

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_F\DATA\VF121918\  
 Data File : VF061071.D  
 Acq On : 18 Dec 2018 19:51  
 Operator : VA/AP  
 Sample : VSTDICCC050  
 Misc : 5.00G/5mL/MSVOA-F/SOIL  
 ALS Vial : 18 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VSTDICCC050

Manual Integrations  
 APPROVED

apatel  
 12/20/2018 10:28:53 AM

Quant Time: Dec 19 06:28:52 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Dec 19 04:15:13 2018  
 Response via : Initial Calibration

| Internal Standards            | R.T.   | QIon | Response | Conc    | Units   | Dev(Min) |
|-------------------------------|--------|------|----------|---------|---------|----------|
| 1) Pentafluorobenzene         | 4.87   | 168  | 198020   | 50.00   | ug/l    | 0.00     |
| 34) 1,4-Difluorobenzene       | 5.59   | 114  | 337564   | 50.00   | ug/l    | 0.00     |
| 63) Chlorobenzene-d5          | 9.78   | 117  | 323859   | 50.00   | ug/l    | 0.00     |
| 72) 1,4-Dichlorobenzene-d4    | 12.55  | 152  | 151783   | 50.00   | ug/l    | 0.00     |
| System Monitoring Compounds   |        |      |          |         |         |          |
| 33) 1,2-Dichloroethane-d4     | 4.84   | 65   | 120682   | 51.84   | ug/l    | 0.00     |
| Spiked Amount                 | 50.000 |      | Recovery | =       | 103.68% |          |
| 35) Dibromofluoromethane      | 4.11   | 113  | 125326   | 47.68   | ug/l    | 0.00     |
| Spiked Amount                 | 50.000 |      | Recovery | =       | 95.36%  |          |
| 50) Toluene-d8                | 7.56   | 98   | 371392   | 47.86   | ug/l    | 0.00     |
| Spiked Amount                 | 50.000 |      | Recovery | =       | 95.72%  |          |
| 62) 4-Bromofluorobenzene      | 11.41  | 95   | 164518   | 46.80   | ug/l    | 0.00     |
| Spiked Amount                 | 50.000 |      | Recovery | =       | 93.60%  |          |
| Target Compounds              |        |      |          |         |         |          |
|                               |        |      |          |         | Qvalue  |          |
| 2) Dichlorodifluoromethane    | 0.96   | 85   | 222056   | 69.080  | ug/l    | 100      |
| 3) Chloromethane              | 1.10   | 50   | 125150   | 60.748  | ug/l    | 100      |
| 4) Vinyl Chloride             | 1.13   | 62   | 119698   | 62.777  | ug/l    | 100      |
| 5) Bromomethane               | 1.34   | 94   | 83120    | 62.699  | ug/l    | 100      |
| 6) Chloroethane               | 1.39   | 64   | 54037    | 65.748  | ug/l    | 100      |
| 7) Trichlorofluoromethane     | 1.50   | 101  | 234392m  | 59.293  | ug/l    |          |
| 8) Diethyl Ether              | 1.63   | 74   | 31005    | 54.795  | ug/l    | 100      |
| 9) 1,1,2-Trichlorotrifluoroet | 1.83   | 101  | 111793   | 56.008  | ug/l    | 100      |
| 10) Methyl Iodide             | 1.91   | 142  | 177384m  | 58.008  | ug/l    |          |
| 11) Tert butyl alcohol        | 2.56   | 59   | 26538    | 274.912 | ug/l    | 100      |
| 12) 1,1-Dichloroethene        | 1.80   | 96   | 88799    | 55.359  | ug/l    | 100      |
| 13) Acrolein                  | 2.00   | 56   | 15988m   | 190.756 | ug/l    |          |
| 14) Allyl chloride            | 2.09   | 41   | 85278    | 45.588  | ug/l    | 100      |
| 15) Acrylonitrile             | 2.94   | 53   | 63048    | 285.365 | ug/l    | 100      |
| 16) Acetone                   | 2.24   | 43   | 134933   | 302.167 | ug/l    | 100      |
| 17) Carbon Disulfide          | 1.83   | 76   | 261789m  | 59.514  | ug/l    |          |
| 18) Methyl Acetate            | 2.35   | 43   | 47194    | 57.072  | ug/l    | 100      |
| 19) Methyl tert-butyl Ether   | 2.43   | 73   | 193197   | 53.938  | ug/l    | 100      |
| 20) Methylene Chloride        | 2.26   | 84   | 84068m   | 54.962  | ug/l    |          |
| 21) trans-1,2-Dichloroethene  | 2.31   | 96   | 86745m   | 56.079  | ug/l    |          |
| 22) Diisopropyl ether         | 2.80   | 45   | 299842   | 55.340  | ug/l    | 100      |
| 23) Vinyl Acetate             | 3.19   | 43   | 705158   | 283.569 | ug/l    | 100      |
| 24) 1,1-Dichloroethane        | 2.87   | 63   | 183410   | 56.979  | ug/l    | 100      |
| 25) 2-Butanone                | 4.33   | 43   | 206908   | 273.913 | ug/l    | 100      |
| 26) 2,2-Dichloropropane       | 3.59   | 77   | 102054   | 50.125  | ug/l    | 100      |
| 27) cis-1,2-Dichloroethene    | 3.47   | 96   | 136937   | 54.619  | ug/l    | 100      |
| 28) Bromochloromethane        | 3.72   | 49   | 90602    | 57.337  | ug/l    | 100      |
| 29) Tetrahydrofuran           | 4.07   | 42   | 81632    | 256.248 | ug/l    | 100      |
| 30) Chloroform                | 3.86   | 83   | 271415   | 54.611  | ug/l    | 100      |
| 31) Cyclohexane               | 3.69   | 56   | 180615m  | 53.498  | ug/l    |          |
| 32) 1,1,1-Trichloroethane     | 4.08   | 97   | 155207   | 47.179  | ug/l    | 100      |
| 36) 1,1-Dichloropropene       | 4.27   | 75   | 205165   | 54.277  | ug/l    | 100      |
| 37) Ethyl Acetate             | 4.11   | 43   | 79203    | 51.870  | ug/l    | 100      |
| 38) Carbon Tetrachloride      | 3.99   | 117  | 155191   | 48.488  | ug/l    | 100      |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_F\DATA\VF121918\  
 Data File : VF061071.D  
 Acq On : 18 Dec 2018 19:51  
 Operator : VA/AP  
 Sample : VSTDICCC050  
 Misc : 5.00G/5mL/MSVOA-F/SOIL  
 ALS Vial : 18 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VSTDICCC050

