

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN050619\  
 Data File : VN055405.D  
 Acq On : 6 May 2019 9:23  
 Operator : JC/SP  
 Sample : VSTDCCC050  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC050

Manual Integrations  
 APPROVED

MMDadoda  
 5/7/2019 1:25:13 PM

Quant Time: May 07 01:19:29 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Apr 30 07:16:52 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 417641   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 656929   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 552930   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 224320   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.03   | 65  | 256012   | 46.86 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 93.72%  |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 209676   | 48.63 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.26%  |      |
| 50) Toluene-d8            | 10.09  | 98  | 771946   | 49.58 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 99.16%  |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 257089   | 52.83 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.66% |      |

## Target Compounds

|                               |      |     |         |         |      | Qvalue |
|-------------------------------|------|-----|---------|---------|------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 230938  | 45.132  | ug/l | 100    |
| 3) Chloromethane              | 2.06 | 50  | 255831  | 40.376  | ug/l | 99     |
| 4) Vinyl Chloride             | 2.19 | 62  | 228919  | 44.820  | ug/l | 97     |
| 5) Bromomethane               | 2.57 | 94  | 127653  | 47.185  | ug/l | 95     |
| 6) Chloroethane               | 2.71 | 64  | 130467  | 47.154  | ug/l | 97     |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 333018  | 45.854  | ug/l | 99     |
| 8) Diethyl Ether              | 3.41 | 74  | 118854  | 46.776  | ug/l | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.77 | 101 | 205343  | 47.481  | ug/l | 99     |
| 10) Methyl Iodide             | 3.96 | 142 | 271616  | 44.627  | ug/l | 100    |
| 11) Tert butyl alcohol        | 4.78 | 59  | 66527   | 212.674 | ug/l | 95     |
| 12) 1,1-Dichloroethene        | 3.74 | 96  | 188257  | 45.631  | ug/l | 97     |
| 13) Acrolein                  | 3.61 | 56  | 64282   | 263.133 | ug/l | 98     |
| 14) Allyl chloride            | 4.33 | 41  | 407320  | 47.670  | ug/l | 99     |
| 15) Acrylonitrile             | 4.99 | 53  | 395679  | 225.038 | ug/l | 100    |
| 16) Acetone                   | 3.82 | 43  | 416933  | 244.907 | ug/l | 99     |
| 17) Carbon Disulfide          | 4.06 | 76  | 464181  | 43.113  | ug/l | 99     |
| 18) Methyl Acetate            | 4.33 | 43  | 198358  | 47.784  | ug/l | 97     |
| 19) Methyl tert-butyl Ether   | 5.04 | 73  | 537497  | 46.344  | ug/l | 99     |
| 20) Methylene Chloride        | 4.55 | 84  | 220033  | 42.344  | ug/l | 97     |
| 21) trans-1,2-Dichloroethene  | 5.04 | 96  | 195408  | 44.723  | ug/l | 98     |
| 22) Diisopropyl ether         | 5.95 | 45  | 832481  | 49.035  | ug/l | 96     |
| 23) Vinyl Acetate             | 5.90 | 43  | 2632206 | 236.565 | ug/l | 99     |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 426904  | 47.195  | ug/l | 99     |
| 25) 2-Butanone                | 6.84 | 43  | 507717  | 233.201 | ug/l | 99     |
| 26) 2,2-Dichloropropane       | 6.83 | 77  | 309998  | 49.629  | ug/l | 98     |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 235954  | 47.488  | ug/l | 97     |
| 28) Bromochloromethane        | 7.19 | 49  | 213437  | 46.811  | ug/l | 98     |
| 29) Tetrahydrofuran           | 7.21 | 42  | 308010  | 220.938 | ug/l | 99     |
| 30) Chloroform                | 7.37 | 83  | 405311  | 47.268  | ug/l | 97     |
| 31) Cyclohexane               | 7.65 | 56  | 377669  | 43.945  | ug/l | 99     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 329163  | 47.298  | ug/l | 99     |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 299762  | 47.639  | ug/l | 99     |
| 37) Ethyl Acetate             | 6.93 | 43  | 203737  | 42.247  | ug/l | 98     |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 281862  | 46.436  | ug/l | 98     |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Apr 30 07:16:52 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 320654   | 47.929  | ug/l   | 99       |
| 40) Benzene                    | 8.04  | 78   | 880102   | 47.446  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.17  | 41   | 123125   | 47.215  | ug/l   | 97       |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 307448   | 46.797  | ug/l   | 100      |
| 43) Isopropyl Acetate          | 8.16  | 43   | 363572   | 46.912  | ug/l # | 88       |
| 44) Trichloroethene            | 8.83  | 130  | 227031   | 48.010  | ug/l   | 100      |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 254668   | 47.602  | ug/l   | 100      |
| 46) Dibromomethane             | 9.21  | 93   | 134026   | 45.831  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.40  | 83   | 312588   | 49.826  | ug/l   | 99       |
| 48) Methyl methacrylate        | 9.20  | 41   | 169852   | 44.581  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 35799    | 908.947 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 1007171  | 230.820 | ug/l   | 99       |
| 52) Toluene                    | 10.15 | 92   | 516335   | 48.513  | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 283034   | 51.970  | ug/l   | 100      |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 345762   | 50.921  | ug/l   | 97       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 184469   | 46.675  | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 233653   | 48.031  | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 330296   | 47.639  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.69  | 63   | 262202   | 177.464 | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 647915   | 237.318 | ug/l   | 98       |
| 60) Dibromochloromethane       | 10.90 | 129  | 207657   | 51.409  | ug/l   | 99       |
| 61) 1,2-Dibromoethane          | 11.00 | 107  | 170215   | 46.596  | ug/l   | 99       |
| 64) Tetrachloroethene          | 10.63 | 164  | 217221   | 48.039  | ug/l   | 99       |
| 65) Chlorobenzene              | 11.43 | 112  | 525345   | 48.596  | ug/l   | 98       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 208949   | 49.361  | ug/l   | 100      |
| 67) Ethyl Benzene              | 11.51 | 91   | 987024   | 50.561  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.62 | 106  | 716412   | 102.813 | ug/l   | 99       |
| 69) o-Xylene                   | 11.95 | 106  | 348611   | 50.475  | ug/l   | 99       |
| 70) Styrene                    | 11.96 | 104  | 577701   | 54.478  | ug/l   | 100      |
| 71) Bromoform                  | 12.12 | 173  | 122911   | 52.328  | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 951710   | 53.544  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 253927   | 44.108  | ug/l   | 100      |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 212593   | 47.685  | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 172447m  | 40.900  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 220183   | 51.522  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.59 | 91   | 1064243  | 46.186  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 645314   | 53.254  | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 789306   | 44.883  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 53352    | 45.072  | ug/l   | 98       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 621238   | 46.369  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.99 | 119  | 662731   | 53.442  | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 760013   | 48.322  | ug/l   | 100      |
| 85) sec-Butylbenzene           | 13.17 | 105  | 877308   | 45.898  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 756471   | 48.151  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 369476   | 49.222  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 355001   | 50.220  | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.61 | 91   | 601538   | 53.884  | ug/l   | 99       |
| 90) Hexachloroethane           | 13.87 | 117  | 131930   | 53.136  | ug/l   | 98       |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 361159   | 48.545  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 29098    | 49.306  | ug/l   | 100      |

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|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 141569   | 48.382 | ug/l  | 99       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 136298   | 61.529 | ug/l  | 96       |
| 95) Naphthalene            | 15.13 | 128  | 259780   | 42.219 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 139217   | 48.292 | ug/l  | 99       |

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

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