

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX092618\  
 Data File : VX004723.D  
 Acq On : 26 Sep 2018 12:25  
 Operator : JC/MD  
 Sample : VSTDIC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC020

Manual Integrations  
 APPROVED

MMDadoda  
 10/1/2018 1:30:58 PM

Quant Time: Sep 26 13:30:33 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X092618W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Sep 26 13:18:49 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 325159   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.86  | 114  | 472295   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 392694   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 214026   | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |      |
|---------------------------|--------|-----|----------|-------|--------|------|
| 33) 1,2-Dichloroethane-d4 | 6.07   | 65  | 91776    | 18.48 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 36.96% |      |
| 35) Dibromofluoromethane  | 5.50   | 113 | 71929    | 17.15 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 34.30% |      |
| 50) Toluene-d8            | 8.71   | 98  | 260407   | 20.84 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 41.68% |      |
| 62) 4-Bromofluorobenzene  | 11.14  | 95  | 82775    | 18.39 | ug/l   | 0.00 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 36.78% |      |

## Target Compounds

|                               |      |     |         |         |        | Qvalue |
|-------------------------------|------|-----|---------|---------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 90359   | 17.316  | ug/l   | 98     |
| 3) Chloromethane              | 1.32 | 50  | 106032  | 18.437  | ug/l   | 98     |
| 4) Vinyl Chloride             | 1.40 | 62  | 97112   | 17.974  | ug/l   | 95     |
| 5) Bromomethane               | 1.64 | 94  | 58668   | 18.897  | ug/l   | 99     |
| 6) Chloroethane               | 1.72 | 64  | 61997   | 20.979  | ug/l   | 100    |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 129418  | 18.713  | ug/l   | 98     |
| 8) Diethyl Ether              | 2.19 | 74  | 46068   | 17.496  | ug/l   | 82     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.38 | 101 | 66023   | 19.153  | ug/l   | 98     |
| 10) Methyl Iodide             | 2.51 | 142 | 93298   | 16.710  | ug/l   | 97     |
| 11) Tert butyl alcohol        | 3.07 | 59  | 124766  | 94.860  | ug/l   | 100    |
| 12) 1,1-Dichloroethene        | 2.37 | 96  | 69424   | 20.357  | ug/l   | 98     |
| 13) Acrolein                  | 2.29 | 56  | 93028   | 102.942 | ug/l   | 95     |
| 14) Allyl chloride            | 2.73 | 41  | 138941  | 17.495  | ug/l   | 99     |
| 15) Acrylonitrile             | 3.15 | 53  | 257793  | 86.069  | ug/l   | 90     |
| 16) Acetone                   | 2.45 | 43  | 266591  | 94.362  | ug/l   | 94     |
| 17) Carbon Disulfide          | 2.57 | 76  | 204086  | 18.751  | ug/l   | 99     |
| 18) Methyl Acetate            | 2.78 | 43  | 128366  | 18.660  | ug/l   | 93     |
| 19) Methyl tert-butyl Ether   | 3.20 | 73  | 242286  | 20.203  | ug/l   | 99     |
| 20) Methylene Chloride        | 2.85 | 84  | 74114   | 16.549  | ug/l # | 84     |
| 21) trans-1,2-Dichloroethene  | 3.17 | 96  | 67838   | 16.910  | ug/l   | 98     |
| 22) Diisopropyl ether         | 3.87 | 45  | 239105  | 17.859  | ug/l   | 95     |
| 23) Vinyl Acetate             | 3.82 | 43  | 1140815 | 89.811  | ug/l   | 96     |
| 24) 1,1-Dichloroethane        | 3.70 | 63  | 135571  | 16.805  | ug/l   | 99     |
| 25) 2-Butanone                | 4.70 | 43  | 395961  | 96.404  | ug/l   | 96     |
| 26) 2,2-Dichloropropane       | 4.58 | 77  | 102170  | 19.063  | ug/l   | 98     |
| 27) cis-1,2-Dichloroethene    | 4.60 | 96  | 82940   | 18.537  | ug/l   | 98     |
| 28) Bromochloromethane        | 5.01 | 49  | 71615   | 20.228  | ug/l   | 94     |
| 29) Tetrahydrofuran           | 5.16 | 42  | 232257  | 87.544  | ug/l   | 98     |
| 30) Chloroform                | 5.21 | 83  | 141710  | 20.199  | ug/l   | 98     |
| 31) Cyclohexane               | 5.57 | 56  | 110705  | 16.749  | ug/l   | 91     |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97  | 116548  | 19.439  | ug/l   | 96     |
| 36) 1,1-Dichloropropene       | 5.80 | 75  | 99857   | 18.766  | ug/l   | 96     |
| 37) Ethyl Acetate             | 4.86 | 43  | 129498  | 17.807  | ug/l   | 98     |
| 38) Carbon Tetrachloride      | 5.78 | 117 | 104408  | 18.605  | ug/l   | 98     |