Manual Integrations  
 APPROVED

apatel  
 12/20/2018 10:28:53 AM

Quant Time: Dec 19 06:28:52 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Dec 19 04:15:13 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units | Dev(Min) |
|--------------------------------|-------|------|----------|----------|-------|----------|
| 39) Methylcyclohexane          | 5.45  | 83   | 192179m  | 48.908   | ug/l  |          |
| 40) Benzene                    | 4.63  | 78   | 433005   | 52.075   | ug/l  | 100      |
| 41) Methacrylonitrile          | 4.74  | 41   | 42651    | 47.184   | ug/l  | 100      |
| 42) 1,2-Dichloroethane         | 4.94  | 62   | 168427   | 55.558   | ug/l  | 100      |
| 43) Isopropyl Acetate          | 6.95  | 43   | 94932    | 46.351   | ug/l  | 100      |
| 44) Trichloroethene            | 5.50  | 130  | 138958   | 51.238   | ug/l  | 100      |
| 45) 1,2-Dichloropropane        | 6.23  | 63   | 118123   | 54.916   | ug/l  | 100      |
| 46) Dibromomethane             | 6.09  | 93   | 78135    | 53.630   | ug/l  | 100      |
| 47) Bromodichloromethane       | 6.38  | 83   | 209889   | 54.108   | ug/l  | 100      |
| 48) Methyl methacrylate        | 6.72  | 41   | 69637    | 50.870   | ug/l  | 100      |
| 49) 1,4-Dioxane                | 6.71  | 88   | 10447    | 1055.482 | ug/l  | 100      |
| 51) 4-Methyl-2-Pentanone       | 8.26  | 43   | 332319   | 238.916  | ug/l  | 100      |
| 52) Toluene                    | 7.63  | 92   | 281154   | 48.292   | ug/l  | 100      |
| 53) t-1,3-Dichloropropene      | 8.28  | 75   | 157788   | 50.382   | ug/l  | 100      |
| 54) cis-1,3-Dichloropropene    | 7.30  | 75   | 199316   | 51.572   | ug/l  | 100      |
| 55) 1,1,2-Trichloroethane      | 8.49  | 97   | 81994    | 48.942   | ug/l  | 100      |
| 56) Ethyl methacrylate         | 8.62  | 69   | 94379    | 51.086   | ug/l  | 100      |
| 57) 1,3-Dichloropropane        | 8.85  | 76   | 152499   | 51.861   | ug/l  | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 7.29  | 63   | 87295    | 399.097  | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.49  | 43   | 245999   | 250.269  | ug/l  | 100      |
| 60) Dibromochloromethane       | 8.72  | 129  | 128553   | 51.376   | ug/l  | 100      |
| 61) 1,2-Dibromoethane          | 8.99  | 107  | 93190    | 51.171   | ug/l  | 100      |
| 64) Tetrachloroethene          | 8.15  | 164  | 120007   | 48.342   | ug/l  | 100      |
| 65) Chlorobenzene              | 9.80  | 112  | 317592   | 50.762   | ug/l  | 100      |
| 66) 1,1,1,2-Tetrachloroethane  | 9.93  | 131  | 126831   | 47.325   | ug/l  | 100      |
| 67) Ethyl Benzene              | 9.89  | 91   | 579058   | 49.581   | ug/l  | 100      |
| 68) m/p-Xylenes                | 10.13 | 106  | 405862   | 96.288   | ug/l  | 100      |
| 69) o-Xylene                   | 10.71 | 106  | 225787   | 48.668   | ug/l  | 100      |
| 70) Styrene                    | 10.79 | 104  | 300763   | 47.100   | ug/l  | 100      |
| 71) Bromoform                  | 10.77 | 173  | 60108    | 46.662   | ug/l  | 100      |
| 73) Isopropylbenzene           | 11.13 | 105  | 669355   | 55.073   | ug/l  | 100      |
