

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX042919\  
 Data File : VX009201.D  
 Acq On : 29 Apr 2019 12:10  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 4/30/2019 11:03:22 AM

Quant Time: Apr 30 06:54:50 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Apr 30 06:38:58 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.66  | 168  | 196213   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.85  | 114  | 317418   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.11 | 117  | 282027   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 133541   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 6.06  | 65   | 14466    | 5.20 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =    | 10.40% |          |
| 35) Dibromofluoromethane    | 5.50  | 113  | 10580    | 5.17 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =    | 10.34% |          |
| 50) Toluene-d8              | 8.71  | 98   | 40780    | 4.99 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =    | 9.98%  |          |
| 62) 4-Bromofluorobenzene    | 11.13 | 95   | 13875    | 4.79 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =    | 9.58%  |          |

| Target Compounds              | R.T. | QIon | Response | Conc   | Units  | Qvalue |
|-------------------------------|------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85   | 8228     | 3.781  | ug/l   | 98     |
| 3) Chloromethane              | 1.32 | 50   | 11537    | 4.209  | ug/l   | 99     |
| 4) Vinyl Chloride             | 1.41 | 62   | 11430    | 4.296  | ug/l   | 93     |
| 5) Bromomethane               | 1.64 | 94   | 7166     | 4.132  | ug/l   | 93     |
| 6) Chloroethane               | 1.71 | 64   | 7327     | 4.640  | ug/l   | 93     |
| 7) Trichlorofluoromethane     | 1.92 | 101  | 13991    | 4.476  | ug/l   | 96     |
| 8) Diethyl Ether              | 2.19 | 74   | 6830     | 4.749  | ug/l   | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101  | 9121     | 4.555  | ug/l   | 98     |
| 10) Methyl Iodide             | 2.51 | 142  | 6111     | 3.083  | ug/l   | 99     |
| 11) Tert butyl alcohol        | 3.05 | 59   | 16227    | 26.270 | ug/l   | 96     |
| 12) 1,1-Dichloroethene        | 2.37 | 96   | 8663     | 4.160  | ug/l   | 96     |
| 13) Acrolein                  | 2.29 | 56   | 14662    | 27.556 | ug/l   | 99     |
| 14) Allyl chloride            | 2.73 | 41   | 21130    | 4.629  | ug/l   | 99     |
| 15) Acrylonitrile             | 3.14 | 53   | 38355    | 24.729 | ug/l   | 97     |
| 16) Acetone                   | 2.45 | 43   | 35609    | 24.897 | ug/l   | 96     |
| 17) Carbon Disulfide          | 2.57 | 76   | 21342    | 3.326  | ug/l   | 100    |
| 18) Methyl Acetate            | 2.78 | 43   | 18284    | 5.113  | ug/l   | 99     |
| 19) Methyl tert-butyl Ether   | 3.20 | 73   | 35219    | 4.715  | ug/l   | 99     |
| 20) Methylene Chloride        | 2.85 | 84   | 11237    | 4.582  | ug/l   | 97     |
| 21) trans-1,2-Dichloroethene  | 3.16 | 96   | 9583     | 4.310  | ug/l   | 91     |
| 22) Diisopropyl ether         | 3.85 | 45   | 42780    | 4.803  | ug/l   | 95     |
| 23) Vinyl Acetate             | 3.81 | 43   | 176634   | 22.685 | ug/l   | 99     |
| 24) 1,1-Dichloroethane        | 3.69 | 63   | 21377    | 4.792  | ug/l   | 98     |
| 25) 2-Butanone                | 4.68 | 43   | 54888    | 24.045 | ug/l   | 95     |
| 26) 2,2-Dichloropropane       | 4.58 | 77   | 15336    | 4.584  | ug/l   | 99     |
| 27) cis-1,2-Dichloroethene    | 4.59 | 96   | 11817    | 4.663  | ug/l   | 99     |
| 28) Bromochloromethane        | 5.01 | 49   | 10664    | 5.085  | ug/l   | 98     |
| 29) Tetrahydrofuran           | 5.13 | 42   | 35824    | 23.470 | ug/l   | 98     |
| 30) Chloroform                | 5.21 | 83   | 19512    | 4.885  | ug/l   | 97     |
| 31) Cyclohexane               | 5.57 | 56   | 19107    | 4.379  | ug/l   | 96     |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97   | 15254    | 4.613  | ug/l   | 98     |
| 36) 1,1-Dichloropropene       | 5.80 | 75   | 14043    | 4.318  | ug/l   | 96     |
| 37) Ethyl Acetate             | 4.84 | 43   | 20179    | 4.820  | ug/l # | 91     |
| 38) Carbon Tetrachloride      | 5.78 | 117  | 12652    | 4.567  | ug/l   | 96     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\WX042919\  
 Data File : VX009201.D  
 Acq On : 29 Apr 2019 12:10  
 Operator : JC/SP  
 Sample : VSTDIC005  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC005

