

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN042619\  
 Data File : VN055254.D  
 Acq On : 25 Apr 2019 19:40  
 Operator : JC/SP  
 Sample : VSTDIC150  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDIC150

Manual Integrations  
 APPROVED

MMdadoda  
 4/26/2019 10:53:01 AM

Quant Time: Apr 26 05:20:49 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N042619W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Apr 26 04:33:00 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 70671    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 400939   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 356082   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 167646   | 31.10    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 103.67% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 174197   | 31.52    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 105.07% |
| 63) Toluene-d8            | 10.09  | 98    | 494168   | 29.21    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 97.37%  |

## Target Compounds

|                               |      |     |         |          | Ovalue     |
|-------------------------------|------|-----|---------|----------|------------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 547082  | 134.870  | ug/l 99    |
| 3) Chloromethane              | 2.06 | 50  | 775185  | 139.681  | ug/l 94    |
| 4) Vinyl Chloride             | 2.18 | 62  | 637076  | 133.774  | ug/l 98    |
| 5) Bromomethane               | 2.54 | 94  | 347026  | 126.232  | ug/l 96    |
| 6) Chloroethane               | 2.69 | 64  | 356563  | 133.935  | ug/l 100   |
| 7) Trichlorofluoromethane     | 3.01 | 101 | 928434  | 149.388  | ug/l 95    |
| 8) Diethyl Ether              | 3.41 | 74  | 394893  | 188.301  | ug/l 90    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 595003  | 169.217  | ug/l 98    |
| 10) 1,1-Dichloroethene        | 3.73 | 96  | 561805  | 172.249  | ug/l 99    |
| 11) Methyl Iodide             | 3.95 | 142 | 920615  | 184.566  | ug/l 99    |
| 12) Methyl Acetate            | 4.33 | 43  | 823004  | 194.594  | ug/l 95    |
| 13) Acrolein                  | 3.61 | 56  | 176030  | 552.695  | ug/l 97    |
| 14) Acrylonitrile             | 4.99 | 53  | 1465052 | 871.210  | ug/l 99    |
| 15) Acetone                   | 3.82 | 58  | 339564  | 846.495  | ug/l 95    |
| 16) Carbon Disulfide          | 4.05 | 76  | 1603452 | 152.520  | ug/l 99    |
| 17) Allyl chloride            | 4.32 | 41  | 1266900 | 163.155  | ug/l 99    |
| 18) Methylene Chloride        | 4.55 | 84  | 675467  | 144.226  | ug/l 96    |
| 19) trans-1,2-Dichloroethene  | 5.04 | 96  | 602551  | 146.734  | ug/l 95    |
| 20) Diisopropyl ether         | 5.95 | 45  | 2506167 | 156.608  | ug/l 99    |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 1279381 | 151.317  | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 706334  | 148.773  | ug/l 98    |
| 23) tert-Butyl Alcohol        | 4.79 | 59  | 304918  | 1082.617 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 1871978 | 171.038  | ug/l 100   |
| 25) Chloroform                | 7.37 | 83  | 1213363 | 150.563  | ug/l 96    |
| 26) Cyclohexane               | 7.65 | 56  | 1139240 | 147.950  | ug/l # 96  |
| 29) 1,1-Dichloropropene       | 7.79 | 75  | 924943  | 146.947  | ug/l 99    |
| 30) 2-Butanone                | 6.84 | 43  | 1842580 | 840.756  | ug/l 99    |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 872135  | 148.662  | ug/l 100   |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 1020606 | 151.131  | ug/l 99    |
| 33) Carbon Tetrachloride      | 7.77 | 117 | 866764  | 149.755  | ug/l 97    |
| 34) Benzene                   | 8.04 | 78  | 2732276 | 145.681  | ug/l # 88  |
| 35) Methacrylonitrile         | 7.18 | 41  | 450570  | 170.642  | ug/l 97    |
| 36) 1,2-Dichloroethane        | 8.12 | 62  | 946733  | 146.321  | ug/l 100   |
| 37) Trichloroethene           | 8.84 | 130 | 676686  | 142.384  | ug/l 99    |
| 38) Methylcyclohexane         | 9.08 | 83  | 993913  | 138.673  | ug/l 97    |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 779458  | 148.965  | ug/l 100   |
| 40) Dibromomethane            | 9.21 | 93  | 433854  | 145.868  | ug/l 99    |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Apr 26 04:33:00 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc     | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|----------|--------|----------|
