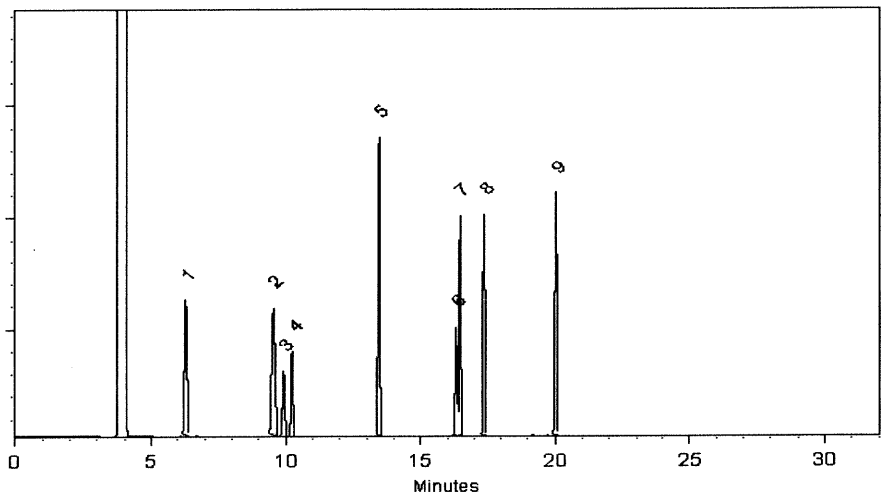
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°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.

Miranda Kline

Miranda Kline - Operations Technician I

**Date Mixed:** 19-Dec-2019 **Balance:** 1127510105

Fang-Yun Lo - QC Analyst

**Date Passed:** 23-Dec-2019

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

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1st source
DD
P9817 To P9826 (10)

**Catalog No. :** 30065 **Lot No.:** A0155991

**Description :** Gasoline Range Organics Mix (EPA)

Gasoline Range Organics Mix (EPA) 500 - 1500µg/mL, P&T Methanol, 1mL/ampul

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

**Expiration Date :** January 31, 2027 **Storage:** 0°C or colder

## CERTIFIED VALUES

| Elution Order | Compound | | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|---|
| 1 | 2-Methylpentane<br>**CAS #** 107-83-5<br>**Purity** 98% | (Lot MKCB1674V) | 1,505.3 µg/mL | +/- 8.9409 µg/mL<br>+/- 84.4194 µg/mL<br>+/- 86.3938 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 2 | 2,2,4-Trimethylpentane ( isooctane )<br>**CAS #** 540-84-1<br>**Purity** 99% | (Lot SHBD2922V) | 1,504.0 µg/mL | +/- 8.9333 µg/mL<br>+/- 84.3476 µg/mL<br>+/- 86.3203 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 3 | n-Heptane (C7)<br>**CAS #** 142-82-5<br>**Purity** 98% | (Lot SHBK8626) | 500.8 µg/mL | +/- 2.9745 µg/mL<br>+/- 28.0848 µg/mL<br>+/- 28.7417 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 4 | Benzene<br>**CAS #** 71-43-2<br>**Purity** 99% | (Lot SHBK5679) | 501.0 µg/mL | +/- 2.9758 µg/mL<br>+/- 28.0972 µg/mL<br>+/- 28.7543 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 5 | Toluene<br>**CAS #** 108-88-3<br>**Purity** 99% | (Lot MKCH9232) | 1,505.0 µg/mL | +/- 8.9392 µg/mL<br>+/- 84.4037 µg/mL<br>+/- 86.3777 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 6 | Ethylbenzene<br>**CAS #** 100-41-4<br>**Purity** 99% | (Lot SHBJ4278) | 502.0 µg/mL | +/- 2.9817 µg/mL<br>+/- 28.1533 µg/mL<br>+/- 28.8117 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |
| 7 | m-Xylene<br>**CAS #** 108-38-3<br>**Purity** 99% | (Lot SHBJ8743) | 1,004.0 µg/mL | +/- 5.9635 µg/mL<br>+/- 56.3065 µg/mL<br>+/- 57.6234 µg/mL | | Gravimetric<br>Unstressed<br>Stressed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | o-Xylene | | 1,008.0 | µg/mL | +/- 5.9872 | µg/mL | Gravimetric |
| | **CAS #** 95-47-6 | (Lot SHBK7739) | | | +/- 56.5308 | µg/mL | Unstressed |
| | **Purity** 99% | | | | +/- 57.8530 | µg/mL | Stressed |
| 9 | 1,2,4-Trimethylbenzene | | 1,004.5 | µg/mL | +/- 5.9664 | µg/mL | Gravimetric |
| | **CAS #** 95-63-6 | (Lot MKBJ6229V) | | | +/- 56.3345 | µg/mL | Unstressed |
| | **Purity** 98% | | | | +/- 57.6521 | µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

