

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX071919\  
 Data File : VX010986.D  
 Acq On : 19 Jul 2019 02:38  
 Operator : JC/SP  
 Sample : VX0719WBSD01  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 43 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX0719WBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 7/19/2019 3:13:14 PM

Quant Time: Jul 19 03:51:27 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X071919W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jul 19 03:27:28 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 39312    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 215800   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 191335   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.06   | 65    | 78117    | 29.31    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 97.70%  |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 93892    | 29.81    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.37%  |
| 63) Toluene-d8            | 8.71   | 98    | 259570   | 30.86    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 102.87% |

## Target Compounds

|                               |      |     |        |              | Ovalue |
|-------------------------------|------|-----|--------|--------------|--------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 55966  | 21.534 ug/l  | 100    |
| 3) Chloromethane              | 1.33 | 50  | 48584  | 21.258 ug/l  | 96     |
| 4) Vinyl Chloride             | 1.41 | 62  | 49157  | 20.625 ug/l  | 97     |
| 5) Bromomethane               | 1.64 | 94  | 31293  | 23.852 ug/l  | 97     |
| 6) Chloroethane               | 1.73 | 64  | 28942  | 20.526 ug/l  | 90     |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 82342  | 20.803 ug/l  | 95     |
| 8) Diethyl Ether              | 2.19 | 74  | 26836  | 20.645 ug/l  | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 2.38 | 101 | 45833  | 20.950 ug/l  | 98     |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 44314  | 20.156 ug/l  | 95     |
| 11) Methyl Iodide             | 2.51 | 142 | 55017  | 18.635 ug/l  | 98     |
| 12) Methyl Acetate            | 2.78 | 43  | 65127  | 21.091 ug/l  | 99     |
| 13) Acrolein                  | 2.29 | 56  | 35228  | 95.149 ug/l  | 99     |
| 14) Acrylonitrile             | 3.14 | 53  | 122941 | 101.726 ug/l | 98     |
| 15) Acetone                   | 2.45 | 58  | 35115  | 104.343 ug/l | 96     |
| 16) Carbon Disulfide          | 2.57 | 76  | 113722 | 20.130 ug/l  | 99     |
| 17) Allyl chloride            | 2.73 | 41  | 63223  | 19.864 ug/l  | 99     |
| 18) Methylene Chloride        | 2.85 | 84  | 48461  | 19.795 ug/l  | 97     |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 47348  | 20.386 ug/l  | 97     |
| 20) Diisopropyl ether         | 3.85 | 45  | 136451 | 20.307 ug/l  | 97     |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 79255  | 20.496 ug/l  | 100    |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 54031  | 20.227 ug/l  | 99     |
| 23) tert-Butyl Alcohol        | 3.04 | 59  | 63118  | 100.029 ug/l | # 100  |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 143116 | 20.278 ug/l  | 99     |
| 25) Chloroform                | 5.21 | 83  | 84880  | 20.042 ug/l  | 100    |
| 26) Cyclohexane               | 5.58 | 56  | 71330  | 20.159 ug/l  | # 97   |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 61502  | 20.265 ug/l  | 99     |
| 30) 2-Butanone                | 4.67 | 43  | 169141 | 103.251 ug/l | 100    |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 46656  | 17.612 ug/l  | 99     |
| 32) 1,1,1-Trichloroethane     | 5.50 | 97  | 72744  | 19.877 ug/l  | 98     |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 62692  | 19.702 ug/l  | 99     |
| 34) Benzene                   | 6.14 | 78  | 187424 | 20.588 ug/l  | 98     |
| 35) Methacrylonitrile         | 5.04 | 41  | 34700  | 20.348 ug/l  | 98     |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 64136  | 19.704 ug/l  | 99     |
| 37) Trichloroethene           | 7.21 | 130 | 54564  | 20.473 ug/l  | 98     |
| 38) Methylcyclohexane         | 7.46 | 83  | 77987  | 20.362 ug/l  | 100    |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 45876  | 20.161 ug/l  | 98     |
| 40) Dibromomethane            | 7.66 | 93  | 34717  | 20.744 ug/l  | 97     |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.90  | 83   | 59711    | 19.602  | ug/l  | 96       |
