

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN072518\  
 Data File : VN050049.D  
 Acq On : 25 Jul 2018 17:41  
 Operator : MD\SY  
 Sample : VSTDCCC050  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 16 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC050

Manual Integrations  
 APPROVED

MMDadoda  
 7/26/2018 3:54:42 PM

Quant Time: Jul 26 07:03:34 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N072418W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Jul 24 06:27:04 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.67  | 168  | 742187   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.59  | 114  | 1050552  | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.41 | 117  | 980238   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.35 | 152  | 532702   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |         |      |
|---------------------------|--------|-----|----------|-------|---------|------|
| 33) 1,2-Dichloroethane-d4 | 8.03   | 65  | 502078   | 48.49 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 96.98%  |      |
| 35) Dibromofluoromethane  | 7.59   | 113 | 440615   | 51.37 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 102.74% |      |
| 50) Toluene-d8            | 10.09  | 98  | 1659925  | 52.64 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 105.28% |      |
| 62) 4-Bromofluorobenzene  | 12.40  | 95  | 566270   | 54.54 | ug/l    | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 109.08% |      |

## Target Compounds

|                               |      |     |         |        |      | Qvalue |
|-------------------------------|------|-----|---------|--------|------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 548687  | 51.45  | ug/l | 99     |
| 3) Chloromethane              | 2.06 | 50  | 530793  | 45.79  | ug/l | 99     |
| 4) Vinyl Chloride             | 2.18 | 62  | 572345  | 46.89  | ug/l | 97     |
| 5) Bromomethane               | 2.55 | 94  | 348255  | 51.40  | ug/l | 99     |
| 6) Chloroethane               | 2.69 | 64  | 333632  | 45.51  | ug/l | 100    |
| 7) Trichlorofluoromethane     | 3.00 | 101 | 761752  | 48.17  | ug/l | 99     |
| 8) Diethyl Ether              | 3.41 | 74  | 258949  | 49.12  | ug/l | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.75 | 101 | 454959  | 47.84  | ug/l | 99     |
| 10) Methyl Iodide             | 3.95 | 142 | 606960  | 49.73  | ug/l | 99     |
| 11) Tert butyl alcohol        | 4.80 | 59  | 189894  | 249.23 | ug/l | 100    |
| 12) 1,1-Dichloroethene        | 3.73 | 96  | 411290  | 48.08  | ug/l | 98     |
| 13) Acrolein                  | 3.61 | 56  | 114083  | 186.36 | ug/l | 96     |
| 14) Allyl chloride            | 4.32 | 41  | 653557  | 49.27  | ug/l | 99     |
| 15) Acrylonitrile             | 4.99 | 53  | 829127  | 249.42 | ug/l | 99     |
| 16) Acetone                   | 3.82 | 43  | 633335  | 259.82 | ug/l | 99     |
| 17) Carbon Disulfide          | 4.05 | 76  | 1217077 | 46.44  | ug/l | 99     |
| 18) Methyl Acetate            | 4.33 | 43  | 495092  | 52.26  | ug/l | 99     |
| 19) Methyl tert-butyl Ether   | 5.05 | 73  | 1195098 | 52.43  | ug/l | 99     |
| 20) Methylene Chloride        | 4.55 | 84  | 465550  | 50.72  | ug/l | 99     |
| 21) trans-1,2-Dichloroethene  | 5.04 | 96  | 443855  | 48.97  | ug/l | 97     |
| 22) Diisopropyl ether         | 5.95 | 45  | 1393433 | 52.98  | ug/l | 98     |
| 23) Vinyl Acetate             | 5.90 | 43  | 4863870 | 261.70 | ug/l | 100    |
| 24) 1,1-Dichloroethane        | 5.85 | 63  | 822333  | 47.82  | ug/l | 99     |
| 25) 2-Butanone                | 6.84 | 43  | 1000178 | 253.22 | ug/l | 99     |
| 26) 2,2-Dichloropropane       | 6.83 | 77  | 656992  | 50.22  | ug/l | 99     |
| 27) cis-1,2-Dichloroethene    | 6.83 | 96  | 494933  | 50.72  | ug/l | 100    |
| 28) Bromochloromethane        | 7.19 | 49  | 389491  | 49.65  | ug/l | 100    |
| 29) Tetrahydrofuran           | 7.22 | 42  | 660079  | 258.62 | ug/l | 100    |
| 30) Chloroform                | 7.37 | 83  | 846429  | 48.23  | ug/l | 100    |
| 31) Cyclohexane               | 7.65 | 56  | 701547  | 49.19  | ug/l | 97     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 721866  | 48.09  | ug/l | 100    |
| 36) 1,1-Dichloropropene       | 7.79 | 75  | 636773  | 53.80  | ug/l | 100    |
| 37) Ethyl Acetate             | 6.93 | 43  | 430133  | 52.12  | ug/l | 99     |
| 38) Carbon Tetrachloride      | 7.77 | 117 | 651494  | 51.88  | ug/l | 99     |