Manual Integrations  
 APPROVED

MMDadoda  
 4/30/2019 11:03:22 AM

Quant Time: Apr 30 06:54:50 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
 Quant Title : SW846 8260  
 QLast Update : Tue Apr 30 06:38:58 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 39) Methylcyclohexane          | 7.46  | 83   | 16753    | 4.236   | ug/l   | 97       |
| 40) Benzene                    | 6.14  | 78   | 44518    | 4.624   | ug/l   | 97       |
| 41) Methacrylonitrile          | 5.04  | 41   | 11947    | 4.946   | ug/l   | 95       |
| 42) 1,2-Dichloroethane         | 6.19  | 62   | 15843    | 4.645   | ug/l   | 99       |
| 43) Isopropyl Acetate          | 6.44  | 43   | 31801    | 4.696   | ug/l   | 99       |
| 44) Trichloroethene            | 7.21  | 130  | 10674    | 4.531   | ug/l   | 90       |
| 45) 1,2-Dichloropropane        | 7.51  | 63   | 12417    | 4.642   | ug/l   | 98       |
| 46) Dibromomethane             | 7.66  | 93   | 7236     | 4.653   | ug/l   | 99       |
| 47) Bromodichloromethane       | 7.90  | 83   | 14069    | 4.603   | ug/l   | 97       |
| 48) Methyl methacrylate        | 7.77  | 41   | 15556    | 4.650   | ug/l   | 98       |
| 49) 1,4-Dioxane                | 7.74  | 88   | 6980     | 109.114 | ug/l   | 98       |
| 51) 4-Methyl-2-Pentanone       | 8.64  | 43   | 108026   | 24.948  | ug/l   | 99       |
| 52) Toluene                    | 8.78  | 92   | 26800    | 4.635   | ug/l   | 99       |
| 53) t-1,3-Dichloropropene      | 9.04  | 75   | 15465    | 4.420   | ug/l   | 98       |
| 54) cis-1,3-Dichloropropene    | 8.43  | 75   | 17025    | 4.330   | ug/l   | 94       |
| 55) 1,1,2-Trichloroethane      | 9.21  | 97   | 11617    | 5.055   | ug/l   | 93       |
| 56) Ethyl methacrylate         | 9.18  | 69   | 19049    | 4.629   | ug/l   | 99       |
| 57) 1,3-Dichloropropane        | 9.37  | 76   | 19981    | 4.899   | ug/l   | 100      |
| 58) 2-Chloroethyl Vinyl ether  | 8.31  | 63   | 50621    | 22.773  | ug/l   | 98       |
| 59) 2-Hexanone                 | 9.49  | 43   | 85169    | 25.380  | ug/l   | 99       |
| 60) Dibromochloromethane       | 9.58  | 129  | 10041    | 4.560   | ug/l   | 96       |
| 61) 1,2-Dibromoethane          | 9.67  | 107  | 10818    | 4.580   | ug/l   | 96       |
| 64) Tetrachloroethene          | 9.34  | 164  | 9720     | 4.588   | ug/l   | 99       |
| 65) Chlorobenzene              | 10.13 | 112  | 28145    | 4.734   | ug/l   | 99       |
| 66) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 10129    | 4.839   | ug/l   | 99       |
| 67) Ethyl Benzene              | 10.25 | 91   | 50793    | 4.679   | ug/l   | 99       |
| 68) m/p-Xylenes                | 10.36 | 106  | 37125    | 9.383   | ug/l   | 99       |
| 69) o-Xylene                   | 10.69 | 106  | 18841    | 4.894   | ug/l   | 99       |
| 70) Styrene                    | 10.71 | 104  | 30988    | 4.634   | ug/l   | 98       |
