

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN102418\  
 Data File : VN051983.D  
 Acq On : 24 Oct 2018 13:07  
 Operator : MD\SY  
 Sample : VN1024WBSD02  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 11 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 ClientSampleID :  
 VN1024WBSD02

Manual Integrations  
 APPROVED

apatel  
 10/25/2018 9:24:14 AM

Quant Time: Oct 25 01:28:11 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N101218W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Oct 12 10:23:44 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.20  | 128  | 165762   | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.59  | 114  | 919044   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.41 | 117  | 822558   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |        |
|---------------------------|--------|-------|----------|----------|------|--------|
| 27) 1,2-Dichloroethane-d4 | 8.03   | 65    | 289721   | 28.72    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 95.73% |
| 60) 4-Bromofluorobenzene  | 12.40  | 95    | 340829   | 28.73    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 95.77% |
| 63) Toluene-d8            | 10.09  | 98    | 1058606  | 29.64    | ug/l | 0.00   |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.80% |

## Target Compounds

|                               |      |     |        |        | Ovalue    |
|-------------------------------|------|-----|--------|--------|-----------|
| 2) Dichlorodifluoromethane    | 1.85 | 85  | 135653 | 21.064 | ug/l 97   |
| 3) Chloromethane              | 2.06 | 50  | 121676 | 17.877 | ug/l 96   |
| 4) Vinyl Chloride             | 2.19 | 62  | 153087 | 15.062 | ug/l 100  |
| 5) Bromomethane               | 2.57 | 94  | 157717 | 17.562 | ug/l 84   |
| 6) Chloroethane               | 2.71 | 64  | 112461 | 15.353 | ug/l 96   |
| 7) Trichlorofluoromethane     | 3.02 | 101 | 286721 | 19.786 | ug/l 98   |
| 8) Diethyl Ether              | 3.42 | 74  | 83482  | 19.790 | ug/l 70   |
| 9) 1,1,2-Trichlorotrifluoroet | 3.76 | 101 | 175011 | 21.207 | ug/l # 40 |
| 10) 1,1-Dichloroethene        | 3.74 | 96  | 153470 | 20.109 | ug/l # 81 |
| 11) Methyl Iodide             | 3.96 | 142 | 255880 | 23.064 | ug/l 92   |
| 12) Methyl Acetate            | 4.33 | 43  | 92976  | 19.619 | ug/l 100  |
| 13) Acrolein                  | 3.61 | 56  | 8035   | 25.733 | ug/l # 53 |
| 14) Acrylonitrile             | 4.99 | 53  | 192971 | 91.106 | ug/l # 61 |
| 15) Acetone                   | 3.82 | 58  | 45234  | 86.391 | ug/l 94   |
| 16) Carbon Disulfide          | 4.06 | 76  | 340988 | 17.013 | ug/l 100  |
| 17) Allyl chloride            | 4.33 | 41  | 142442 | 15.721 | ug/l 73   |
| 18) Methylene Chloride        | 4.56 | 84  | 178850 | 20.959 | ug/l # 84 |
| 19) trans-1,2-Dichloroethene  | 5.05 | 96  | 171082 | 19.632 | ug/l # 80 |
| 20) Diisopropyl ether         | 5.95 | 45  | 371608 | 18.415 | ug/l # 83 |
| 21) 1,1-Dichloroethane        | 5.85 | 63  | 263448 | 18.684 | ug/l 96   |
| 22) cis-1,2-Dichloroethene    | 6.83 | 96  | 202653 | 19.799 | ug/l # 78 |
| 23) tert-Butyl Alcohol        | 4.78 | 59  | 34186m | 61.283 | ug/l      |
| 24) Methyl tert-Butyl Ether   | 5.05 | 73  | 400925 | 18.234 | ug/l # 67 |
| 25) Chloroform                | 7.37 | 83  | 329347 | 19.688 | ug/l 99   |
| 26) Cyclohexane               | 7.65 | 56  | 210636 | 17.621 | ug/l # 65 |
| 29) 1,1-Dichloropropene       | 7.80 | 75  | 226425 | 19.113 | ug/l 93   |
| 30) 2-Butanone                | 6.84 | 43  | 203290 | 82.102 | ug/l # 84 |
| 31) 2,2-Dichloropropane       | 6.83 | 77  | 235553 | 16.902 | ug/l # 74 |
| 32) 1,1,1-Trichloroethane     | 7.57 | 97  | 297569 | 18.946 | ug/l 94   |
| 33) Carbon Tetrachloride      | 7.78 | 117 | 263430 | 18.539 | ug/l 93   |
| 34) Benzene                   | 8.04 | 78  | 697383 | 19.901 | ug/l # 65 |
| 35) Methacrylonitrile         | 7.17 | 41  | 36986  | 11.369 | ug/l # 72 |
| 36) 1,2-Dichloroethane        | 8.13 | 62  | 217673 | 19.386 | ug/l 96   |
| 37) Trichloroethene           | 8.84 | 130 | 219605 | 20.188 | ug/l 95   |
| 38) Methylcyclohexane         | 9.08 | 83  | 275781 | 18.150 | ug/l 77   |
| 39) 1,2-Dichloropropane       | 9.12 | 63  | 160491 | 19.448 | ug/l 96   |
| 40) Dibromomethane            | 9.21 | 93  | 120620 | 19.694 | ug/l 92   |

