

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF012319\  
 Data File : VF061480.D  
 Acq On : 23 Jan 2019 12:53  
 Operator : VA/AP  
 Sample : VF0123SBS01  
 Misc : 5.00g/5mL/MSVOA-F/SOIL  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 VF0123SBS01

Manual Integrations  
 APPROVED

MMDadoda  
 1/24/2019 12:56:44 PM

Quant Time: Jan 24 03:12:56 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F011519S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jan 16 04:51:59 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.86  | 168  | 189517   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.58  | 114  | 325589   | 50.00 | ug/l  | -0.01    |
| 63) Chlorobenzene-d5       | 9.76  | 117  | 305907   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.54 | 152  | 153077   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 4.83   | 65  | 109412   | 46.76 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 93.52%  |      |
| 35) Dibromofluoromethane  | 4.10   | 113 | 126794   | 49.35 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.70%  |      |
| 50) Toluene-d8            | 7.54   | 98  | 372376   | 52.90 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.80% |      |
| 62) 4-Bromofluorobenzene  | 11.40  | 95  | 165384   | 50.29 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 100.58% |      |

## Target Compounds

|                               |      |     |        |         |        | Qvalue |
|-------------------------------|------|-----|--------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 0.95 | 85  | 71519  | 19.206  | ug/l   | 88     |
| 3) Chloromethane              | 1.09 | 50  | 59915  | 21.944  | ug/l   | 97     |
| 4) Vinyl Chloride             | 1.14 | 62  | 52549  | 21.636  | ug/l   | 97     |
| 5) Bromomethane               | 1.32 | 94  | 32395  | 20.454  | ug/l   | 86     |
| 6) Chloroethane               | 1.38 | 64  | 21342  | 19.831  | ug/l   | 100    |
| 7) Trichlorofluoromethane     | 1.48 | 101 | 93119  | 19.721  | ug/l   | 97     |
| 8) Diethyl Ether              | 1.62 | 74  | 11907  | 19.681  | ug/l   | 81     |
| 9) 1,1,2-Trichlorotrifluoroet | 1.82 | 101 | 48011  | 21.162  | ug/l   | 95     |
| 10) Methyl Iodide             | 1.89 | 142 | 75037m | 21.334  | ug/l   |        |
| 11) Tert butyl alcohol        | 2.56 | 59  | 9758   | 98.525  | ug/l   | 95     |
| 12) 1,1-Dichloroethene        | 1.79 | 96  | 38020  | 22.556  | ug/l   | 83     |
| 13) Acrolein                  | 1.99 | 56  | 6775   | 86.471  | ug/l   | 97     |
| 14) Allyl chloride            | 2.09 | 41  | 62201  | 34.196  | ug/l   | 94     |
| 15) Acrylonitrile             | 2.94 | 53  | 29798  | 117.457 | ug/l   | 96     |
| 16) Acetone                   | 2.23 | 43  | 56454  | 120.269 | ug/l   | 92     |
| 17) Carbon Disulfide          | 1.79 | 76  | 112372 | 21.381  | ug/l   | 95     |
| 18) Methyl Acetate            | 2.34 | 43  | 20585  | 22.113  | ug/l   | 94     |
| 19) Methyl tert-butyl Ether   | 2.42 | 73  | 76077  | 20.134  | ug/l   | 93     |
| 20) Methylene Chloride        | 2.18 | 84  | 39310m | 23.748  | ug/l   |        |
| 21) trans-1,2-Dichloroethene  | 2.30 | 96  | 39690  | 21.402  | ug/l   | 95     |
| 22) Diisopropyl ether         | 2.79 | 45  | 126601 | 21.106  | ug/l # | 99     |
| 23) Vinyl Acetate             | 3.18 | 43  | 322819 | 123.987 | ug/l   | 99     |
| 24) 1,1-Dichloroethane        | 2.87 | 63  | 79820  | 21.202  | ug/l   | 98     |
| 25) 2-Butanone                | 4.32 | 43  | 92295  | 118.238 | ug/l   | 98     |
| 26) 2,2-Dichloropropane       | 3.59 | 77  | 47363  | 20.477  | ug/l   | 93     |
| 27) cis-1,2-Dichloroethene    | 3.46 | 96  | 61380  | 22.422  | ug/l   | 98     |
| 28) Bromochloromethane        | 3.70 | 49  | 34711  | 20.512  | ug/l # | 97     |
| 29) Tetrahydrofuran           | 4.06 | 42  | 37640  | 111.985 | ug/l   | 100    |
| 30) Chloroform                | 3.85 | 83  | 112326 | 22.108  | ug/l   | 95     |
| 31) Cyclohexane               | 3.68 | 56  | 86719  | 23.060  | ug/l   | 99     |
| 32) 1,1,1-Trichloroethane     | 4.08 | 97  | 71227  | 19.119  | ug/l   | 95     |
| 36) 1,1-Dichloropropene       | 4.27 | 75  | 83380  | 22.087  | ug/l   | 99     |
| 37) Ethyl Acetate             | 4.10 | 43  | 33423  | 22.149  | ug/l   | 82     |
| 38) Carbon Tetrachloride      | 3.98 | 117 | 68330  | 20.704  | ug/l   | 96     |

