

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN120718\  
 Data File : VN052731.D  
 Acq On : 7 Dec 2018 17:12  
 Operator : MD\SY  
 Sample : VN1207WBSD01  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 17 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleID :  
 VN1207WBSD01

Manual Integrations  
 APPROVED

MMDadoda  
 12/10/2018 12:51:02 PM

Quant Time: Dec 07 22:27:09 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\624N112618W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Nov 27 00:48:33 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 149180   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 853170   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 746146   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 306002   | 30.10    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 100.33% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 342088   | 29.99    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 99.97%  |
| 63) Toluene-d8            | 10.09  | 98    | 1039250  | 30.04    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 100.13% |

## Target Compounds

|                               |      |     |        |              | Qvalue |
|-------------------------------|------|-----|--------|--------------|--------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 164420 | 19.352 ug/l  | 97     |
| 3) Chloromethane              | 2.06 | 50  | 215191 | 19.098 ug/l  | 99     |
| 4) Vinyl Chloride             | 2.19 | 62  | 223486 | 19.651 ug/l  | 97     |
| 5) Bromomethane               | 2.57 | 94  | 92950  | 14.334 ug/l  | 95     |
| 6) Chloroethane               | 2.71 | 64  | 133842 | 19.790 ug/l  | 99     |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 285728 | 20.357 ug/l  | 98     |
| 8) Diethyl Ether              | 3.41 | 74  | 110459 | 21.314 ug/l  | 93     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.77 | 101 | 181636 | 20.414 ug/l  | 88     |
| 10) 1,1-Dichloroethene        | 3.74 | 96  | 171747 | 20.530 ug/l  | 100    |
| 11) Methyl Iodide             | 3.96 | 142 | 162838 | 14.019 ug/l  | 100    |
| 12) Methyl Acetate            | 4.33 | 43  | 160312 | 22.554 ug/l  | 97     |
| 13) Acrolein                  | 3.61 | 56  | 50367  | 60.323 ug/l  | 98     |
| 14) Acrylonitrile             | 4.99 | 53  | 332419 | 109.760 ug/l | 98     |
| 15) Acetone                   | 3.82 | 58  | 82616  | 105.332 ug/l | 93     |
| 16) Carbon Disulfide          | 4.06 | 76  | 491486 | 18.557 ug/l  | 100    |
| 17) Allyl chloride            | 4.33 | 41  | 293203 | 20.097 ug/l  | 100    |
| 18) Methylene Chloride        | 4.55 | 84  | 204996 | 21.164 ug/l  | 95     |
| 19) trans-1,2-Dichloroethene  | 5.05 | 96  | 185846 | 20.643 ug/l  | 94     |
| 20) Diisopropyl ether         | 5.95 | 45  | 630889 | 20.577 ug/l  | 99     |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 360643 | 20.638 ug/l  | 99     |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 212444 | 20.590 ug/l  | 99     |
| 23) tert-Butyl Alcohol        | 4.78 | 59  | 55327  | 122.803 ug/l | # 100  |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 470662 | 21.446 ug/l  | 98     |
| 25) Chloroform                | 7.37 | 83  | 351923 | 20.875 ug/l  | 100    |
| 26) Cyclohexane               | 7.65 | 56  | 320376 | 19.439 ug/l  | # 97   |
| 29) 1,1-Dichloropropene       | 7.79 | 75  | 264852 | 20.328 ug/l  | 99     |
| 30) 2-Butanone                | 6.84 | 43  | 386174 | 110.769 ug/l | 99     |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 250355 | 20.872 ug/l  | 99     |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 287601 | 21.215 ug/l  | 98     |
| 33) Carbon Tetrachloride      | 7.78 | 117 | 249649 | 21.046 ug/l  | 97     |
| 34) Benzene                   | 8.04 | 78  | 821461 | 20.971 ug/l  | 99     |
| 35) Methacrylonitrile         | 7.17 | 41  | 83159  | 19.226 ug/l  | 96     |
| 36) 1,2-Dichloroethane        | 8.12 | 62  | 246990 | 20.808 ug/l  | 99     |
| 37) Trichloroethene           | 8.84 | 130 | 205291 | 20.668 ug/l  | 100    |
| 38) Methylcyclohexane         | 9.08 | 83  | 323496 | 20.058 ug/l  | 97     |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 219504 | 20.905 ug/l  | 100    |
| 40) Dibromomethane            | 9.21 | 93  | 124686 | 21.974 ug/l  | 98     |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 41) Bromodichloromethane       | 9.40  | 83   | 261248   | 20.839  | ug/l   | 99       |