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|--------------------------------|-------|------|----------|---------|--------|----------|
| -----                          |       |      |          |         |        |          |
| 41) Bromodichloromethane       | 9.40  | 83   | 230747   | 18.239  | ug/l   | 94       |
| 42) Vinyl Acetate              | 5.90  | 43   | 1222572  | 87.711  | ug/l # | 89       |
| 43) Ethyl Acetate              | 6.93  | 43   | 93167    | 17.329  | ug/l   | 96       |
| 44) Isopropyl Acetate          | 8.17  | 43   | 183438   | 17.082  | ug/l   | 97       |
| 45) 1,4-Dioxane                | 9.20  | 88   | 23503    | 272.567 | ug/l # | 75       |
| 46) Methyl methacrylate        | 9.20  | 41   | 87373    | 17.639  | ug/l   | 72       |
| 47) n-amyl Acetate             | 12.07 | 43   | 172761   | 19.217  | ug/l # | 72       |
| 48) t-1,3-Dichloropropene      | 10.38 | 75   | 209125   | 16.951  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene    | 9.84  | 75   | 245123   | 18.024  | ug/l   | 98       |
| 50) 1,1,2-Trichloroethane      | 10.56 | 97   | 169729   | 20.057  | ug/l   | 92       |
| 51) Ethyl methacrylate         | 10.43 | 69   | 180105   | 18.590  | ug/l   | 86       |
| 52) 1,3-Dichloropropane        | 10.71 | 76   | 250808   | 19.203  | ug/l   | 99       |
| 53) Dibromochloromethane       | 10.90 | 129  | 176989   | 16.906  | ug/l   | 95       |
| 54) 1,2-Dibromoethane          | 11.01 | 107  | 168901   | 19.015  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.70  | 63   | 477912   | 115.389 | ug/l # | 90       |
| 56) Bromoform                  | 12.13 | 173  | 97042    | 14.055  | ug/l # | 94       |
| 58) 4-Methyl-2-Pentanone       | 9.99  | 43   | 493243   | 89.607  | ug/l # | 85       |
| 59) 2-Hexanone                 | 10.75 | 43   | 324220   | 87.307  | ug/l # | 89       |
| 61) Tetrachloroethene          | 10.63 | 164  | 204589   | 19.449  | ug/l   | 98       |
| 62) Toluene                    | 10.16 | 91   | 819544   | 20.056  | ug/l   | 99       |
| 64) Chlorobenzene              | 11.43 | 112  | 545069   | 20.367  | ug/l   | 96       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.51 | 131  | 195980   | 19.079  | ug/l   | 99       |
| 66) Ethyl Benzene              | 11.51 | 91   | 882295   | 19.536  | ug/l   | 98       |
| 67) m/p-Xylenes                | 11.62 | 106  | 717549   | 39.189  | ug/l   | 95       |
| 68) o-Xylene                   | 11.95 | 106  | 346477   | 19.195  | ug/l   | 87       |
| 69) Styrene                    | 11.96 | 104  | 540090   | 19.502  | ug/l   | 95       |
| 70) Isopropylbenzene           | 12.25 | 105  | 922336   | 19.162  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane  | 12.50 | 83   | 159068   | 16.734  | ug/l   | 96       |
| 72) 1,2,3-Trichloropropane     | 12.55 | 75   | 144968m  | 19.386  | ug/l   |          |
| 73) Bromobenzene               | 12.53 | 156  | 234941   | 19.705  | ug/l   | 79       |
| 74) n-propylbenzene            | 12.59 | 91   | 988673   | 19.095  | ug/l   | 94       |
| 75) 2-Chlorotoluene            | 12.67 | 91   | 569523   | 18.763  | ug/l   | 91       |
| 76) 1,3,5-Trimethylbenzene     | 12.73 | 105  | 724277   | 18.196  | ug/l   | 97       |
| 77) t-1,4-Dichloro-2-butene    | 12.30 | 75   | 32071    | 12.967  | ug/l   | 86       |
| 78) 4-Chlorotoluene            | 12.77 | 91   | 576476   | 19.330  | ug/l   | 90       |
| 79) tert-butylbenzene          | 12.99 | 119  | 664463   | 18.152  | ug/l   | 94       |
| 80) 1,2,4-Trimethylbenzene     | 13.04 | 105  | 718647   | 18.065  | ug/l   | 95       |
| 81) sec-Butylbenzene           | 13.17 | 105  | 873579   | 18.243  | ug/l   | 97       |
| 82) p-Isopropyltoluene         | 13.29 | 119  | 770596   | 17.984  | ug/l   | 96       |
| 83) 1,3-Dichlorobenzene        | 13.28 | 146  | 400883   | 19.055  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene        | 13.36 | 146  | 387268   | 19.554  | ug/l   | 98       |
| 85) n-Butylbenzene             | 13.61 | 91   | 572923   | 17.731  | ug/l   | 94       |
| 86) Hexachloroethane           | 13.88 | 117  | 102396   | 13.859  | ug/l   | 95       |
| 87) 1,2-Dichlorobenzene        | 13.65 | 146  | 360842   | 17.717  | ug/l   | 95       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.27 | 75   | 17251    | 12.152  | ug/l # | 72       |
| 89) 1,2,4-Trichlorobenzene     | 14.91 | 180  | 117200   | 16.446  | ug/l   | 100      |
| 90) Hexachlorobutadiene        | 15.01 | 225  | 86952    | 13.248  | ug/l   | 97       |
| 91) Naphthalene                | 15.13 | 128  | 220948   | 16.465  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene     | 15.31 | 180  | 89117    | 9.617   | ug/l   | 95       |
| -----                          |       |      |          |         |        |          |

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

