

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN110118\  
 Data File : VN052094.D  
 Acq On : 1 Nov 2018 10:09  
 Operator : MD\SY  
 Sample : VSTDIC150  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 6 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDIC150

Manual Integrations  
 APPROVED

MMDadoda  
 11/2/2018 9:21:13 AM

Quant Time: Nov 02 05:35:04 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\624N110118W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Nov 02 05:15:09 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 70045    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 404260   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 366956   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 145872   | 28.06    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 93.53% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 173066   | 29.48    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 98.27% |
| 63) Toluene-d8            | 10.09  | 98    | 499502   | 28.95    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 96.50% |

## Target Compounds

|                               |      |     |         |         | Qvalue     |
|-------------------------------|------|-----|---------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 745761  | 159.412 | ug/l 97    |
| 3) Chloromethane              | 2.06 | 50  | 777151  | 145.350 | ug/l 99    |
| 4) Vinyl Chloride             | 2.19 | 62  | 753109  | 143.585 | ug/l 97    |
| 5) Bromomethane               | 2.55 | 94  | 519055  | 144.983 | ug/l 98    |
| 6) Chloroethane               | 2.70 | 64  | 466673  | 139.150 | ug/l 97    |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 1041331 | 146.610 | ug/l 95    |
| 8) Diethyl Ether              | 3.41 | 74  | 353488  | 147.397 | ug/l 99    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 612511  | 147.547 | ug/l 94    |
| 10) 1,1-Dichloroethene        | 3.74 | 96  | 589003  | 152.057 | ug/l 90    |
| 11) Methyl Iodide             | 3.96 | 142 | 925576  | 165.265 | ug/l 97    |
| 12) Methyl Acetate            | 4.32 | 43  | 457395  | 135.923 | ug/l 100   |
| 13) Acrolein                  | 3.61 | 56  | 280817  | 802.905 | ug/l 98    |
| 14) Acrylonitrile             | 4.99 | 53  | 1024096 | 708.302 | ug/l 100   |
| 15) Acetone                   | 3.81 | 58  | 219837  | 643.320 | ug/l 88    |
| 16) Carbon Disulfide          | 4.06 | 76  | 1784819 | 156.053 | ug/l 98    |
| 17) Allyl chloride            | 4.33 | 41  | 964251  | 146.614 | ug/l 98    |
| 18) Methylene Chloride        | 4.55 | 84  | 662990  | 138.667 | ug/l 93    |
| 19) trans-1,2-Dichloroethene  | 5.04 | 96  | 635552  | 149.749 | ug/l 94    |
| 20) Diisopropyl ether         | 5.95 | 45  | 2072294 | 144.921 | ug/l 96    |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 1187930 | 142.233 | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 726575  | 146.605 | ug/l 98    |
| 23) tert-Butyl Alcohol        | 4.78 | 59  | 157752  | 691.552 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 1617968 | 147.337 | ug/l 97    |
| 25) Chloroform                | 7.37 | 83  | 1205091 | 143.697 | ug/l 95    |
| 26) Cyclohexane               | 7.66 | 56  | 1099727 | 146.884 | ug/l # 99  |
| 29) 1,1-Dichloropropene       | 7.80 | 75  | 935039  | 145.686 | ug/l 98    |
| 30) 2-Butanone                | 6.83 | 43  | 1159265 | 678.241 | ug/l # 77  |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 974407  | 147.307 | ug/l 99    |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 1084752 | 151.055 | ug/l 96    |
| 33) Carbon Tetrachloride      | 7.78 | 117 | 960674  | 150.422 | ug/l 96    |
| 34) Benzene                   | 8.04 | 78  | 2712976 | 144.362 | ug/l # 91  |
| 35) Methacrylonitrile         | 7.18 | 41  | 310111  | 89.665  | ug/l # 74  |
| 36) 1,2-Dichloroethane        | 8.13 | 62  | 870159  | 138.485 | ug/l 99    |
| 37) Trichloroethene           | 8.84 | 130 | 718660  | 152.790 | ug/l 89    |
| 38) Methylcyclohexane         | 9.08 | 83  | 1159867 | 148.142 | ug/l 97    |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 711356  | 142.199 | ug/l 95    |
| 40) Dibromomethane            | 9.21 | 93  | 436133  | 141.440 | ug/l 92    |

