

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW102319\  
 Data File : VW013670.D  
 Acq On : 23 Oct 2019 16:39  
 Operator : SY/VA  
 Sample : VW1023SBS01  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VW1023SBS01

Manual Integrations  
 APPROVED

MMDadoda  
 10/24/2019 1:27:12 PM

Quant Time: Oct 24 07:46:34 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W102319S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Oct 23 14:11:46 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 323186   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 455006   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 395448   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.55 | 152  | 201817   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 131802   | 54.36 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 108.72% |      |
| 35) Dibromofluoromethane  | 7.88   | 113 | 133042   | 52.62 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.24% |      |
| 50) Toluene-d8            | 10.32  | 98  | 555148   | 53.89 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 107.78% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 187462   | 53.74 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 107.48% |      |

## Target Compounds

|                               |      |     |        |         |        | Qvalue |
|-------------------------------|------|-----|--------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 2.01 | 85  | 39283  | 23.072  | ug/l   | 97     |
| 3) Chloromethane              | 2.21 | 50  | 38886  | 21.251  | ug/l   | 98     |
| 4) Vinyl Chloride             | 2.37 | 62  | 60449  | 21.875  | ug/l   | 100    |
| 5) Bromomethane               | 2.78 | 94  | 38111  | 20.970  | ug/l   | 99     |
| 6) Chloroethane               | 2.92 | 64  | 34348  | 20.541  | ug/l   | 96     |
| 7) Trichlorofluoromethane     | 3.26 | 101 | 34428  | 19.946  | ug/l   | 100    |
| 8) Diethyl Ether              | 3.68 | 74  | 28830  | 20.674  | ug/l   | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 4.07 | 101 | 57014  | 20.319  | ug/l   | 98     |
| 10) Methyl Iodide             | 4.27 | 142 | 93148  | 20.371  | ug/l   | 100    |
| 11) Tert butyl alcohol        | 5.20 | 59  | 16957  | 117.161 | ug/l # | 88     |
| 12) 1,1-Dichloroethene        | 4.04 | 96  | 59119  | 20.396  | ug/l   | 96     |
| 13) Acrolein                  | 3.90 | 56  | 15801  | 95.293  | ug/l   | 100    |
| 14) Allyl chloride            | 4.67 | 41  | 89623  | 20.109  | ug/l   | 99     |
| 15) Acrylonitrile             | 5.37 | 53  | 60616  | 106.899 | ug/l   | 100    |
| 16) Acetone                   | 4.13 | 43  | 46632  | 90.714  | ug/l   | 98     |
| 17) Carbon Disulfide          | 4.39 | 76  | 170661 | 20.502  | ug/l   | 99     |
| 18) Methyl Acetate            | 4.67 | 43  | 31704  | 22.499  | ug/l   | 97     |
| 19) Methyl tert-butyl Ether   | 5.43 | 73  | 73928  | 21.255  | ug/l   | 92     |
| 20) Methylene Chloride        | 4.92 | 84  | 66126  | 20.587  | ug/l   | 91     |
| 21) trans-1,2-Dichloroethene  | 5.42 | 96  | 63971  | 20.506  | ug/l   | 95     |
| 22) Diisopropyl ether         | 6.31 | 45  | 165682 | 20.379  | ug/l   | 97     |
| 23) Vinyl Acetate             | 6.26 | 43  | 485708 | 102.964 | ug/l   | 100    |
| 24) 1,1-Dichloroethane        | 6.21 | 63  | 103905 | 20.180  | ug/l   | 99     |
| 25) 2-Butanone                | 7.17 | 43  | 76926  | 104.088 | ug/l   | 98     |
| 26) 2,2-Dichloropropane       | 7.17 | 77  | 60083  | 20.180  | ug/l   | 99     |
| 27) cis-1,2-Dichloroethene    | 7.17 | 96  | 66238  | 19.990  | ug/l   | 97     |
| 28) Bromochloromethane        | 7.51 | 49  | 28012  | 16.201  | ug/l # | 99     |
| 29) Tetrahydrofuran           | 7.54 | 42  | 50263  | 109.853 | ug/l   | 99     |
| 30) Chloroform                | 7.68 | 83  | 101140 | 19.871  | ug/l   | 99     |
| 31) Cyclohexane               | 7.96 | 56  | 106679 | 19.798  | ug/l   | 100    |
| 32) 1,1,1-Trichloroethane     | 7.87 | 97  | 80930  | 20.262  | ug/l   | 99     |
| 36) 1,1-Dichloropropene       | 8.09 | 75  | 87493  | 20.647  | ug/l   | 98     |
| 37) Ethyl Acetate             | 7.25 | 43  | 34525  | 21.284  | ug/l   | 97     |
| 38) Carbon Tetrachloride      | 8.07 | 117 | 77290  | 20.255  | ug/l   | 98     |

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 Acq On : 23 Oct 2019 16:39  
 Operator : SY/VA  
 Sample : VW1023SBSD01  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 12 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VW1023SBSD01

Manual Integrations  
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MMDadoda  
 10/24/2019 1:27:12 PM

