

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX021319\  
 Data File : VX007501.D  
 Acq On : 12 Feb 2019 23:29  
 Operator : JC/SP  
 Sample : VSTDIC050  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VSTDIC050

Manual Integrations  
 APPROVED

MMDadoda  
 2/13/2019 11:52:45 AM

Quant Time: Feb 13 07:55:53 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X021319W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Feb 13 07:08:48 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.02  | 128  | 77982    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 6.86  | 114  | 416106   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 10.11 | 117  | 376111   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 6.07   | 65    | 146603   | 28.69    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 95.63% |
| 60) 4-Bromofluorobenzene  | 11.13  | 95    | 173127   | 29.94    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.80% |
| 63) Toluene-d8            | 8.71   | 98    | 504013   | 29.73    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 99.10% |

## Target Compounds

|                               |      |     |        |         | Ovalue    |
|-------------------------------|------|-----|--------|---------|-----------|
| 2) Dichlorodifluoromethane    | 1.20 | 85  | 195727 | 53.575  | ug/l 100  |
| 3) Chloromethane              | 1.33 | 50  | 213753 | 52.890  | ug/l 98   |
| 4) Vinyl Chloride             | 1.41 | 62  | 239392 | 52.603  | ug/l 98   |
| 5) Bromomethane               | 1.64 | 94  | 219006 | 48.540  | ug/l 98   |
| 6) Chloroethane               | 1.72 | 64  | 153366 | 50.065  | ug/l 94   |
| 7) Trichlorofluoromethane     | 1.93 | 101 | 367804 | 48.437  | ug/l 99   |
| 8) Diethyl Ether              | 2.19 | 74  | 146506 | 50.654  | ug/l 100  |
| 9) 1,1,2-Trichlorotrifluoroet | 2.39 | 101 | 209361 | 47.076  | ug/l 100  |
| 10) 1,1-Dichloroethene        | 2.37 | 96  | 207051 | 50.428  | ug/l 97   |
| 11) Methyl Iodide             | 2.51 | 142 | 315985 | 48.912  | ug/l 100  |
| 12) Methyl Acetate            | 2.78 | 43  | 268498 | 40.326  | ug/l 99   |
| 13) Acrolein                  | 2.30 | 56  | 247154 | 412.091 | ug/l 98   |
| 14) Acrylonitrile             | 3.15 | 53  | 671422 | 258.142 | ug/l 99   |
| 15) Acetone                   | 2.45 | 58  | 181147 | 248.115 | ug/l 91   |
| 16) Carbon Disulfide          | 2.57 | 76  | 566623 | 55.807  | ug/l 100  |
| 17) Allyl chloride            | 2.73 | 41  | 353365 | 49.960  | ug/l 98   |
| 18) Methylene Chloride        | 2.86 | 84  | 233912 | 49.929  | ug/l 97   |
| 19) trans-1,2-Dichloroethene  | 3.17 | 96  | 222916 | 50.369  | ug/l 97   |
| 20) Diisopropyl ether         | 3.87 | 45  | 677412 | 51.198  | ug/l 96   |
| 21) 1,1-Dichloroethane        | 3.70 | 63  | 378818 | 50.405  | ug/l 99   |
| 22) cis-1,2-Dichloroethene    | 4.60 | 96  | 250707 | 51.268  | ug/l 99   |
| 23) tert-Butyl Alcohol        | 3.07 | 59  | 277630 | 255.147 | ug/l 100  |
| 24) Methyl tert-Butyl Ether   | 3.20 | 73  | 715121 | 49.978  | ug/l 99   |
| 25) Chloroform                | 5.21 | 83  | 402991 | 51.641  | ug/l 93   |
| 26) Cyclohexane               | 5.57 | 56  | 325223 | 51.009  | ug/l # 99 |
| 29) 1,1-Dichloropropene       | 5.80 | 75  | 290756 | 52.764  | ug/l 98   |
| 30) 2-Butanone                | 4.70 | 43  | 868714 | 265.543 | ug/l 99   |
| 31) 2,2-Dichloropropane       | 4.59 | 77  | 235108 | 43.827  | ug/l 100  |
| 32) 1,1,1-Trichloroethane     | 5.49 | 97  | 345322 | 52.753  | ug/l 100  |
| 33) Carbon Tetrachloride      | 5.79 | 117 | 302158 | 52.451  | ug/l 97   |
| 34) Benzene                   | 6.15 | 78  | 898993 | 52.703  | ug/l 97   |
| 35) Methacrylonitrile         | 5.06 | 41  | 177011 | 52.752  | ug/l 98   |
| 36) 1,2-Dichloroethane        | 6.20 | 62  | 304135 | 51.812  | ug/l 99   |
| 37) Trichloroethene           | 7.21 | 130 | 258301 | 51.576  | ug/l 99   |
| 38) Methylcyclohexane         | 7.46 | 83  | 336178 | 48.636  | ug/l 99   |
| 39) 1,2-Dichloropropane       | 7.51 | 63  | 224637 | 52.483  | ug/l 98   |
| 40) Dibromomethane            | 7.66 | 93  | 161396 | 52.029  | ug/l 96   |

