

Data Path : W:\HPCHEM1\MSVOA X\DATA\VX043018\  
 Data File : VX001265.D  
 Acq On : 30 Apr 2018 20:55  
 Operator : JC/MD  
 Sample : VX0430WBS01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 14 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleID :  
 VX0430WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 5/2/2018 11:08:09 AM

Quant Time: May 01 09:28:01 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  | 34299    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 193340   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 179042   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 75102    | 30.36    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 101.20% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 86898    | 28.97    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 96.57%  |
| 63) Toluene-d8            | 8.72   | 98    | 228979   | 29.82    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 99.40%  |

## Target Compounds

|                               |      |     |        |        |        | Ovalue |
|-------------------------------|------|-----|--------|--------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 47031  | 20.91  | ug/l   | 99     |
| 3) Chloromethane              | 1.32 | 50  | 43669  | 20.81  | ug/l   | 99     |
| 4) Vinyl Chloride             | 1.40 | 62  | 47207  | 21.44  | ug/l   | 98     |
| 5) Bromomethane               | 1.65 | 94  | 34709  | 20.87  | ug/l   | 100    |
| 6) Chloroethane               | 1.73 | 64  | 29320  | 21.77  | ug/l   | 99     |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 79156  | 21.64  | ug/l   | 98     |
| 8) Diethyl Ether              | 2.19 | 74  | 27411  | 21.59  | ug/l   | 90     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 43769  | 21.11  | ug/l   | 93     |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 39965  | 21.27  | ug/l   | 95     |
| 11) Methyl Iodide             | 2.51 | 142 | 39713  | 17.38  | ug/l   | 95     |
| 12) Methyl Acetate            | 2.78 | 43  | 59062  | 23.91  | ug/l   | 97     |
| 13) Acrolein                  | 2.29 | 56  | 28904  | 98.12  | ug/l   | 99     |
| 14) Acrylonitrile             | 3.15 | 53  | 115037 | 117.02 | ug/l   | 99     |
| 15) Acetone                   | 2.45 | 58  | 32532  | 106.35 | ug/l   | 94     |
| 16) Carbon Disulfide          | 2.57 | 76  | 97768  | 19.57  | ug/l   | 99     |
| 17) Allyl chloride            | 2.73 | 41  | 70766  | 21.23  | ug/l   | 97     |
| 18) Methylene Chloride        | 2.86 | 84  | 43571  | 21.28  | ug/l   | 97     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 42284  | 20.88  | ug/l   | 94     |
| 20) Diisopropyl ether         | 3.88 | 45  | 130987 | 19.96  | ug/l   | 97     |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 72451  | 20.55  | ug/l   | 98     |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 46709  | 20.65  | ug/l   | 99     |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 51309  | 127.71 | ug/l # | 100    |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 138681 | 21.52  | ug/l   | 94     |
| 25) Chloroform                | 5.23 | 83  | 79357  | 20.67  | ug/l   | 97     |
| 26) Cyclohexane               | 5.59 | 56  | 63848  | 19.92  | ug/l # | 94     |
| 29) 1,1-Dichloropropene       | 5.81 | 75  | 56726  | 19.80  | ug/l   | 99     |
| 30) 2-Butanone                | 4.71 | 43  | 158514 | 107.99 | ug/l # | 94     |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 56105  | 17.94  | ug/l   | 98     |
| 32) 1,1,1-Trichloroethane     | 5.51 | 97  | 67658  | 19.52  | ug/l   | 98     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 59228  | 18.96  | ug/l   | 96     |
| 34) Benzene                   | 6.15 | 78  | 169642 | 19.99  | ug/l   | 94     |
| 35) Methacrylonitrile         | 5.07 | 41  | 34741  | 21.33  | ug/l   | 93     |
| 36) 1,2-Dichloroethane        | 6.21 | 62  | 65456  | 20.09  | ug/l   | 99     |
| 37) Trichloroethene           | 7.22 | 130 | 50903  | 19.78  | ug/l   | 99     |
| 38) Methylcyclohexane         | 7.47 | 83  | 66641  | 19.77  | ug/l   | 96     |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 42290  | 19.65  | ug/l   | 100    |
| 40) Dibromomethane            | 7.67 | 93  | 30447  | 20.11  | ug/l   | 86     |

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 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 14 Sample Multiplier: 1