| 42) Vinyl Acetate              | 3.82  | 43   | 539958   | 100.045 | ug/l  | 100      |
| 43) Ethyl Acetate              | 4.84  | 43   | 64279    | 20.441  | ug/l  | 98       |
| 44) Isopropyl Acetate          | 6.45  | 43   | 100455   | 19.613  | ug/l  | 99       |
| 45) 1,4-Dioxane                | 7.74  | 88   | 28335    | 425.044 | ug/l  | 95       |
| 46) Methyl methacrylate        | 7.77  | 41   | 49650    | 19.972  | ug/l  | 97       |
| 47) n-amyl Acetate             | 10.90 | 43   | 91532    | 19.926  | ug/l  | 99       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 59590    | 18.562  | ug/l  | 100      |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 68107    | 19.440  | ug/l  | 99       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 50260    | 20.520  | ug/l  | 98       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 74581    | 19.688  | ug/l  | 98       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 79224    | 20.129  | ug/l  | 98       |
| 53) Dibromochloromethane       | 9.58  | 129  | 51255    | 19.376  | ug/l  | 99       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 53723    | 20.183  | ug/l  | 99       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 157489   | 98.177  | ug/l  | 99       |
| 56) Bromoform                  | 10.85 | 173  | 37347    | 18.957  | ug/l  | 97       |
| 58) 4-Methyl-2-Pentanone       | 8.64  | 43   | 336954   | 104.278 | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.49  | 43   | 260564   | 105.379 | ug/l  | 100      |
| 61) Tetrachloroethene          | 9.33  | 164  | 54372    | 21.523  | ug/l  | 94       |
| 62) Toluene                    | 8.78  | 91   | 213342   | 20.989  | ug/l  | 100      |
| 64) Chlorobenzene              | 10.13 | 112  | 135373   | 20.787  | ug/l  | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 48337    | 20.423  | ug/l  | 99       |
| 66) Ethyl Benzene              | 10.25 | 91   | 236538   | 20.672  | ug/l  | 98       |
| 67) m/p-Xylenes                | 10.36 | 106  | 183839   | 41.993  | ug/l  | 99       |
| 68) o-Xylene                   | 10.69 | 106  | 89963    | 20.972  | ug/l  | 99       |
| 69) Styrene                    | 10.71 | 104  | 148299   | 20.567  | ug/l  | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 236553   | 20.709  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 77556    | 21.057  | ug/l  | 100      |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 63935m   | 20.796  | ug/l  |          |
| 73) Bromobenzene               | 11.26 | 156  | 63759    | 20.688  | ug/l  | 99       |
| 74) n-propylbenzene            | 11.36 | 91   | 265909   | 20.684  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 157456   | 20.564  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 198649   | 20.545  | ug/l  | 98       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 18524    | 18.262  | ug/l  | 94       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 179978   | 20.467  | ug/l  | 100      |
| 79) tert-butylbenzene          | 11.77 | 119  | 193152   | 20.596  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 200275   | 20.569  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 231257   | 20.919  | ug/l  | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 212036   | 20.670  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 112974   | 20.764  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 109684   | 20.283  | ug/l  | 98       |
| 85) n-Butylbenzene             | 12.38 | 91   | 177499   | 20.320  | ug/l  | 99       |
| 86) Hexachloroethane           | 12.59 | 117  | 30828    | 19.054  | ug/l  | 99       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 112386   | 21.098  | ug/l  | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 16580    | 20.447  | ug/l  | 97       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 75131    | 20.448  | ug/l  | 99       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 36264    | 20.413  | ug/l  | 99       |
| 91) Naphthalene                | 13.83 | 128  | 237094   | 21.148  | ug/l  | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 77226    | 20.970  | ug/l  | 99       |

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ALS Vial : 43 Sample Multiplier: 1

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| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|--------------------|------|------|----------|------|-------|----------|
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