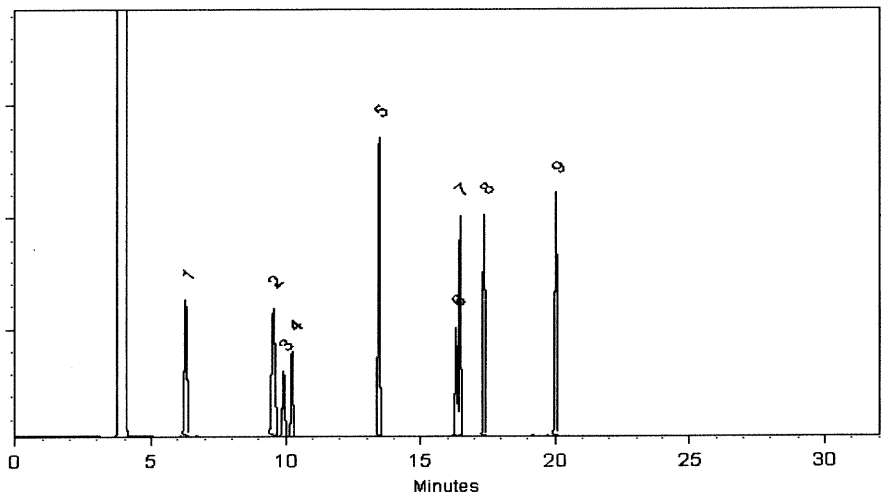
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°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.

Miranda Kline

Miranda Kline - Operations Technician I

**Date Mixed:** 19-Dec-2019 **Balance:** 1127510105

Fang-Yun Lo - QC Analyst

**Date Passed:** 23-Dec-2019

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

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

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DD
V11250
TO
V11254
(5)

**Catalog No. :** 30068 **Lot No.:** A0158026

**Description :** a,a,a-Trifluorotoluene Standard

a,a,a-Trifluorotoluene 2500µg/mL, P & T Methanol, 1mL/ampul

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

**Expiration Date :** May 31, 2028 **Storage:** 0°C or colder

## CERTIFIED VALUES

| Elution Order | Compound | Grav. Conc. (weight/volume) | Expanded Uncertainty (95% C.L.; K=2) | | |
|---|---|---|---|---|---|
| 1 | a,a,a-Trifluorotoluene | 2,514.0 µg/mL | +/- 14.9324 | µg/mL | Gravimetric |
| | **CAS #** 98-08-8 (Lot SHBJ9102) | | +/- 140.9906 | µg/mL | Unstressed |
| | **Purity** 99% | | +/- 144.2881 | µg/mL | Stressed |

**Solvent:** P&T Methanol
**CAS #** 67-56-1
**Purity** 99%

**Column:**
105m x 0.53mm x 3.0µm
Rtx-502.2 (cat.#10910)

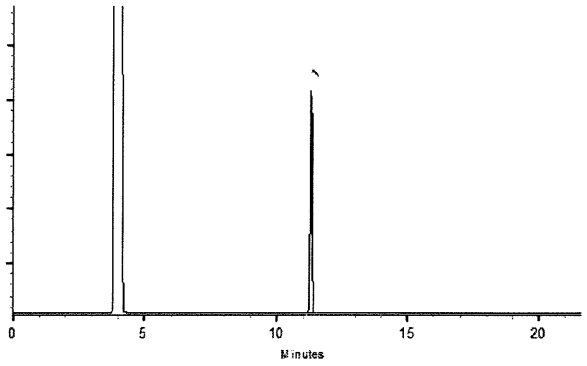
**Carrier Gas:**
hydrogen-constant pressure 11.0 psi.

