

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122718\  
 Data File : VF061202.D  
 Acq On : 27 Dec 2018 12:05  
 Operator : VA/AP  
 Sample : VSTDCCC050  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VSTDCCC050

Manual Integrations  
 APPROVED

MMDadoda  
 12/28/2018 9:38:11 AM

Quant Time: Dec 27 23:53:36 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         | 4.84  | 168  | 195047   | 50.00   | ug/l   | -0.03    |
| 34) 1,4-Difluorobenzene       | 5.57  | 114  | 341062   | 50.00   | ug/l   | -0.02    |
| 63) Chlorobenzene-d5          | 9.75  | 117  | 312653   | 50.00   | ug/l   | -0.02    |
| 72) 1,4-Dichlorobenzene-d4    | 12.53 | 152  | 146544   | 50.00   | ug/l   | -0.01    |
| System Monitoring Compounds   |       |      |          |         |        |          |
| 33) 1,2-Dichloroethane-d4     | 4.82  | 65   | 118081   | 47.07   | ug/l   | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 94.14% |          |
| 35) Dibromofluoromethane      | 4.09  | 113  | 132674   | 48.56   | ug/l   | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 97.12% |          |
| 50) Toluene-d8                | 7.53  | 98   | 372052   | 48.05   | ug/l   | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 96.10% |          |
| 62) 4-Bromofluorobenzene      | 11.39 | 95   | 162265   | 45.46   | ug/l   | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 90.92% |          |
| Target Compounds              |       |      |          |         |        |          |
|                               |       |      |          |         | Qvalue |          |
| 2) Dichlorodifluoromethane    | 0.95  | 85   | 200240   | 46.183  | ug/l   | 99       |
| 3) Chloromethane              | 1.09  | 50   | 132941   | 53.528  | ug/l   | 96       |
| 4) Vinyl Chloride             | 1.13  | 62   | 111825   | 48.537  | ug/l   | 97       |
| 5) Bromomethane               | 1.32  | 94   | 74051    | 46.339  | ug/l   | 92       |
| 6) Chloroethane               | 1.39  | 64   | 48595    | 45.775  | ug/l # | 81       |
| 7) Trichlorofluoromethane     | 1.47  | 101  | 227763m  | 51.775  | ug/l   |          |
| 8) Diethyl Ether              | 1.61  | 74   | 31984    | 53.094  | ug/l   | 99       |
| 9) 1,1,2-Trichlorotrifluoroet | 1.83  | 101  | 110670   | 48.521  | ug/l   | 92       |
| 10) Methyl Iodide             | 1.89  | 142  | 170107m  | 47.313  | ug/l   |          |
| 11) Tert butyl alcohol        | 2.56  | 59   | 22965    | 226.851 | ug/l   | 96       |
| 12) 1,1-Dichloroethene        | 1.78  | 96   | 91795    | 53.390  | ug/l   | 91       |
| 13) Acrolein                  | 1.99  | 56   | 18067m   | 246.982 | ug/l   |          |
| 14) Allyl chloride            | 2.08  | 41   | 112958   | 63.132  | ug/l   | 92       |
| 15) Acrylonitrile             | 2.93  | 53   | 60866    | 260.009 | ug/l   | 94       |
| 16) Acetone                   | 2.22  | 43   | 132331   | 263.868 | ug/l   | 96       |
| 17) Carbon Disulfide          | 1.82  | 76   | 257858m  | 49.627  | ug/l   |          |
| 18) Methyl Acetate            | 2.32  | 43   | 50720    | 48.883  | ug/l   | 99       |
| 19) Methyl tert-butyl Ether   | 2.41  | 73   | 183367   | 48.048  | ug/l   | 98       |
| 20) Methylene Chloride        | 2.17  | 84   | 87362m   | 54.959  | ug/l   |          |
| 21) trans-1,2-Dichloroethene  | 2.30  | 96   | 91817    | 49.930  | ug/l   | 90       |
| 22) Diisopropyl ether         | 2.78  | 45   | 307014   | 51.512  | ug/l   | 97       |
| 23) Vinyl Acetate             | 3.16  | 43   | 696810   | 253.432 | ug/l   | 99       |
| 24) 1,1-Dichloroethane        | 2.85  | 63   | 186831   | 52.907  | ug/l   | 98       |
| 25) 2-Butanone                | 4.31  | 43   | 194137   | 238.690 | ug/l   | 96       |
| 26) 2,2-Dichloropropane       | 3.57  | 77   | 109661   | 54.113  | ug/l   | 97       |
| 27) cis-1,2-Dichloroethene    | 3.45  | 96   | 136128   | 48.354  | ug/l   | 97       |
| 28) Bromochloromethane        | 3.70  | 49   | 86751    | 48.416  | ug/l   | 93       |
| 29) Tetrahydrofuran           | 4.04  | 42   | 81825    | 247.176 | ug/l   | 98       |
| 30) Chloroform                | 3.83  | 83   | 258240   | 48.771  | ug/l   | 93       |
| 31) Cyclohexane               | 3.66  | 56   | 182598m  | 49.832  | ug/l   |          |
| 32) 1,1,1-Trichloroethane     | 4.07  | 97   | 154496   | 48.681  | ug/l   | 95       |
| 36) 1,1-Dichloropropene       | 4.25  | 75   | 199939   | 48.566  | ug/l   | 99       |
| 37) Ethyl Acetate             | 4.08  | 43   | 73013    | 44.774  | ug/l # | 70       |
| 38) Carbon Tetrachloride      | 3.96  | 117  | 156511   | 49.921  | ug/l   | 93       |

