

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF051619\  
 Data File : VF062622.D  
 Acq On : 16 May 2019 12:28  
 Operator : FY/SY  
 Sample : VSTDIC075  
 Misc : 5.00g/5mL/MSVOA F/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VSTDIC075

Manual Integrations  
 APPROVED

MMDadoda  
 5/17/2019 4:20:13 PM

Quant Time: May 17 05:16:35 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri May 17 04:56:17 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.07  | 168  | 760837   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.79  | 114  | 1321532  | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 9.92  | 117  | 979745   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.62 | 152  | 483656   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 5.04   | 65  | 345566   | 64.27 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 128.54% |      |
| 35) Dibromofluoromethane  | 4.32   | 113 | 634838   | 62.78 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 125.56% |      |
| 50) Toluene-d8            | 7.72   | 98  | 1499445  | 62.10 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 124.20% |      |
| 62) 4-Bromofluorobenzene  | 11.50  | 95  | 573500   | 62.63 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 125.26% |      |

## Target Compounds

|                               |      |     |         |         |        | Qvalue |
|-------------------------------|------|-----|---------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.01 | 85  | 659598  | 63.706  | ug/l   | 97     |
| 3) Chloromethane              | 1.16 | 50  | 632941  | 66.390  | ug/l   | 94     |
| 4) Vinyl Chloride             | 1.19 | 62  | 590886  | 67.333  | ug/l   | 100    |
| 5) Bromomethane               | 1.40 | 94  | 308762  | 64.314  | ug/l   | 98     |
| 6) Chloroethane               | 1.45 | 64  | 216205  | 67.082  | ug/l   | 93     |
| 7) Trichlorofluoromethane     | 1.56 | 101 | 813980  | 73.323  | ug/l # | 80     |
| 8) Diethyl Ether              | 1.72 | 74  | 163702  | 70.128  | ug/l   | 87     |
| 9) 1,1,2-Trichlorotrifluoroet | 1.90 | 101 | 498805m | 66.481  | ug/l   |        |
| 10) Methyl Iodide             | 1.99 | 142 | 966219  | 65.556  | ug/l   | 99     |
| 11) Tert butyl alcohol        | 2.70 | 59  | 118096  | 332.704 | ug/l   | 99     |
| 12) 1,1-Dichloroethene        | 1.87 | 96  | 459192  | 67.184  | ug/l   | 82     |
| 13) Acrolein                  | 2.10 | 56  | 134958  | 364.234 | ug/l   | 97     |
| 14) Allyl chloride            | 2.20 | 41  | 466607m | 69.483  | ug/l   |        |
| 15) Acrylonitrile             | 3.10 | 53  | 307587  | 307.196 | ug/l   | 95     |
| 16) Acetone                   | 2.36 | 43  | 503412  | 360.914 | ug/l   | 96     |
| 17) Carbon Disulfide          | 1.93 | 76  | 1404612 | 72.124  | ug/l   | 97     |
| 18) Methyl Acetate            | 2.47 | 43  | 145255  | 60.937  | ug/l   | 93     |
| 19) Methyl tert-butyl Ether   | 2.55 | 73  | 851972  | 69.729  | ug/l   | 98     |
| 20) Methylene Chloride        | 2.35 | 84  | 440925m | 63.434  | ug/l   |        |
| 21) trans-1,2-Dichloroethene  | 2.44 | 96  | 468886  | 70.188  | ug/l   | 91     |
| 22) Diisopropyl ether         | 2.95 | 45  | 1001301 | 65.630  | ug/l   | 97     |
| 23) Vinyl Acetate             | 3.35 | 43  | 3298695 | 320.517 | ug/l   | 99     |
| 24) 1,1-Dichloroethane        | 3.02 | 63  | 754191  | 67.385  | ug/l   | 98     |
| 25) 2-Butanone                | 4.54 | 43  | 973823  | 326.782 | ug/l   | 97     |
| 26) 2,2-Dichloropropane       | 3.79 | 77  | 424357  | 66.266  | ug/l   | 91     |
| 27) cis-1,2-Dichloroethene    | 3.66 | 96  | 717436  | 65.288  | ug/l   | 99     |
| 28) Bromochloromethane        | 3.92 | 49  | 429280  | 68.387  | ug/l   | 94     |
| 29) Tetrahydrofuran           | 4.28 | 42  | 392756  | 325.691 | ug/l   | 97     |
| 30) Chloroform                | 4.06 | 83  | 1024401 | 65.922  | ug/l   | 98     |
| 31) Cyclohexane               | 3.90 | 56  | 1005564 | 72.166  | ug/l   | 97     |
| 32) 1,1,1-Trichloroethane     | 4.30 | 97  | 713525  | 69.139  | ug/l   | 95     |
| 36) 1,1-Dichloropropene       | 4.49 | 75  | 848215  | 62.638  | ug/l   | 99     |
| 37) Ethyl Acetate             | 4.31 | 43  | 330921  | 59.851  | ug/l   | 96     |
| 38) Carbon Tetrachloride      | 4.20 | 117 | 689824  | 72.304  | ug/l   | 99     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF051619\  
 Data File : VF062622.D  
 Acq On : 16 May 2019 12:28  
 Operator : FY/SY  
 Sample : VSTDIC075  
 Misc : 5.00g/5mL/MSVOA F/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleID :  
 VSTDIC075

