

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN090823\  
 Data File : VN079189.D  
 Acq On : 08 Sep 2023 11:11  
 Operator : JC\MD  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC020

Manual Integrations  
 APPROVED

Reviewed By : John Carlone 09/09/2023  
 Supervised By : Mahesh Dadoda 09/11/2023

Quant Time: Sep 08 17:19:25 2023  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N090723W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Sep 08 05:09:17 2023  
 Response via : Initial Calibration

| Compound                     | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|------------------------------|----------------|------|------------|----------|--------|----------|
| -----                        |                |      |            |          |        |          |
| Internal Standards           |                |      |            |          |        |          |
| 1) Bromochloromethane        | 7.824          | 128  | 31699      | 30.000   | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 9.106          | 114  | 183080     | 30.000   | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 11.871         | 117  | 154092     | 30.000   | ug/l   | 0.00     |
|                              |                |      |            |          |        |          |
| System Monitoring Compounds  |                |      |            |          |        |          |
| 27) 1,2-Dichloroethane-d4    | 8.583          | 65   | 69620      | 29.233   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = | 97.433%  |        |          |
| 60) 4-Bromofluorobenzene     | 12.853         | 95   | 75445      | 33.229   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = | 110.767% |        |          |
| 63) Toluene-d8               | 10.571         | 98   | 218242     | 30.306   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = | 101.033% |        |          |
|                              |                |      |            |          |        |          |
| Target Compounds             |                |      |            |          |        | Qvalue   |
| 2) Dichlorodifluoromethane   | 2.130          | 85   | 33133      | 18.741   | ug/l   | 95       |
| 3) Chloromethane             | 2.365          | 50   | 43635      | 24.614   | ug/l   | 92       |
| 4) Vinyl Chloride            | 2.512          | 62   | 37552      | 21.411   | ug/l   | 94       |
| 5) Bromomethane              | 2.948          | 94   | 23473      | 21.806   | ug/l   | 98       |
| 6) Chloroethane              | 3.118          | 64   | 26676      | 24.835   | ug/l   | 98       |
| 7) Trichlorofluoromethane    | 3.495          | 101  | 55190      | 26.431   | ug/l   | 92       |
| 8) Diethyl Ether             | 3.965          | 74   | 21709      | 28.355   | ug/l   | 98       |
| 9) 1,1,2-Trichlorotrifluo... | 4.383          | 101  | 32200      | 27.983   | ug/l   | 98       |
| 10) 1,1-Dichloroethene       | 4.336          | 96   | 31376      | 28.141   | ug/l   | 90       |
| 11) Methyl Iodide            | 4.589          | 142  | 36134      | 25.728   | ug/l   | 94       |
| 12) Methyl Acetate           | 5.030          | 43   | 67765      | 26.080   | ug/l   | 98       |
| 13) Acrolein                 | 4.183          | 56   | 20724      | 87.573   | ug/l   | 97       |
| 14) Acrylonitrile            | 5.730          | 53   | 95534      | 125.323  | ug/l   | 98       |
| 15) Acetone                  | 4.430          | 58   | 27435      | 137.964  | ug/l   | 98       |
| 16) Carbon Disulfide         | 4.712          | 76   | 86584      | 26.281   | ug/l   | 100      |
