

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122018\  
 Data File : VF061102.D  
 Acq On : 20 Dec 2018 12:23  
 Operator : VA/AP  
 Sample : VF1220SBS01  
 Misc : 5.00µg/5mL/MSVOA-F/SOIL  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VF1220SBS01

Manual Integrations  
 APPROVED

apatel  
 12/21/2018 12:22:58 PM

Quant Time: Dec 21 06:57:26 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Dec 20 00:56:59 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.86  | 168  | 235772   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.60  | 114  | 412189   | 50.00 | ug/l  | 0.01     |
| 63) Chlorobenzene-d5       | 9.78  | 117  | 358474   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.55 | 152  | 175469   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 4.84   | 65  | 149604   | 49.33 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.66%  |      |
| 35) Dibromofluoromethane  | 4.11   | 113 | 167265   | 50.66 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.32% |      |
| 50) Toluene-d8            | 7.56   | 98  | 474088   | 50.67 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.34% |      |
| 62) 4-Bromofluorobenzene  | 11.41  | 95  | 199192   | 46.18 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 92.36%  |      |

## Target Compounds

|                               |      |     |         |         |        | Qvalue |
|-------------------------------|------|-----|---------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 0.96 | 85  | 98436   | 18.782  | ug/l   | 96     |
| 3) Chloromethane              | 1.10 | 50  | 69743   | 23.231  | ug/l   | 97     |
| 4) Vinyl Chloride             | 1.13 | 62  | 62000   | 22.262  | ug/l   | 94     |
| 5) Bromomethane               | 1.32 | 94  | 39667   | 20.535  | ug/l   | 95     |
| 6) Chloroethane               | 1.39 | 64  | 26071   | 20.316  | ug/l   | 95     |
| 7) Trichlorofluoromethane     | 1.47 | 101 | 97692m  | 18.372  | ug/l   |        |
| 8) Diethyl Ether              | 1.63 | 74  | 16841   | 23.128  | ug/l   | 95     |
| 9) 1,1,2-Trichlorotrifluoroet | 1.84 | 101 | 55992   | 20.308  | ug/l   | 95     |
| 10) Methyl Iodide             | 1.91 | 142 | 89613m  | 20.619  | ug/l   |        |
| 11) Tert butyl alcohol        | 2.58 | 59  | 15267   | 124.760 | ug/l # | 92     |
| 12) 1,1-Dichloroethene        | 1.80 | 96  | 45138   | 21.718  | ug/l   | 94     |
| 13) Acrolein                  | 1.99 | 56  | 11450   | 129.489 | ug/l   | 86     |
| 14) Allyl chloride            | 2.09 | 41  | 54137   | 25.031  | ug/l   | 93     |
| 15) Acrylonitrile             | 2.94 | 53  | 36696   | 129.682 | ug/l   | 94     |
| 16) Acetone                   | 2.24 | 43  | 72072   | 118.888 | ug/l # | 92     |
| 17) Carbon Disulfide          | 1.84 | 76  | 140153m | 22.315  | ug/l   |        |
| 18) Methyl Acetate            | 2.35 | 43  | 32041m  | 25.547  | ug/l   |        |
| 19) Methyl tert-butyl Ether   | 2.43 | 73  | 100136  | 21.707  | ug/l   | 99     |
| 20) Methylene Chloride        | 2.25 | 84  | 52064m  | 24.594  | ug/l   |        |
| 21) trans-1,2-Dichloroethene  | 2.31 | 96  | 45797m  | 20.602  | ug/l   |        |
| 22) Diisopropyl ether         | 2.80 | 45  | 161474  | 22.413  | ug/l   | 91     |
| 23) Vinyl Acetate             | 3.19 | 43  | 381184  | 114.691 | ug/l   | 100    |
| 24) 1,1-Dichloroethane        | 2.87 | 63  | 89770   | 21.030  | ug/l   | 97     |
| 25) 2-Butanone                | 4.34 | 43  | 112750  | 114.680 | ug/l   | 97     |
| 26) 2,2-Dichloropropane       | 3.59 | 77  | 50653   | 20.678  | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene    | 3.47 | 96  | 68241   | 20.053  | ug/l   | 98     |
| 28) Bromochloromethane        | 3.72 | 49  | 45060   | 20.804  | ug/l   | 95     |
| 29) Tetrahydrofuran           | 4.07 | 42  | 51427   | 128.516 | ug/l   | 98     |
| 30) Chloroform                | 3.86 | 83  | 126536  | 19.770  | ug/l   | 99     |
| 31) Cyclohexane               | 3.69 | 56  | 103325m | 23.327  | ug/l   |        |
| 32) 1,1,1-Trichloroethane     | 4.09 | 97  | 72633   | 18.933  | ug/l   | 95     |
| 36) 1,1-Dichloropropene       | 4.28 | 75  | 98802   | 19.858  | ug/l   | 99     |
| 37) Ethyl Acetate             | 4.11 | 43  | 44792   | 20.943  | ug/l   | 87     |
| 38) Carbon Tetrachloride      | 3.99 | 117 | 71334   | 18.827  | ug/l   | 98     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122018\  
 Data File : VF061102.D  
 Acq On : 20 Dec 2018 12:23  
 Operator : VA/AP  
 Sample : VF1220SBS01  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VF1220SBS01

