

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN092722\  
 Data File : VN074624.D  
 Acq On : 27 Sep 2022 12:53  
 Operator : JC\MD  
 Sample : VSTDICC050  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDICC050

Manual Integrations  
 APPROVED

Reviewed By : John Carlone 09/28/2022  
 Supervised By : Mahesh Dadoda 09/28/2022

Quant Time: Sep 28 07:19:57 2022  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N092722W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Sep 28 07:17:56 2022  
 Response via : Initial Calibration

| Compound                     | R.T.           | QIon | Response            | Conc    | Units  | Dev(Min) |
|------------------------------|----------------|------|---------------------|---------|--------|----------|
| -----                        |                |      |                     |         |        |          |
| Internal Standards           |                |      |                     |         |        |          |
| 1) Bromochloromethane        | 7.492          | 128  | 144816              | 30.000  | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 8.828          | 114  | 843135              | 30.000  | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 11.622         | 117  | 790627              | 30.000  | ug/l   | 0.00     |
| System Monitoring Compounds  |                |      |                     |         |        |          |
| 27) 1,2-Dichloroethane-d4    | 8.286          | 65   | 414279              | 30.340  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = 101.133% |         |        |          |
| 60) 4-Bromofluorobenzene     | 12.610         | 95   | 458768              | 29.872  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = 99.567%  |         |        |          |
| 63) Toluene-d8               | 10.310         | 98   | 1354433             | 30.371  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = 101.233% |         |        |          |
| Target Compounds             |                |      |                     |         |        |          |
|                              |                |      |                     |         | Qvalue |          |
| 2) Dichlorodifluoromethane   | 1.999          | 85   | 405250              | 47.618  | ug/l   | 96       |
| 3) Chloromethane             | 2.216          | 50   | 628029              | 50.251  | ug/l   | 99       |
| 4) Vinyl Chloride            | 2.357          | 62   | 797862              | 49.865  | ug/l   | 96       |
| 5) Bromomethane              | 2.722          | 94   | 558958              | 54.194  | ug/l   | 87       |
| 6) Chloroethane              | 2.893          | 64   | 545783              | 48.258  | ug/l   | 96       |
| 7) Trichlorofluoromethane    | 3.240          | 101  | 730385              | 49.148  | ug/l   | 96       |
| 8) Diethyl Ether             | 3.681          | 74   | 384722              | 49.083  | ug/l   | 100      |
| 9) 1,1,2-Trichlorotrifluo... | 4.046          | 101  | 465550              | 49.541  | ug/l   | 97       |
| 10) 1,1-Dichloroethene       | 4.016          | 96   | 471117              | 48.097  | ug/l   | 96       |
| 11) Methyl Iodide            | 4.251          | 142  | 649326              | 51.606  | ug/l   | 93       |
| 12) Methyl Acetate           | 4.669          | 43   | 1061577             | 50.473  | ug/l   | 95       |
| 13) Acrolein                 | 3.893          | 56   | 452569              | 264.282 | ug/l   | 97       |
| 14) Acrylonitrile            | 5.363          | 53   | 2198185             | 257.914 | ug/l   | 100      |
| 15) Acetone                  | 4.128          | 58   | 581129              | 264.837 | ug/l   | 98       |
| 16) Carbon Disulfide         | 4.357          | 76   | 1361985             | 49.332  | ug/l   | 100      |
| 17) Allyl chloride           | 4.657          | 41   | 1013431             | 50.466  | ug/l   | 95       |
| 18) Methylene Chloride       | 4.904          | 84   | 615463              | 49.145  | ug/l   | 95       |
| 19) trans-1,2-Dichloroethene | 5.398          | 96   | 541008              | 48.659  | ug/l   | 96       |
| 20) Diisopropyl ether        | 6.304          | 45   | 2209384             | 50.420  | ug/l   | 98       |
| 21) 1,1-Dichloroethane       | 6.198          | 63   | 1132768             | 51.188  | ug/l   | 99       |
| 22) cis-1,2-Dichloroethene   | 7.157          | 96   | 667155              | 49.439  | ug/l   | 98       |
| 23) tert-Butyl Alcohol       | 5.169          | 59   | 909527              | 258.962 | ug/l # | 100      |
| 24) Methyl tert-Butyl Ether  | 5.422          | 73   | 2075417             | 50.985  | ug/l   | 98       |
| 25) Chloroform               | 7.657          | 83   | 1109505             | 50.575  | ug/l   | 95       |
| 26) Cyclohexane              | 7.939          | 56   | 1004905             | 50.499  | ug/l # | 99       |
| 29) 1,1-Dichloropropene      | 8.069          | 75   | 796687              | 50.590  | ug/l   | 97       |
| 30) 2-Butanone               | 7.163          | 43   | 3098006             | 257.850 | ug/l   | 99       |
| 31) 2,2-Dichloropropane      | 7.151          | 77   | 965186              | 51.146  | ug/l   | 99       |
| 32) 1,1,1-Trichloroethane    | 7.851          | 97   | 935429              | 50.282  | ug/l   | 98       |
| 33) Carbon Tetrachloride     | 8.051          | 117  | 797333              | 51.244  | ug/l   | 93       |
| 34) Benzene                  | 8.310          | 78   | 2629694             | 50.442  | ug/l # | 91       |
| 35) Methacrylonitrile        | 7.475          | 41   | 582581              | 50.967  | ug/l   | 94       |
| 36) 1,2-Dichloroethane       | 8.381          | 62   | 867752              | 50.974  | ug/l   | 98       |
| 37) Trichloroethene          | 9.075          | 130  | 558021              | 50.408  | ug/l   | 89       |
| 38) Methylcyclohexane        | 9.322          | 83   | 1011080             | 49.606  | ug/l   | 99       |
| 39) 1,2-Dichloropropane      | 9.351          | 63   | 698067              | 50.573  | ug/l   | 99       |
| 40) Dibromomethane           | 9.439          | 93   | 456821              | 51.293  | ug/l   | 99       |
| 41) Bromodichloromethane     | 9.628          | 83   | 894320              | 50.515  | ug/l # | 98       |
| 42) Vinyl Acetate            | 6.245          | 43   | 10103659            | 258.787 | ug/l   | 100      |

