

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW060419\  
 Data File : VW010678.D  
 Acq On : 04 Jun 2019 16:08  
 Operator : SY/VA  
 Sample : VSTDIC100  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :  
 VSTDIC100

Manual Integrations  
 APPROVED

MMDadoda  
 6/5/2019 3:05:07 PM

Quant Time: Jun 05 03:20:17 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W060419S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jun 05 02:25:28 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 262037   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 430377   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 384958   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.56 | 152  | 187139   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |        |         |      |
|---------------------------|--------|-----|----------|--------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.31   | 65  | 321379   | 104.06 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =      | 208.12% |      |
| 35) Dibromofluoromethane  | 7.88   | 113 | 255636   | 109.43 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =      | 218.86% |      |
| 50) Toluene-d8            | 10.32  | 98  | 1051681  | 102.67 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =      | 205.34% |      |
| 62) 4-Bromofluorobenzene  | 12.62  | 95  | 387662   | 104.00 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =      | 208.00% |      |

## Target Compounds

|                               |      |     |         |         |      | Qvalue |
|-------------------------------|------|-----|---------|---------|------|--------|
| 2) Dichlorodifluoromethane    | 2.00 | 85  | 219089  | 90.477  | ug/l | 99     |
| 3) Chloromethane              | 2.21 | 50  | 335814  | 94.260  | ug/l | 99     |
| 4) Vinyl Chloride             | 2.36 | 62  | 310651  | 94.378  | ug/l | 99     |
| 5) Bromomethane               | 2.74 | 94  | 158707  | 87.802  | ug/l | 98     |
| 6) Chloroethane               | 2.90 | 64  | 190024  | 96.177  | ug/l | 99     |
| 7) Trichlorofluoromethane     | 3.25 | 101 | 407164  | 95.292  | ug/l | 98     |
| 8) Diethyl Ether              | 3.68 | 74  | 151779  | 99.400  | ug/l | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 4.06 | 101 | 251859  | 95.875  | ug/l | 98     |
| 10) Methyl Iodide             | 4.26 | 142 | 276443  | 119.162 | ug/l | 99     |
| 11) Tert butyl alcohol        | 5.17 | 59  | 132608  | 527.022 | ug/l | 100    |
| 12) 1,1-Dichloroethene        | 4.03 | 96  | 243095  | 95.930  | ug/l | 99     |
| 13) Acrolein                  | 3.89 | 56  | 51805   | 503.846 | ug/l | 98     |
| 14) Allyl chloride            | 4.67 | 41  | 563274  | 100.810 | ug/l | 100    |
| 15) Acrylonitrile             | 5.37 | 53  | 379041  | 510.962 | ug/l | 99     |
| 16) Acetone                   | 4.12 | 43  | 459443  | 555.170 | ug/l | 99     |
| 17) Carbon Disulfide          | 4.37 | 76  | 799283  | 99.360  | ug/l | 99     |
| 18) Methyl Acetate            | 4.67 | 43  | 180140  | 101.121 | ug/l | 98     |
| 19) Methyl tert-butyl Ether   | 5.43 | 73  | 738868  | 101.095 | ug/l | 99     |
| 20) Methylene Chloride        | 4.92 | 84  | 272796  | 93.964  | ug/l | 98     |
| 21) trans-1,2-Dichloroethene  | 5.42 | 96  | 280361  | 97.459  | ug/l | 97     |
| 22) Diisopropyl ether         | 6.31 | 45  | 1117000 | 99.855  | ug/l | 100    |
| 23) Vinyl Acetate             | 6.26 | 43  | 3485956 | 516.372 | ug/l | 99     |
| 24) 1,1-Dichloroethane        | 6.21 | 63  | 553590  | 98.751  | ug/l | 99     |
| 25) 2-Butanone                | 7.17 | 43  | 611746  | 533.093 | ug/l | 99     |
| 26) 2,2-Dichloropropane       | 7.17 | 77  | 444583  | 97.460  | ug/l | 100    |
| 27) cis-1,2-Dichloroethene    | 7.17 | 96  | 311708  | 98.460  | ug/l | 99     |
| 28) Bromochloromethane        | 7.51 | 49  | 259233  | 103.619 | ug/l | 99     |
| 29) Tetrahydrofuran           | 7.53 | 42  | 369748  | 512.261 | ug/l | 100    |
| 30) Chloroform                | 7.68 | 83  | 505268  | 98.539  | ug/l | 100    |
| 31) Cyclohexane               | 7.95 | 56  | 570664  | 91.575  | ug/l | 97     |
| 32) 1,1,1-Trichloroethane     | 7.87 | 97  | 442359  | 98.761  | ug/l | 99     |
| 36) 1,1-Dichloropropene       | 8.08 | 75  | 427110  | 96.951  | ug/l | 100    |
| 37) Ethyl Acetate             | 7.25 | 43  | 249689  | 102.281 | ug/l | 99     |
| 38) Carbon Tetrachloride      | 8.07 | 117 | 376835  | 99.089  | ug/l | 97     |