| 17) Allyl chloride           | 5.030          | 41   | 45940      | 25.642   | ug/l   | 88       |
| 18) Methylene Chloride       | 5.277          | 84   | 39951      | 26.715   | ug/l   | 98       |
| 19) trans-1,2-Dichloroethene | 5.795          | 96   | 35596      | 25.517   | ug/l   | 96       |
| 20) Diisopropyl ether        | 6.677          | 45   | 115656     | 21.624   | ug/l   | 97       |
| 21) 1,1-Dichloroethane       | 6.577          | 63   | 69980      | 22.334   | ug/l   | 99       |
| 22) cis-1,2-Dichloroethene   | 7.494          | 96   | 42109      | 19.302   | ug/l   | 99       |
| 23) tert-Butyl Alcohol       | 5.536          | 59   | 32888      | 112.149  | ug/l # | 100      |
| 24) Methyl tert-Butyl Ether  | 5.800          | 73   | 109554     | 24.897   | ug/l   | 98       |
| 25) Chloroform               | 7.971          | 83   | 71759      | 18.992   | ug/l   | 98       |
| 26) Cyclohexane              | 8.265          | 56   | 50484      | 17.768   | ug/l # | 100      |
| 29) 1,1-Dichloropropene      | 8.371          | 75   | 51004      | 17.376   | ug/l   | 99       |
| 30) 2-Butanone               | 7.494          | 43   | 122697     | 83.104   | ug/l   | 98       |
| 31) 2,2-Dichloropropane      | 7.494          | 77   | 53787      | 18.370   | ug/l   | 98       |
| 32) 1,1,1-Trichloroethane    | 8.171          | 97   | 60559      | 17.512   | ug/l   | 100      |
| 33) Carbon Tetrachloride     | 8.371          | 117  | 54139      | 18.225   | ug/l   | 97       |
| 34) Benzene                  | 8.612          | 78   | 161060     | 17.270   | ug/l   | 98       |
| 35) Methacrylonitrile        | 7.783          | 41   | 25947      | 16.322   | ug/l   | 90       |
| 36) 1,2-Dichloroethane       | 8.677          | 62   | 53296      | 17.328   | ug/l   | 99       |
| 37) Trichloroethene          | 9.359          | 130  | 39131      | 17.752   | ug/l   | 97       |
| 38) Methylcyclohexane        | 9.606          | 83   | 47508      | 16.189   | ug/l   | 99       |
| 39) 1,2-Dichloropropane      | 9.630          | 63   | 41767      | 17.362   | ug/l   | 94       |
| 40) Dibromomethane           | 9.718          | 93   | 27688      | 17.453   | ug/l   | 97       |
| 41) Bromodichloromethane     | 9.894          | 83   | 57308      | 18.121   | ug/l   | 97       |
| 42) Vinyl Acetate            | 6.612          | 43   | 333111     | 95.003   | ug/l   | 99       |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Sep 08 05:09:17 2023  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 43) Ethyl Acetate             | 7.571  | 43   | 49738    | 17.738  | ug/l   | 98       |
| 44) Isopropyl Acetate         | 8.694  | 43   | 79744    | 15.809  | ug/l   | 98       |
| 45) 1,4-Dioxane               | 9.700  | 88   | 15416    | 307.038 | ug/l   | 99       |
| 46) Methyl methacrylate       | 9.688  | 41   | 35721    | 15.851  | ug/l   | 99       |
| 47) n-amyl Acetate            | 12.500 | 43   | 59887    | 16.882  | ug/l   | 95       |
| 48) t-1,3-Dichloropropene     | 10.841 | 75   | 57297    | 16.747  | ug/l # | 88       |
| 49) cis-1,3-Dichloropropene   | 10.318 | 75   | 62779    | 17.591  | ug/l   | 96       |
| 50) 1,1,2-Trichloroethane     | 11.024 | 97   | 39400    | 17.703  | ug/l   | 98       |
| 51) Ethyl methacrylate        | 10.882 | 69   | 57274    | 16.663  | ug/l   | 98       |
| 52) 1,3-Dichloropropane       | 11.171 | 76   | 69172    | 18.205  | ug/l   | 100      |
| 53) Dibromochloromethane      | 11.365 | 129  | 41572    | 17.809  | ug/l   | 98       |
| 54) 1,2-Dibromoethane         | 11.476 | 107  | 38309    | 16.951  | ug/l   | 97       |
