

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN040419\  
 Data File : VN054942.D  
 Acq On : 4 Apr 2019 12:24  
 Operator : JC/SP  
 Sample : VSTDICV050  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 9 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 ICVVN040419

Manual Integrations  
 APPROVED

MMDadoda  
 4/8/2019 1:44:00 PM

Quant Time: Apr 05 03:17:29 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N040419W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Apr 05 02:23:47 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 485272   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 784450   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 684603   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.34 | 152  | 300686   | 50.00 | ug/l  | 0.00     |

|                             |        |     |          |       |        |      |
|-----------------------------|--------|-----|----------|-------|--------|------|
| System Monitoring Compounds |        |     |          |       |        |      |
| 33) 1,2-Dichloroethane-d4   | 8.03   | 65  | 299606   | 46.83 | ug/l   | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 93.66% |      |
| 35) Dibromofluoromethane    | 7.59   | 113 | 239760   | 46.95 | ug/l   | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 93.90% |      |
| 50) Toluene-d8              | 10.09  | 98  | 915650   | 47.26 | ug/l   | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 94.52% |      |
| 62) 4-Bromofluorobenzene    | 12.40  | 95  | 306539   | 47.41 | ug/l   | 0.00 |
| Spiked Amount               | 50.000 |     | Recovery | =     | 94.82% |      |

|                               |      |     |         |         |        |     |
|-------------------------------|------|-----|---------|---------|--------|-----|
| Target Compounds              |      |     |         | Qvalue  |        |     |
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 287806  | 49.599  | ug/l   | 100 |
| 3) Chloromethane              | 2.06 | 50  | 377311  | 49.180  | ug/l   | 98  |
| 4) Vinyl Chloride             | 2.19 | 62  | 319609  | 47.680  | ug/l   | 98  |
| 5) Bromomethane               | 2.57 | 94  | 184527  | 48.225  | ug/l   | 98  |
| 6) Chloroethane               | 2.71 | 64  | 171653  | 45.913  | ug/l   | 96  |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 382868  | 47.042  | ug/l   | 99  |
| 8) Diethyl Ether              | 3.41 | 74  | 123227  | 47.539  | ug/l   | 99  |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 197051  | 45.697  | ug/l   | 98  |
| 10) Methyl Iodide             | 3.94 | 142 | 271544  | 44.674  | ug/l   | 99  |
| 11) Tert butyl alcohol        | 4.82 | 59  | 84791   | 256.811 | ug/l # | 86  |
| 12) 1,1-Dichloroethene        | 3.73 | 96  | 195208  | 45.636  | ug/l   | 96  |
| 13) Acrolein                  | 3.61 | 56  | 129423  | 258.537 | ug/l   | 98  |
| 14) Allyl chloride            | 4.32 | 41  | 484094  | 50.992  | ug/l   | 97  |
| 15) Acrylonitrile             | 5.00 | 53  | 494573  | 249.794 | ug/l   | 98  |
| 16) Acetone                   | 3.82 | 43  | 414100  | 260.696 | ug/l   | 99  |
| 17) Carbon Disulfide          | 4.04 | 76  | 675810  | 49.633  | ug/l   | 99  |
| 18) Methyl Acetate            | 4.33 | 43  | 211862  | 50.724  | ug/l   | 100 |
| 19) Methyl tert-butyl Ether   | 5.06 | 73  | 688677  | 49.636  | ug/l   | 98  |
| 20) Methylene Chloride        | 4.55 | 84  | 277565  | 46.742  | ug/l   | 99  |
| 21) trans-1,2-Dichloroethene  | 5.04 | 96  | 256694  | 48.049  | ug/l   | 95  |
| 22) Diisopropyl ether         | 5.96 | 45  | 959502  | 49.211  | ug/l   | 100 |
| 23) Vinyl Acetate             | 5.90 | 43  | 3546104 | 261.369 | ug/l   | 100 |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 511660  | 48.121  | ug/l   | 100 |
| 25) 2-Butanone                | 6.84 | 43  | 630021  | 262.238 | ug/l   | 99  |
| 26) 2,2-Dichloropropane       | 6.82 | 77  | 370703  | 49.734  | ug/l   | 99  |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 296695  | 48.958  | ug/l   | 98  |
| 28) Bromochloromethane        | 7.19 | 49  | 238006  | 47.781  | ug/l   | 98  |
| 29) Tetrahydrofuran           | 7.22 | 42  | 396485  | 251.783 | ug/l   | 100 |
| 30) Chloroform                | 7.37 | 83  | 484917  | 48.122  | ug/l   | 99  |
| 31) Cyclohexane               | 7.65 | 56  | 487392  | 48.344  | ug/l   | 98  |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 407996  | 47.980  | ug/l   | 99  |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 374938  | 48.238  | ug/l   | 100 |
| 37) Ethyl Acetate             | 6.94 | 43  | 272396  | 51.068  | ug/l   | 99  |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 354017  | 47.163  | ug/l   | 96  |