Manual Integrations  
 APPROVED

apatel  
 12/21/2018 12:22:58 PM

Quant Time: Dec 21 06:57:26 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Dec 20 00:56:59 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 5.46  | 83   | 97830    | 21.917  | ug/l   | 94       |
| 40) Benzene                    | 4.63  | 78   | 236509   | 22.104  | ug/l   | 97       |
| 41) Methacrylonitrile          | 4.75  | 41   | 23250    | 22.127  | ug/l   | 95       |
| 42) 1,2-Dichloroethane         | 4.94  | 62   | 75117    | 18.481  | ug/l   | 100      |
| 43) Isopropyl Acetate          | 6.96  | 43   | 54911    | 22.857  | ug/l   | 95       |
| 44) Trichloroethene            | 5.50  | 130  | 67854    | 20.115  | ug/l   | 99       |
| 45) 1,2-Dichloropropane        | 6.23  | 63   | 60389    | 20.745  | ug/l   | 100      |
| 46) Dibromomethane             | 6.09  | 93   | 36593    | 19.381  | ug/l   | 98       |
| 47) Bromodichloromethane       | 6.39  | 83   | 92689    | 18.894  | ug/l   | 99       |
| 48) Methyl methacrylate        | 6.72  | 41   | 33371    | 19.898  | ug/l   | 97       |
| 49) 1,4-Dioxane                | 6.71  | 88   | 6303     | 517.951 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 8.26  | 43   | 185377   | 112.513 | ug/l   | 97       |
| 52) Toluene                    | 7.63  | 92   | 145464   | 20.538  | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 8.28  | 75   | 77096    | 19.481  | ug/l   | 96       |
| 54) cis-1,3-Dichloropropene    | 7.30  | 75   | 102264   | 20.589  | ug/l   | 96       |
| 55) 1,1,2-Trichloroethane      | 8.49  | 97   | 43849    | 20.652  | ug/l   | 97       |
| 56) Ethyl methacrylate         | 8.62  | 69   | 47328    | 20.599  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 8.86  | 76   | 75497    | 19.660  | ug/l   | 97       |
| 58) 2-Chloroethyl Vinyl ether  | 7.30  | 63   | 47538    | 107.733 | ug/l # | 87       |
| 59) 2-Hexanone                 | 9.50  | 43   | 132671   | 111.347 | ug/l   | 93       |
| 60) Dibromochloromethane       | 8.72  | 129  | 59250    | 19.467  | ug/l   | 97       |
| 61) 1,2-Dibromoethane          | 8.99  | 107  | 44423    | 19.590  | ug/l   | 97       |
| 64) Tetrachloroethene          | 8.16  | 164  | 59372    | 21.530  | ug/l   | 97       |
| 65) Chlorobenzene              | 9.81  | 112  | 151695   | 20.484  | ug/l   | 94       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.93  | 131  | 61840    | 20.434  | ug/l   | 96       |
| 67) Ethyl Benzene              | 9.90  | 91   | 281017   | 20.829  | ug/l   | 100      |
| 68) m/p-Xylenes                | 10.13 | 106  | 205537   | 43.289  | ug/l   | 99       |
| 69) o-Xylene                   | 10.71 | 106  | 115626   | 21.958  | ug/l   | 91       |
| 70) Styrene                    | 10.79 | 104  | 155641   | 21.469  | ug/l   | 98       |
