

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN050219\  
 Data File : VN055344.D  
 Acq On : 2 May 2019 12:28  
 Operator : JC/SP  
 Sample : VN0502WBSD01  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN0502WBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 5/3/2019 1:09:21 PM

Quant Time: May 03 03:25:00 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  | 340702   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 568666   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 471185   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 178509   | 50.00 | ug/l  | 0.00     |

|                             |        |     |          |       |         |      |
|-----------------------------|--------|-----|----------|-------|---------|------|
| System Monitoring Compounds |        |     |          |       |         |      |
| 33) 1,2-Dichloroethane-d4   | 8.03   | 65  | 236344   | 53.03 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 106.06% |      |
| 35) Dibromofluoromethane    | 7.59   | 113 | 184446   | 49.42 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 98.84%  |      |
| 50) Toluene-d8              | 10.09  | 98  | 650186   | 48.24 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 96.48%  |      |
| 62) 4-Bromofluorobenzene    | 12.40  | 95  | 210467   | 49.97 | ug/l    | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 99.94%  |      |

| Target Compounds              |      |     |        |         |        | Qvalue |
|-------------------------------|------|-----|--------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 85260  | 20.425  | ug/l   | 96     |
| 3) Chloromethane              | 2.06 | 50  | 93858  | 18.158  | ug/l   | 100    |
| 4) Vinyl Chloride             | 2.19 | 62  | 82203  | 19.729  | ug/l   | 100    |
| 5) Bromomethane               | 2.57 | 94  | 44460  | 20.145  | ug/l   | 94     |
| 6) Chloroethane               | 2.71 | 64  | 45933  | 20.350  | ug/l   | 99     |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 122367 | 20.654  | ug/l   | 97     |
| 8) Diethyl Ether              | 3.41 | 74  | 42265  | 20.390  | ug/l   | 98     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 70672  | 20.031  | ug/l   | 98     |
| 10) Methyl Iodide             | 3.96 | 142 | 94978  | 19.129  | ug/l   | 99     |
| 11) Tert butyl alcohol        | 4.79 | 59  | 27843  | 109.109 | ug/l # | 94     |
| 12) 1,1-Dichloroethene        | 3.74 | 96  | 67141  | 19.949  | ug/l   | 98     |
| 13) Acrolein                  | 3.62 | 56  | 15057  | 75.553  | ug/l   | 97     |
| 14) Allyl chloride            | 4.33 | 41  | 138086 | 19.810  | ug/l   | 99     |
| 15) Acrylonitrile             | 4.99 | 53  | 150690 | 105.057 | ug/l   | 98     |
| 16) Acetone                   | 3.82 | 43  | 131390 | 94.607  | ug/l   | 98     |
| 17) Carbon Disulfide          | 4.06 | 76  | 160249 | 18.245  | ug/l   | 100    |
| 18) Methyl Acetate            | 4.33 | 43  | 77796  | 22.424  | ug/l   | 99     |
| 19) Methyl tert-butyl Ether   | 5.05 | 73  | 200980 | 21.242  | ug/l   | 98     |
| 20) Methylene Chloride        | 4.56 | 84  | 81595  | 19.248  | ug/l   | 96     |
| 21) trans-1,2-Dichloroethene  | 5.05 | 96  | 70762  | 19.853  | ug/l   | 97     |
| 22) Diisopropyl ether         | 5.95 | 45  | 293125 | 21.165  | ug/l   | 94     |
| 23) Vinyl Acetate             | 5.90 | 43  | 962440 | 106.031 | ug/l   | 100    |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 150777 | 20.433  | ug/l   | 99     |
| 25) 2-Butanone                | 6.84 | 43  | 182089 | 102.523 | ug/l   | 100    |
| 26) 2,2-Dichloropropane       | 6.83 | 77  | 96290  | 18.897  | ug/l   | 100    |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 83401  | 20.576  | ug/l   | 99     |
| 28) Bromochloromethane        | 7.20 | 49  | 78293  | 21.049  | ug/l   | 99     |
| 29) Tetrahydrofuran           | 7.22 | 42  | 124273 | 109.272 | ug/l   | 99     |
| 30) Chloroform                | 7.37 | 83  | 144367 | 20.638  | ug/l   | 99     |
| 31) Cyclohexane               | 7.65 | 56  | 136671 | 19.494  | ug/l   | 99     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 115061 | 20.267  | ug/l   | 99     |
| 36) 1,1-Dichloropropene       | 7.80 | 75  | 97846  | 17.963  | ug/l   | 99     |
| 37) Ethyl Acetate             | 6.93 | 43  | 71810  | 17.202  | ug/l   | 99     |
| 38) Carbon Tetrachloride      | 7.78 | 117 | 98261  | 18.701  | ug/l   | 98     |