| 41) Bromodichloromethane       | 9.40  | 83   | 933999   | 153.125  | ug/l   | 96       |
| 42) Vinyl Acetate              | 5.90  | 43   | 9154845  | 833.774  | ug/l   | 99       |
| 43) Ethyl Acetate              | 6.93  | 43   | 790490   | 172.307  | ug/l   | 98       |
| 44) Isopropyl Acetate          | 8.17  | 43   | 1416316  | 179.511  | ug/l # | 77       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 148591   | 3485.456 | ug/l   | 97       |
| 46) Methyl methacrylate        | 9.20  | 41   | 716758   | 179.813  | ug/l   | 98       |
| 47) n-amyl Acetate             | 12.07 | 43   | 1151577  | 203.642  | ug/l   | 99       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 1008259  | 175.863  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 1127622  | 162.258  | ug/l   | 97       |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 611453   | 150.960  | ug/l   | 98       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 898407   | 180.984  | ug/l   | 99       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 1096045  | 154.802  | ug/l   | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 679208   | 162.812  | ug/l   | 100      |
| 54) 1,2-Dibromoethane          | 11.00 | 107  | 626664   | 163.517  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 1501371  | 783.882  | ug/l   | 100      |
| 56) Bromoform                  | 12.13 | 173  | 472201   | 176.801  | ug/l   | 98       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 4024432  | 901.649  | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.75 | 43   | 2600256  | 923.162  | ug/l   | 99       |
| 61) Tetrachloroethene          | 10.63 | 164  | 621157   | 132.883  | ug/l   | 96       |
| 62) Toluene                    | 10.16 | 91   | 2852183  | 143.806  | ug/l   | 98       |
| 64) Chlorobenzene              | 11.43 | 112  | 1754056  | 147.344  | ug/l   | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 655312   | 152.627  | ug/l   | 98       |
| 66) Ethyl Benzene              | 11.51 | 91   | 3132759  | 147.824  | ug/l   | 99       |
| 67) m/p-Xylenes                | 11.62 | 106  | 2306875  | 293.426  | ug/l   | 98       |
| 68) o-Xylene                   | 11.95 | 106  | 1141510  | 145.844  | ug/l   | 95       |
| 69) Styrene                    | 11.96 | 104  | 1856564  | 153.942  | ug/l   | 99       |
| 70) Isopropylbenzene           | 12.25 | 105  | 3025904  | 145.628  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 805623   | 162.962  | ug/l   | 100      |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 675981m  | 165.806  | ug/l   |          |
| 73) Bromobenzene               | 12.53 | 156  | 738652   | 150.602  | ug/l   | 99       |
| 74) n-propylbenzene            | 12.59 | 91   | 3493090  | 150.914  | ug/l   | 99       |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 2112857  | 150.592  | ug/l   | 100      |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 2513046  | 149.987  | ug/l   | 100      |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 220657   | 209.610  | ug/l   | 90       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 2118960  | 158.327  | ug/l   | 99       |
| 79) tert-butylbenzene          | 12.99 | 119  | 2146702  | 147.715  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 2502408  | 151.403  | ug/l   | 100      |
| 81) sec-Butylbenzene           | 13.17 | 105  | 2873619  | 148.700  | ug/l   | 99       |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 2456773  | 151.511  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 1280288  | 157.518  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 1261076  | 163.215  | ug/l   | 98       |
| 85) n-Butylbenzene             | 13.61 | 91   | 2117782  | 165.849  | ug/l   | 99       |
| 86) Hexachloroethane           | 13.87 | 117  | 441644   | 167.518  | ug/l   | 97       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 1239490  | 154.823  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 134048   | 201.651  | ug/l   | 94       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 636743   | 182.181  | ug/l   | 99       |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 393211   | 151.540  | ug/l   | 99       |
| 91) Naphthalene                | 15.13 | 128  | 1515647  | 203.209  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 15.31 | 180  | 634523   | 180.346  | ug/l   | 99       |

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

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