| 71) Bromoform                  | 10.77 | 173  | 28234    | 20.165  | ug/l # | 92       |
| 73) Isopropylbenzene           | 11.13 | 105  | 313632   | 20.741  | ug/l   | 97       |
| 74) N-amyl acetate             | 11.37 | 43   | 79479    | 23.675  | ug/l   | 98       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.70 | 83   | 57194    | 22.790  | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 11.80 | 75   | 41293    | 22.110  | ug/l   | 95       |
| 77) Bromobenzene               | 11.50 | 156  | 67467    | 20.727  | ug/l   | 81       |
| 78) n-propylbenzene            | 11.59 | 91   | 376828   | 19.123  | ug/l   | 97       |
| 79) 2-Chlorotoluene            | 11.72 | 91   | 220161   | 21.224  | ug/l   | 96       |
| 80) 1,3,5-Trimethylbenzene     | 11.83 | 105  | 264903   | 21.276  | ug/l   | 98       |
| 81) trans-1,4-Dichloro-2-buten | 11.87 | 75   | 16758m   | 20.881  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.90 | 91   | 213693   | 19.914  | ug/l   | 98       |
| 83) tert-Butylbenzene          | 12.13 | 119  | 263566   | 20.571  | ug/l   | 96       |
| 84) 1,2,4-Trimethylbenzene     | 12.20 | 105  | 258164   | 20.792  | ug/l   | 97       |
| 85) sec-Butylbenzene           | 12.31 | 105  | 362364   | 21.672  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 12.46 | 119  | 307741   | 22.174  | ug/l   | 97       |
| 87) 1,3-Dichlorobenzene        | 12.48 | 146  | 129286   | 21.244  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 12.57 | 146  | 122835   | 20.551  | ug/l   | 98       |
| 89) n-Butylbenzene             | 12.84 | 91   | 310517   | 19.488  | ug/l   | 95       |
| 90) Hexachloroethane           | 12.92 | 117  | 69738    | 20.338  | ug/l   | 76       |
| 91) 1,2-Dichlorobenzene        | 12.94 | 146  | 120999   | 20.793  | ug/l   | 97       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.64 | 75   | 8859     | 19.237  | ug/l   | 95       |

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF122018\  
Data File : VF061102.D  
Acq On : 20 Dec 2018 12:23  
Operator : VA/AP  
Sample : VF1220SBS01  
Misc : 5.00g/5mL/MSVOA-F/SOIL  
ALS Vial : 4 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :  
VF1220SBS01

Manual Integrations  
APPROVED

apatel  
12/21/2018 12:22:58 PM

Quant Time: Dec 21 06:57:26 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
Quant Title : SW846 8260  
QLast Update : Thu Dec 20 00:56:59 2018  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.20 | 180  | 87062    | 21.096 | ug/l  | 99       |
| 94) Hexachlorobutadiene    | 14.20 | 225  | 54981    | 20.917 | ug/l  | 95       |
| 95) Naphthalene            | 14.46 | 128  | 159353   | 21.146 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 14.60 | 180  | 82907    | 21.731 | ug/l  | 97       |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

