

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX121919\  
 Data File : VX014116.D  
 Acq On : 19 Dec 2019 13:04  
 Operator : JC/SP  
 Sample : VX1219WBS02  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleID :  
 VX1219WBS02

Manual Integrations  
 APPROVED

apatel  
 12/20/2019 10:12:47 AM

Quant Time: Dec 20 02:38:57 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X121219W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 13 01:35:34 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.00  | 128  | 90141    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.85  | 114  | 501452   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 452334   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 6.05   | 65    | 191463   | 29.66    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 98.87%  |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 218981   | 29.98    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.93%  |
| 63) Toluene-d8            | 8.71   | 98    | 616089   | 30.47    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 101.57% |

## Target Compounds

|                               |      |     |         |         | Ovalue    |
|-------------------------------|------|-----|---------|---------|-----------|
| 2) Dichlorodifluoromethane    | 1.19 | 85  | 88118   | 19.352  | ug/l 98   |
| 3) Chloromethane              | 1.32 | 50  | 124873  | 19.458  | ug/l 96   |
| 4) Vinyl Chloride             | 1.40 | 62  | 130204  | 19.791  | ug/l 98   |
| 5) Bromomethane               | 1.63 | 94  | 82481   | 17.150  | ug/l 99   |
| 6) Chloroethane               | 1.72 | 64  | 87061   | 21.424  | ug/l 98   |
| 7) Trichlorofluoromethane     | 1.92 | 101 | 166550  | 20.345  | ug/l 99   |
| 8) Diethyl Ether              | 2.18 | 74  | 74238   | 19.729  | ug/l 98   |
| 9) 1,1,2-Trichlorotrifluoroet | 2.37 | 101 | 100134  | 20.509  | ug/l 98   |
| 10) 1,1-Dichloroethene        | 2.36 | 96  | 96607   | 19.139  | ug/l 91   |
| 11) Methyl Iodide             | 2.50 | 142 | 128467  | 19.770  | ug/l 99   |
| 12) Methyl Acetate            | 2.76 | 43  | 150599  | 19.272  | ug/l 99   |
| 13) Acrolein                  | 2.28 | 56  | 99241   | 104.709 | ug/l 99   |
| 14) Acrylonitrile             | 3.12 | 53  | 304506  | 99.680  | ug/l 98   |
| 15) Acetone                   | 2.43 | 58  | 95533   | 106.456 | ug/l 92   |
| 16) Carbon Disulfide          | 2.56 | 76  | 267303  | 19.548  | ug/l 99   |
| 17) Allyl chloride            | 2.72 | 41  | 179681  | 19.810  | ug/l 98   |
| 18) Methylene Chloride        | 2.84 | 84  | 118333  | 19.132  | ug/l 95   |
| 19) trans-1,2-Dichloroethene  | 3.16 | 96  | 107714  | 19.487  | ug/l 95   |
| 20) Diisopropyl ether         | 3.84 | 45  | 368385  | 19.793  | ug/l 90   |
| 21) 1,1-Dichloroethane        | 3.69 | 63  | 196564  | 19.460  | ug/l 100  |
| 22) cis-1,2-Dichloroethene    | 4.59 | 96  | 124286  | 19.396  | ug/l 99   |
| 23) tert-Butyl Alcohol        | 3.02 | 59  | 122258  | 102.035 | ug/l 100  |
| 24) Methyl tert-Butyl Ether   | 3.18 | 73  | 330512  | 19.384  | ug/l 99   |
| 25) Chloroform                | 5.20 | 83  | 188079  | 19.530  | ug/l 99   |
| 26) Cyclohexane               | 5.56 | 56  | 178233  | 19.788  | ug/l # 97 |
| 29) 1,1-Dichloropropene       | 5.79 | 75  | 143521  | 19.814  | ug/l 99   |
| 30) 2-Butanone                | 4.65 | 43  | 438810  | 102.781 | ug/l 100  |
| 31) 2,2-Dichloropropane       | 4.58 | 77  | 153263  | 22.874  | ug/l 98   |
| 32) 1,1,1-Trichloroethane     | 5.48 | 97  | 157981  | 19.719  | ug/l 99   |
| 33) Carbon Tetrachloride      | 5.78 | 117 | 131718  | 19.340  | ug/l 97   |
| 34) Benzene                   | 6.13 | 78  | 445938  | 19.744  | ug/l 98   |
| 35) Methacrylonitrile         | 5.03 | 41  | 88307   | 19.232  | ug/l 95   |
| 36) 1,2-Dichloroethane        | 6.18 | 62  | 150444  | 19.176  | ug/l 100  |
| 37) Trichloroethene           | 7.20 | 130 | 118683  | 19.312  | ug/l 93   |
| 38) Methylcyclohexane         | 7.45 | 83  | 181748  | 21.035  | ug/l 98   |
| 39) 1,2-Dichloropropane       | 7.50 | 63  | 116416m | 19.846  | ug/l      |
| 40) Dibromomethane            | 7.65 | 93  | 74113   | 19.777  | ug/l 99   |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 7.89  | 83   | 140956   | 19.426  | ug/l  | 97       |
