

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF022619\  
 Data File : VF061745.D  
 Acq On : 26 Feb 2019 16:34  
 Operator : VA/AP  
 Sample : K1560-03MDL2.5PPB  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 MDL-MDL-SOIL-03-QT1-2019

Manual Integrations  
 APPROVED

MMDadoda  
 2/27/2019 3:19:33 PM

Quant Time: Feb 27 05:18:05 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F021319S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Feb 14 03:27:56 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.85  | 168  | 307835   | 50.00 | ug/l  | -0.04    |
| 34) 1,4-Difluorobenzene    | 5.58  | 114  | 460112   | 50.00 | ug/l  | -0.03    |
| 63) Chlorobenzene-d5       | 9.76  | 117  | 404931   | 50.00 | ug/l  | -0.03    |
| 72) 1,4-Dichlorobenzene-d4 | 12.54 | 152  | 247687   | 50.00 | ug/l  | -0.02    |

## System Monitoring Compounds

|                           |        |     |          |       |         |       |
|---------------------------|--------|-----|----------|-------|---------|-------|
| 33) 1,2-Dichloroethane-d4 | 4.82   | 65  | 125242   | 55.48 | ug/l    | -0.04 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 110.96% |       |
| 35) Dibromofluoromethane  | 4.09   | 113 | 185541   | 54.30 | ug/l    | -0.03 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 108.60% |       |
| 50) Toluene-d8            | 7.53   | 98  | 525630   | 53.51 | ug/l    | -0.03 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 107.02% |       |
| 62) 4-Bromofluorobenzene  | 11.40  | 95  | 219305   | 55.18 | ug/l    | -0.02 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 110.36% |       |

