

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX050418\  
 Data File : VX001396.D  
 Acq On : 04 May 2018 14:22  
 Operator : JC/MD  
 Sample : VX0504WBS01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX0504WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 5/7/2018 7:28:01 PM

Quant Time: May 05 05:55:47 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X043018W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue May 01 09:17:40 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.03  | 128  | 29405    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 158880   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 149507   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 63951    | 30.15    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 100.50% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 70971    | 28.33    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 94.43%  |
| 63) Toluene-d8            | 8.72   | 98    | 193012   | 30.10    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.33% |

## Target Compounds

|                               |      |     |        |         | Ovalue     |
|-------------------------------|------|-----|--------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 34071  | 17.673  | ug/l 99    |
| 3) Chloromethane              | 1.32 | 50  | 31988  | 17.777  | ug/l 96    |
| 4) Vinyl Chloride             | 1.40 | 62  | 35610  | 18.868  | ug/l 100   |
| 5) Bromomethane               | 1.64 | 94  | 27365  | 19.196  | ug/l 96    |
| 6) Chloroethane               | 1.73 | 64  | 23169  | 20.063  | ug/l 99    |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 64812  | 20.672  | ug/l 98    |
| 8) Diethyl Ether              | 2.19 | 74  | 22506  | 20.676  | ug/l 87    |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 36882  | 20.745  | ug/l 93    |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 32377  | 20.101  | ug/l 93    |
| 11) Methyl Iodide             | 2.51 | 142 | 46882  | 23.931  | ug/l 95    |
| 12) Methyl Acetate            | 2.79 | 43  | 57705  | 27.252  | ug/l 97    |
| 13) Acrolein                  | 2.30 | 56  | 12928  | 51.190  | ug/l 99    |
| 14) Acrylonitrile             | 3.15 | 53  | 104124 | 123.543 | ug/l 98    |
| 15) Acetone                   | 2.45 | 58  | 30518  | 116.374 | ug/l 91    |
| 16) Carbon Disulfide          | 2.57 | 76  | 66550  | 15.535  | ug/l 100   |
| 17) Allyl chloride            | 2.73 | 41  | 57313  | 20.052  | ug/l 95    |
| 18) Methylene Chloride        | 2.86 | 84  | 37320  | 21.258  | ug/l 95    |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 33988  | 19.573  | ug/l 91    |
| 20) Diisopropyl ether         | 3.88 | 45  | 114255 | 20.312  | ug/l 97    |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 65580  | 21.695  | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 36928  | 19.043  | ug/l 97    |
| 23) tert-Butyl Alcohol        | 3.09 | 59  | 48567  | 141.005 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 116965 | 21.175  | ug/l 94    |
| 25) Chloroform                | 5.22 | 83  | 62633  | 19.031  | ug/l 99    |
| 26) Cyclohexane               | 5.57 | 56  | 46385  | 16.877  | ug/l # 98  |
| 29) 1,1-Dichloropropene       | 5.81 | 75  | 42019  | 17.851  | ug/l 98    |
| 30) 2-Butanone                | 4.72 | 43  | 139200 | 115.401 | ug/l 97    |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 44144  | 17.178  | ug/l 98    |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 53598  | 18.819  | ug/l 98    |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 46795  | 18.229  | ug/l 97    |
| 34) Benzene                   | 6.15 | 78  | 133717 | 19.171  | ug/l # 91  |
| 35) Methacrylonitrile         | 5.08 | 41  | 27872  | 20.823  | ug/l 91    |
| 36) 1,2-Dichloroethane        | 6.21 | 62  | 51602  | 19.276  | ug/l 98    |
| 37) Trichloroethene           | 7.22 | 130 | 41153  | 19.458  | ug/l 94    |
| 38) Methylcyclohexane         | 7.47 | 83  | 47761  | 17.244  | ug/l 96    |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 33898  | 19.164  | ug/l 97    |
| 40) Dibromomethane            | 7.67 | 93  | 24788  | 19.920  | ug/l 87    |