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 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\624N110118W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Nov 02 05:15:09 2018  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|----------|--------|----------|
| -----                          |       |      |          |          |        |          |
| 41) Bromodichloromethane       | 9.40  | 83   | 935711   | 148.313  | ug/l   | 97       |
| 42) Vinyl Acetate              | 5.90  | 43   | 7430335  | 742.574  | ug/l   | 99       |
| 43) Ethyl Acetate              | 6.83  | 43   | 1159265  | 97.439   | ug/l # | 88       |
| 44) Isopropyl Acetate          | 8.16  | 43   | 1036848  | 145.791  | ug/l   | 98       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 91767    | 2828.513 | ug/l # | 80       |
| 46) Methyl methacrylate        | 9.20  | 41   | 512425   | 144.748  | ug/l   | 98       |
| 47) n-amyl Acetate             | 12.07 | 43   | 967698   | 149.992  | ug/l # | 100      |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 980427   | 156.498  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 1117355  | 154.525  | ug/l   | 96       |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 591551   | 145.079  | ug/l   | 98       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 792163   | 150.324  | ug/l   | 98       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 1021140  | 143.774  | ug/l   | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 715717   | 162.591  | ug/l   | 99       |
| 54) 1,2-Dibromoethane          | 11.01 | 107  | 627523   | 151.768  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 2162954  | 749.547  | ug/l   | 98       |
| 56) Bromoform                  | 12.13 | 173  | 427750   | 168.245  | ug/l   | 98       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 2743206  | 697.640  | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 1840469  | 679.792  | ug/l   | 98       |
| 61) Tetrachloroethene          | 10.63 | 164  | 609853   | 152.812  | ug/l   | 94       |
| 62) Toluene                    | 10.16 | 91   | 3046670  | 147.900  | ug/l   | 98       |
| 64) Chlorobenzene              | 11.44 | 112  | 1948050  | 149.213  | ug/l   | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 691218   | 155.556  | ug/l   | 99       |
| 66) Ethyl Benzene              | 11.51 | 91   | 3339723  | 150.093  | ug/l   | 99       |
| 67) m/p-Xylenes                | 11.62 | 106  | 2588815  | 302.201  | ug/l   | 97       |
| 68) o-Xylene                   | 11.95 | 106  | 1245754  | 152.529  | ug/l   | 94       |
| 69) Styrene                    | 11.96 | 104  | 2028264  | 154.110  | ug/l   | 97       |
| 70) Isopropylbenzene           | 12.25 | 105  | 3308214  | 150.887  | ug/l   | 98       |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 677254   | 140.435  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 582592m  | 145.282  | ug/l   |          |
| 73) Bromobenzene               | 12.53 | 156  | 764751   | 157.414  | ug/l   | 89       |
| 74) n-propylbenzene            | 12.59 | 91   | 3829638  | 149.994  | ug/l   | 98       |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 2147745  | 145.908  | ug/l   | 97       |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 2646867  | 150.554  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 218319   | 164.554  | ug/l   | 91       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 2239242  | 151.063  | ug/l   | 97       |
| 79) tert-butylbenzene          | 12.99 | 119  | 2286810  | 149.322  | ug/l   | 98       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 2667594  | 152.307  | ug/l   | 98       |
| 81) sec-Butylbenzene           | 13.17 | 105  | 3216141  | 152.597  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 2774432  | 155.769  | ug/l   | 98       |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 1357384  | 157.958  | ug/l   | 97       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 1367650  | 160.768  | ug/l   | 96       |
| 85) n-Butylbenzene             | 13.62 | 91   | 2446745  | 158.717  | ug/l   | 99       |
| 86) Hexachloroethane           | 13.88 | 117  | 494949   | 164.670  | ug/l   | 93       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 1265284  | 154.974  | ug/l   | 97       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 94919    | 143.940  | ug/l # | 87       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 569426   | 171.811  | ug/l   | 96       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 283758   | 156.492  | ug/l   | 98       |
| 91) Naphthalene                | 15.13 | 128  | 1304768  | 170.801  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 15.31 | 180  | 495541   | 171.557  | ug/l   | 100      |
| -----                          |       |      |          |          |        |          |

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|--------------------|------|------|----------|------|-------|----------|
|--------------------|------|------|----------|------|-------|----------|

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

