

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN110920\  
 Data File : VN064508.D  
 Acq On : 9 Nov 2020 15:35  
 Operator : JC/MD  
 Sample : VSTDICV020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 ICVVN110920

Manual Integrations  
 APPROVED

MMDadoda  
 11/10/2020 1:10:37 PM

Quant Time: Nov 10 03:44:01 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N110920W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Nov 09 13:16:36 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.15  | 128  | 71083    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.55  | 114  | 387867   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.38 | 117  | 353453   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 7.99   | 65    | 195997   | 31.15    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 91 - 110 | Recovery | =    | 103.83% |
| 60) 4-Bromofluorobenzene  | 12.38  | 95    | 180934   | 29.88    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 63 - 112 | Recovery | =    | 99.60%  |
| 63) Toluene-d8            | 10.06  | 98    | 507084   | 30.76    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 91 - 112 | Recovery | =    | 102.53% |

## Target Compounds

|                               |      |     |        |               | Ovalue |
|-------------------------------|------|-----|--------|---------------|--------|
| 2) Dichlorodifluoromethane    | 1.84 | 85  | 94372  | 19.823 ug/l   | 96     |
| 3) Chloromethane              | 2.04 | 50  | 108083 | 19.896 ug/l   | 100    |
| 4) Vinyl Chloride             | 2.17 | 62  | 116443 | 19.783 ug/l   | 100    |
| 5) Bromomethane               | 2.54 | 94  | 75328  | 19.555 ug/l   | 97     |
| 6) Chloroethane               | 2.68 | 64  | 70969  | 19.308 ug/l   | 98     |
| 7) Trichlorofluoromethane     | 2.99 | 101 | 172154 | 20.199 ug/l   | 93     |
| 8) Diethyl Ether              | 3.38 | 74  | 60945  | 20.022 ug/l   | 99     |
| 9) 1,1,2-Trichlorotrifluoroet | 3.71 | 101 | 80125  | 19.974 ug/l # | 47     |
| 10) 1,1-Dichloroethene        | 3.69 | 96  | 74815  | 19.496 ug/l   | 94     |
| 11) Methyl Iodide             | 3.91 | 142 | 88642  | 18.737 ug/l   | 95     |
| 12) Methyl Acetate            | 4.28 | 43  | 84795  | 18.124 ug/l   | 95     |
| 13) Acrolein                  | 3.57 | 56  | 38781  | 81.967 ug/l   | 99     |
| 14) Acrylonitrile             | 4.93 | 53  | 194554 | 93.499 ug/l   | 99     |
| 15) Acetone                   | 3.78 | 58  | 62506  | 91.022 ug/l   | 97     |
| 16) Carbon Disulfide          | 4.01 | 76  | 223430 | 19.186 ug/l   | 99     |
| 17) Allyl chloride            | 4.27 | 41  | 142482 | 19.762 ug/l   | 95     |
| 18) Methylene Chloride        | 4.50 | 84  | 89946  | 19.739 ug/l   | 93     |
| 19) trans-1,2-Dichloroethene  | 4.99 | 96  | 86305  | 19.844 ug/l   | 99     |
| 20) Diisopropyl ether         | 5.90 | 45  | 304357 | 19.388 ug/l   | 99     |
| 21) 1,1-Dichloroethane        | 5.80 | 63  | 171895 | 19.912 ug/l   | 98     |
| 22) cis-1,2-Dichloroethene    | 6.78 | 96  | 97335  | 19.747 ug/l   | 94     |
| 23) tert-Butyl Alcohol        | 4.74 | 59  | 67483  | 94.714 ug/l # | 100    |
| 24) Methyl tert-Butyl Ether   | 4.99 | 73  | 261819 | 19.290 ug/l # | 70     |
| 25) Chloroform                | 7.33 | 83  | 182444 | 20.111 ug/l   | 100    |
| 26) Cyclohexane               | 7.61 | 56  | 129292 | 19.399 ug/l # | 100    |
| 29) 1,1-Dichloropropene       | 7.75 | 75  | 129073 | 19.176 ug/l   | 99     |
| 30) 2-Butanone                | 6.79 | 43  | 294658 | 88.434 ug/l # | 73     |
| 31) 2,2-Dichloropropane       | 6.77 | 77  | 158353 | 19.806 ug/l   | 97     |
| 32) 1,1,1-Trichloroethane     | 7.53 | 97  | 160995 | 19.500 ug/l   | 99     |
| 33) Carbon Tetrachloride      | 7.73 | 117 | 142676 | 19.351 ug/l   | 96     |
| 34) Benzene                   | 8.00 | 78  | 377492 | 19.369 ug/l   | 99     |
| 35) Methacrylonitrile         | 7.13 | 41  | 58666  | 18.821 ug/l   | 94     |
| 36) 1,2-Dichloroethane        | 8.08 | 62  | 157375 | 19.677 ug/l   | 100    |
| 37) Trichloroethene           | 8.80 | 130 | 94799  | 19.238 ug/l   | 95     |
| 38) Methylcyclohexane         | 9.05 | 83  | 116206 | 19.087 ug/l   | 99     |
| 39) 1,2-Dichloropropane       | 9.08 | 63  | 102025 | 19.483 ug/l   | 97     |
| 40) Dibromomethane            | 9.17 | 93  | 67735  | 19.173 ug/l   | 99     |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 41) Bromodichloromethane       | 9.37  | 83   | 145316   | 18.979  | ug/l   | 99       |
