

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF122718\  
 Data File : VF061204.D  
 Acq On : 27 Dec 2018 13:18  
 Operator : VA/AP  
 Sample : VF1227SBS01  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VF1227SBS01

Manual Integrations  
 APPROVED

MMDadoda  
 12/28/2018 9:38:18 AM

Quant Time: Dec 28 04:12:28 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  | 183922   | 50.00   | ug/l    | -0.02    |
| 34) 1,4-Difluorobenzene       | 5.57  | 114  | 326719   | 50.00   | ug/l    | -0.02    |
| 63) Chlorobenzene-d5          | 9.75  | 117  | 305020   | 50.00   | ug/l    | -0.02    |
| 72) 1,4-Dichlorobenzene-d4    | 12.53 | 152  | 146052   | 50.00   | ug/l    | -0.01    |
| System Monitoring Compounds   |       |      |          |         |         |          |
| 33) 1,2-Dichloroethane-d4     | 4.82  | 65   | 133252   | 56.33   | ug/l    | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 112.66% |          |
| 35) Dibromofluoromethane      | 4.08  | 113  | 142388   | 54.40   | ug/l    | -0.03    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 108.80% |          |
| 50) Toluene-d8                | 7.53  | 98   | 376779   | 50.80   | ug/l    | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 101.60% |          |
| 62) 4-Bromofluorobenzene      | 11.39 | 95   | 177966   | 52.05   | ug/l    | -0.02    |
| Spiked Amount 50.000          |       |      | Recovery | =       | 104.10% |          |
| Target Compounds              |       |      |          |         |         |          |
|                               |       |      |          |         | Qvalue  |          |
| 2) Dichlorodifluoromethane    | 0.96  | 85   | 81928    | 20.039  | ug/l    | 99       |
| 3) Chloromethane              | 1.09  | 50   | 52462    | 22.401  | ug/l    | 97       |
| 4) Vinyl Chloride             | 1.14  | 62   | 48132    | 22.155  | ug/l #  | 86       |
| 5) Bromomethane               | 1.31  | 94   | 29399    | 19.510  | ug/l    | 87       |
| 6) Chloroethane               | 1.39  | 64   | 21077    | 21.055  | ug/l    | 94       |
| 7) Trichlorofluoromethane     | 1.48  | 101  | 91002m   | 21.938  | ug/l    |          |
| 8) Diethyl Ether              | 1.62  | 74   | 11714    | 20.622  | ug/l    | 92       |
| 9) 1,1,2-Trichlorotrifluoroet | 1.83  | 101  | 51166    | 23.789  | ug/l    | 94       |
| 10) Methyl Iodide             | 1.91  | 142  | 74070m   | 21.848  | ug/l    |          |
| 11) Tert butyl alcohol        | 2.55  | 59   | 9407     | 98.544  | ug/l #  | 88       |
| 12) 1,1-Dichloroethene        | 1.79  | 96   | 35206    | 21.715  | ug/l    | 90       |
| 13) Acrolein                  | 1.99  | 56   | 6011     | 87.143  | ug/l    | 95       |
| 14) Allyl chloride            | 2.08  | 41   | 51134    | 30.307  | ug/l    | 90       |
| 15) Acrylonitrile             | 2.93  | 53   | 26253    | 118.932 | ug/l    | 96       |
| 16) Acetone                   | 2.23  | 43   | 51156    | 108.175 | ug/l    | 96       |
| 17) Carbon Disulfide          | 1.82  | 76   | 106101m  | 21.655  | ug/l    |          |
| 18) Methyl Acetate            | 2.32  | 43   | 23919m   | 24.447  | ug/l    |          |
| 19) Methyl tert-butyl Ether   | 2.41  | 73   | 75694    | 21.034  | ug/l    | 94       |
| 20) Methylene Chloride        | 2.17  | 84   | 36370m   | 21.508  | ug/l    |          |
| 21) trans-1,2-Dichloroethene  | 2.29  | 96   | 36713    | 21.172  | ug/l    | 93       |
| 22) Diisopropyl ether         | 2.78  | 45   | 121647   | 21.645  | ug/l    | 96       |
| 23) Vinyl Acetate             | 3.16  | 43   | 279077   | 107.641 | ug/l    | 97       |
| 24) 1,1-Dichloroethane        | 2.86  | 63   | 72435    | 21.753  | ug/l    | 97       |
| 25) 2-Butanone                | 4.31  | 43   | 81154    | 105.813 | ug/l    | 95       |
| 26) 2,2-Dichloropropane       | 3.57  | 77   | 46553    | 24.361  | ug/l    | 96       |
| 27) cis-1,2-Dichloroethene    | 3.46  | 96   | 57382    | 21.615  | ug/l    | 93       |
| 28) Bromochloromethane        | 3.70  | 49   | 37776    | 22.358  | ug/l    | 97       |
| 29) Tetrahydrofuran           | 4.05  | 42   | 33676    | 107.881 | ug/l    | 94       |
| 30) Chloroform                | 3.83  | 83   | 103830   | 20.796  | ug/l    | 93       |
| 31) Cyclohexane               | 3.68  | 56   | 78995m   | 22.862  | ug/l    |          |
| 32) 1,1,1-Trichloroethane     | 4.07  | 97   | 65755    | 21.972  | ug/l    | 94       |
| 36) 1,1-Dichloropropene       | 4.26  | 75   | 80272    | 20.354  | ug/l    | 96       |
| 37) Ethyl Acetate             | 4.09  | 43   | 29458    | 17.144  | ug/l #  | 93       |
| 38) Carbon Tetrachloride      | 3.96  | 117  | 64249    | 21.393  | ug/l    | 94       |