| 71) Bromoform                  | 10.85 | 173  | 7223     | 4.323   | ug/l # | 96       |
| 73) Isopropylbenzene           | 11.02 | 105  | 48564    | 4.828   | ug/l   | 99       |
| 74) N-amyl acetate             | 10.90 | 43   | 28128    | 4.845   | ug/l   | 98       |
| 75) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 19188    | 5.190   | ug/l   | 98       |
| 76) 1,2,3-Trichloropropane     | 11.29 | 75   | 16362m   | 5.037   | ug/l   |          |
| 77) Bromobenzene               | 11.26 | 156  | 12197    | 4.804   | ug/l   | 100      |
| 78) n-propylbenzene            | 11.36 | 91   | 54280    | 4.711   | ug/l   | 99       |
| 79) 2-Chlorotoluene            | 11.42 | 91   | 35051    | 5.035   | ug/l   | 98       |
| 80) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 40993    | 4.853   | ug/l   | 100      |
| 81) trans-1,4-Dichloro-2-buten | 11.07 | 75   | 5369     | 4.285   | ug/l   | 91       |
| 82) 4-Chlorotoluene            | 11.51 | 91   | 37736    | 4.671   | ug/l   | 99       |
| 83) tert-Butylbenzene          | 11.77 | 119  | 39741    | 4.885   | ug/l   | 99       |
| 84) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 40588    | 4.717   | ug/l   | 99       |
| 85) sec-Butylbenzene           | 11.94 | 105  | 46948    | 4.849   | ug/l   | 100      |
| 86) p-Isopropyltoluene         | 12.06 | 119  | 41976    | 4.719   | ug/l   | 99       |
| 87) 1,3-Dichlorobenzene        | 12.02 | 146  | 21674    | 4.858   | ug/l   | 98       |
| 88) 1,4-Dichlorobenzene        | 12.10 | 146  | 21878    | 4.835   | ug/l   | 94       |
| 89) n-Butylbenzene             | 12.38 | 91   | 35298    | 4.286   | ug/l   | 99       |
| 90) Hexachloroethane           | 12.59 | 117  | 6724     | 4.578   | ug/l   | 99       |
| 91) 1,2-Dichlorobenzene        | 12.39 | 146  | 22155    | 5.004   | ug/l   | 98       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 4156     | 4.914   | ug/l   | 93       |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX042919\  
Data File : VX009201.D  
Acq On : 29 Apr 2019 12:10  
Operator : JC/SP  
Sample : VSTDICC005  
Misc : 5.0mL/MSVOA X/WATER  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
MSVOA\_X  
ClientSampleId :  
VSTDICC005

Manual Integrations  
APPROVED

MMDadoda  
4/30/2019 11:03:22 AM

Quant Time: Apr 30 06:54:50 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X042919W.M  
Quant Title : SW846 8260  
QLast Update : Tue Apr 30 06:38:58 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 93) 1,2,4-Trichlorobenzene | 13.65 | 180  | 14231    | 4.476 | ug/l  | 97       |
| 94) Hexachlorobutadiene    | 13.78 | 225  | 7616     | 4.801 | ug/l  | 98       |
| 95) Naphthalene            | 13.83 | 128  | 45983    | 4.499 | ug/l  | 98       |
| 96) 1,2,3-Trichlorobenzene | 14.02 | 180  | 14587    | 4.629 | ug/l  | 98       |

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

