

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN111218\  
 Data File : VN052251.D  
 Acq On : 12 Nov 2018 9:37  
 Operator : MD\SY  
 Sample : VSTDCCC050  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC050

Manual Integrations  
 APPROVED

MMDadoda  
 11/13/2018 2:54:18 PM

Quant Time: Nov 13 00:29:15 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N110918W.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Nov 12 00:34:27 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.66  | 168  | 327670   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.58  | 114  | 537989   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 484941   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 224858   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.02   | 65  | 205386   | 45.83 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 91.66%  |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 171608   | 49.25 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 98.50%  |      |
| 50) Toluene-d8            | 10.09  | 98  | 665723   | 48.81 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 97.62%  |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 223415   | 50.65 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 101.30% |      |

## Target Compounds

|                               |      |     |         |         |      | Qvalue |
|-------------------------------|------|-----|---------|---------|------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 180208  | 50.588  | ug/l | 97     |
| 3) Chloromethane              | 2.06 | 50  | 233547  | 46.958  | ug/l | 100    |
| 4) Vinyl Chloride             | 2.19 | 62  | 200157  | 48.303  | ug/l | 99     |
| 5) Bromomethane               | 2.57 | 94  | 120881  | 45.978  | ug/l | 93     |
| 6) Chloroethane               | 2.71 | 64  | 110897  | 45.067  | ug/l | 97     |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 279991  | 48.539  | ug/l | 99     |
| 8) Diethyl Ether              | 3.41 | 74  | 101104  | 44.553  | ug/l | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 177318  | 47.913  | ug/l | 98     |
| 10) Methyl Iodide             | 3.96 | 142 | 229138  | 47.720  | ug/l | 100    |
| 11) Tert butyl alcohol        | 4.77 | 59  | 50732   | 220.858 | ug/l | 99     |
| 12) 1,1-Dichloroethene        | 3.74 | 96  | 158074  | 46.145  | ug/l | 97     |
| 13) Acrolein                  | 3.60 | 56  | 70071   | 203.856 | ug/l | 97     |
| 14) Allyl chloride            | 4.33 | 41  | 333576  | 46.511  | ug/l | 97     |
| 15) Acrylonitrile             | 4.99 | 53  | 301847  | 213.802 | ug/l | 99     |
| 16) Acetone                   | 3.81 | 43  | 301504  | 270.024 | ug/l | 100    |
| 17) Carbon Disulfide          | 4.06 | 76  | 498540  | 50.169  | ug/l | 99     |
| 18) Methyl Acetate            | 4.32 | 43  | 149023  | 39.798  | ug/l | 99     |
| 19) Methyl tert-butyl Ether   | 5.04 | 73  | 445325  | 45.502  | ug/l | 99     |
| 20) Methylene Chloride        | 4.55 | 84  | 186781  | 45.722  | ug/l | 98     |
| 21) trans-1,2-Dichloroethene  | 5.05 | 96  | 175315  | 47.089  | ug/l | 98     |
| 22) Diisopropyl ether         | 5.95 | 45  | 675790  | 47.004  | ug/l | 97     |
| 23) Vinyl Acetate             | 5.89 | 43  | 2288769 | 232.000 | ug/l | 99     |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 352567  | 46.427  | ug/l | 100    |
| 25) 2-Butanone                | 6.83 | 43  | 403890  | 211.279 | ug/l | 100    |
| 26) 2,2-Dichloropropane       | 6.82 | 77  | 278586  | 50.228  | ug/l | 99     |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 196909  | 47.249  | ug/l | 97     |
| 28) Bromochloromethane        | 7.19 | 49  | 170120  | 45.337  | ug/l | 100    |
| 29) Tetrahydrofuran           | 7.21 | 42  | 245666  | 197.462 | ug/l | 99     |
| 30) Chloroform                | 7.37 | 83  | 338098  | 47.044  | ug/l | 99     |
| 31) Cyclohexane               | 7.65 | 56  | 346347  | 49.297  | ug/l | 98     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 285024  | 48.656  | ug/l | 99     |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 268408  | 49.429  | ug/l | 98     |
| 37) Ethyl Acetate             | 6.92 | 43  | 174654  | 42.763  | ug/l | 98     |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 254925  | 51.804  | ug/l | 99     |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N110918W.M  
 Quant Title : SW846 8260  
 QLast Update : Mon Nov 12 00:34:27 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 329769   | 53.243  | ug/l   | 99       |
