

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN082020\  
 Data File : VN063031.D  
 Acq On : 20 Aug 2020 11:48  
 Operator : JC/MD  
 Sample : VSTDIC150  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDIC150

Manual Integrations  
 APPROVED

MMDadoda  
 8/21/2020 9:22:11 AM

Quant Time: Aug 20 13:56:40 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N082020W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu Aug 20 13:39:19 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.15  | 128  | 33079    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.55  | 114  | 174530   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.38 | 117  | 166947   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 7.99   | 65    | 66892    | 28.54    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 95.13%  |
| 60) 4-Bromofluorobenzene  | 12.38  | 95    | 83321    | 31.58    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 105.27% |
| 63) Toluene-d8            | 10.06  | 98    | 225810   | 29.47    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 98.23%  |

## Target Compounds

|                               |      |     |         |         | Ovalue     |
|-------------------------------|------|-----|---------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.83 | 85  | 373356  | 157.862 | ug/l 97    |
| 3) Chloromethane              | 2.03 | 50  | 409516  | 156.480 | ug/l 100   |
| 4) Vinyl Chloride             | 2.16 | 62  | 409548  | 155.452 | ug/l 100   |
| 5) Bromomethane               | 2.50 | 94  | 239845  | 147.688 | ug/l 98    |
| 6) Chloroethane               | 2.65 | 64  | 235755  | 151.410 | ug/l 99    |
| 7) Trichlorofluoromethane     | 2.97 | 101 | 473710  | 149.102 | ug/l 99    |
| 8) Diethyl Ether              | 3.37 | 74  | 161510  | 152.849 | ug/l 98    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.71 | 101 | 242518  | 141.175 | ug/l 99    |
| 10) 1,1-Dichloroethene        | 3.69 | 96  | 229299  | 148.545 | ug/l 98    |
| 11) Methyl Iodide             | 3.91 | 142 | 351537  | 165.983 | ug/l 97    |
| 12) Methyl Acetate            | 4.27 | 43  | 310803  | 151.053 | ug/l 99    |
| 13) Acrolein                  | 3.56 | 56  | 167979  | 796.560 | ug/l 98    |
| 14) Acrylonitrile             | 4.93 | 53  | 695033  | 771.441 | ug/l 97    |
| 15) Acetone                   | 3.77 | 58  | 184660  | 708.183 | ug/l 95    |
| 16) Carbon Disulfide          | 4.00 | 76  | 623058  | 150.352 | ug/l 99    |
| 17) Allyl chloride            | 4.27 | 41  | 435157  | 153.631 | ug/l 97    |
| 18) Methylene Chloride        | 4.50 | 84  | 291468  | 134.954 | ug/l 99    |
| 19) trans-1,2-Dichloroethene  | 4.99 | 96  | 250987  | 147.863 | ug/l 98    |
| 20) Diisopropyl ether         | 5.90 | 45  | 1022401 | 154.115 | ug/l 92    |
| 21) 1,1-Dichloroethane        | 5.80 | 63  | 528141  | 145.059 | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 6.78 | 96  | 316861  | 150.633 | ug/l 98    |
| 23) tert-Butyl Alcohol        | 4.74 | 59  | 214320  | 726.106 | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 4.99 | 73  | 884026  | 156.107 | ug/l 98    |
| 25) Chloroform                | 7.33 | 83  | 527957  | 145.607 | ug/l 100   |
| 26) Cyclohexane               | 7.61 | 56  | 510751  | 162.958 | ug/l # 98  |
| 29) 1,1-Dichloropropene       | 7.75 | 75  | 380201  | 150.005 | ug/l 99    |
| 30) 2-Butanone                | 6.78 | 43  | 864974  | 732.185 | ug/l 99    |
| 31) 2,2-Dichloropropane       | 6.78 | 77  | 435415  | 141.331 | ug/l 99    |
| 32) 1,1,1-Trichloroethane     | 7.53 | 97  | 435084  | 142.523 | ug/l 100   |
| 33) Carbon Tetrachloride      | 7.73 | 117 | 375979  | 144.634 | ug/l 96    |
| 34) Benzene                   | 8.00 | 78  | 1183142 | 145.664 | ug/l # 89  |
| 35) Methacrylonitrile         | 7.12 | 41  | 169405  | 153.765 | ug/l 95    |
| 36) 1,2-Dichloroethane        | 8.08 | 62  | 389123  | 140.424 | ug/l 100   |
| 37) Trichloroethene           | 8.80 | 130 | 290409  | 145.996 | ug/l 97    |
| 38) Methylcyclohexane         | 9.05 | 83  | 520003  | 163.568 | ug/l 96    |
| 39) 1,2-Dichloropropane       | 9.08 | 63  | 343123  | 145.149 | ug/l 100   |
| 40) Dibromomethane            | 9.17 | 93  | 196610  | 143.249 | ug/l 98    |