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Quant Time: Dec 27 23:53:36 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          | 5.42  | 83   | 185588   | 50.249  | ug/l   | 97       |
| 40) Benzene                    | 4.60  | 78   | 427842   | 48.326  | ug/l   | 95       |
| 41) Methacrylonitrile          | 4.72  | 41   | 40426    | 46.497  | ug/l # | 93       |
| 42) 1,2-Dichloroethane         | 4.92  | 62   | 156629   | 46.571  | ug/l   | 97       |
| 43) Isopropyl Acetate          | 6.93  | 43   | 87533    | 44.035  | ug/l # | 95       |
| 44) Trichloroethene            | 5.48  | 130  | 131242   | 47.020  | ug/l   | 100      |
| 45) 1,2-Dichloropropane        | 6.21  | 63   | 114894   | 47.700  | ug/l   | 96       |
| 46) Dibromomethane             | 6.06  | 93   | 74246    | 47.525  | ug/l   | 94       |
| 47) Bromodichloromethane       | 6.36  | 83   | 197613   | 48.684  | ug/l   | 94       |
| 48) Methyl methacrylate        | 6.69  | 41   | 59663    | 42.994  | ug/l   | 97       |
| 49) 1,4-Dioxane                | 6.68  | 88   | 9463     | 939.795 | ug/l # | 85       |
| 51) 4-Methyl-2-Pentanone       | 8.23  | 43   | 307159   | 225.307 | ug/l   | 99       |
| 52) Toluene                    | 7.60  | 92   | 264075   | 45.061  | ug/l   | 98       |
| 53) t-1,3-Dichloropropene      | 8.25  | 75   | 147392   | 45.012  | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 7.28  | 75   | 190851   | 46.438  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 8.47  | 97   | 81362    | 46.311  | ug/l   | 93       |
| 56) Ethyl methacrylate         | 8.60  | 69   | 89073    | 46.854  | ug/l   | 92       |
| 57) 1,3-Dichloropropane        | 8.83  | 76   | 150543   | 47.378  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 7.27  | 63   | 51267    | 140.414 | ug/l   | 98       |
| 59) 2-Hexanone                 | 9.47  | 43   | 232099   | 235.418 | ug/l   | 99       |
| 60) Dibromochloromethane       | 8.69  | 129  | 116554   | 46.281  | ug/l   | 98       |
| 61) 1,2-Dibromoethane          | 8.96  | 107  | 84229    | 44.890  | ug/l   | 91       |
| 64) Tetrachloroethene          | 8.13  | 164  | 112629   | 46.829  | ug/l   | 97       |
| 65) Chlorobenzene              | 9.77  | 112  | 314178   | 48.642  | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.91  | 131  | 127930   | 48.467  | ug/l   | 93       |
| 67) Ethyl Benzene              | 9.88  | 91   | 552854   | 46.983  | ug/l   | 99       |
| 68) m/p-Xylenes                | 10.11 | 106  | 394480   | 95.260  | ug/l   | 99       |
| 69) o-Xylene                   | 10.69 | 106  | 227073   | 49.441  | ug/l   | 93       |
| 70) Styrene                    | 10.77 | 104  | 296071   | 53.217  | ug/l   | 99       |
| 71) Bromoform                  | 10.75 | 173  | 58927    | 48.255  | ug/l # | 95       |
| 73) Isopropylbenzene           | 11.10 | 105  | 657763   | 52.086  | ug/l   | 99       |
| 74) N-amyl acetate             | 11.35 | 43   | 142289   | 50.750  | ug/l   | 97       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.68 | 83   | 103574   | 49.417  | ug/l   | 96       |
| 76) 1,2,3-Trichloropropane     | 11.77 | 75   | 74779    | 47.942  | ug/l   | 96       |
| 77) Bromobenzene               | 11.48 | 156  | 129493   | 47.634  | ug/l   | 89       |
| 78) n-propylbenzene            | 11.58 | 91   | 720901   | 49.473  | ug/l   | 97       |
| 79) 2-Chlorotoluene            | 11.71 | 91   | 422245   | 48.740  | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 11.80 | 105  | 516182   | 49.640  | ug/l   | 98       |
| 81) trans-1,4-Dichloro-2-buten | 11.85 | 75   | 36127m   | 53.901  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.88 | 91   | 431168   | 48.112  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 12.11 | 119  | 523331   | 48.907  | ug/l   | 97       |
| 84) 1,2,4-Trimethylbenzene     | 12.19 | 105  | 508726   | 49.059  | ug/l   | 98       |
| 85) sec-Butylbenzene           | 12.29 | 105  | 704724   | 50.467  | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 12.45 | 119  | 570428   | 49.213  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 12.46 | 146  | 241491   | 54.968  | ug/l   | 97       |
| 88) 1,4-Dichlorobenzene        | 12.54 | 146  | 241244   | 48.328  | ug/l   | 95       |
| 89) n-Butylbenzene             | 12.83 | 91   | 608539   | 52.630  | ug/l   | 99       |
| 90) Hexachloroethane           | 12.90 | 117  | 148674   | 51.917  | ug/l   | 94       |
| 91) 1,2-Dichlorobenzene        | 12.93 | 146  | 237600   | 48.890  | ug/l   | 96       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.63 | 75   | 19836    | 51.575  | ug/l   | 83       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.18 | 180  | 167485   | 48.594 | ug/l  | 97       |
| 94) Hexachlorobutadiene    | 14.17 | 225  | 114524   | 52.170 | ug/l  | 96       |
| 95) Naphthalene            | 14.44 | 128  | 312910   | 49.718 | ug/l  | 98       |
| 96) 1,2,3-Trichlorobenzene | 14.59 | 180  | 161799   | 50.780 | ug/l  | 97       |

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

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