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 Sample : VSTDICC100  
 Misc : 5.00G/5ML/MSVOA W/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleID :  
 VSTDICC100

Manual Integrations  
 APPROVED

MMDadoda  
 6/5/2019 3:05:07 PM

Quant Time: Jun 05 03:20:17 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W060419S.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jun 05 02:25:28 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units | Dev(Min) |
|--------------------------------|-------|------|----------|----------|-------|----------|
| 39) Methylcyclohexane          | 9.34  | 83   | 538258   | 96.113   | ug/l  | 100      |
| 40) Benzene                    | 8.32  | 78   | 1169175  | 97.284   | ug/l  | 99       |
| 41) Methacrylonitrile          | 7.48  | 41   | 148196   | 102.130  | ug/l  | 99       |
| 42) 1,2-Dichloroethane         | 8.40  | 62   | 376873   | 98.805   | ug/l  | 100      |
| 43) Isopropyl Acetate          | 8.42  | 43   | 485639   | 102.971  | ug/l  | 99       |
| 44) Trichloroethene            | 9.09  | 130  | 288746   | 97.398   | ug/l  | 98       |
| 45) 1,2-Dichloropropane        | 9.37  | 63   | 313905   | 98.670   | ug/l  | 99       |
| 46) Dibromomethane             | 9.46  | 93   | 147059   | 99.521   | ug/l  | 99       |
| 47) Bromodichloromethane       | 9.65  | 83   | 393228   | 102.661  | ug/l  | 98       |
| 48) Methyl methacrylate        | 9.44  | 41   | 238131   | 104.722  | ug/l  | 100      |
| 49) 1,4-Dioxane                | 9.45  | 88   | 48582    | 2102.880 | ug/l  | 96       |
| 51) 4-Methyl-2-Pentanone       | 10.21 | 43   | 1246922  | 517.522  | ug/l  | 100      |
| 52) Toluene                    | 10.39 | 92   | 725004   | 98.046   | ug/l  | 99       |
| 53) t-1,3-Dichloropropene      | 10.60 | 75   | 423770   | 104.452  | ug/l  | 99       |
| 54) cis-1,3-Dichloropropene    | 10.07 | 75   | 492495   | 103.161  | ug/l  | 99       |
| 55) 1,1,2-Trichloroethane      | 10.79 | 97   | 211608   | 99.406   | ug/l  | 99       |
| 56) Ethyl methacrylate         | 10.65 | 69   | 341728   | 104.327  | ug/l  | 99       |
| 57) 1,3-Dichloropropane        | 10.93 | 76   | 401256   | 100.022  | ug/l  | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 9.93  | 63   | 888092   | 517.639  | ug/l  | 100      |
| 59) 2-Hexanone                 | 10.97 | 43   | 923731   | 530.473  | ug/l  | 100      |
| 60) Dibromochloromethane       | 11.13 | 129  | 247331   | 104.812  | ug/l  | 99       |
| 61) 1,2-Dibromoethane          | 11.24 | 107  | 206050   | 102.162  | ug/l  | 98       |
| 64) Tetrachloroethene          | 10.87 | 164  | 249203   | 97.499   | ug/l  | 98       |
| 65) Chlorobenzene              | 11.66 | 112  | 737932   | 97.479   | ug/l  | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.73 | 131  | 264048   | 100.761  | ug/l  | 99       |
| 67) Ethyl Benzene              | 11.73 | 91   | 1412893  | 97.115   | ug/l  | 100      |
| 68) m/p-Xylenes                | 11.84 | 106  | 1022477  | 196.326  | ug/l  | 99       |