## Target Compounds

|                               |      |     |        |        | Qvalue |    |
|-------------------------------|------|-----|--------|--------|--------|----|
| 2) Dichlorodifluoromethane    | 0.96 | 85  | 9229   | 2.611  | ug/l   | 92 |
| 3) Chloromethane              | 1.10 | 50  | 10937  | 2.949  | ug/l   | 96 |
| 4) Vinyl Chloride             | 1.14 | 62  | 9683   | 2.808  | ug/l # | 85 |
| 5) Bromomethane               | 1.34 | 94  | 7362   | 3.102  | ug/l # | 79 |
| 6) Chloroethane               | 1.38 | 64  | 5380   | 3.166  | ug/l   | 95 |
| 7) Trichlorofluoromethane     | 1.47 | 101 | 11518m | 2.769  | ug/l   |    |
| 8) Diethyl Ether              | 1.63 | 74  | 2734   | 2.609  | ug/l   | 86 |
| 9) 1,1,2-Trichlorotrifluoroet | 1.83 | 101 | 8194   | 2.731  | ug/l # | 87 |
| 10) Methyl Iodide             | 1.90 | 142 | 14200m | 2.478  | ug/l   |    |
| 11) Tert butyl alcohol        | 2.56 | 59  | 1807   | 13.831 | ug/l # | 83 |
| 12) 1,1-Dichloroethene        | 1.78 | 96  | 6468   | 2.452  | ug/l   | 96 |
| 13) Acrolein                  | 2.00 | 56  | 3446   | 20.987 | ug/l   | 93 |
| 14) Allyl chloride            | 2.09 | 41  | 8369   | 2.585  | ug/l   | 93 |
| 15) Acrylonitrile             | 2.93 | 53  | 6170   | 13.315 | ug/l # | 82 |
| 16) Acetone                   | 2.23 | 43  | 9188   | 18.970 | ug/l   | 94 |
| 17) Carbon Disulfide          | 1.82 | 76  | 20584m | 2.483  | ug/l   |    |
| 18) Methyl Acetate            | 2.37 | 43  | 8646   | 7.924  | ug/l # | 65 |
| 19) Methyl tert-butyl Ether   | 2.43 | 73  | 11411  | 2.531  | ug/l   | 93 |
| 20) Methylene Chloride        | 2.26 | 84  | 15024m | 3.442  | ug/l   |    |
| 21) trans-1,2-Dichloroethene  | 2.31 | 96  | 7933   | 2.766  | ug/l # | 84 |
| 22) Diisopropyl ether         | 2.79 | 45  | 21654  | 2.787  | ug/l   | 95 |
| 23) Vinyl Acetate             | 3.17 | 43  | 38777  | 10.218 | ug/l   | 99 |
| 24) 1,1-Dichloroethane        | 2.86 | 63  | 12580  | 2.675  | ug/l # | 95 |
| 25) 2-Butanone                | 4.32 | 43  | 13575  | 12.831 | ug/l   | 96 |
| 26) 2,2-Dichloropropane       | 3.59 | 77  | 5645   | 2.834  | ug/l   | 77 |
| 27) cis-1,2-Dichloroethene    | 3.46 | 96  | 8949   | 2.378  | ug/l   | 93 |
| 28) Bromochloromethane        | 3.70 | 49  | 6228   | 2.760  | ug/l   | 99 |
| 29) Tetrahydrofuran           | 4.07 | 42  | 6512   | 13.543 | ug/l # | 89 |
| 30) Chloroform                | 3.84 | 83  | 14376  | 2.688  | ug/l   | 99 |
| 31) Cyclohexane               | 3.67 | 56  | 13226m | 2.598  | ug/l   |    |
| 32) 1,1,1-Trichloroethane     | 4.07 | 97  | 8499   | 2.426  | ug/l   | 95 |
| 36) 1,1-Dichloropropene       | 4.26 | 75  | 12805  | 2.809  | ug/l   | 91 |
| 37) Ethyl Acetate             | 4.10 | 43  | 5197   | 2.455  | ug/l # | 84 |
| 38) Carbon Tetrachloride      | 3.96 | 117 | 8505m  | 2.702  | ug/l   |    |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F021319S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Feb 14 03:27:56 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 39) Methylcyclohexane          | 5.44  | 83   | 13914    | 2.581  | ug/l # | 87       |
| 40) Benzene                    | 4.61  | 78   | 31046    | 2.604  | ug/l # | 85       |
| 41) Methacrylonitrile          | 4.73  | 41   | 3255     | 3.006  | ug/l # | 80       |
| 42) 1,2-Dichloroethane         | 4.93  | 62   | 7306     | 2.562  | ug/l   | 100      |
| 43) Isopropyl Acetate          | 6.95  | 43   | 6213m    | 2.479  | ug/l   |          |
| 44) Trichloroethene            | 5.48  | 130  | 10586    | 2.746  | ug/l   | 99       |
| 45) 1,2-Dichloropropane        | 6.22  | 63   | 7653     | 2.656  | ug/l   | 100      |
| 46) Dibromomethane             | 6.07  | 93   | 4446     | 2.506  | ug/l # | 70       |
| 47) Bromodichloromethane       | 6.36  | 83   | 9848     | 2.535  | ug/l # | 93       |
| 48) Methyl methacrylate        | 6.70  | 41   | 3911     | 2.593  | ug/l # | 87       |
| 49) 1,4-Dioxane                | 6.70  | 88   | 682      | 48.108 | ug/l # | 56       |
