

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122618\  
 Data File : VF061200.D  
 Acq On : 26 Dec 2018 20:54  
 Operator : VA/AP  
 Sample : VSTDCCC050  
 Misc : 5.00µ/5mL/MSVOA-F/SOIL  
 ALS Vial : 22 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VSTDCCC050EC

Manual Integrations  
 APPROVED

apatel  
 12/27/2018 4:19:16 PM

Quant Time: Dec 27 08:23:55 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      | 4.85  | 168  | 164742   | 50.00 | ug/l  | -0.02    |
| 34) 1,4-Difluorobenzene    | 5.58  | 114  | 268983   | 50.00 | ug/l  | -0.01    |
| 63) Chlorobenzene-d5       | 9.76  | 117  | 262492   | 50.00 | ug/l  | -0.01    |
| 72) 1,4-Dichlorobenzene-d4 | 12.54 | 152  | 134269   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |       |
|---------------------------|--------|-----|----------|-------|---------|-------|
| 33) 1,2-Dichloroethane-d4 | 4.83   | 65  | 106403   | 50.22 | ug/l    | -0.01 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 100.44% |       |
| 35) Dibromofluoromethane  | 4.10   | 113 | 110696   | 51.37 | ug/l    | -0.01 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 102.74% |       |
| 50) Toluene-d8            | 7.54   | 98  | 320405   | 52.47 | ug/l    | -0.01 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 104.94% |       |
| 62) 4-Bromofluorobenzene  | 11.40  | 95  | 144082   | 51.18 | ug/l    | -0.01 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 102.36% |       |

## Target Compounds

|                               |      |     |         |         |        | Qvalue |
|-------------------------------|------|-----|---------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 0.96 | 85  | 180093  | 49.177  | ug/l   | 96     |
| 3) Chloromethane              | 1.10 | 50  | 108843  | 51.886  | ug/l   | 98     |
| 4) Vinyl Chloride             | 1.13 | 62  | 98450   | 50.592  | ug/l # | 85     |
| 5) Bromomethane               | 1.34 | 94  | 71335   | 52.851  | ug/l   | 97     |
| 6) Chloroethane               | 1.39 | 64  | 46131   | 51.448  | ug/l   | 96     |
| 7) Trichlorofluoromethane     | 1.48 | 101 | 198955  | 53.546  | ug/l   | 96     |
| 8) Diethyl Ether              | 1.62 | 74  | 23278   | 45.750  | ug/l   | 96     |
| 9) 1,1,2-Trichlorotrifluoroet | 1.83 | 101 | 99940   | 51.877  | ug/l   | 95     |
| 10) Methyl Iodide             | 1.89 | 142 | 148170m | 48.792  | ug/l   |        |
| 11) Tert butyl alcohol        | 2.56 | 59  | 20425   | 238.875 | ug/l # | 93     |
| 12) 1,1-Dichloroethene        | 1.78 | 96  | 71586   | 49.295  | ug/l   | 92     |
| 13) Acrolein                  | 1.99 | 56  | 13165   | 213.076 | ug/l   | 89     |
| 14) Allyl chloride            | 2.09 | 41  | 90870   | 60.129  | ug/l   | 98     |
| 15) Acrylonitrile             | 2.93 | 53  | 53543   | 270.801 | ug/l   | 96     |
| 16) Acetone                   | 2.23 | 43  | 94390   | 222.836 | ug/l   | 97     |
| 17) Carbon Disulfide          | 1.83 | 76  | 206165  | 46.978  | ug/l   | 96     |
| 18) Methyl Acetate            | 2.33 | 43  | 48162   | 54.957  | ug/l # | 93     |
| 19) Methyl tert-butyl Ether   | 2.42 | 73  | 160191  | 49.697  | ug/l   | 100    |
| 20) Methylene Chloride        | 2.24 | 84  | 94249m  | 71.567  | ug/l   |        |
| 21) trans-1,2-Dichloroethene  | 2.29 | 96  | 76637   | 49.341  | ug/l   | 97     |
| 22) Diisopropyl ether         | 2.79 | 45  | 256574  | 50.968  | ug/l   | 97     |
| 23) Vinyl Acetate             | 3.17 | 43  | 636353  | 274.018 | ug/l   | 99     |
| 24) 1,1-Dichloroethane        | 2.86 | 63  | 150285  | 50.387  | ug/l   | 99     |
| 25) 2-Butanone                | 4.32 | 43  | 178674  | 260.089 | ug/l   | 95     |
| 26) 2,2-Dichloropropane       | 3.59 | 77  | 92238   | 53.888  | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene    | 3.46 | 96  | 117841  | 49.558  | ug/l   | 97     |
| 28) Bromochloromethane        | 3.70 | 49  | 78219   | 51.685  | ug/l   | 93     |
| 29) Tetrahydrofuran           | 4.05 | 42  | 75850   | 271.275 | ug/l   | 98     |
| 30) Chloroform                | 3.84 | 83  | 236672  | 52.920  | ug/l   | 98     |
| 31) Cyclohexane               | 3.68 | 56  | 159757m | 51.618  | ug/l   |        |
| 32) 1,1,1-Trichloroethane     | 4.08 | 97  | 148199  | 55.286  | ug/l   | 93     |
| 36) 1,1-Dichloropropene       | 4.26 | 75  | 166974  | 51.427  | ug/l   | 94     |
| 37) Ethyl Acetate             | 4.10 | 43  | 72161   | 59.014  | ug/l # | 95     |
| 38) Carbon Tetrachloride      | 3.97 | 117 | 143730  | 58.130  | ug/l   | 96     |