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 ALS Vial : 9 Sample Multiplier: 1

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 4/8/2019 1:44:00 PM

Quant Time: Apr 05 03:17:29 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N040419W.M  
 Quant Title : SW846 8260  
 QLast Update : Fri Apr 05 02:23:47 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|----------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 430490   | 50.344   | ug/l   | 99       |
| 40) Benzene                    | 8.04  | 78   | 1096183  | 49.012   | ug/l   | 99       |
| 41) Methacrylonitrile          | 7.18  | 41   | 150720   | 49.417   | ug/l   | 94       |
| 42) 1,2-Dichloroethane         | 8.12  | 62   | 377022   | 47.972   | ug/l   | 99       |
| 43) Isopropyl Acetate          | 8.17  | 43   | 465149   | 51.743   | ug/l   | 99       |
| 44) Trichloroethene            | 8.83  | 130  | 279124   | 48.809   | ug/l   | 97       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 307718   | 49.380   | ug/l   | 99       |
| 46) Dibromomethane             | 9.21  | 93   | 175233   | 49.587   | ug/l   | 98       |
| 47) Bromodichloromethane       | 9.40  | 83   | 368959   | 49.709   | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.20  | 41   | 240140   | 52.769   | ug/l   | 100      |
| 49) 1,4-Dioxane                | 9.20  | 88   | 46717    | 1017.064 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43   | 1302016  | 259.624  | ug/l   | 100      |
| 52) Toluene                    | 10.16 | 92   | 657337   | 49.862   | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 367988   | 48.024   | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 438438   | 52.483   | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 237378   | 49.663   | ug/l   | 98       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 327705   | 52.438   | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 416982   | 49.953   | ug/l   | 99       |
| 58) 2-Chloroethyl Vinyl ether  | 9.70  | 63   | 662805   | 239.208  | ug/l   | 100      |
| 59) 2-Hexanone                 | 10.75 | 43   | 844714   | 269.666  | ug/l   | 100      |
| 60) Dibromochloromethane       | 10.90 | 129  | 257436   | 51.420   | ug/l   | 99       |
| 61) 1,2-Dibromoethane          | 11.00 | 107  | 229084   | 50.974   | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.63 | 164  | 254363   | 46.068   | ug/l   | 99       |
| 65) Chlorobenzene              | 11.43 | 112  | 682369   | 48.900   | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 261720   | 51.227   | ug/l   | 98       |
| 67) Ethyl Benzene              | 11.51 | 91   | 1250784  | 49.713   | ug/l   | 98       |
| 68) m/p-Xylenes                | 11.62 | 106  | 925783   | 100.656  | ug/l   | 99       |
| 69) o-Xylene                   | 11.95 | 106  | 448600   | 50.004   | ug/l   | 100      |
| 70) Styrene                    | 11.96 | 104  | 744317   | 51.725   | ug/l   | 99       |
| 71) Bromoform                  | 12.13 | 173  | 159572   | 51.962   | ug/l # | 99       |
| 73) Isopropylbenzene           | 12.25 | 105  | 1199033  | 47.205   | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 394342   | 55.854   | ug/l   | 99       |
| 75) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 288421   | 52.213   | ug/l   | 97       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 251475m  | 54.689   | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 292923   | 47.619   | ug/l   | 97       |
| 78) n-propylbenzene            | 12.59 | 91   | 1354811  | 48.413   | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.67 | 91   | 812110   | 46.825   | ug/l   | 98       |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 989644   | 47.441   | ug/l   | 99       |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 71610    | 55.012   | ug/l   | 96       |
| 82) 4-Chlorotoluene            | 12.77 | 91   | 805612   | 49.110   | ug/l   | 99       |
| 83) tert-Butylbenzene          | 12.99 | 119  | 837873   | 47.217   | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 981980   | 48.654   | ug/l   | 100      |
| 85) sec-Butylbenzene           | 13.17 | 105  | 1097319  | 47.808   | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 972013   | 49.150   | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 499159   | 48.782   | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 481671   | 49.447   | ug/l   | 99       |
| 89) n-Butylbenzene             | 13.61 | 91   | 822863   | 52.063   | ug/l   | 100      |
| 90) Hexachloroethane           | 13.87 | 117  | 162890   | 49.033   | ug/l   | 100      |
| 91) 1,2-Dichlorobenzene        | 13.65 | 146  | 487200   | 48.495   | ug/l   | 100      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 41602    | 47.848   | ug/l   | 98       |

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| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 14.91 | 180  | 262156   | 49.962 | ug/l  | 100      |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 155877   | 46.378 | ug/l  | 97       |
| 95) Naphthalene            | 15.13 | 128  | 584731   | 51.297 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.31 | 180  | 253094   | 54.860 | ug/l  | 97       |

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

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