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Quant Time: Jul 26 07:03:34 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\82N072418W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Jul 24 06:27:04 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 9.08  | 83   | 687099   | 56.43   | ug/l   | 99       |
| 40) Benzene                    | 8.04  | 78   | 1894506  | 52.60   | ug/l   | 100      |
| 41) Methacrylonitrile          | 7.18  | 41   | 194242   | 45.46   | ug/l   | 97       |
| 42) 1,2-Dichloroethane         | 8.13  | 62   | 621334   | 51.71   | ug/l   | 100      |
| 43) Isopropyl Acetate          | 8.17  | 43   | 792391   | 50.98   | ug/l   | 98       |
| 44) Trichloroethene            | 8.84  | 130  | 497612   | 51.42   | ug/l   | 98       |
| 45) 1,2-Dichloropropane        | 9.12  | 63   | 496280   | 52.02   | ug/l   | 97       |
| 46) Dibromomethane             | 9.21  | 93   | 309833   | 52.31   | ug/l   | 99       |
| 47) Bromodichloromethane       | 9.40  | 83   | 646759   | 51.73   | ug/l   | 98       |
| 48) Methyl methacrylate        | 9.20  | 41   | 391409   | 55.07   | ug/l   | 98       |
| 49) 1,4-Dioxane                | 9.20  | 88   | 110001   | 1137.34 | ug/l   | 97       |
| 51) 4-Methyl-2-Pentanone       | 9.99  | 43   | 2247467  | 277.05  | ug/l   | 100      |
| 52) Toluene                    | 10.16 | 92   | 1178858  | 55.45   | ug/l   | 100      |
| 53) t-1,3-Dichloropropene      | 10.38 | 75   | 654146   | 55.45   | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 9.84  | 75   | 739365   | 54.84   | ug/l   | 99       |
| 55) 1,1,2-Trichloroethane      | 10.56 | 97   | 442852   | 52.52   | ug/l   | 99       |
| 56) Ethyl methacrylate         | 10.43 | 69   | 583002   | 50.99   | ug/l   | 100      |
| 57) 1,3-Dichloropropane        | 10.71 | 76   | 737062   | 53.68   | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 9.70  | 63   | 1336832  | 250.47  | ug/l   | 100      |
| 59) 2-Hexanone                 | 10.75 | 43   | 1537506  | 257.77  | ug/l   | 99       |
| 60) Dibromochloromethane       | 10.90 | 129  | 509963   | 54.62   | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 11.01 | 107  | 442164   | 52.85   | ug/l   | 98       |
| 64) Tetrachloroethene          | 10.63 | 164  | 482346   | 51.18   | ug/l   | 99       |
| 65) Chlorobenzene              | 11.44 | 112  | 1265801  | 51.12   | ug/l   | 100      |
| 66) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 486394   | 51.13   | ug/l   | 100      |
| 67) Ethyl Benzene              | 11.51 | 91   | 2214164  | 55.67   | ug/l   | 100      |
| 68) m/p-Xylenes                | 11.62 | 106  | 1716967  | 114.13  | ug/l   | 100      |
| 69) o-Xylene                   | 11.95 | 106  | 818233   | 57.05   | ug/l   | 99       |
| 70) Styrene                    | 11.97 | 104  | 1334677  | 52.28   | ug/l   | 99       |
| 71) Bromoform                  | 12.13 | 173  | 362798   | 52.42   | ug/l # | 100      |
| 73) Isopropylbenzene           | 12.25 | 105  | 2186010  | 52.91   | ug/l   | 100      |
| 74) N-amyl acetate             | 12.07 | 43   | 659060   | 52.20   | ug/l   | 100      |
| 75) 1,1,2,2-Tetrachloroethane  | 12.51 | 83   | 582131   | 52.86   | ug/l   | 99       |
| 76) 1,2,3-Trichloropropane     | 12.55 | 75   | 504984m  | 51.01   | ug/l   |          |
| 77) Bromobenzene               | 12.53 | 156  | 563592   | 49.22   | ug/l   | 99       |
| 78) n-propylbenzene            | 12.59 | 91   | 2536581  | 54.93   | ug/l   | 100      |
| 79) 2-Chlorotoluene            | 12.68 | 91   | 1497426  | 52.32   | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 1816949  | 55.91   | ug/l   | 100      |
| 81) trans-1,4-Dichloro-2-buten | 12.30 | 75   | 167151   | 53.55   | ug/l   | 99       |
| 82) 4-Chlorotoluene            | 12.78 | 91   | 1528386  | 53.92   | ug/l   | 100      |
| 83) tert-Butylbenzene          | 13.00 | 119  | 1549652  | 54.64   | ug/l   | 100      |
| 84) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 1870537  | 57.11   | ug/l   | 99       |
| 85) sec-Butylbenzene           | 13.17 | 105  | 2100843  | 55.44   | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 13.29 | 119  | 1851228  | 57.98   | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 13.28 | 146  | 999161   | 51.47   | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 13.36 | 146  | 979478   | 51.77   | ug/l   | 100      |
| 89) n-Butylbenzene             | 13.62 | 91   | 1530276  | 58.28   | ug/l   | 100      |
| 90) Hexachloroethane           | 13.88 | 117  | 337344   | 47.58   | ug/l   | 100      |
| 91) 1,2-Dichlorobenzene        | 13.66 | 146  | 980154   | 50.51   | ug/l   | 100      |
| 92) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 93616    | 50.87   | 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  | 510944   | 49.67 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 15.01 | 225  | 313975   | 52.86 | ug/l  | 99       |
| 95) Naphthalene            | 15.14 | 128  | 1133201  | 46.88 | ug/l  | 100      |
| 96) 1,2,3-Trichlorobenzene | 15.32 | 180  | 507219   | 50.58 | ug/l  | 100      |

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

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