

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_X\DATA\VX060818\  
 Data File : VX002395.D  
 Acq On : 08 Jun 2018 11:53  
 Operator : JC/MD  
 Sample : VX0608WBS01  
 Misc : 5.0mL/MSVOA\_X/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX0608WBS01

Manual Integrations  
 APPROVED

MMDadoda  
 6/11/2018 9:30:14 AM

Quant Time: Jun 08 13:13:59 2018

Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\624X052518W.M

Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS

QLast Update : Fri May 25 02:17:15 2018

Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.03  | 128  | 41621    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.87  | 114  | 245657   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.12 | 117  | 236123   | 30.00 | ug/l  | 0.00     |

#### System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 103409   | 31.57    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 105.23% |
| 60) 4-Bromofluorobenzene  | 11.14  | 95    | 117747   | 29.13    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 97.10%  |
| 63) Toluene-d8            | 8.72   | 98    | 296603   | 28.18    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 93.93%  |

#### Target Compounds

|                               |      |     |        |        |        | Qvalue |
|-------------------------------|------|-----|--------|--------|--------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 48772  | 22.07  | ug/l   | 97     |
| 3) Chloromethane              | 1.32 | 50  | 57978  | 22.06  | ug/l   | 100    |
| 4) Vinyl Chloride             | 1.41 | 62  | 63352  | 24.23  | ug/l   | 99     |
| 5) Bromomethane               | 1.64 | 94  | 32924  | 22.48  | ug/l   | 99     |
| 6) Chloroethane               | 1.73 | 64  | 41785  | 27.01  | ug/l   | 100    |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 105473 | 26.45  | ug/l   | 100    |
| 8) Diethyl Ether              | 2.19 | 74  | 37929  | 25.27  | ug/l   | 100    |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 60463  | 28.15  | ug/l   | 99     |
| 10) 1,1-Dichloroethene        | 2.38 | 96  | 53327  | 25.75  | ug/l   | 99     |
| 11) Methyl Iodide             | 2.51 | 142 | 43880  | 13.49  | ug/l   | 98     |
| 12) Methyl Acetate            | 2.78 | 43  | 77254  | 23.02  | ug/l   | 97     |
| 13) Acrolein                  | 2.29 | 56  | 25961  | 90.85  | ug/l   | 99     |
| 14) Acrylonitrile             | 3.15 | 53  | 162799 | 117.89 | ug/l   | 99     |
| 15) Acetone                   | 2.45 | 58  | 51218  | 139.13 | ug/l   | 97     |
| 16) Carbon Disulfide          | 2.57 | 76  | 119366 | 20.19  | ug/l   | 100    |
| 17) Allyl chloride            | 2.73 | 41  | 106801 | 24.99  | ug/l   | 92     |
| 18) Methylene Chloride        | 2.86 | 84  | 61241  | 26.31  | ug/l   | 98     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 56252  | 25.69  | ug/l   | 95     |
| 20) Diisopropyl ether         | 3.87 | 45  | 184798 | 22.65  | ug/l   | 93     |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 113450 | 26.12  | ug/l   | 99     |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 56862  | 21.78  | ug/l # | 78     |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 79712  | 111.29 | ug/l   | 100    |
| 24) Methyl tert-Butyl Ether   | 3.21 | 73  | 199650 | 24.70  | ug/l   | 100    |
| 25) Chloroform                | 5.22 | 83  | 98392  | 21.54  | ug/l   | 97     |
| 26) Cyclohexane               | 5.58 | 56  | 85408  | 21.36  | ug/l # | 98     |
| 29) 1,1-Dichloropropene       | 5.81 | 75  | 70488  | 20.51  | ug/l   | 99     |
| 30) 2-Butanone                | 4.71 | 43  | 215615 | 89.94  | ug/l   | 98     |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 76147  | 25.21  | ug/l   | 100    |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 85308  | 19.00  | ug/l   | 99     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 72766  | 17.84  | ug/l   | 98     |
| 34) Benzene                   | 6.15 | 78  | 214114 | 20.63  | ug/l   | 97     |
| 35) Methacrylonitrile         | 5.07 | 41  | 47223  | 17.79  | ug/l   | 99     |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 85902  | 21.24  | ug/l   | 100    |
| 37) Trichloroethene           | 7.22 | 130 | 59718  | 20.28  | ug/l   | 94     |
| 38) Methylcyclohexane         | 7.46 | 83  | 86710  | 21.62  | ug/l   | 99     |
| 39) 1,2-Dichloropropane       | 7.52 | 63  | 55880  | 19.91  | ug/l   | 97     |
| 40) Dibromomethane            | 7.66 | 93  | 38542  | 20.47  | ug/l   | 99     |