| 42) Vinyl Acetate              | 5.90  | 43   | 1997152  | 105.877 | ug/l   | 99       |
| 43) Ethyl Acetate              | 6.93  | 43   | 162909   | 21.975  | ug/l # | 67       |
| 44) Isopropyl Acetate          | 8.17  | 43   | 303220   | 23.322  | ug/l   | 97       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 35336    | 496.810 | ug/l   | 95       |
| 46) Methyl methacrylate        | 9.20  | 41   | 149552   | 22.154  | ug/l   | 97       |
| 47) n-amyl Acetate             | 12.07 | 43   | 233972   | 21.705  | ug/l   | 99       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 253972   | 20.893  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 303090   | 20.466  | ug/l   | 98       |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 177284   | 22.041  | ug/l   | 99       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 224899   | 22.263  | ug/l   | 95       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 307061   | 21.448  | ug/l   | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 190817   | 21.548  | ug/l   | 97       |
| 54) 1,2-Dibromoethane          | 11.01 | 107  | 173071   | 22.020  | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 630983   | 106.708 | ug/l   | 98       |
| 56) Bromoform                  | 12.13 | 173  | 127166   | 21.970  | ug/l   | 99       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 849523   | 117.440 | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 564395   | 114.217 | ug/l   | 100      |
| 61) Tetrachloroethene          | 10.63 | 164  | 197884   | 21.533  | ug/l   | 95       |
| 62) Toluene                    | 10.16 | 91   | 865934   | 21.052  | ug/l   | 99       |
| 64) Chlorobenzene              | 11.43 | 112  | 533779   | 21.261  | ug/l   | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 190989   | 21.916  | ug/l   | 98       |
| 66) Ethyl Benzene              | 11.51 | 91   | 919657   | 20.745  | ug/l   | 100      |
| 67) m/p-Xylenes                | 11.62 | 106  | 689272   | 41.733  | ug/l   | 100      |
| 68) o-Xylene                   | 11.95 | 106  | 342306   | 21.354  | ug/l   | 98       |
| 69) Styrene                    | 11.96 | 104  | 543239   | 20.995  | ug/l   | 100      |
| 70) Isopropylbenzene           | 12.25 | 105  | 906825   | 21.261  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 214546   | 23.124  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 178246m  | 22.380  | ug/l   |          |
| 73) Bromobenzene               | 12.53 | 156  | 223379   | 21.654  | ug/l   | 97       |
| 74) n-propylbenzene            | 12.59 | 91   | 1019289  | 20.511  | ug/l   | 99       |
| 75) 2-Chlorotoluene            | 12.68 | 91   | 608815   | 21.106  | ug/l   | 99       |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 733103   | 21.280  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 52306    | 20.789  | ug/l   | 97       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 598252   | 20.768  | ug/l   | 100      |
| 79) tert-butylbenzene          | 12.99 | 119  | 645354   | 21.510  | ug/l   | 98       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 727423   | 21.102  | ug/l   | 99       |
| 81) sec-Butylbenzene           | 13.17 | 105  | 871876   | 20.864  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 740253   | 20.803  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 377596   | 20.813  | ug/l   | 99       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 363052   | 20.712  | ug/l   | 99       |
| 85) n-Butylbenzene             | 13.62 | 91   | 586989   | 19.204  | ug/l   | 100      |
| 86) Hexachloroethane           | 13.88 | 117  | 127056   | 21.073  | ug/l   | 98       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 377203   | 21.848  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 31302    | 24.085  | ug/l   | 98       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 171939   | 20.214  | ug/l   | 99       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 119463   | 21.410  | ug/l   | 99       |
| 91) Naphthalene                | 15.13 | 128  | 353865   | 20.601  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.32 | 180  | 168021   | 21.435  | ug/l   | 98       |

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

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