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 1/24/2019 12:56:44 PM

Quant Time: Jan 24 03:12:56 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F011519S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jan 16 04:51:59 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 5.44  | 83   | 87835    | 21.470  | ug/l   | 97       |
| 40) Benzene                    | 4.62  | 78   | 197855   | 23.554  | ug/l   | 98       |
| 41) Methacrylonitrile          | 4.73  | 41   | 18343    | 22.845  | ug/l   | 94       |
| 42) 1,2-Dichloroethane         | 4.93  | 62   | 61585    | 20.574  | ug/l   | 98       |
| 43) Isopropyl Acetate          | 6.95  | 43   | 46959    | 24.795  | ug/l # | 83       |
| 44) Trichloroethene            | 5.49  | 130  | 60132    | 23.335  | ug/l   | 99       |
| 45) 1,2-Dichloropropane        | 6.22  | 63   | 49824    | 22.600  | ug/l   | 98       |
| 46) Dibromomethane             | 6.07  | 93   | 31463    | 21.463  | ug/l   | 95       |
| 47) Bromodichloromethane       | 6.37  | 83   | 78826    | 21.733  | ug/l   | 92       |
| 48) Methyl methacrylate        | 6.70  | 41   | 27802    | 21.861  | ug/l   | 96       |
| 49) 1,4-Dioxane                | 6.68  | 88   | 3885     | 395.680 | ug/l # | 74       |
| 51) 4-Methyl-2-Pentanone       | 8.24  | 43   | 161502   | 115.995 | ug/l   | 96       |
| 52) Toluene                    | 7.61  | 92   | 126915   | 22.943  | ug/l   | 92       |
| 53) t-1,3-Dichloropropene      | 8.26  | 75   | 65475    | 22.734  | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 7.29  | 75   | 85629    | 23.786  | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 8.48  | 97   | 35461    | 22.574  | ug/l   | 94       |
| 56) Ethyl methacrylate         | 8.61  | 69   | 39777    | 21.765  | ug/l   | 96       |
| 57) 1,3-Dichloropropane        | 8.84  | 76   | 63764    | 21.656  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 7.29  | 63   | 23662    | 137.395 | ug/l   | 94       |
| 59) 2-Hexanone                 | 9.48  | 43   | 124690   | 128.428 | ug/l   | 95       |
| 60) Dibromochloromethane       | 8.71  | 129  | 50024    | 21.782  | ug/l   | 96       |
| 61) 1,2-Dibromoethane          | 8.97  | 107  | 36335    | 20.205  | ug/l   | 86       |
| 64) Tetrachloroethene          | 8.14  | 164  | 49256    | 21.411  | ug/l   | 96       |
| 65) Chlorobenzene              | 9.78  | 112  | 133137   | 21.402  | ug/l   | 96       |
| 66) 1,1,1,2-Tetrachloroethane  | 9.92  | 131  | 52695    | 21.264  | ug/l   | 96       |
| 67) Ethyl Benzene              | 9.89  | 91   | 244496   | 21.512  | ug/l   | 99       |
| 68) m/p-Xylenes                | 10.12 | 106  | 184343   | 45.095  | ug/l   | 100      |
| 69) o-Xylene                   | 10.70 | 106  | 100237   | 22.624  | ug/l   | 96       |
| 70) Styrene                    | 10.78 | 104  | 142705   | 23.531  | ug/l   | 98       |
| 71) Bromoform                  | 10.76 | 173  | 24778    | 22.253  | ug/l # | 92       |
| 73) Isopropylbenzene           | 11.11 | 105  | 291587   | 23.421  | ug/l   | 99       |
| 74) N-amyl acetate             | 11.36 | 43   | 71503    | 24.288  | ug/l   | 97       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.68 | 83   | 49986    | 22.537  | ug/l   | 93       |
| 76) 1,2,3-Trichloropropane     | 11.78 | 75   | 35352    | 22.182  | ug/l   | 99       |
| 77) Bromobenzene               | 11.49 | 156  | 59197    | 22.514  | ug/l   | 95       |
| 78) n-propylbenzene            | 11.59 | 91   | 362532   | 22.450  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 11.70 | 91   | 197218   | 22.831  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 11.81 | 105  | 233168   | 23.207  | ug/l   | 100      |
| 81) trans-1,4-Dichloro-2-buten | 11.86 | 75   | 13332m   | 19.244  | ug/l   |          |
| 82) 4-Chlorotoluene            | 11.89 | 91   | 202339   | 23.212  | ug/l   | 96       |
| 83) tert-Butylbenzene          | 12.12 | 119  | 241196   | 23.194  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 12.20 | 105  | 227582   | 21.990  | ug/l   | 96       |
| 85) sec-Butylbenzene           | 12.30 | 105  | 326473   | 23.117  | ug/l   | 97       |
| 86) p-Isopropyltoluene         | 12.45 | 119  | 270133   | 23.301  | ug/l   | 97       |
| 87) 1,3-Dichlorobenzene        | 12.46 | 146  | 112074   | 20.293  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 12.55 | 146  | 111395   | 22.420  | ug/l   | 98       |
| 89) n-Butylbenzene             | 12.84 | 91   | 290062   | 24.261  | ug/l   | 100      |
| 90) Hexachloroethane           | 12.91 | 117  | 66714    | 24.413  | ug/l   | 98       |
| 91) 1,2-Dichlorobenzene        | 12.94 | 146  | 106687   | 21.690  | ug/l   | 97       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.63 | 75   | 7493     | 19.047  | ug/l   | 67       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.19 | 180  | 73995    | 21.475 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 14.18 | 225  | 45450    | 21.257 | ug/l  | 99       |
| 95) Naphthalene            | 14.45 | 128  | 128555   | 19.637 | ug/l  | 97       |
| 96) 1,2,3-Trichlorobenzene | 14.59 | 180  | 65265    | 20.462 | ug/l  | 98       |

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

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