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Quant Time: May 05 05:55:47 2018  
 Quant Method : W:\HPCHEM1\MSVOA X\METHOD\624X043018W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue May 01 09:17:40 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 41) Bromodichloromethane       | 7.91  | 83   | 42815    | 18.212  | ug/l   | 96       |
| 42) Vinyl Acetate              | 3.84  | 43   | 506280   | 106.702 | ug/l   | 98       |
| 43) Ethyl Acetate              | 4.89  | 43   | 51442    | 22.145  | ug/l   | 97       |
| 44) Isopropyl Acetate          | 6.48  | 43   | 77686    | 19.655  | ug/l   | 98       |
| 45) 1,4-Dioxane                | 7.77  | 88   | 18210    | 506.862 | ug/l   | 93       |
| 46) Methyl methacrylate        | 7.79  | 41   | 41728    | 20.292  | ug/l   | 93       |
| 47) n-amyl Acetate             | 10.91 | 43   | 69443    | 18.308  | ug/l   | 98       |
| 48) t-1,3-Dichloropropene      | 8.45  | 75   | 49374    | 17.841  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 9.05  | 75   | 43219    | 16.304  | ug/l   | 91       |
| 50) 1,1,2-Trichloroethane      | 9.22  | 97   | 37646    | 20.370  | ug/l   | 97       |
| 51) Ethyl methacrylate         | 9.19  | 69   | 49625    | 18.845  | ug/l   | 93       |
| 52) 1,3-Dichloropropane        | 9.38  | 76   | 58453    | 19.567  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.59  | 129  | 36151    | 17.723  | ug/l   | 98       |
| 54) 1,2-Dibromoethane          | 9.68  | 107  | 39447    | 19.942  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 129179   | 100.142 | ug/l   | 99       |
| 56) Bromoform                  | 10.87 | 173  | 29465    | 17.649  | ug/l # | 98       |
| 58) 4-Methyl-2-Pentanone       | 8.66  | 43   | 278922   | 112.405 | ug/l   | 98       |
| 59) 2-Hexanone                 | 9.51  | 43   | 216679   | 112.075 | ug/l   | 97       |
| 61) Tetrachloroethene          | 9.34  | 164  | 50844    | 22.192  | ug/l   | 92       |
| 62) Toluene                    | 8.79  | 91   | 150602   | 18.743  | ug/l   | 98       |
| 64) Chlorobenzene              | 10.15 | 112  | 101384   | 18.702  | ug/l   | 98       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 37410    | 18.900  | ug/l   | 98       |
| 66) Ethyl Benzene              | 10.26 | 91   | 164051   | 18.291  | ug/l   | 98       |
| 67) m/p-Xylenes                | 10.37 | 106  | 129999   | 36.490  | ug/l   | 98       |
| 68) o-Xylene                   | 10.71 | 106  | 63588    | 18.467  | ug/l   | 98       |
| 69) Styrene                    | 10.72 | 104  | 103774   | 18.106  | ug/l   | 100      |
| 70) Isopropylbenzene           | 11.02 | 105  | 173553   | 18.560  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 54018    | 19.695  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 51999m   | 21.184  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 50680    | 18.649  | ug/l   | 93       |
| 74) n-propylbenzene            | 11.37 | 91   | 192454   | 18.222  | ug/l   | 98       |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 116403   | 18.260  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 146818   | 18.427  | ug/l   | 68       |
| 77) t-1,4-Dichloro-2-butene    | 11.08 | 75   | 11758    | 16.100  | ug/l   | 74       |
| 78) 4-Chlorotoluene            | 11.52 | 91   | 133744   | 17.591  | ug/l   | 98       |
| 79) tert-butylbenzene          | 12.07 | 119  | 158943   | 18.643  | ug/l   | 95       |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 149324   | 18.415  | ug/l   | 100      |
| 81) sec-Butylbenzene           | 11.95 | 105  | 174561   | 18.868  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 158943   | 18.643  | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene        | 12.03 | 146  | 90188    | 18.202  | ug/l   | 97       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 89495    | 17.716  | ug/l   | 97       |
| 85) n-Butylbenzene             | 12.40 | 91   | 128110   | 17.377  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 21493    | 16.493  | ug/l   | 66       |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 93016    | 18.879  | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 11326    | 19.759  | ug/l   | 90       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 67011    | 17.950  | ug/l   | 97       |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 37172    | 21.449  | ug/l   | 98       |
| 91) Naphthalene                | 13.84 | 128  | 193334   | 19.961  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 71808    | 19.489  | ug/l   | 98       |

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