**Temp. Program:**
40°C (hold 2 min.) to 240°C
@ 8°C/min. (hold 5 min.)

**Inj. Temp:**
200°C

**Det. Temp:**
250°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.

Dustin J Lidgett

**Dustin Lidgett - Mix Technician**

**Date Mixed:** 20-Feb-2020 **Balance:** B251644995

Feng-Yun Lo - QC Analyst

**Date Passed:** 24-Feb-2020

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

CHEMTECH

# SHIPPING DOCUMENTS

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

**Chemtech Project Number:** 01232/33

**COC Number:**

### CLIENT INFORMATION

COMPANY: Louis Berger dba WSP USA Inc.
ADDRESS: 350 Mt. Kemble Ave
CITY Morristown STATE: NJ ZIP: 07962
ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com)
PHONE: 212-612-7995 FAX:

### PROJECT INFORMATION

PROJECT NAME: HWR1140A PCSMP Ph II SCI
PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island
PROJECT MANAGER: Jon Ganz
E-MAIL: Jon.Ganz@wsp.com
PHONE: 212-612-7995 FAX:

### BILLING INFORMATION

BILL TO: Louis Berger PO# 31202661.297 Task 02
ADDRESS: 350 Mt. Kemble Ave
CITY: Morristown STATE: NJ ZIP: 07962
ATTENTION: Jon Ganz PHONE: 212-612-7995

### DATA TURNAROUND INFORMATION

FAX:_____DAYS
HARD COPY:_____DAYS*
EDD See Contract Rates below DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days
TCL SVOC - 5 days
PAH - 5 days
TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Filter - 3 Days

### DATA DELIVERABLE INFORMATION

☐ RESEULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other_____

Level 2

☐ EDD Format_____

### ANALYSIS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| TCL VOC (8260C) | TCL SVOC (8270C/625) | TCL Pest (8081A/608) | PCB (3550B, 8082/608) | TAL Metals (7471A and 6010B) | PCBs (8082), PAHs (8270) | TCLP Metals (RCRA 8) EPA 1311/ 6010B | RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B | TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B) |

| 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. | B-P17A | soil | | X | 1/18/23 | 0950 | 1 | X | X | X | X | X | | | | | |
| 2. | B-P17B | soil | | X | 1/18/23 | 1005 | 1 | X | X | X | X | X | | | | | |
| 3. | WC17 | soil | X | | 1/18/23 | 1010 | 1 | | | | | | X | X | X | X | |
| 4. | B-P18A | | | X | 1/18/23 | 1025 | | X | X | X | X | X | | | | | |
| 5. | B-P18B | | | X | 1/18/23 | 1045 | | X | X | X | X | X | | | | | |
| 6. | B-P19A | | | X | 1/18/23 | 1125 | | X | X | X | X | X | | | | | |
| 7. | B-P19B | | | X | 1/18/23 | 1135 | | X | X | X | X | X | | | | | |
| 8. | B-P35A | | | X | 1/18/23 | 1225 | | X | X | X | X | X | | | | | |
| 9. | B-P35B | | | X | 1/18/23 | 1245 | | X | X | X | X | X | | | | | |
| 10. | DUP01 | | | X | — | — | | X | X | X | X | X | | | | | |

**PRESERVATIVES** (E-ICE)

**COMMENTS** <-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

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

| | DATE/TIME | | |
|---|---|---|---|
| 1. RELINQUISHED BY SAMPLER | 1/19/23 | 1. RECEIVED BY | 1333 1-19-23 |
| 2. RELINQUISHED BY | DATE/TIME | 2. RECEIVED BY | |
| 3. RELINQUISHED BY | DATE/TIME 1806 1-19-23 | 3. RECEIVED FOR LAB BY | — |

**Conditions of bottles or coolers at receipt:** ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:_____
**Comments:**

Page 1 of 3

**SHIPPED VIA:** CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

**Shipment Complete** ☐ YES ☐ NO

**WHITE** - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

**Chemtech Project Number:** 01232/33

**COC Number:**

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PHONE: 212-612-7995 FAX:

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PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island
PROJECT MANAGER: Jon Ganz
E-MAIL: Jon.Ganz@wsp.com
PHONE: 212-612-7995 FAX:

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TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Fitler - 3 Days

### DATA DELIVERABLE INFORMATION

❑ RESEULTS ONLY ❑ USEPA CLP
❑ RESULTS + QC ❑ New York State ASP "B"
❑ New Jersey REDUCED ❑ New York State ASP "A"
❑ New Jersey CLP ❑ Other_____

Level 2

❑ EDD Format_____

### ANALYSIS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| TCL VOC (8260C) | TCL SVOC (8270C/625) | TCL Pest (8081A/608) | PCB (3550B, 8082/608) | TAL Metals (7471A and 6010B) | PCBs (8082), PAHs (8270) | TCLP Metals (RCRA 8) EPA 1311/ 6010B | RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B | TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B) |