Manual Integrations  
 APPROVED

MMDadoda  
 5/17/2019 4:20:13 PM

Quant Time: May 17 05:16:35 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri May 17 04:56:17 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|----------|--------|----------|
| 39) Methylcyclohexane          | 5.64  | 83   | 996382   | 61.150   | ug/l   | 93       |
| 40) Benzene                    | 4.83  | 78   | 2273547  | 61.629   | ug/l   | 100      |
| 41) Methacrylonitrile          | 4.94  | 41   | 176808   | 60.995   | ug/l   | 89       |
| 42) 1,2-Dichloroethane         | 5.14  | 62   | 477722   | 64.937   | ug/l   | 97       |
| 43) Isopropyl Acetate          | 7.12  | 43   | 429186   | 59.916   | ug/l # | 96       |
| 44) Trichloroethene            | 5.70  | 130  | 626639   | 60.437   | ug/l   | 93       |
| 45) 1,2-Dichloropropane        | 6.42  | 63   | 584318   | 62.745   | ug/l   | 99       |
| 46) Dibromomethane             | 6.27  | 93   | 332779   | 61.832   | ug/l   | 95       |
| 47) Bromodichloromethane       | 6.57  | 83   | 697509   | 62.428   | ug/l   | 96       |
| 48) Methyl methacrylate        | 6.88  | 41   | 227510   | 60.766   | ug/l   | 94       |
| 49) 1,4-Dioxane                | 6.88  | 88   | 59510    | 1240.998 | ug/l   | 97       |
| 51) 4-Methyl-2-Pentanone       | 8.41  | 43   | 1447006  | 295.533  | ug/l   | 99       |
| 52) Toluene                    | 7.79  | 92   | 1207878  | 62.431   | ug/l   | 98       |
| 53) t-1,3-Dichloropropene      | 8.43  | 75   | 595432   | 65.139   | ug/l   | 95       |
| 54) cis-1,3-Dichloropropene    | 7.47  | 75   | 817098   | 63.857   | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 8.65  | 97   | 362626   | 63.302   | ug/l   | 98       |
| 56) Ethyl methacrylate         | 8.76  | 69   | 408630   | 59.874   | ug/l   | 100      |
| 57) 1,3-Dichloropropane        | 9.00  | 76   | 600586   | 61.552   | ug/l   | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 7.45  | 63   | 751124   | 338.120  | ug/l   | 100      |
| 59) 2-Hexanone                 | 9.63  | 43   | 1038737  | 290.161  | ug/l   | 96       |
| 60) Dibromochloromethane       | 8.86  | 129  | 490279   | 65.668   | ug/l   | 97       |
| 61) 1,2-Dibromoethane          | 9.14  | 107  | 400841   | 65.879   | ug/l   | 98       |
| 64) Tetrachloroethene          | 8.31  | 164  | 504033   | 64.938   | ug/l   | 97       |
| 65) Chlorobenzene              | 9.94  | 112  | 1247971  | 64.853   | ug/l   | 100      |
| 66) 1,1,1,2-Tetrachloroethane  | 10.07 | 131  | 502093   | 64.995   | ug/l   | 97       |
| 67) Ethyl Benzene              | 10.04 | 91   | 2092251  | 62.587   | ug/l   | 99       |
| 68) m/p-Xylenes                | 10.26 | 106  | 1577223  | 125.532  | ug/l   | 98       |
| 69) o-Xylene                   | 10.83 | 106  | 878172   | 67.858   | ug/l   | 93       |