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 Sample : VSTDICC050  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDICC050

Manual Integrations  
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Quant Time: Sep 28 07:19:57 2022  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N092722W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Sep 28 07:17:56 2022  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc     | Units | Dev(Min) |
|-------------------------------|--------|------|----------|----------|-------|----------|
| 43) Ethyl Acetate             | 7.245  | 43   | 1196257  | 51.407   | ug/l  | 96       |
| 44) Isopropyl Acetate         | 8.416  | 43   | 1937618  | 51.276   | ug/l  | 99       |
| 45) 1,4-Dioxane               | 9.433  | 88   | 341909   | 1060.284 | ug/l  | 100      |
| 46) Methyl methacrylate       | 9.428  | 41   | 800992   | 50.893   | ug/l  | 98       |
| 47) n-amyl Acetate            | 12.269 | 43   | 1747804  | 50.535   | ug/l  | 99       |
| 48) t-1,3-Dichloropropene     | 10.592 | 75   | 1086121  | 50.535   | ug/l  | 99       |
| 49) cis-1,3-Dichloropropene   | 10.057 | 75   | 1139079  | 50.931   | ug/l  | 94       |
| 50) 1,1,2-Trichloroethane     | 10.775 | 97   | 666831   | 51.500   | ug/l  | 95       |
| 51) Ethyl methacrylate        | 10.639 | 69   | 1239524  | 51.053   | ug/l  | 98       |
| 52) 1,3-Dichloropropane       | 10.922 | 76   | 1169329  | 50.952   | ug/l  | 100      |
| 53) Dibromochloromethane      | 11.116 | 129  | 715959   | 52.318   | ug/l  | 95       |
| 54) 1,2-Dibromoethane         | 11.222 | 107  | 692153   | 51.672   | ug/l  | 97       |
| 55) 2-Chloroethyl vinyl ether | 9.916  | 63   | 2496360  | 264.945  | ug/l  | 99       |
| 56) Bromoform                 | 12.333 | 173  | 519672   | 48.584   | ug/l  | 99       |
| 58) 4-Methyl-2-Pentanone      | 10.204 | 43   | 6455525  | 263.105  | ug/l  | 99       |
| 59) 2-Hexanone                | 10.963 | 43   | 4940963  | 260.001  | ug/l  | 99       |
| 61) Tetrachloroethene         | 10.851 | 164  | 433461   | 49.147   | ug/l  | 96       |
| 62) Toluene                   | 10.375 | 91   | 2851027  | 49.246   | ug/l  | 99       |
| 64) Chlorobenzene             | 11.645 | 112  | 1656935  | 49.948   | ug/l  | 99       |
| 65) 1,1,1,2-Tetrachloroethane | 11.716 | 131  | 623533   | 50.026   | ug/l  | 99       |
| 66) Ethyl Benzene             | 11.722 | 91   | 3098707  | 50.404   | ug/l  | 98       |
| 67) m/p-Xylenes               | 11.827 | 106  | 2440364  | 98.866   | ug/l  | 99       |