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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   | 78110    | 22.077  | ug/l   | 97       |
| 40) Benzene                    | 4.60  | 78   | 181232   | 21.369  | ug/l   | 96       |
| 41) Methacrylonitrile          | 4.71  | 41   | 16008    | 19.220  | ug/l   | 97       |
| 42) 1,2-Dichloroethane         | 4.92  | 62   | 62647    | 19.445  | ug/l   | 99       |
| 43) Isopropyl Acetate          | 6.94  | 43   | 34148    | 17.933  | ug/l   | 98       |
| 44) Trichloroethene            | 5.48  | 130  | 56458    | 21.115  | ug/l   | 97       |
| 45) 1,2-Dichloropropane        | 6.21  | 63   | 46417    | 20.117  | ug/l   | 98       |
| 46) Dibromomethane             | 6.06  | 93   | 29748    | 19.878  | ug/l   | 93       |
| 47) Bromodichloromethane       | 6.36  | 83   | 77659    | 19.972  | ug/l   | 98       |
| 48) Methyl methacrylate        | 6.69  | 41   | 22681    | 17.062  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 6.68  | 88   | 3091     | 320.452 | ug/l # | 21       |
| 51) 4-Methyl-2-Pentanone       | 8.23  | 43   | 132990   | 101.833 | ug/l   | 97       |
| 52) Toluene                    | 7.60  | 92   | 113465   | 20.211  | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 8.25  | 75   | 58810    | 18.748  | ug/l   | 96       |
| 54) cis-1,3-Dichloropropene    | 7.28  | 75   | 80124    | 20.352  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 8.47  | 97   | 31558    | 18.751  | ug/l   | 97       |
| 56) Ethyl methacrylate         | 8.60  | 69   | 34933    | 19.182  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 8.82  | 76   | 58475    | 19.211  | ug/l   | 98       |
| 58) 2-Chloroethyl Vinyl ether  | 7.27  | 63   | 21341    | 61.016  | ug/l   | 93       |
| 59) 2-Hexanone                 | 9.47  | 43   | 94012    | 99.542  | ug/l   | 95       |
| 60) Dibromochloromethane       | 8.70  | 129  | 48202    | 19.980  | ug/l   | 98       |
| 61) 1,2-Dibromoethane          | 8.96  | 107  | 36490    | 20.301  | ug/l   | 98       |
| 64) Tetrachloroethene          | 8.12  | 164  | 44888    | 19.131  | ug/l   | 97       |
| 65) Chlorobenzene              | 9.77  | 112  | 127798   | 20.281  | ug/l   | 95       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.91  | 131  | 52022    | 20.202  | ug/l   | 96       |
| 67) Ethyl Benzene              | 9.88  | 91   | 239016   | 20.821  | ug/l   | 98       |
| 68) m/p-Xylenes                | 10.11 | 106  | 162163   | 40.139  | ug/l   | 92       |
| 69) o-Xylene                   | 10.69 | 106  | 90050    | 20.098  | ug/l   | 99       |
| 70) Styrene                    | 10.77 | 104  | 125003   | 19.961  | ug/l   | 99       |
| 71) Bromoform                  | 10.75 | 173  | 22582    | 18.955  | ug/l   | 94       |
| 73) Isopropylbenzene           | 11.10 | 105  | 279493   | 22.207  | ug/l   | 98       |
| 74) N-amyl acetate             | 11.36 | 43   | 58393    | 20.897  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.68 | 83   | 45542    | 21.802  | ug/l   | 94       |
| 76) 1,2,3-Trichloropropane     | 11.77 | 75   | 31783    | 20.445  | ug/l   | 96       |
| 77) Bromobenzene               | 11.48 | 156  | 55245    | 20.390  | ug/l   | 84       |
| 78) n-propylbenzene            | 11.58 | 91   | 333804   | 20.461  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 11.71 | 91   | 190635   | 22.079  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 11.80 | 105  | 218347   | 21.068  | ug/l   | 94       |
| 81) trans-1,4-Dichloro-2-buten | 11.85 | 75   | 14419m   | 21.585  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.88 | 91   | 192760   | 21.582  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 12.11 | 119  | 231490   | 21.707  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 12.19 | 105  | 217841   | 21.078  | ug/l   | 98       |
| 85) sec-Butylbenzene           | 12.29 | 105  | 312267   | 22.437  | ug/l   | 97       |
| 86) p-Isopropyltoluene         | 12.45 | 119  | 267798   | 23.182  | ug/l   | 98       |
| 87) 1,3-Dichlorobenzene        | 12.45 | 146  | 111625   | 22.261  | ug/l   | 97       |
| 88) 1,4-Dichlorobenzene        | 12.54 | 146  | 100892   | 20.280  | ug/l   | 95       |
| 89) n-Butylbenzene             | 12.83 | 91   | 275498   | 20.873  | ug/l   | 95       |
| 90) Hexachloroethane           | 12.90 | 117  | 60887    | 21.333  | ug/l   | 100      |
| 91) 1,2-Dichlorobenzene        | 12.93 | 146  | 107437   | 22.181  | ug/l   | 96       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.63 | 75   | 7315     | 19.083  | ug/l   | 98       |

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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 | 14.18 | 180  | 74376    | 21.652 | ug/l  | 95       |
| 94) Hexachlorobutadiene    | 14.17 | 225  | 47039    | 21.500 | ug/l  | 96       |
| 95) Naphthalene            | 14.44 | 128  | 126421   | 20.155 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 14.59 | 180  | 67780    | 21.344 | ug/l  | 94       |

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

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