### PRESERVATIVES

### COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

| CHEMTECH SAMPLE ID | PROJECT SAMPLE IDENTIFICATION | SAMPLE MATRIX | SAMPLE TYPE COMP | SAMPLE TYPE GRAB | SAMPLE COLLECTION DATE | SAMPLE COLLECTION TIME | # of Bottles | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | FB01 | Field Blank | | | 1/18/23 | 1205 | 2 | X | X | X | X | X | | | | | HCl Preservative |
| 2. | B-P34A | soil | | X | 1/18/23 | 2115 | 1 | X | X | X | X | X | | | | | Ice Preservative |
| 3. | B-P34B | soil | | X | 1/18/23 | 2140 | 1 | X | X | X | X | X | | | | | |
| 4. | B-P36A | | | X | | 2210 | 1 | X | X | X | X | X | | | | | |
| 5. | B-P36B | | | X | | 2225 | 1 | X | X | X | X | X | | | | | |
| 6. | B-P37A | | | X | | 2300 | 1 | X | X | X | X | X | | | | | |
| 7. | B-P37B | | | X | | 2315 | 1 | X | X | X | X | X | | | | | |
| 8. | B-38A | | | X | | 2345 | 1 | X | X | X | X | X | | | | | |
| 9. | B-P38B | | | X | | 2355 | 1 | X | X | X | X | X | | | | | |
| 10. | ~~WC38~~ WC38 | | X | | | 2355 | 1 | | | | | | X | X | X | X | |

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

| RELINQUISHED BY SAMPLER | DATE/TIME | RECEIVED BY |
|---|---|---|
| 1. | 1/19/23 | 1. 1333 1.19.23 |
| RELINQUISHED BY | DATE/TIME | RECEIVED BY |
| 2. | | 2. |
| RELINQUISHED BY | DATE/TIME 1855 | RECEIVED FOR LAB BY |
| 3. | 1-19-23 | 3. |

**Conditions of bottles or coolers at receipt:** ❑ Compliant ❑ Non Compliant ❑ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ❑ Ice in Cooler?:_____
**Comments:**



**SHIPPED VIA:** CLIENT: ❑ Hand Delivered ❑ Overnight
CHEMTECH: ❑ Picked Up ❑ Overnight

**Shipment Complete** ❑ YES ❑ NO

**WHITE** - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

# CHEMTECH
## CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 78-8922
www.chemtech.net

**Chemtech Project Number:** 01232/33

**COC Number:**

| CLIENT INFORMATION | PROJECT INFORMATION | BILLING INFORMATION |
|---|---|---|
| COMPANY: Louis Berger dba WSP USA Inc. | PROJECT NAME: HWR1140A PCSMP Ph II SCI | BILL TO: Louis Berger PO# 31202661.297 Task 02 |
| ADDRESS: 350 Mt. Kemble Ave | PROJECT #: 31202661.297 Task 02 LOCATION: Staten Island | ADDRESS: 350 Mt. Kemble Ave |
| CITY Morristown STATE: NJ ZIP: 07962 | PROJECT MANAGER: Jon Ganz | CITY: Morristown STATE: NJ ZIP: 07962 |
| ATTENTION: Jonathan Ganz (Jon.Ganz@wsp.com) | E-MAIL: Jon.Ganz@wsp.com | ATTENTION: Jon Ganz PHONE: 212-612-7995 |
| PHONE: 212-612-7995 FAX: | PHONE: 212-612-7995 FAX: | |

### DATA TURNAROUND INFORMATION

FAX:_____ DAYS
HARD COPY:_____DAYS*
EDD See Contract Rates below DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

TCL VOC - 2 days
TCL SVOC - 5 days
PAH - 5 days
TPH GRO/DRO - 3 days
TAL Metals - 5 Days
PCBs and Pesticides - 5 Day
TCLP RCRA Metals - 5 Day
RCRA Characteristics and Paint Filter - 3 Days

### DATA DELIVERABLE INFORMATION

- ❑ RESEULTS ONLY
- ❑ RESULTS + QC
- ❑ New Jersey REDUCED
- ❑ New Jersey CLP
- ❑ USEPA CLP
- ❑ New York State ASP "B"
- ❑ New York State ASP "A"
- ❑ Other_____