| 55) 2-Chloroethyl vinyl ether | 10.165 | 63   | 102975   | 84.315  | ug/l   | 99       |
| 56) Bromoform                 | 12.582 | 173  | 29866    | 18.362  | ug/l   | 99       |
| 58) 4-Methyl-2-Pentanone      | 10.453 | 43   | 251213   | 88.841  | ug/l   | 99       |
| 59) 2-Hexanone                | 11.200 | 43   | 175860   | 88.556  | ug/l   | 98       |
| 61) Tetrachloroethene         | 11.112 | 164  | 32160    | 19.181  | ug/l   | 95       |
| 62) Toluene                   | 10.635 | 91   | 171702   | 19.138  | ug/l   | 100      |
| 64) Chlorobenzene             | 11.894 | 112  | 99497    | 19.009  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane | 11.965 | 131  | 39669    | 19.796  | ug/l   | 98       |
| 66) Ethyl Benzene             | 11.971 | 91   | 175593   | 19.438  | ug/l   | 97       |
| 67) m/p-Xylenes               | 12.076 | 106  | 134390   | 39.537  | ug/l   | 100      |
| 68) o-Xylene                  | 12.406 | 106  | 64973    | 19.820  | ug/l   | 100      |
| 69) Styrene                   | 12.418 | 104  | 107708   | 20.600  | ug/l   | 100      |
| 70) Isopropylbenzene          | 12.700 | 105  | 161953   | 19.436  | ug/l   | 100      |
| 71) 1,1,2,2-Tetrachloroethane | 12.941 | 83   | 63153    | 20.261  | ug/l   | 97       |
| 72) 1,2,3-Trichloropropane    | 13.000 | 75   | 51161m   | 19.507  | ug/l   |          |
| 73) Bromobenzene              | 12.988 | 156  | 41816    | 20.090  | ug/l   | 98       |
| 74) n-propylbenzene           | 13.041 | 91   | 195009   | 20.541  | ug/l   | 99       |
| 75) 2-Chlorotoluene           | 13.129 | 91   | 125446   | 20.607  | ug/l   | 99       |
| 76) 1,3,5-Trimethylbenzene    | 13.176 | 105  | 138682   | 20.129  | ug/l   | 99       |
| 77) t-1,4-Dichloro-2-butene   | 12.741 | 75   | 17192    | 18.619  | ug/l   | 98       |
| 78) 4-Chlorotoluene           | 13.223 | 91   | 116951   | 20.346  | ug/l   | 100      |
| 79) tert-butylbenzene         | 13.441 | 119  | 110428   | 19.527  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene    | 13.488 | 105  | 132405   | 20.124  | ug/l   | 100      |
| 81) sec-Butylbenzene          | 13.623 | 105  | 149670   | 19.343  | ug/l   | 98       |
| 82) p-Isopropyltoluene        | 13.735 | 119  | 123016   | 20.128  | ug/l   | 100      |
| 83) 1,3-Dichlorobenzene       | 13.741 | 146  | 65268    | 19.745  | ug/l   | 97       |
| 84) 1,4-Dichlorobenzene       | 13.818 | 146  | 63552    | 20.500  | ug/l   | 98       |
| 85) n-Butylbenzene            | 14.059 | 91   | 90708    | 19.486  | ug/l   | 99       |
| 86) Hexachloroethane          | 14.341 | 117  | 23747    | 19.624  | ug/l   | 100      |
| 87) 1,2-Dichlorobenzene       | 14.112 | 146  | 64934    | 19.906  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.723 | 75   | 9657     | 18.329  | ug/l   | 98       |
| 89) 1,2,4-Trichlorobenzene    | 15.841 | 180  | 24069    | 17.242  | ug/l   | 97       |
| 90) Hexachlorobutadiene       | 15.506 | 225  | 16116    | 19.007  | ug/l   | 99       |
| 91) Naphthalene               | 15.647 | 128  | 55783    | 15.293  | ug/l   | 100      |
| 92) 1,2,3-Trichlorobenzene    | 15.841 | 180  | 24069    | 17.242  | ug/l   | 97       |

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

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 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

## Instrument :

MSVOA\_N

## ClientSampleId :

VSTDCCC020

## Manual Integrations

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Reviewed By :John Carlone 09/09/2023

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