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apatel  
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 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          | 5.43  | 83   | 178093   | 61.141  | ug/l   | 98       |
| 40) Benzene                    | 4.61  | 78   | 368453   | 52.770  | ug/l   | 97       |
| 41) Methacrylonitrile          | 4.73  | 41   | 36723    | 53.556  | ug/l   | 94       |
| 42) 1,2-Dichloroethane         | 4.93  | 62   | 144214   | 54.370  | ug/l   | 98       |
| 43) Isopropyl Acetate          | 6.94  | 43   | 87351    | 55.718  | ug/l # | 92       |
| 44) Trichloroethene            | 5.49  | 130  | 116741   | 53.032  | ug/l   | 93       |
| 45) 1,2-Dichloropropane        | 6.22  | 63   | 98287    | 51.740  | ug/l   | 97       |
| 46) Dibromomethane             | 6.07  | 93   | 71555    | 58.076  | ug/l   | 91       |
| 47) Bromodichloromethane       | 6.37  | 83   | 176600   | 55.165  | ug/l   | 100      |
| 48) Methyl methacrylate        | 6.70  | 41   | 60807    | 55.560  | ug/l   | 93       |
| 49) 1,4-Dioxane                | 6.68  | 88   | 7092     | 893.062 | ug/l   | 97       |
| 51) 4-Methyl-2-Pentanone       | 8.24  | 43   | 297925   | 277.093 | ug/l   | 96       |
| 52) Toluene                    | 7.61  | 92   | 250924   | 54.290  | ug/l   | 98       |
| 53) t-1,3-Dichloropropene      | 8.26  | 75   | 138824   | 53.756  | ug/l   | 100      |
| 54) cis-1,3-Dichloropropene    | 7.29  | 75   | 186244   | 57.461  | ug/l   | 97       |
| 55) 1,1,2-Trichloroethane      | 8.48  | 97   | 79301    | 57.233  | ug/l   | 93       |
| 56) Ethyl methacrylate         | 8.61  | 69   | 89706    | 59.832  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 8.83  | 76   | 141171   | 56.333  | ug/l   | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 7.28  | 63   | 72938    | 253.299 | ug/l   | 100      |
| 59) 2-Hexanone                 | 9.48  | 43   | 216155   | 277.997 | ug/l   | 99       |
| 60) Dibromochloromethane       | 8.70  | 129  | 116602   | 58.707  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 8.97  | 107  | 83763    | 56.605  | ug/l   | 97       |
| 64) Tetrachloroethene          | 8.13  | 164  | 103244   | 51.130  | ug/l   | 95       |
| 65) Chlorobenzene              | 9.78  | 112  | 279808   | 51.599  | ug/l   | 96       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.91  | 131  | 114316   | 51.586  | ug/l   | 96       |
| 67) Ethyl Benzene              | 9.89  | 91   | 521294   | 52.767  | ug/l   | 100      |
| 68) m/p-Xylenes                | 10.12 | 106  | 359565   | 103.421 | ug/l   | 99       |
| 69) o-Xylene                   | 10.70 | 106  | 199038   | 51.619  | ug/l   | 98       |
| 70) Styrene                    | 10.78 | 104  | 270190   | 58.316  | ug/l   | 97       |
| 71) Bromoform                  | 10.76 | 173  | 57574    | 56.156  | ug/l # | 97       |
| 73) Isopropylbenzene           | 11.11 | 105  | 564704   | 48.805  | ug/l   | 99       |
| 74) N-amyl acetate             | 11.36 | 43   | 139456   | 54.287  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.68 | 83   | 102365   | 53.305  | ug/l   | 97       |
| 76) 1,2,3-Trichloropropane     | 11.78 | 75   | 77319    | 54.103  | ug/l   | 96       |
| 77) Bromobenzene               | 11.49 | 156  | 128584   | 51.624  | ug/l   | 83       |
| 78) n-propylbenzene            | 11.59 | 91   | 690012   | 52.294  | ug/l   | 97       |
| 79) 2-Chlorotoluene            | 11.70 | 91   | 391251   | 49.292  | ug/l   | 95       |
| 80) 1,3,5-Trimethylbenzene     | 11.81 | 105  | 479815   | 50.361  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 11.86 | 75   | 30831m   | 50.205  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.89 | 91   | 418965   | 51.024  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.12 | 119  | 497221   | 50.715  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 12.20 | 105  | 480434   | 50.567  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 12.30 | 105  | 663885   | 51.889  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 12.44 | 119  | 552519   | 52.026  | ug/l   | 97       |
| 87) 1,3-Dichlorobenzene        | 12.46 | 146  | 234784   | 58.695  | ug/l   | 98       |
| 88) 1,4-Dichlorobenzene        | 12.55 | 146  | 234284   | 51.225  | ug/l   | 96       |
| 89) n-Butylbenzene             | 12.83 | 91   | 560219   | 52.966  | ug/l   | 95       |
| 90) Hexachloroethane           | 12.91 | 117  | 138363   | 52.733  | ug/l   | 87       |
| 91) 1,2-Dichlorobenzene        | 12.93 | 146  | 224899   | 50.507  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.63 | 75   | 19493    | 55.316  | ug/l   | 91       |

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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 | 14.19 | 180  | 163354   | 51.728 | ug/l  | 96       |
| 94) Hexachlorobutadiene    | 14.18 | 225  | 103848   | 51.632 | ug/l  | 99       |
| 95) Naphthalene            | 14.45 | 128  | 311779   | 54.067 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 14.59 | 180  | 157507   | 53.952 | ug/l  | 98       |

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