| 40) Benzene                    | 8.04  | 78   | 766454   | 49.298  | ug/l   | 98       |
| 41) Methacrylonitrile          | 7.17  | 41   | 81748    | 34.446  | ug/l # | 84       |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 252665   | 46.319  | ug/l   | 99       |
| 43) Isopropyl Acetate          | 8.16  | 43   | 314945   | 44.240  | ug/l   | 98       |
| 44) Trichloroethene            | 8.83  | 130  | 190582   | 48.918  | ug/l   | 97       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 212592   | 48.946  | ug/l   | 98       |
| 46) Dibromomethane             | 9.21  | 93   | 118045   | 47.315  | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.40  | 83   | 257612   | 49.837  | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.20  | 41   | 162614   | 43.353  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 28448    | 943.446 | ug/l   | 100      |
| 51) 4-Methyl-2-Pentanone       | 9.98  | 43   | 844014   | 214.681 | ug/l   | 100      |
| 52) Toluene                    | 10.15 | 92   | 463526   | 49.424  | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 265581   | 52.066  | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 309510   | 51.401  | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 157332   | 46.413  | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 211244   | 46.109  | ug/l   | 100      |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 282156   | 46.498  | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.69  | 63   | 603227   | 237.792 | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 621902   | 225.336 | ug/l   | 100      |
| 60) Dibromochloromethane       | 10.90 | 129  | 180198   | 52.407  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 11.00 | 107  | 156220   | 46.892  | ug/l   | 100      |
| 64) Tetrachloroethene          | 10.63 | 164  | 172198   | 50.717  | ug/l   | 94       |
| 65) Chlorobenzene              | 11.43 | 112  | 500935   | 48.751  | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 178281   | 51.220  | ug/l   | 97       |
| 67) Ethyl Benzene              | 11.51 | 91   | 903161   | 49.970  | ug/l   | 99       |
| 68) m/p-Xylenes                | 11.62 | 106  | 678301   | 100.773 | ug/l   | 98       |
| 69) o-Xylene                   | 11.95 | 106  | 325318   | 50.588  | ug/l   | 99       |
| 70) Styrene                    | 11.96 | 104  | 527987   | 50.819  | ug/l   | 99       |
| 71) Bromoform                  | 12.12 | 173  | 107603   | 51.820  | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 884545   | 48.122  | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 299123   | 44.825  | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 187161   | 41.534  | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 162284m  | 40.792  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 199996   | 46.482  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.59 | 91   | 1068262  | 49.621  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 601633   | 48.240  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 721375   | 49.348  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 57302    | 49.166  | ug/l   | 99       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 608599   | 48.633  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.99 | 119  | 632064   | 49.526  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 731322   | 49.618  | ug/l   | 99       |
| 85) sec-Butylbenzene           | 13.17 | 105  | 882423   | 50.420  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 757783   | 51.755  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 368140   | 49.150  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 362966   | 48.405  | ug/l   | 100      |
| 89) n-Butylbenzene             | 13.61 | 91   | 698105   | 53.545  | ug/l   | 99       |
| 90) Hexachloroethane           | 13.87 | 117  | 132330   | 51.492  | ug/l   | 98       |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 345161   | 47.219  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 28521    | 44.520  | ug/l   | 96       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 157157   | 54.370 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 82425    | 52.477 | ug/l  | 99       |
| 95) Naphthalene            | 15.13 | 128  | 343276   | 48.186 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 138433   | 50.655 | ug/l  | 98       |

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

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