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 Operator : JC/MD  
 Sample : VSTDIC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC020

Manual Integrations  
 APPROVED

MMDadoda  
 10/1/2018 1:30:58 PM

Quant Time: Sep 26 13:30:33 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X092618W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Sep 26 13:18:49 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 7.46  | 83   | 93807    | 17.196  | ug/l   | 91       |
| 40) Benzene                    | 6.14  | 78   | 334983   | 20.438  | ug/l   | 94       |
| 41) Methacrylonitrile          | 5.06  | 41   | 75649    | 18.062  | ug/l   | 96       |
| 42) 1,2-Dichloroethane         | 6.20  | 62   | 107129   | 18.214  | ug/l   | 96       |
| 43) Isopropyl Acetate          | 6.46  | 43   | 185652   | 16.576  | ug/l   | 97       |
| 44) Trichloroethene            | 7.21  | 130  | 71507    | 18.729  | ug/l   | 81       |
| 45) 1,2-Dichloropropane        | 7.52  | 63   | 73978    | 18.866  | ug/l   | 98       |
| 46) Dibromomethane             | 7.66  | 93   | 47572    | 19.462  | ug/l   | 98       |
| 47) Bromodichloromethane       | 7.90  | 83   | 90903    | 19.420  | ug/l   | 85       |
| 48) Methyl methacrylate        | 7.77  | 41   | 84297    | 17.445  | ug/l   | 94       |
| 49) 1,4-Dioxane                | 7.76  | 88   | 40419    | 333.402 | ug/l   | 89       |
| 51) 4-Methyl-2-Pentanone       | 8.65  | 43   | 603248   | 91.047  | ug/l   | 96       |
| 52) Toluene                    | 8.79  | 92   | 192130   | 20.391  | ug/l   | 94       |
| 53) t-1,3-Dichloropropene      | 9.04  | 75   | 109724   | 18.616  | ug/l   | 99       |
| 54) cis-1,3-Dichloropropene    | 8.44  | 75   | 105476   | 18.280  | ug/l   | 93       |
| 55) 1,1,2-Trichloroethane      | 9.22  | 97   | 77717    | 18.900  | ug/l   | 96       |
| 56) Ethyl methacrylate         | 9.18  | 69   | 116219   | 18.569  | ug/l   | 98       |
| 57) 1,3-Dichloropropane        | 9.37  | 76   | 132215   | 18.799  | ug/l   | 96       |
| 58) 2-Chloroethyl Vinyl ether  | 8.32  | 63   | 288146   | 86.131  | ug/l   | 96       |
| 59) 2-Hexanone                 | 9.50  | 43   | 520812   | 88.046  | ug/l   | 97       |
| 60) Dibromochloromethane       | 9.59  | 129  | 75167    | 16.731  | ug/l   | 100      |
| 61) 1,2-Dibromoethane          | 9.67  | 107  | 83616    | 17.909  | ug/l   | 97       |
| 64) Tetrachloroethene          | 9.34  | 164  | 81829    | 20.794  | ug/l   | 90       |
| 65) Chlorobenzene              | 10.14 | 112  | 205041   | 20.761  | ug/l   | 97       |
| 66) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 67537    | 19.578  | ug/l   | 96       |
| 67) Ethyl Benzene              | 10.26 | 91   | 318648   | 20.175  | ug/l   | 99       |
| 68) m/p-Xylenes                | 10.36 | 106  | 266005   | 41.170  | ug/l   | 99       |
| 69) o-Xylene                   | 10.70 | 106  | 110850   | 18.962  | ug/l   | 99       |
| 70) Styrene                    | 10.71 | 104  | 194547   | 19.448  | ug/l   | 98       |