| 70) Styrene                    | 10.89 | 104  | 1305588  | 66.374   | ug/l   | 99       |
| 71) Bromoform                  | 10.88 | 173  | 281022   | 72.634   | ug/l # | 99       |
| 73) Isopropylbenzene           | 11.22 | 105  | 2193637  | 63.282   | ug/l   | 98       |
| 74) N-amyl acetate             | 11.46 | 43   | 591788   | 55.338   | ug/l   | 97       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.77 | 83   | 450072   | 63.532   | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 11.87 | 75   | 297162   | 63.841   | ug/l   | 87       |
| 77) Bromobenzene               | 11.58 | 156  | 571659   | 66.345   | ug/l   | 96       |
| 78) n-propylbenzene            | 11.67 | 91   | 2563792  | 62.495   | ug/l   | 97       |
| 79) 2-Chlorotoluene            | 11.80 | 91   | 1499815  | 64.871   | ug/l   | 97       |
| 80) 1,3,5-Trimethylbenzene     | 11.90 | 105  | 1759132  | 63.288   | ug/l   | 98       |
| 81) trans-1,4-Dichloro-2-buten | 11.94 | 75   | 140838m  | 54.459   | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.98 | 91   | 1479862  | 64.909   | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.21 | 119  | 1802115  | 63.905   | ug/l   | 100      |
| 84) 1,2,4-Trimethylbenzene     | 12.27 | 105  | 1674518  | 62.244   | ug/l   | 97       |
| 85) sec-Butylbenzene           | 12.37 | 105  | 2391495  | 63.192   | ug/l   | 97       |
| 86) p-Isopropyltoluene         | 12.52 | 119  | 1990760  | 62.418   | ug/l   | 96       |
| 87) 1,3-Dichlorobenzene        | 12.54 | 146  | 964135   | 61.847   | ug/l   | 98       |
| 88) 1,4-Dichlorobenzene        | 12.63 | 146  | 926003   | 63.299   | ug/l   | 98       |
| 89) n-Butylbenzene             | 12.90 | 91   | 1932371  | 61.451   | ug/l   | 98       |
| 90) Hexachloroethane           | 12.97 | 117  | 527994   | 69.010   | ug/l   | 93       |
| 91) 1,2-Dichlorobenzene        | 13.00 | 146  | 899616   | 64.739   | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.69 | 75   | 58813    | 69.592   | ug/l   | 99       |

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA F\DATA\VF051619\  
Data File : VF062622.D  
Acq On : 16 May 2019 12:28  
Operator : FY/SY  
Sample : VSTDICC075  
Misc : 5.00g/5mL/MSVOA F/SOIL  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :  
VSTDICC075

Manual Integrations  
APPROVED

MMDadoda  
5/17/2019 4:20:13 PM

Quant Time: May 17 05:16:35 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
Quant Title : SW846 8260  
QLast Update : Fri May 17 04:56:17 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.25 | 180  | 622113   | 62.545 | ug/l  | 95       |
| 94) Hexachlorobutadiene    | 14.24 | 225  | 461944   | 66.548 | ug/l  | 95       |
| 95) Naphthalene            | 14.49 | 128  | 1174530  | 64.998 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 14.64 | 180  | 668382   | 70.941 | ug/l  | 97       |

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