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Quant Time: May 01 09:28:01 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       | 7.90  | 83   | 53657    | 18.76  | ug/l   | 97       |
| 42) Vinyl Acetate              | 3.83  | 43   | 562822   | 97.48  | ug/l   | 98       |
| 43) Ethyl Acetate              | 4.87  | 43   | 62121    | 21.98  | ug/l   | 97       |
| 44) Isopropyl Acetate          | 6.48  | 43   | 98153    | 20.41  | ug/l   | 98       |
| 45) 1,4-Dioxane                | 7.76  | 88   | 20784    | 475.40 | ug/l   | 97       |
| 46) Methyl methacrylate        | 7.79  | 41   | 50989    | 20.38  | ug/l   | 89       |
| 47) n-amyl Acetate             | 10.90 | 43   | 87295    | 18.91  | ug/l   | 100      |
| 48) t-1,3-Dichloropropene      | 8.44  | 75   | 62339    | 18.51  | ug/l   | 96       |
| 49) cis-1,3-Dichloropropene    | 9.05  | 75   | 56433    | 17.49  | ug/l   | 94       |
| 50) 1,1,2-Trichloroethane      | 9.22  | 97   | 45272    | 20.13  | ug/l   | 95       |
| 51) Ethyl methacrylate         | 9.19  | 69   | 62305    | 19.44  | ug/l   | 92       |
| 52) 1,3-Dichloropropane        | 9.38  | 76   | 73347    | 20.18  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.59  | 129  | 45107    | 18.17  | ug/l   | 98       |
| 54) 1,2-Dibromoethane          | 9.68  | 107  | 48431    | 20.12  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 154963   | 98.72  | ug/l   | 100      |
| 56) Bromoform                  | 10.86 | 173  | 35514    | 17.48  | ug/l # | 95       |
| 58) 4-Methyl-2-Pentanone       | 8.66  | 43   | 325770   | 109.63 | ug/l   | 98       |
| 59) 2-Hexanone                 | 9.50  | 43   | 247772   | 107.02 | ug/l   | 97       |
| 61) Tetrachloroethene          | 9.34  | 164  | 59601    | 21.72  | ug/l   | 90       |
| 62) Toluene                    | 8.79  | 91   | 195875   | 20.36  | ug/l   | 100      |
| 64) Chlorobenzene              | 10.15 | 112  | 129925   | 20.01  | ug/l   | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 45641    | 19.25  | ug/l   | 96       |
| 66) Ethyl Benzene              | 10.26 | 91   | 214979   | 20.01  | ug/l   | 100      |
| 67) m/p-Xylenes                | 10.37 | 106  | 168171   | 39.42  | ug/l   | 99       |
| 68) o-Xylene                   | 10.70 | 106  | 80222    | 19.45  | ug/l   | 98       |
| 69) Styrene                    | 10.72 | 104  | 132541   | 19.31  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 219242   | 19.58  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 66694    | 20.30  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 62484m   | 21.26  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 64228    | 19.74  | ug/l   | 93       |
| 74) n-propylbenzene            | 11.37 | 91   | 251263   | 19.87  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 150784   | 19.75  | ug/l   | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 186789   | 19.58  | ug/l   | 68       |
| 77) t-1,4-Dichloro-2-butene    | 11.08 | 75   | 14161    | 16.19  | ug/l   | 77       |
| 78) 4-Chlorotoluene            | 11.52 | 91   | 174218   | 19.13  | ug/l   | 99       |
| 79) tert-butylbenzene          | 12.07 | 119  | 203556   | 19.94  | ug/l   | 94       |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 193425   | 19.92  | ug/l   | 98       |
| 81) sec-Butylbenzene           | 11.95 | 105  | 223149   | 20.14  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 203556   | 19.94  | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene        | 12.03 | 146  | 115606   | 19.48  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 116265   | 19.22  | ug/l   | 98       |
| 85) n-Butylbenzene             | 12.39 | 91   | 171225   | 19.39  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 27996    | 17.94  | ug/l   | 69       |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 114697   | 19.44  | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 13727    | 20.00  | ug/l   | 93       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 87475    | 19.57  | ug/l   | 98       |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 46060    | 22.19  | ug/l   | 97       |
| 91) Naphthalene                | 13.84 | 128  | 245597   | 21.17  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 90789    | 20.58  | ug/l   | 97       |

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

