

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN072020\  
 Data File : VN062553.D  
 Acq On : 20 Jul 2020 10:24  
 Operator : JC/MD  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC020

Quant Time: Jul 21 01:11:24 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N071320W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Jul 14 00:52:57 2020  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 7.15  | 128  | 40812    | 30.00 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.55  | 114  | 213533   | 30.00 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.38 | 117  | 198022   | 30.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |      |         |
|---------------------------|--------|-------|----------|----------|------|---------|
| 27) 1,2-Dichloroethane-d4 | 7.99   | 65    | 102747   | 29.31    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 50 - 169 | Recovery | =    | 97.70%  |
| 60) 4-Bromofluorobenzene  | 12.37  | 95    | 101719   | 30.18    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 56 - 143 | Recovery | =    | 100.60% |
| 63) Toluene-d8            | 10.06  | 98    | 285919   | 30.56    | ug/l | 0.00    |
| Spiked Amount             | 30.000 | Range | 66 - 137 | Recovery | =    | 101.87% |

## Target Compounds

|                               |      |     |        |         | Ovalue     |
|-------------------------------|------|-----|--------|---------|------------|
| 2) Dichlorodifluoromethane    | 1.83 | 85  | 44451  | 18.453  | ug/l 100   |
| 3) Chloromethane              | 2.04 | 50  | 61017  | 17.543  | ug/l 98    |
| 4) Vinyl Chloride             | 2.16 | 62  | 52659  | 17.319  | ug/l 100   |
| 5) Bromomethane               | 2.53 | 94  | 24457  | 16.214  | ug/l 91    |
| 6) Chloroethane               | 2.67 | 64  | 25766  | 17.214  | ug/l 99    |
| 7) Trichlorofluoromethane     | 2.98 | 101 | 68094  | 19.109  | ug/l 97    |
| 8) Diethyl Ether              | 3.37 | 74  | 31268  | 18.253  | ug/l 97    |
| 9) 1,1,2-Trichlorotrifluoroet | 3.72 | 101 | 43129  | 18.722  | ug/l 98    |
| 10) 1,1-Dichloroethene        | 3.69 | 96  | 42969  | 18.283  | ug/l 94    |
| 11) Methyl Iodide             | 3.91 | 142 | 53695  | 18.657  | ug/l 97    |
| 12) Methyl Acetate            | 4.28 | 43  | 58246  | 18.480  | ug/l 98    |
| 13) Acrolein                  | 3.57 | 56  | 41436  | 87.989  | ug/l 95    |
| 14) Acrylonitrile             | 4.93 | 53  | 134492 | 91.747  | ug/l 99    |
| 15) Acetone                   | 3.77 | 58  | 47335  | 105.190 | ug/l 95    |
| 16) Carbon Disulfide          | 4.01 | 76  | 135407 | 17.680  | ug/l 99    |
| 17) Allyl chloride            | 4.28 | 41  | 91243  | 18.255  | ug/l 98    |
| 18) Methylene Chloride        | 4.50 | 84  | 54969  | 19.009  | ug/l 95    |
| 19) trans-1,2-Dichloroethene  | 4.99 | 96  | 46247  | 17.779  | ug/l 96    |
| 20) Diisopropyl ether         | 5.90 | 45  | 191192 | 18.608  | ug/l 99    |
| 21) 1,1-Dichloroethane        | 5.80 | 63  | 98182  | 18.074  | ug/l 99    |
| 22) cis-1,2-Dichloroethene    | 6.78 | 96  | 53429  | 18.214  | ug/l 99    |
| 23) tert-Butyl Alcohol        | 4.73 | 59  | 47352  | 96.523  | ug/l # 100 |
| 24) Methyl tert-Butyl Ether   | 4.99 | 73  | 157370 | 18.163  | ug/l 98    |
| 25) Chloroform                | 7.33 | 83  | 94419  | 18.953  | ug/l 100   |
| 26) Cyclohexane               | 7.61 | 56  | 82253  | 17.179  | ug/l # 98  |
| 29) 1,1-Dichloropropene       | 7.75 | 75  | 69421  | 19.166  | ug/l 98    |
| 30) 2-Butanone                | 6.79 | 43  | 195614 | 101.834 | ug/l 98    |
| 31) 2,2-Dichloropropane       | 6.77 | 77  | 81203  | 19.883  | ug/l # 72  |
| 32) 1,1,1-Trichloroethane     | 7.53 | 97  | 79338  | 20.380  | ug/l 99    |
| 33) Carbon Tetrachloride      | 7.73 | 117 | 67812  | 20.095  | ug/l 98    |
| 34) Benzene                   | 8.00 | 78  | 213540 | 19.844  | ug/l 98    |
| 35) Methacrylonitrile         | 7.13 | 41  | 37655  | 22.316  | ug/l 93    |
| 36) 1,2-Dichloroethane        | 8.08 | 62  | 78777  | 20.368  | ug/l 100   |
| 37) Trichloroethene           | 8.80 | 130 | 48334  | 19.997  | ug/l 94    |
| 38) Methylcyclohexane         | 9.05 | 83  | 74596  | 18.359  | ug/l 99    |
| 39) 1,2-Dichloropropane       | 9.08 | 63  | 60814  | 19.838  | ug/l 100   |
| 40) Dibromomethane            | 9.18 | 93  | 35195  | 19.921  | ug/l 99    |