| 71) Bromoform                  | 10.86 | 173  | 53356    | 17.218  | ug/l # | 99       |
| 73) Isopropylbenzene           | 11.02 | 105  | 294795   | 19.595  | ug/l   | 97       |
| 74) N-amyl acetate             | 10.90 | 43   | 136496   | 18.575  | ug/l   | 93       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 110491   | 20.416  | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 11.30 | 75   | 97726m   | 19.706  | ug/l   |          |
| 77) Bromobenzene               | 11.26 | 156  | 84132    | 20.604  | ug/l   | 93       |
| 78) n-propylbenzene            | 11.36 | 91   | 332479   | 19.112  | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 11.42 | 91   | 206593   | 19.785  | ug/l   | 98       |
| 80) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 247941   | 19.136  | ug/l   | 98       |
| 81) trans-1,4-Dichloro-2-buten | 11.07 | 75   | 35435    | 21.508  | ug/l   | 91       |
| 82) 4-Chlorotoluene            | 11.51 | 91   | 241612   | 19.454  | ug/l   | 100      |
| 83) tert-Butylbenzene          | 11.77 | 119  | 233254   | 18.921  | ug/l   | 98       |
| 84) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 258189   | 19.368  | ug/l   | 98       |
| 85) sec-Butylbenzene           | 11.94 | 105  | 286415   | 19.090  | ug/l   | 99       |
| 86) p-Isopropyltoluene         | 12.07 | 119  | 260672   | 19.117  | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 12.02 | 146  | 146595   | 19.369  | ug/l   | 99       |
| 88) 1,4-Dichlorobenzene        | 12.10 | 146  | 150118   | 19.541  | ug/l   | 98       |
| 89) n-Butylbenzene             | 12.39 | 91   | 224373   | 18.292  | ug/l   | 97       |
| 90) Hexachloroethane           | 12.60 | 117  | 39042    | 19.123  | ug/l   | 99       |
| 91) 1,2-Dichlorobenzene        | 12.40 | 146  | 150144   | 19.421  | ug/l   | 99       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 23862    | 19.582  | ug/l   | 93       |

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Data File : VX004723.D  
Acq On : 26 Sep 2018 12:25  
Operator : JC/MD  
Sample : VSTDICC020  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 4 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
VSTDICC020

Manual Integrations  
APPROVED

MMDadoda  
10/1/2018 1:30:58 PM

Quant Time: Sep 26 13:30:33 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X092618W.M  
Quant Title : SW846 8260  
QLast Update : Wed Sep 26 13:18:49 2018  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|----------------------------|-------|------|----------|--------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 13.65 | 180  | 106759   | 18.790 | ug/l  | 98       |
| 94) Hexachlorobutadiene    | 13.79 | 225  | 53273    | 19.537 | ug/l  | 96       |
| 95) Naphthalene            | 13.83 | 128  | 327908   | 17.993 | ug/l  | 99       |
| 96) 1,2,3-Trichlorobenzene | 14.02 | 180  | 110031   | 18.794 | ug/l  | 99       |

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