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| Internal Standards             | R.T.  | QIon | Response | Conc     | Units | Dev(Min) |
|--------------------------------|-------|------|----------|----------|-------|----------|
| -----                          |       |      |          |          |       |          |
| 41) Bromodichloromethane       | 7.90  | 83   | 293366   | 54.028   | ug/l  | 99       |
| 42) Vinyl Acetate              | 3.82  | 43   | 3028930  | 268.266  | ug/l  | 100      |
| 43) Ethyl Acetate              | 4.86  | 43   | 330558m  | 53.458   | ug/l  |          |
| 44) Isopropyl Acetate          | 6.46  | 43   | 510738   | 53.127   | ug/l  | 99       |
| 45) 1,4-Dioxane                | 7.75  | 88   | 120928   | 1046.298 | ug/l  | 99       |
| 46) Methyl methacrylate        | 7.77  | 41   | 261600   | 53.532   | ug/l  | 98       |
| 47) n-amyl Acetate             | 10.90 | 43   | 460357   | 54.664   | ug/l  | 96       |
| 48) t-1,3-Dichloropropene      | 9.04  | 75   | 309871   | 52.977   | ug/l  | 96       |
| 49) cis-1,3-Dichloropropene    | 8.44  | 75   | 340922   | 52.382   | ug/l  | 96       |
| 50) 1,1,2-Trichloroethane      | 9.21  | 97   | 241295   | 52.297   | ug/l  | 95       |
| 51) Ethyl methacrylate         | 9.18  | 69   | 353362   | 53.425   | ug/l  | 96       |
| 52) 1,3-Dichloropropane        | 9.37  | 76   | 383617   | 51.831   | ug/l  | 100      |
| 53) Dibromochloromethane       | 9.59  | 129  | 257977   | 55.204   | ug/l  | 98       |
| 54) 1,2-Dibromoethane          | 9.67  | 107  | 262171   | 52.893   | ug/l  | 98       |
| 55) 2-Chloroethyl vinyl ether  | 8.31  | 63   | 881083   | 247.879  | ug/l  | 99       |
| 56) Bromoform                  | 10.86 | 173  | 196626   | 55.326   | ug/l  | 98       |
| 58) 4-Methyl-2-Pentanone       | 8.65  | 43   | 1703887  | 266.219  | ug/l  | 100      |
| 59) 2-Hexanone                 | 9.49  | 43   | 1296365  | 264.224  | ug/l  | 100      |
| 61) Tetrachloroethene          | 9.34  | 164  | 261572   | 50.117   | ug/l  | 99       |
| 62) Toluene                    | 8.79  | 91   | 1002320  | 51.964   | ug/l  | 100      |
| 64) Chlorobenzene              | 10.14 | 112  | 661111   | 52.014   | ug/l  | 98       |
| 65) 1,1,1,2-Tetrachloroethane  | 10.22 | 131  | 237370   | 52.419   | ug/l  | 97       |
| 66) Ethyl Benzene              | 10.25 | 91   | 1100183  | 52.975   | ug/l  | 100      |
| 67) m/p-Xylenes                | 10.36 | 106  | 861460   | 105.331  | ug/l  | 99       |
| 68) o-Xylene                   | 10.69 | 106  | 416406   | 51.957   | ug/l  | 99       |
| 69) Styrene                    | 10.71 | 104  | 686178   | 53.050   | ug/l  | 99       |
| 70) Isopropylbenzene           | 11.02 | 105  | 1117821  | 52.785   | ug/l  | 98       |
| 71) 1,1,2,2-Tetrachloroethane  | 11.27 | 83   | 354687   | 51.732   | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 11.30 | 75   | 331364m  | 51.835   | ug/l  |          |
| 73) Bromobenzene               | 11.26 | 156  | 300346   | 51.258   | ug/l  | 100      |
| 74) n-propylbenzene            | 11.36 | 91   | 1244893  | 52.398   | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 11.42 | 91   | 733044   | 51.952   | ug/l  | 99       |
| 76) 1,3,5-Trimethylbenzene     | 11.51 | 105  | 906218   | 51.491   | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 11.07 | 75   | 98435    | 52.605   | ug/l  | 88       |
| 78) 4-Chlorotoluene            | 11.51 | 91   | 831525   | 50.913   | ug/l  | 99       |
| 79) tert-butylbenzene          | 12.06 | 119  | 979612   | 51.543   | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 11.80 | 105  | 923612   | 51.831   | ug/l  | 99       |
| 81) sec-Butylbenzene           | 11.94 | 105  | 1092940  | 51.642   | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 12.06 | 119  | 979612   | 51.543   | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 12.02 | 146  | 529357   | 50.977   | ug/l  | 98       |
| 84) 1,4-Dichlorobenzene        | 12.10 | 146  | 519921   | 50.110   | ug/l  | 98       |
| 85) n-Butylbenzene             | 12.39 | 91   | 804885   | 49.587   | ug/l  | 100      |
| 86) Hexachloroethane           | 12.60 | 117  | 162017   | 54.000   | ug/l  | 94       |
| 87) 1,2-Dichlorobenzene        | 12.39 | 146  | 521292   | 50.257   | ug/l  | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 13.00 | 75   | 75932    | 54.194   | ug/l  | 98       |
| 89) 1,2,4-Trichlorobenzene     | 13.65 | 180  | 351516   | 49.862   | ug/l  | 100      |
| 90) Hexachlorobutadiene        | 13.78 | 225  | 163890   | 48.819   | ug/l  | 98       |
| 91) Naphthalene                | 13.83 | 128  | 1130721  | 52.463   | ug/l  | 100      |
| 92) 1,2,3-Trichlorobenzene     | 14.02 | 180  | 353986   | 50.582   | ug/l  | 99       |
| -----                          |       |      |          |          |       |          |

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Sample : VSTDICC050  
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ALS Vial : 27 Sample Multiplier: 1

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