| 42) Vinyl Acetate              | 5.84  | 43   | 1252812  | 93.921  | ug/l   | 100      |
| 43) Ethyl Acetate              | 6.89  | 43   | 122522   | 18.898  | ug/l # | 93       |
| 44) Isopropyl Acetate          | 8.13  | 43   | 205579   | 18.369  | ug/l   | 94       |
| 45) 1,4-Dioxane                | 9.17  | 88   | 27444    | 349.807 | ug/l   | 96       |
| 46) Methyl methacrylate        | 9.16  | 41   | 105678   | 18.987  | ug/l   | 99       |
| 47) n-amyl Acetate             | 12.04 | 43   | 170851   | 17.647  | ug/l   | 97       |
| 48) t-1,3-Dichloropropene      | 10.35 | 75   | 152060   | 18.740  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene    | 9.81  | 75   | 161572   | 18.951  | ug/l   | 98       |
| 50) 1,1,2-Trichloroethane      | 10.53 | 97   | 91431    | 18.877  | ug/l   | 97       |
| 51) Ethyl methacrylate         | 10.40 | 69   | 125183   | 18.036  | ug/l   | 97       |
| 52) 1,3-Dichloropropane        | 10.68 | 76   | 158115   | 19.002  | ug/l   | 99       |
| 53) Dibromochloromethane       | 10.87 | 129  | 105124   | 18.952  | ug/l   | 97       |
| 54) 1,2-Dibromoethane          | 10.98 | 107  | 93543    | 18.882  | ug/l   | 98       |
| 55) 2-Chloroethyl vinyl ether  | 9.66  | 63   | 246967   | 67.994  | ug/l   | 99       |
| 56) Bromoform                  | 12.10 | 173  | 64859    | 17.818  | ug/l   | 97       |
| 58) 4-Methyl-2-Pentanone       | 9.95  | 43   | 611472   | 94.206  | ug/l   | 99       |
| 59) 2-Hexanone                 | 10.72 | 43   | 455770   | 93.228  | ug/l   | 99       |
| 61) Tetrachloroethene          | 10.60 | 164  | 88179    | 19.959  | ug/l   | 97       |
| 62) Toluene                    | 10.12 | 91   | 408816   | 19.695  | ug/l   | 100      |
| 64) Chlorobenzene              | 11.41 | 112  | 242545   | 19.658  | ug/l   | 99       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.48 | 131  | 94093    | 19.508  | ug/l   | 99       |
| 66) Ethyl Benzene              | 11.48 | 91   | 437562   | 19.532  | ug/l   | 99       |
| 67) m/p-Xylenes                | 11.59 | 106  | 324072   | 39.194  | ug/l   | 97       |
| 68) o-Xylene                   | 11.92 | 106  | 151619   | 19.377  | ug/l   | 96       |
| 69) Styrene                    | 11.94 | 104  | 262889   | 19.618  | ug/l   | 99       |
| 70) Isopropylbenzene           | 12.22 | 105  | 403178   | 19.686  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.48 | 83   | 125412   | 19.121  | ug/l   | 98       |
| 72) 1,2,3-Trichloropropane     | 12.53 | 75   | 117834m  | 18.014  | ug/l   |          |
| 73) Bromobenzene               | 12.50 | 156  | 95576    | 18.865  | ug/l   | 98       |
| 74) n-propylbenzene            | 12.56 | 91   | 479964   | 19.924  | ug/l   | 100      |
| 75) 2-Chlorotoluene            | 12.65 | 91   | 298568   | 19.712  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene     | 12.71 | 105  | 340280   | 19.682  | ug/l   | 97       |
| 77) t-1,4-Dichloro-2-butene    | 12.27 | 75   | 41340    | 17.334  | ug/l   | 94       |
| 78) 4-Chlorotoluene            | 12.75 | 91   | 311144   | 19.550  | ug/l   | 100      |
| 79) tert-butylbenzene          | 12.97 | 119  | 270200   | 19.914  | ug/l   | 95       |
| 80) 1,2,4-Trimethylbenzene     | 13.01 | 105  | 342240   | 19.643  | ug/l   | 100      |
| 81) sec-Butylbenzene           | 13.14 | 105  | 353371   | 19.648  | ug/l   | 100      |
| 82) p-Isopropyltoluene         | 13.26 | 119  | 313369   | 19.503  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene        | 13.26 | 146  | 172121   | 19.312  | ug/l   | 99       |
| 84) 1,4-Dichlorobenzene        | 13.34 | 146  | 168922   | 19.056  | ug/l   | 98       |
| 85) n-Butylbenzene             | 13.59 | 91   | 274218   | 19.685  | ug/l   | 99       |
| 86) Hexachloroethane           | 13.85 | 117  | 60661    | 18.946  | ug/l   | 99       |
| 87) 1,2-Dichlorobenzene        | 13.63 | 146  | 169318   | 19.505  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.24 | 75   | 26115    | 18.430  | ug/l   | 95       |
| 89) 1,2,4-Trichlorobenzene     | 14.88 | 180  | 71101    | 18.040  | ug/l   | 98       |
| 90) Hexachlorobutadiene        | 14.98 | 225  | 38192    | 19.455  | ug/l   | 98       |
| 91) Naphthalene                | 15.10 | 128  | 218832   | 16.784  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.28 | 180  | 73195    | 18.350  | ug/l   | 96       |

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

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