| 69) o-Xylene                   | 12.17 | 106  | 487384   | 98.672   | ug/l  | 100      |
| 70) Styrene                    | 12.18 | 104  | 861670   | 100.422  | ug/l  | 99       |
| 71) Bromoform                  | 12.35 | 173  | 145355   | 107.250  | ug/l  | # 100    |
| 73) Isopropylbenzene           | 12.46 | 105  | 1343623  | 95.545   | ug/l  | 100      |
| 74) N-amyl acetate             | 12.27 | 43   | 469765   | 103.361  | ug/l  | 100      |
| 75) 1,1,2,2-Tetrachloroethane  | 12.71 | 83   | 262384   | 98.007   | ug/l  | 99       |
| 76) 1,2,3-Trichloropropane     | 12.77 | 75   | 192178m  | 71.683   | ug/l  |          |
| 77) Bromobenzene               | 12.75 | 156  | 296992   | 96.750   | ug/l  | 99       |
| 78) n-propylbenzene            | 12.80 | 91   | 1617615  | 95.395   | ug/l  | 100      |
| 79) 2-Chlorotoluene            | 12.90 | 91   | 922711   | 95.245   | ug/l  | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.94 | 105  | 1100703  | 95.625   | ug/l  | 100      |
| 81) trans-1,4-Dichloro-2-buten | 12.51 | 75   | 91015    | 106.442  | ug/l  | 98       |
| 82) 4-Chlorotoluene            | 12.99 | 91   | 958246   | 95.850   | ug/l  | 99       |
| 83) tert-Butylbenzene          | 13.21 | 119  | 926218   | 94.814   | ug/l  | 100      |
| 84) 1,2,4-Trimethylbenzene     | 13.26 | 105  | 1106653  | 95.541   | ug/l  | 100      |
| 85) sec-Butylbenzene           | 13.38 | 105  | 1344469  | 94.527   | ug/l  | 99       |
| 86) p-Isopropyltoluene         | 13.50 | 119  | 1222769  | 96.137   | ug/l  | 100      |
| 87) 1,3-Dichlorobenzene        | 13.50 | 146  | 570664   | 96.400   | ug/l  | 99       |
| 88) 1,4-Dichlorobenzene        | 13.58 | 146  | 560565   | 95.517   | ug/l  | 99       |
| 89) n-Butylbenzene             | 13.83 | 91   | 1216668  | 95.873   | ug/l  | 100      |
| 90) Hexachloroethane           | 14.10 | 117  | 225854   | 99.155   | ug/l  | 98       |
| 91) 1,2-Dichlorobenzene        | 13.87 | 146  | 510729   | 95.936   | ug/l  | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.49 | 75   | 47343    | 102.980  | ug/l  | 100      |

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Sample : VSTDICC100  
Misc : 5.00G/5ML/MSVOA W/SOIL  
ALS Vial : 7 Sample Multiplier: 1

Instrument :  
MSVOA\_W  
ClientSampleId :  
VSTDICC100

Manual Integrations  
APPROVED

MMDadoda  
6/5/2019 3:05:07 PM

Quant Time: Jun 05 03:20:17 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W060419S.M  
Quant Title : SW846 8260  
QLast Update : Wed Jun 05 02:25:28 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|----------------------------|-------|------|----------|---------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 15.14 | 180  | 372039   | 99.586  | ug/l  | 99       |
| 94) Hexachlorobutadiene    | 15.24 | 225  | 228600   | 97.499  | ug/l  | 98       |
| 95) Naphthalene            | 15.37 | 128  | 708723   | 104.415 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.56 | 180  | 318517   | 100.253 | ug/l  | 99       |

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