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| Internal Standards             | R.T.  | QIon | Response | Conc     | Units | Dev(Min) |
|--------------------------------|-------|------|----------|----------|-------|----------|
| 41) Bromodichloromethane       | 9.37  | 83   | 443573   | 145.841  | ug/l  | 97       |
| 42) Vinyl Acetate              | 5.84  | 43   | 3321585  | 742.210  | ug/l  | 99       |
| 43) Ethyl Acetate              | 6.88  | 43   | 328300   | 145.597  | ug/l  | 100      |
| 44) Isopropyl Acetate          | 8.12  | 43   | 574775   | 151.842  | ug/l  | 97       |
| 45) 1,4-Dioxane                | 9.17  | 88   | 110288   | 3110.832 | ug/l  | 95       |
| 46) Methyl methacrylate        | 9.17  | 41   | 293421   | 157.441  | ug/l  | 98       |
| 47) n-amyl Acetate             | 12.05 | 43   | 560278   | 166.763  | ug/l  | 96       |
| 48) t-1,3-Dichloropropene      | 10.35 | 75   | 496143   | 154.455  | ug/l  | 96       |
| 49) cis-1,3-Dichloropropene    | 9.81  | 75   | 536535   | 153.450  | ug/l  | 99       |
| 50) 1,1,2-Trichloroethane      | 10.53 | 97   | 300334   | 141.922  | ug/l  | 98       |
| 51) Ethyl methacrylate         | 10.40 | 69   | 471919   | 163.910  | ug/l  | 99       |
| 52) 1,3-Dichloropropane        | 10.68 | 76   | 514742   | 147.228  | ug/l  | 99       |
| 53) Dibromochloromethane       | 10.87 | 129  | 347186   | 149.506  | ug/l  | 100      |
| 54) 1,2-Dibromoethane          | 10.98 | 107  | 305093   | 150.285  | ug/l  | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.66  | 63   | 561543   | 949.522  | ug/l  | 99       |
| 56) Bromoform                  | 12.10 | 173  | 264224   | 155.380  | ug/l  | 96       |
| 58) 4-Methyl-2-Pentanone       | 9.95  | 43   | 1828588  | 761.402  | ug/l  | 98       |
| 59) 2-Hexanone                 | 10.72 | 43   | 1314040  | 767.012  | ug/l  | 96       |
| 61) Tetrachloroethene          | 10.60 | 164  | 259805   | 141.956  | ug/l  | 97       |
| 62) Toluene                    | 10.12 | 91   | 1310119  | 148.071  | ug/l  | 99       |
| 64) Chlorobenzene              | 11.41 | 112  | 827016   | 151.058  | ug/l  | 100      |
| 65) 1,1,1,2-Tetrachloroethane  | 11.48 | 131  | 322588   | 148.660  | ug/l  | 99       |
| 66) Ethyl Benzene              | 11.48 | 91   | 1524003  | 158.013  | ug/l  | 100      |
| 67) m/p-Xylenes                | 11.60 | 106  | 1140742  | 315.716  | ug/l  | 99       |
| 68) o-Xylene                   | 11.92 | 106  | 553154   | 159.373  | ug/l  | 100      |
| 69) Styrene                    | 11.94 | 104  | 992088   | 163.627  | ug/l  | 100      |
| 70) Isopropylbenzene           | 12.22 | 105  | 1507107  | 159.622  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.48 | 83   | 443396   | 146.441  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 12.53 | 75   | 407113m  | 155.573  | ug/l  |          |
| 73) Bromobenzene               | 12.50 | 156  | 391132   | 153.614  | ug/l  | 99       |
| 74) n-propylbenzene            | 12.57 | 91   | 1811843  | 159.973  | ug/l  | 99       |
| 75) 2-Chlorotoluene            | 12.65 | 91   | 1057728  | 156.695  | ug/l  | 99       |
| 76) 1,3,5-Trimethylbenzene     | 12.71 | 105  | 1303741  | 161.803  | ug/l  | 99       |
| 77) t-1,4-Dichloro-2-butene    | 12.27 | 75   | 159943   | 168.441  | ug/l  | 92       |
| 78) 4-Chlorotoluene            | 12.75 | 91   | 1117514  | 160.571  | ug/l  | 99       |
| 79) tert-butylbenzene          | 12.97 | 119  | 1127835  | 166.355  | ug/l  | 96       |
| 80) 1,2,4-Trimethylbenzene     | 13.01 | 105  | 1307172  | 166.660  | ug/l  | 100      |
| 81) sec-Butylbenzene           | 13.15 | 105  | 1538098  | 164.693  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 13.26 | 119  | 1391890  | 168.114  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 13.26 | 146  | 710212   | 159.754  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 13.34 | 146  | 702996   | 161.795  | ug/l  | 100      |
| 85) n-Butylbenzene             | 13.59 | 91   | 1236773  | 179.752  | ug/l  | 97       |
| 86) Hexachloroethane           | 13.85 | 117  | 258827   | 158.725  | ug/l  | 98       |
| 87) 1,2-Dichlorobenzene        | 13.63 | 146  | 666891   | 156.630  | ug/l  | 98       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.24 | 75   | 78849    | 164.178  | ug/l  | 95       |
| 89) 1,2,4-Trichlorobenzene     | 14.88 | 180  | 395498   | 188.226  | ug/l  | 99       |
| 90) Hexachlorobutadiene        | 14.98 | 225  | 231181   | 148.646  | ug/l  | 99       |
| 91) Naphthalene                | 15.10 | 128  | 895703   | 192.918  | ug/l  | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.28 | 180  | 382977   | 182.567  | ug/l  | 98       |

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

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