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| Internal Standards             | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|--------------------------------|-------|------|----------|---------|-------|----------|
| 41) Bromodichloromethane       | 9.37  | 83   | 75368    | 20.112  | ug/l  | 98       |
| 42) Vinyl Acetate              | 5.84  | 43   | 769058   | 96.346  | ug/l  | 100      |
| 43) Ethyl Acetate              | 6.88  | 43   | 75695    | 19.600  | ug/l  | 97       |
| 44) Isopropyl Acetate          | 8.12  | 43   | 122235   | 18.865  | ug/l  | 98       |
| 45) 1,4-Dioxane                | 9.16  | 88   | 19028    | 429.293 | ug/l  | 98       |
| 46) Methyl methacrylate        | 9.17  | 41   | 58564    | 19.052  | ug/l  | 98       |
| 47) n-amyl Acetate             | 12.05 | 43   | 100413   | 18.384  | ug/l  | 99       |
| 48) t-1,3-Dichloropropene      | 10.35 | 75   | 85043    | 19.457  | ug/l  | 99       |
| 49) cis-1,3-Dichloropropene    | 9.81  | 75   | 90848    | 19.255  | ug/l  | 98       |
| 50) 1,1,2-Trichloroethane      | 10.53 | 97   | 50594    | 20.430  | ug/l  | 97       |
| 51) Ethyl methacrylate         | 10.40 | 69   | 76154    | 18.264  | ug/l  | 99       |
| 52) 1,3-Dichloropropane        | 10.68 | 76   | 90935    | 20.007  | ug/l  | 99       |
| 53) Dibromochloromethane       | 10.87 | 129  | 53806    | 19.941  | ug/l  | 98       |
| 54) 1,2-Dibromoethane          | 10.98 | 107  | 50284    | 19.837  | ug/l  | 99       |
| 55) 2-Chloroethyl vinyl ether  | 9.66  | 63   | 113162   | 84.974  | ug/l  | 99       |
| 56) Bromoform                  | 12.10 | 173  | 36815    | 19.977  | ug/l  | 97       |
| 58) 4-Methyl-2-Pentanone       | 9.95  | 43   | 376418   | 97.566  | ug/l  | 99       |
| 59) 2-Hexanone                 | 10.72 | 43   | 277113   | 97.936  | ug/l  | 100      |
| 61) Tetrachloroethene          | 10.60 | 164  | 40402    | 19.923  | ug/l  | 96       |
| 62) Toluene                    | 10.12 | 91   | 218984   | 19.493  | ug/l  | 99       |
| 64) Chlorobenzene              | 11.40 | 112  | 130345   | 19.746  | ug/l  | 97       |
| 65) 1,1,1,2-Tetrachloroethane  | 11.48 | 131  | 49138    | 20.110  | ug/l  | 99       |
| 66) Ethyl Benzene              | 11.48 | 91   | 235566   | 18.936  | ug/l  | 98       |
| 67) m/p-Xylenes                | 11.59 | 106  | 171998   | 38.092  | ug/l  | 97       |
| 68) o-Xylene                   | 11.92 | 106  | 81943    | 18.910  | ug/l  | 99       |
| 69) Styrene                    | 11.94 | 104  | 140038   | 19.041  | ug/l  | 99       |
| 70) Isopropylbenzene           | 12.22 | 105  | 223675   | 19.229  | ug/l  | 100      |
| 71) 1,1,2,2-Tetrachloroethane  | 12.48 | 83   | 74849    | 19.909  | ug/l  | 99       |
| 72) 1,2,3-Trichloropropane     | 12.53 | 75   | 71425m   | 19.531  | ug/l  |          |
| 73) Bromobenzene               | 12.50 | 156  | 52827    | 19.609  | ug/l  | 99       |
| 74) n-propylbenzene            | 12.56 | 91   | 266714   | 19.289  | ug/l  | 100      |
| 75) 2-Chlorotoluene            | 12.65 | 91   | 161056   | 19.346  | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene     | 12.71 | 105  | 191172   | 19.288  | ug/l  | 98       |
| 77) t-1,4-Dichloro-2-butene    | 12.27 | 75   | 26154    | 19.123  | ug/l  | 92       |
| 78) 4-Chlorotoluene            | 12.75 | 91   | 161713   | 19.037  | ug/l  | 100      |
| 79) tert-butylbenzene          | 12.97 | 119  | 155721   | 18.974  | ug/l  | 99       |
| 80) 1,2,4-Trimethylbenzene     | 13.01 | 105  | 186991   | 19.182  | ug/l  | 99       |
| 81) sec-Butylbenzene           | 13.15 | 105  | 209616   | 19.018  | ug/l  | 100      |
| 82) p-Isopropyltoluene         | 13.27 | 119  | 184334   | 18.952  | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene        | 13.26 | 146  | 91040    | 19.459  | ug/l  | 99       |
| 84) 1,4-Dichlorobenzene        | 13.34 | 146  | 88562    | 19.183  | ug/l  | 99       |
| 85) n-Butylbenzene             | 13.59 | 91   | 148832   | 17.838  | ug/l  | 99       |
| 86) Hexachloroethane           | 13.85 | 117  | 36695    | 19.551  | ug/l  | 98       |
| 87) 1,2-Dichlorobenzene        | 13.63 | 146  | 88455    | 19.661  | ug/l  | 99       |
| 88) 1,2-Dibromo-3-Chloropropan | 14.24 | 75   | 13948    | 19.645  | ug/l  | 99       |
| 89) 1,2,4-Trichlorobenzene     | 14.88 | 180  | 38527    | 17.202  | ug/l  | 98       |
| 90) Hexachlorobutadiene        | 14.98 | 225  | 25406    | 20.452  | ug/l  | 96       |
| 91) Naphthalene                | 15.10 | 128  | 95617    | 15.746  | ug/l  | 98       |
| 92) 1,2,3-Trichlorobenzene     | 15.28 | 180  | 40542    | 17.960  | ug/l  | 98       |

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

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