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 6/11/2018 9:30:14 AM

Quant Time: Jun 08 13:13:59 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\624X052518W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri May 25 02:17:15 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| 41) Bromodichloromethane       | 7.90  | 83   | 67045    | 17.17  | ug/l   | 98       |
| 42) Vinyl Acetate              | 3.83  | 43   | 866568   | 114.26 | ug/l   | 100      |
| 43) Ethyl Acetate              | 4.86  | 43   | 82790    | 17.59  | ug/l   | 99       |
| 44) Isopropyl Acetate          | 6.47  | 43   | 133006   | 17.00  | ug/l   | 99       |
| 45) 1,4-Dioxane                | 7.76  | 88   | 26372    | 354.27 | ug/l # | 89       |
| 46) Methyl methacrylate        | 7.78  | 41   | 69527    | 17.55  | ug/l   | 96       |
| 47) n-amyl Acetate             | 10.90 | 43   | 122607   | 17.03  | ug/l # | 90       |
| 48) t-1,3-Dichloropropene      | 8.44  | 75   | 80212    | 18.28  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 9.05  | 75   | 71937    | 16.93  | ug/l   | 97       |
| 50) 1,1,2-Trichloroethane      | 9.22  | 97   | 56807    | 21.02  | ug/l   | 98       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 85985    | 18.36  | ug/l   | 98       |
| 52) 1,3-Dichloropropane        | 9.38  | 76   | 93858    | 20.59  | ug/l   | 99       |
| 53) Dibromochloromethane       | 9.59  | 129  | 52425    | 15.88  | ug/l   | 100      |
| 54) 1,2-Dibromoethane          | 9.68  | 107  | 58175    | 19.88  | ug/l   | 100      |
| 55) 2-Chloroethyl vinyl ether  | 8.32  | 63   | 203999   | 92.83  | ug/l   | 100      |
| 56) Bromoform                  | 10.86 | 173  | 38686    | 13.32  | ug/l   | 99       |
| 58) 4-Methyl-2-Pentanone       | 8.65  | 43   | 439076   | 85.45  | ug/l   | 99       |
| 59) 2-Hexanone                 | 9.50  | 43   | 341453   | 85.63  | ug/l   | 100      |
| 61) Tetrachloroethene          | 9.34  | 164  | 66592    | 18.49  | ug/l   | 98       |
| 62) Toluene                    | 8.79  | 91   | 242967   | 20.15  | ug/l   | 99       |
| 64) Chlorobenzene              | 10.14 | 112  | 158330   | 20.29  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 10.23 | 131  | 56620    | 17.83  | ug/l   | 99       |
| 66) Ethyl Benzene              | 10.26 | 91   | 273418   | 20.17  | ug/l   | 99       |
| 67) m/p-Xylenes                | 10.36 | 106  | 207004   | 40.23  | ug/l   | 100      |
| 68) o-Xylene                   | 10.70 | 106  | 102071   | 19.81  | ug/l   | 100      |
| 69) Styrene                    | 10.71 | 104  | 166572   | 19.26  | ug/l   | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 281373   | 20.40  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 82546    | 19.09  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 82546m   | 20.27  | ug/l   |          |
| 73) Bromobenzene               | 11.26 | 156  | 74158    | 20.01  | ug/l   | 96       |
| 74) n-propylbenzene            | 11.37 | 91   | 318562   | 20.69  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 11.43 | 91   | 189847   | 19.99  | ug/l   | 99       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 233926   | 19.94  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.08 | 75   | 19915    | 13.50  | ug/l   | 80       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 216730   | 20.07  | ug/l   | 99       |
| 79) tert-butylbenzene          | 12.07 | 119  | 254886   | 20.73  | ug/l   | 100      |
| 80) 1,2,4-Trimethylbenzene     | 11.81 | 105  | 239440   | 20.19  | ug/l   | 100      |
| 81) sec-Butylbenzene           | 11.95 | 105  | 288273   | 20.97  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 12.07 | 119  | 254886   | 20.73  | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene        | 12.03 | 146  | 134550   | 20.49  | ug/l   | 99       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 135109   | 20.68  | ug/l   | 99       |
| 85) n-Butylbenzene             | 12.39 | 91   | 212549   | 20.61  | ug/l   | 99       |
| 86) Hexachloroethane           | 12.60 | 117  | 34374    | 14.05  | ug/l   | 100      |
| 87) 1,2-Dichlorobenzene        | 12.40 | 146  | 138937   | 20.55  | ug/l   | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.01 | 75   | 16764    | 13.31  | ug/l   | 98       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 95465    | 19.88  | ug/l   | 98       |
| 90) Hexachlorobutadiene        | 13.79 | 225  | 53505    | 20.94  | ug/l   | 100      |
| 91) Naphthalene                | 13.84 | 128  | 283900   | 18.73  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 100734   | 20.08  | ug/l   | 99       |

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ALS Vial : 5 Sample Multiplier: 1

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QLast Update : Fri May 25 02:17:15 2018  
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|--------------------|------|------|----------|------|-------|----------|
|--------------------|------|------|----------|------|-------|----------|

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