Quant Time: Oct 24 07:46:34 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W102319S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Oct 23 14:11:46 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.34  | 83   | 108243   | 19.780  | ug/l   | 98       |
| 40) Benzene                    | 8.32  | 78   | 242656   | 20.235  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.48  | 41   | 22359    | 22.104  | ug/l   | 93       |
| 42) 1,2-Dichloroethane         | 8.40  | 62   | 62693    | 20.746  | ug/l   | 99       |
| 43) Isopropyl Acetate          | 8.42  | 43   | 66657    | 21.468  | ug/l   | 99       |
| 44) Trichloroethene            | 9.09  | 130  | 70134    | 20.417  | ug/l   | 99       |
| 45) 1,2-Dichloropropane        | 9.37  | 63   | 56215    | 19.625  | ug/l   | 100      |
| 46) Dibromomethane             | 9.46  | 93   | 28813    | 20.725  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.65  | 83   | 72523    | 20.161  | ug/l   | 97       |
| 48) Methyl methacrylate        | 9.43  | 41   | 33440    | 21.718  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.46  | 88   | 8932     | 434.776 | ug/l # | 97       |
| 51) 4-Methyl-2-Pentanone       | 10.21 | 43   | 166963   | 108.213 | ug/l   | 100      |
| 52) Toluene                    | 10.38 | 92   | 158385   | 20.475  | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 10.60 | 75   | 74670    | 20.505  | ug/l   | 100      |
| 54) cis-1,3-Dichloropropene    | 10.07 | 75   | 88582    | 19.716  | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 10.79 | 97   | 43746    | 21.113  | ug/l   | 93       |
| 56) Ethyl methacrylate         | 10.65 | 69   | 54878    | 21.170  | ug/l   | 100      |
| 57) 1,3-Dichloropropane        | 10.93 | 76   | 74174    | 20.861  | ug/l   | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 9.92  | 63   | 122906   | 103.017 | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.97 | 43   | 114161   | 107.327 | ug/l   | 99       |
| 60) Dibromochloromethane       | 11.13 | 129  | 49401    | 20.081  | ug/l   | 99       |
| 61) 1,2-Dibromoethane          | 11.23 | 107  | 40133    | 20.474  | ug/l   | 96       |
| 64) Tetrachloroethene          | 10.86 | 164  | 60474    | 20.015  | ug/l   | 96       |
| 65) Chlorobenzene              | 11.66 | 112  | 163767   | 20.153  | ug/l   | 98       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.73 | 131  | 55442    | 19.549  | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.73 | 91   | 288651   | 19.699  | ug/l   | 100      |
| 68) m/p-Xylenes                | 11.83 | 106  | 226599   | 40.027  | ug/l   | 97       |
| 69) o-Xylene                   | 12.16 | 106  | 103180   | 19.829  | ug/l   | 99       |
| 70) Styrene                    | 12.18 | 104  | 177506   | 19.854  | ug/l   | 99       |
| 71) Bromoform                  | 12.35 | 173  | 29910    | 20.097  | ug/l # | 100      |
| 73) Isopropylbenzene           | 12.46 | 105  | 285741   | 19.716  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.27 | 43   | 58330    | 20.806  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.71 | 83   | 47870    | 20.931  | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.77 | 75   | 35431m   | 24.446  | ug/l   |          |
| 77) Bromobenzene               | 12.74 | 156  | 69226    | 19.995  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.80 | 91   | 331275   | 19.748  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.89 | 91   | 189059   | 20.055  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.94 | 105  | 240919   | 19.692  | ug/l   | 98       |
| 81) trans-1,4-Dichloro-2-buten | 12.51 | 75   | 14982    | 19.536  | ug/l   | 97       |
| 82) 4-Chlorotoluene            | 12.99 | 91   | 198022   | 20.009  | ug/l   | 99       |
| 83) tert-Butylbenzene          | 13.21 | 119  | 217220   | 20.002  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 13.25 | 105  | 242143   | 20.064  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 13.38 | 105  | 296150   | 19.942  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 13.50 | 119  | 279222   | 20.184  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.50 | 146  | 133362   | 19.881  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.58 | 146  | 133647   | 20.054  | ug/l   | 98       |
| 89) n-Butylbenzene             | 13.82 | 91   | 249941   | 20.017  | ug/l   | 100      |
| 90) Hexachloroethane           | 14.09 | 117  | 46187    | 19.209  | ug/l   | 97       |
| 91) 1,2-Dichlorobenzene        | 13.87 | 146  | 117113   | 20.135  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.48 | 75   | 7150     | 20.674  | ug/l   | 97       |

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Acq On : 23 Oct 2019 16:39  
Operator : SY/VA  
Sample : VW1023SBSD01  
Misc : 5.00G/5ML/MSVOA W/SOIL  
ALS Vial : 12 Sample Multiplier: 1

Instrument :  
MSVOA\_W  
ClientSampleId :  
VW1023SBSD01

Manual Integrations  
APPROVED

MMDadoda  
10/24/2019 1:27:12 PM

Quant Time: Oct 24 07:46:34 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_W\METHOD\82W102319S.M  
Quant Title : SW846 8260  
QLast Update : Wed Oct 23 14:11:46 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 15.13 | 180  | 81951    | 19.360 | ug/l  | 97       |
| 94) Hexachlorobutadiene    | 15.24 | 225  | 57116    | 19.987 | ug/l  | 98       |
| 95) Naphthalene            | 15.36 | 128  | 136038   | 20.498 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.55 | 180  | 72427    | 19.857 | ug/l  | 100      |

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