| 51) 4-Methyl-2-Pentanone       | 8.24  | 43   | 22669    | 12.660 | ug/l   | 96       |
| 52) Toluene                    | 7.60  | 92   | 18095    | 2.503  | ug/l   | 90       |
| 53) t-1,3-Dichloropropene      | 8.26  | 75   | 8263     | 2.555  | ug/l   | 96       |
| 54) cis-1,3-Dichloropropene    | 7.29  | 75   | 10472    | 2.431  | ug/l # | 89       |
| 55) 1,1,2-Trichloroethane      | 8.48  | 97   | 5283     | 2.487  | ug/l # | 85       |
| 56) Ethyl methacrylate         | 8.60  | 69   | 6168     | 2.608  | ug/l   | 97       |
| 57) 1,3-Dichloropropane        | 8.83  | 76   | 8762     | 2.471  | ug/l   | 90       |
| 58) 2-Chloroethyl Vinyl ether  | 7.28  | 63   | 3861     | 9.461  | ug/l # | 54       |
| 59) 2-Hexanone                 | 9.48  | 43   | 16422    | 13.084 | ug/l   | 98       |
| 60) Dibromochloromethane       | 8.70  | 129  | 6705     | 2.268  | ug/l   | 91       |
| 61) 1,2-Dibromoethane          | 8.96  | 107  | 6052     | 2.627  | ug/l   | 91       |
| 64) Tetrachloroethene          | 8.13  | 164  | 8671     | 2.620  | ug/l   | 95       |
| 65) Chlorobenzene              | 9.78  | 112  | 22133    | 2.694  | ug/l   | 98       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.91  | 131  | 7952     | 2.470  | ug/l   | 82       |
| 67) Ethyl Benzene              | 9.88  | 91   | 35719    | 2.614  | ug/l   | 98       |
| 68) m/p-Xylenes                | 10.12 | 106  | 28724    | 5.492  | ug/l   | 91       |
| 69) o-Xylene                   | 10.70 | 106  | 15220    | 2.727  | ug/l   | 90       |
| 70) Styrene                    | 10.77 | 104  | 21543    | 2.729  | ug/l   | 94       |
| 71) Bromoform                  | 10.76 | 173  | 4057     | 2.320  | ug/l   | 79       |
| 73) Isopropylbenzene           | 11.11 | 105  | 40395    | 2.291  | ug/l   | 98       |
| 74) N-amyl acetate             | 11.36 | 43   | 10165    | 2.401  | ug/l # | 91       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.68 | 83   | 6578     | 2.082  | ug/l   | 93       |
| 76) 1,2,3-Trichloropropane     | 11.78 | 75   | 5406     | 2.517  | ug/l   | 96       |
| 77) Bromobenzene               | 11.48 | 156  | 10510    | 2.412  | ug/l   | 89       |
| 78) n-propylbenzene            | 11.58 | 91   | 50846    | 2.513  | ug/l   | 93       |
| 79) 2-Chlorotoluene            | 11.70 | 91   | 29730    | 2.623  | ug/l   | 89       |
| 80) 1,3,5-Trimethylbenzene     | 11.81 | 105  | 35054    | 2.487  | ug/l   | 97       |
| 81) trans-1,4-Dichloro-2-buten | 11.85 | 75   | 2229m    | 2.165  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.88 | 91   | 31414    | 2.670  | ug/l   | 91       |
| 83) tert-Butylbenzene          | 12.12 | 119  | 38969    | 2.496  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 12.19 | 105  | 35158    | 2.511  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 12.30 | 105  | 51336    | 2.543  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 12.44 | 119  | 43137    | 2.546  | ug/l   | 96       |
| 87) 1,3-Dichlorobenzene        | 12.46 | 146  | 22852    | 2.691  | ug/l   | 95       |
| 88) 1,4-Dichlorobenzene        | 12.55 | 146  | 22281    | 2.728  | ug/l   | 91       |
| 89) n-Butylbenzene             | 12.83 | 91   | 39723    | 2.483  | ug/l   | 99       |
| 90) Hexachloroethane           | 12.91 | 117  | 9494     | 2.409  | ug/l   | 94       |
| 91) 1,2-Dichlorobenzene        | 12.93 | 146  | 21207    | 2.625  | ug/l   | 86       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.63 | 75   | 925      | 1.847  | ug/l   | 60       |

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Quant Title : SW846 8260  
QLast Update : Thu Feb 14 03:27:56 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.19 | 180  | 13877    | 2.397 | ug/l  | 93       |
| 94) Hexachlorobutadiene    | 14.18 | 225  | 9465     | 2.647 | ug/l  | 94       |
| 95) Naphthalene            | 14.45 | 128  | 24441    | 2.412 | ug/l  | 94       |
| 96) 1,2,3-Trichlorobenzene | 14.59 | 180  | 12586    | 2.368 | ug/l  | 92       |

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