| 42) Vinyl Acetate              | 3.80  | 43   | 1555652  | 103.205 | ug/l  | 99       |
| 43) Ethyl Acetate              | 4.82  | 43   | 158775   | 19.381  | ug/l  | 98       |
| 44) Isopropyl Acetate          | 6.43  | 43   | 267136   | 19.469  | ug/l  | 100      |
| 45) 1,4-Dioxane                | 7.73  | 88   | 52466    | 408.329 | ug/l  | 98       |
| 46) Methyl methacrylate        | 7.76  | 41   | 126209   | 18.937  | ug/l  | 96       |
| 47) n-amyl Acetate             | 10.89 | 43   | 221466   | 18.153  | ug/l  | 100      |
| 48) t-1,3-Dichloropropene      | 9.03  | 75   | 153742   | 19.413  | ug/l  | 95       |
| 49) cis-1,3-Dichloropropene    | 8.43  | 75   | 174170   | 19.556  | ug/l  | 99       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 112488   | 19.450  | ug/l  | 99       |
| 51) Ethyl methacrylate         | 9.17  | 69   | 173254   | 18.834  | ug/l  | 96       |
| 52) 1,3-Dichloropropane        | 9.36  | 76   | 190298   | 19.367  | ug/l  | 97       |
| 53) Dibromochloromethane       | 9.57  | 129  | 111410   | 19.265  | ug/l  | 99       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 116622   | 19.585  | ug/l  | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.30  | 63   | 413137   | 101.880 | ug/l  | 100      |
| 56) Bromoform                  | 10.85 | 173  | 80217    | 17.788  | ug/l  | 99       |
| 58) 4-Methyl-2-Pentanone       | 8.63  | 43   | 831409   | 98.236  | ug/l  | 99       |
| 59) 2-Hexanone                 | 9.48  | 43   | 640512   | 99.725  | ug/l  | 100      |
| 61) Tetrachloroethene          | 9.33  | 164  | 122211   | 20.423  | ug/l  | 95       |
| 62) Toluene                    | 8.78  | 91   | 478380   | 19.885  | ug/l  | 100      |
| 64) Chlorobenzene              | 10.13 | 112  | 295816   | 19.627  | ug/l  | 96       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.21 | 131  | 107778   | 19.312  | ug/l  | 99       |
| 66) Ethyl Benzene              | 10.25 | 91   | 522316   | 19.839  | ug/l  | 98       |
| 67) m/p-Xylenes                | 10.36 | 106  | 398718   | 39.617  | ug/l  | 99       |
| 68) o-Xylene                   | 10.70 | 106  | 188612   | 18.917  | ug/l  | 98       |
| 69) Styrene                    | 10.71 | 104  | 319227   | 18.828  | ug/l  | 99       |
| 70) Isopropylbenzene           | 11.01 | 105  | 508475   | 19.735  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 11.26 | 83   | 172277   | 18.855  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 11.29 | 75   | 163654m  | 20.122  | ug/l  |          |
| 73) Bromobenzene               | 11.25 | 156  | 130436   | 18.965  | ug/l  | 100      |
| 74) n-propylbenzene            | 11.35 | 91   | 582558   | 19.935  | ug/l  | 98       |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 343094   | 19.431  | ug/l  | 98       |
| 76) 1,3,5-Trimethylbenzene     | 11.50 | 105  | 420465   | 19.238  | ug/l  | 100      |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 52788    | 19.655  | ug/l  | 94       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 387175   | 19.189  | ug/l  | 99       |
| 79) tert-butylbenzene          | 11.76 | 119  | 404788   | 19.214  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 415973   | 19.034  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 488734   | 19.504  | ug/l  | 99       |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 443542   | 19.614  | ug/l  | 100      |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 230480   | 19.226  | ug/l  | 98       |
| 84) 1,4-Dichlorobenzene        | 12.09 | 146  | 227379   | 19.048  | ug/l  | 99       |
| 85) n-Butylbenzene             | 12.39 | 91   | 373654   | 19.653  | ug/l  | 98       |
| 86) Hexachloroethane           | 12.59 | 117  | 74559    | 18.175  | ug/l  | 99       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 231499   | 19.012  | ug/l  | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 12.99 | 75   | 33536    | 18.415  | ug/l  | 96       |
| 89) 1,2,4-Trichlorobenzene     | 13.64 | 180  | 142333   | 18.289  | ug/l  | 98       |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 71673    | 19.376  | ug/l  | 97       |
| 91) Naphthalene                | 13.83 | 128  | 431929   | 18.466  | ug/l  | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.01 | 180  | 144142   | 18.261  | ug/l  | 99       |

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