Level 2

❑ EDD Format_____

### ANALYSIS

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| TCL VOC (8260C) | TCL SVOC (8270C/625) | TCL Pest (8081A/608) | PCB (3550B, 8082/608) | TAL Metals (7471A and 6010B) | PCBs (8082), PAHs (8270) | TCLP Metals (RCRA 8) EPA 1311/ 6010B | RCRA Char- EPA 9012B/9034, 1030/1010A, 9045C, 9095B | TPH-DRO/GRO (8015B), Paint Filter Test (EPA 9095B) |

| 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. | B-P38C | SOIL | | X | 1/18/23 | 2350 | 1 | X | X | X | X | X | | | | | |
| 2. | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | |

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

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

| | RELINQUISHED BY SAMPLER | DATE/TIME | RECEIVED BY | DATE/TIME |
|---|---|---|---|---|
| 1. | | 1/19/23 | | 1333 1-19-23 |
| 2. | RELINQUISHED BY | DATE/TIME | RECEIVED BY | |
| 3. | RELINQUISHED BY | DATE/TIME 1800 1-19-23 | RECEIVED FOR LAB BY | |

**Conditions of bottles or coolers at receipt:** ❑ Compliant ❑ Non Compliant ❑ Cooler Temp 3.0
MeOH extraction requires an additional 4oz. Jar for percent solid ❑ Ice in Cooler?:_____
**Comments:**

Page 3 of 3

**SHIPPED VIA:** CLIENT: ❑ Hand Delivered ❑ Overnight
CHEMTECH: ❑ Picked Up ❑ Overnight

**Shipment Complete** ❑ YES ❑ NO

**WHITE** - CHEMTECH COPYFOR 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-0649 |
| | |
| DOD ELAP (L-A-B) | L2219 |
| | |
| Maine | 2022022 |
| | |
| Maryland | 296 |
| | |
| New Hampshire | 255422 |
| | |
| New Jersey | 20012 |
| | |
| New York | 11376 |
| | |
| Pennsylvania | 68-00548 |
| | |
| Soil Permit | P330-21-00137 |
| | |
| Texas | T104704488-22-15 |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** O1232 loui01
**Client Name :** Louis Berger U.S., Inc., A V
**Client Contact :** Jonathan Ganz
**Invoice Name :** Louis Berger U.S., Inc., A V
**Invoice Contact :** Jonathan Ganz

**Order Date :** 1/19/2023 1:44:00 PM
**Project Name :** NYCDDC Phase II SCI Artl
**Receive DateTime :** 1/19/2023 ~~12:00:00 AM~~ 18:05
**Purchase Order :**

**Project Mgr :**
**Report Type :** Level 1
**EDD Type :** Excel NY
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| O1232-01 | B-P-17A | Solid | 01/18/2023 | 09:50 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-02 | B-P-17B | Solid | 01/18/2023 | 10:05 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-04 | B-P-18A | Solid | 01/18/2023 | 10:25 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-05 | B-P-18B | Solid | 01/18/2023 | 10:45 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-06 | B-P-19A | Solid | 01/18/2023 | 11:25 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-07 | B-P-19B | Solid | 01/18/2023 | 11:35 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-08 | B-P-35A | Solid | 01/18/2023 | 12:25 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-09 | B-P-35B | Solid | 01/18/2023 | 12:45 | | | | | |
| | | | | | VOC-TCLVOA-10 | | 8260D | | 2 Bus. Days |
| O1232-10 | DUP01 | Solid | 01/18/2023 | 00:00 | | | | | |

CHEMTECH

# LOGIN REPORT/SAMPLE TRANSFER

**Order ID :** O1232 loui01
**Client Name :** Louis Berger U.S., Inc., A V
**Client Contact :** Jonathan Ganz
**Invoice Name :** Louis Berger U.S., Inc., A V
**Invoice Contact :** Jonathan Ganz

**Order Date :** 1/19/2023 1:44:00 PM
**Project Name :** NYCDDC Phase II SCI Artl
**Receive DateTime :** 1/19/2023 ~~12:00:00~~ AM
**Purchase Order :** 18:05

**Project Mgr :**
**Report Type :** Level 1
**EDD Type :** Excel NY
**Hard Copy Date :**
**Date Signoff :**

| LAB ID | CLIENT ID | MATRIX | SAMPLE DATE | SAMPLE TIME | TEST | TEST GROUP | METHOD | FAX DATE | DUE DATES |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | VOC-TCLVOA-10 | | 8260D | 2 Bus. Days | |

JAN samples

storedin VOA FRZ # 02

**Relinguished By :** CL
**Date / Time :** 1/20/23 9:20

**Received By :** [signature]
**Date / Time :** 1/20/23 9:20

**Storage Area :** VOA Refridgerator Room