| 68) o-Xylene                  | 12.157 | 106  | 1223574  | 48.687   | ug/l  | 99       |
| 69) Styrene                   | 12.169 | 104  | 2072795  | 49.025   | ug/l  | 99       |
| 70) Isopropylbenzene          | 12.457 | 105  | 3120926  | 48.675   | ug/l  | 99       |
| 71) 1,1,2,2-Tetrachloroethane | 12.704 | 83   | 1165879  | 51.224   | ug/l  | 98       |
| 72) 1,2,3-Trichloropropane    | 12.757 | 75   | 901099m  | 32.754   | ug/l  |          |
| 73) Bromobenzene              | 12.733 | 156  | 656705   | 50.974   | ug/l  | 98       |
| 74) n-propylbenzene           | 12.798 | 91   | 3653462  | 50.568   | ug/l  | 99       |
| 75) 2-Chlorotoluene           | 12.880 | 91   | 2171038  | 49.538   | ug/l  | 100      |
| 76) 1,3,5-Trimethylbenzene    | 12.939 | 105  | 2646010  | 48.944   | ug/l  | 100      |
| 77) t-1,4-Dichloro-2-butene   | 12.504 | 75   | 449098   | 50.322   | ug/l  | 92       |
| 78) 4-Chlorotoluene           | 12.980 | 91   | 2173745  | 49.493   | ug/l  | 98       |
| 79) tert-butylbenzene         | 13.198 | 119  | 2339715  | 49.466   | ug/l  | 97       |
| 80) 1,2,4-Trimethylbenzene    | 13.245 | 105  | 2674072  | 50.080   | ug/l  | 98       |
| 81) sec-Butylbenzene          | 13.380 | 105  | 3257806  | 48.678   | ug/l  | 99       |
| 82) p-Isopropyltoluene        | 13.492 | 119  | 2700206  | 49.020   | ug/l  | 99       |
| 83) 1,3-Dichlorobenzene       | 13.492 | 146  | 1300921  | 49.136   | ug/l  | 97       |
| 84) 1,4-Dichlorobenzene       | 13.568 | 146  | 1284171  | 48.767   | ug/l  | 97       |
| 85) n-Butylbenzene            | 13.821 | 91   | 2293116  | 48.794   | ug/l  | 99       |
| 86) Hexachloroethane          | 14.086 | 117  | 542340   | 51.115   | ug/l  | 98       |
| 87) 1,2-Dichlorobenzene       | 13.863 | 146  | 1281634  | 47.324   | ug/l  | 97       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.480 | 75   | 247822   | 51.991   | ug/l  | 98       |
| 89) 1,2,4-Trichlorobenzene    | 15.127 | 180  | 581369   | 51.468   | ug/l  | 99       |
| 90) Hexachlorobutadiene       | 15.233 | 225  | 244262   | 49.080   | ug/l  | 96       |
| 91) Naphthalene               | 15.368 | 128  | 2510238  | 52.971   | ug/l  | 99       |
| 92) 1,2,3-Trichlorobenzene    | 15.551 | 180  | 581315   | 51.336   | ug/l  | 98       |

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

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Sample : VSTDICC050  
Misc : 5.0mL/MSVOA\_N/WATER  
ALS Vial : 1 Sample Multiplier: 1

**Instrument :**  
MSVOA\_N  
**ClientSampleId :**  
VSTDICC050

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