| 74) N-amyl acetate             | 11.37 | 43   | 145784   | 52.485   | ug/l  | 100      |
| 75) 1,1,2,2-Tetrachloroethane  | 11.70 | 83   | 109096   | 54.733   | ug/l  | 100      |
| 76) 1,2,3-Trichloropropane     | 11.80 | 75   | 81559    | 55.874   | ug/l  | 100      |
| 77) Bromobenzene               | 11.49 | 156  | 142510   | 54.206   | ug/l  | 100      |
| 78) n-propylbenzene            | 11.59 | 91   | 784120   | 55.060   | ug/l  | 100      |
| 79) 2-Chlorotoluene            | 11.72 | 91   | 451981   | 55.283   | ug/l  | 100      |
| 80) 1,3,5-Trimethylbenzene     | 11.83 | 105  | 540452   | 54.816   | ug/l  | 100      |
| 81) trans-1,4-Dichloro-2-buten | 11.87 | 75   | 35765m   | 50.927   | ug/l  |          |
| 82) 4-Chlorotoluene            | 11.90 | 91   | 448896   | 52.366   | ug/l  | 100      |
| 83) tert-Butylbenzene          | 12.13 | 119  | 555527   | 55.083   | ug/l  | 100      |
| 84) 1,2,4-Trimethylbenzene     | 12.20 | 105  | 524681   | 53.834   | ug/l  | 100      |
| 85) sec-Butylbenzene           | 12.30 | 105  | 720438   | 52.699   | ug/l  | 100      |
| 86) p-Isopropyltoluene         | 12.46 | 119  | 601208   | 52.286   | ug/l  | 100      |
| 87) 1,3-Dichlorobenzene        | 12.48 | 146  | 254028   | 50.804   | ug/l  | 100      |
| 88) 1,4-Dichlorobenzene        | 12.57 | 146  | 249402   | 51.153   | ug/l  | 100      |
| 89) n-Butylbenzene             | 12.84 | 91   | 615519   | 53.188   | ug/l  | 100      |
| 90) Hexachloroethane           | 12.91 | 117  | 151072   | 54.774   | ug/l  | 100      |
| 91) 1,2-Dichlorobenzene        | 12.94 | 146  | 254151   | 53.436   | ug/l  | 100      |
| 92) 1,2-Dibromo-3-Chloropropan | 13.64 | 75   | 21137    | 54.844   | ug/l  | 100      |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_F\DATA\VF121918\  
Data File : VF061071.D  
Acq On : 18 Dec 2018 19:51  
Operator : VA/AP  
Sample : VSTDICCC050  
Misc : 5.00G/5mL/MSVOA-F/SOIL  
ALS Vial : 18 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
ClientSampleId :  
VSTDICCC050

Manual Integrations  
APPROVED

apatel  
12/20/2018 10:28:53 AM

Quant Time: Dec 19 06:28:52 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
Quant Title : SW846 8260  
QLast Update : Wed Dec 19 04:15:13 2018  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.19 | 180  | 176299   | 53.006 | ug/l  | 100      |
| 94) Hexachlorobutadiene    | 14.18 | 225  | 115265   | 52.054 | ug/l  | 100      |
| 95) Naphthalene            | 14.45 | 128  | 340639   | 46.656 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 14.60 | 180  | 176225   | 56.309 | ug/l  | 100      |

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

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA\_F\DATA\VF121918\  
Data File : VF061071.D  
Acq On : 18 Dec 2018 19:51  
Operator : VA/AP  
Sample : VSTDICCC050  
Misc : 5.00G/5mL/MSVOA-F/SOIL  
ALS Vial : 18 Sample Multiplier: 1

Instrument :  
MSVOA\_F  
Client Sample Id :  
VSTDICCC050

Manual Integrations  
APPROVED

apatel  
12/20/2018 10:28:53 AM

Quant Time: Dec 19 06:28:52 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_F\METHODS\82F121918S.M  
Quant Title : SW846 8260  
QLast Update : Wed Dec 19 04:15:13 2018  
Response via : Initial Calibration