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 Sample : VN0502WBSD01  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleID :  
 VN0502WBSD01

Manual Integrations  
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MMDadoda  
 5/3/2019 1:09:21 PM

Quant Time: May 03 03:25:00 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) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 105806   | 18.270  | ug/l   | 97       |
| 40) Benzene                    | 8.04  | 78   | 308878   | 19.236  | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.17  | 41   | 42592    | 19.312  | ug/l   | 94       |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 113113   | 19.889  | ug/l   | 99       |
| 43) Isopropyl Acetate          | 8.17  | 43   | 145496   | 21.687  | ug/l # | 85       |
| 44) Trichloroethene            | 8.84  | 130  | 76292    | 18.638  | ug/l   | 92       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 90577    | 19.558  | ug/l   | 99       |
| 46) Dibromomethane             | 9.21  | 93   | 49431    | 19.527  | ug/l   | 98       |
| 47) Bromodichloromethane       | 9.40  | 83   | 107887   | 19.866  | ug/l   | 99       |
| 48) Methyl methacrylate        | 9.20  | 41   | 65819    | 19.957  | ug/l   | 99       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 13766    | 403.772 | ug/l   | 95       |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43   | 383611   | 101.560 | ug/l   | 99       |
| 52) Toluene                    | 10.16 | 92   | 178249   | 19.347  | ug/l   | 97       |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 91255    | 19.357  | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 114789   | 19.529  | ug/l   | 98       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 71332    | 20.850  | ug/l   | 97       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 84898    | 20.161  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 121195   | 20.193  | ug/l   | 98       |
| 58) 2-Chloroethyl Vinyl ether  | 9.70  | 63   | 104724   | 88.562  | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 240184   | 101.629 | ug/l   | 98       |
| 60) Dibromochloromethane       | 10.90 | 129  | 69854    | 19.978  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 11.01 | 107  | 61541    | 19.461  | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.63 | 164  | 78004    | 20.244  | ug/l   | 97       |
| 65) Chlorobenzene              | 11.43 | 112  | 178845   | 19.414  | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 69602    | 19.295  | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.51 | 91   | 332159   | 19.967  | ug/l   | 100      |
| 68) m/p-Xylenes                | 11.62 | 106  | 241216   | 40.623  | ug/l   | 97       |
| 69) o-Xylene                   | 11.95 | 106  | 121371   | 20.622  | ug/l   | 97       |
| 70) Styrene                    | 11.96 | 104  | 189232   | 20.941  | ug/l   | 99       |
| 71) Bromoform                  | 12.13 | 173  | 41058    | 20.512  | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 312606   | 20.119  | ug/l   | 98       |
| 74) N-amyl acetate             | 12.07 | 43   | 88785    | 19.380  | ug/l   | 98       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 78232    | 20.225  | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 73810m   | 20.773  | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 74610    | 20.613  | ug/l   | 99       |
| 78) n-propylbenzene            | 12.59 | 91   | 339183   | 18.498  | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 214941   | 20.655  | ug/l   | 100      |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 262912   | 18.787  | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 18082    | 19.196  | ug/l   | 92       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 199375   | 18.700  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 12.99 | 119  | 215715   | 20.033  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 244448   | 19.531  | ug/l   | 100      |
| 85) sec-Butylbenzene           | 13.17 | 105  | 279551   | 18.379  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 235476   | 18.835  | ug/l   | 100      |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 117253   | 19.629  | ug/l   | 98       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 109356   | 19.440  | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.61 | 91   | 164031   | 18.464  | ug/l   | 97       |
| 90) Hexachloroethane           | 13.87 | 117  | 39894    | 19.182  | ug/l   | 100      |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 117739   | 19.887  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 11060    | 23.551  | ug/l   | 91       |

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ClientSampleId :  
VN0502WBSD01

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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) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 33876    | 16.864 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 41753    | 21.862 | ug/l  | 97       |
| 95) Naphthalene            | 15.13 | 128  | 69866    | 16.472 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 38567    | 18.515 | ug/l  | 98       |

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

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