

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN012224\  
 Data File : VN080750.D  
 Acq On : 22 Jan 2024 20:56  
 Operator : JC\MD  
 Sample : VSTDC0020  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDC0020EC

Quant Time: Jan 23 01:32:53 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N011124W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jan 12 05:20:11 2024  
 Response via : Initial Calibration

### Manual Integrations APPROVED

Reviewed By :John  
 Carlone  
 01/23/2024

Supervised By :Mahesh  
 Dadoda  
 01/23/2024

| Compound                     | R.T.           | QIon | Response            | Conc   | Units  | Dev(Min) |
|------------------------------|----------------|------|---------------------|--------|--------|----------|
| -----                        |                |      |                     |        |        |          |
| Internal Standards           |                |      |                     |        |        |          |
| 1) Bromochloromethane        | 7.812          | 128  | 10926               | 30.000 | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 9.100          | 114  | 116447              | 30.000 | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 11.865         | 117  | 125501              | 30.000 | ug/l   | 0.00     |
|                              |                |      |                     |        |        |          |
| System Monitoring Compounds  |                |      |                     |        |        |          |
| 27) 1,2-Dichloroethane-d4    | 8.577          | 65   | 57827               | 32.774 | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = 109.233% |        |        |          |
| 60) 4-Bromofluorobenzene     | 12.853         | 95   | 73798               | 26.582 | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = 88.600%  |        |        |          |
| 63) Toluene-d8               | 10.565         | 98   | 166511              | 30.231 | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = 100.767% |        |        |          |
|                              |                |      |                     |        |        |          |
| Target Compounds             |                |      |                     |        | Qvalue |          |
| 2) Dichlorodifluoromethane   | 2.124          | 85   | 32887               | 17.710 | ug/l   | 93       |
| 3) Chloromethane             | 2.359          | 50   | 48309               | 19.098 | ug/l   | 98       |
| 4) Vinyl Chloride            | 2.512          | 62   | 37868               | 19.680 | ug/l   | 90       |
| 5) Bromomethane              | 2.965          | 94   | 14204               | 20.103 | ug/l   | 94       |
| 6) Chloroethane              | 3.130          | 64   | 19951               | 19.178 | ug/l   | 96       |
| 7) Trichlorofluoromethane    | 3.501          | 101  | 49289               | 17.146 | ug/l   | 99       |
| 8) Diethyl Ether             | 3.953          | 74   | 22572               | 16.873 | ug/l   | 58       |
| 9) 1,1,2-Trichlorotrifluo... | 4.365          | 101  | 30499m              | 18.411 | ug/l   |          |
| 10) 1,1-Dichloroethene       | 4.342          | 96   | 31815               | 17.879 | ug/l   | 93       |
| 11) Methyl Iodide            | 4.583          | 142  | 24634               | 16.231 | ug/l   | 94       |
| 12) Methyl Acetate           | 5.018          | 43   | 40386               | 19.184 | ug/l # | 79       |
| 13) Acrolein                 | 4.177          | 56   | 24370m              | 87.085 | ug/l   |          |
| 14) Acrylonitrile            | 5.712          | 53   | 90372               | 95.263 | ug/l   | 99       |
| 15) Acetone                  | 4.430          | 58   | 19895m              | 92.449 | ug/l   |          |
| 16) Carbon Disulfide         | 4.712          | 76   | 91743               | 16.643 | ug/l   | 99       |
| 17) Allyl chloride           | 5.018          | 41   | 63314               | 17.577 | ug/l   | 84       |
| 18) Methylene Chloride       | 5.277          | 84   | 36423               | 17.615 | ug/l # | 78       |
| 19) trans-1,2-Dichloroethene | 5.789          | 96   | 33955               | 18.150 | ug/l   | 95       |
| 20) Diisopropyl ether        | 6.677          | 45   | 135415              | 18.526 | ug/l   | 96       |
| 21) 1,1-Dichloroethane       | 6.577          | 63   | 76077m              | 19.165 | ug/l   |          |
| 22) cis-1,2-Dichloroethene   | 7.489          | 96   | 39859               | 18.212 | ug/l   | 84       |
| 23) tert-Butyl Alcohol       | 5.506          | 59   | 27866               | 85.170 | ug/l # | 100      |
| 24) Methyl tert-Butyl Ether  | 5.795          | 73   | 113716              | 17.675 | ug/l   | 96       |
| 25) Chloroform               | 7.965          | 83   | 67072               | 18.148 | ug/l   | 100      |
| 26) Cyclohexane              | 8.259          | 56   | 60545               | 19.396 | ug/l # | 86       |
| 29) 1,1-Dichloropropene      | 8.371          | 75   | 52906               | 14.946 | ug/l   | 96       |
| 30) 2-Butanone               | 7.483          | 43   | 119449              | 76.259 | ug/l # | 89       |
| 31) 2,2-Dichloropropane      | 7.489          | 77   | 58734               | 13.812 | ug/l # | 80       |
| 32) 1,1,1-Trichloroethane    | 8.171          | 97   | 54629               | 14.025 | ug/l # | 93       |
| 33) Carbon Tetrachloride     | 8.365          | 117  | 42354               | 13.769 | ug/l   | 90       |
| 34) Benzene                  | 8.606          | 78   | 162339              | 15.462 | ug/l   | 96       |
| 35) Methacrylonitrile        | 7.777          | 41   | 31857               | 16.208 | ug/l   | 88       |
| 36) 1,2-Dichloroethane       | 8.665          | 62   | 54135               | 14.022 | ug/l   | 96       |
| 37) Trichloroethene          | 9.353          | 130  | 33404               | 14.588 | ug/l   | 91       |
| 38) Methylcyclohexane        | 9.600          | 83   | 52644               | 15.266 | ug/l   | 92       |
| 39) 1,2-Dichloropropane      | 9.618          | 63   | 45856               | 16.204 | ug/l   | 96       |
| 40) Dibromomethane           | 9.712          | 93   | 25306               | 15.029 | ug/l   | 83       |
| 41) Bromodichloromethane     | 9.883          | 83   | 53565               | 14.537 | ug/l # | 98       |
| 42) Vinyl Acetate            | 6.600          | 43   | 551266              | 75.722 | ug/l # | 93       |

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 Acq On : 22 Jan 2024 20:56  
 Operator : JC\MD  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDCCC020EC

Manual Integrations  
 APPROVED

Reviewed By :John  
 Carlone  
 01/23/2024

Supervised By :Mahesh  
 Dadoda  
 01/23/2024

Quant Time: Jan 23 01:32:53 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N011124W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Jan 12 05:20:11 2024  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 43) Ethyl Acetate             | 7.553  | 43   | 52888    | 16.080  | ug/l   | 98       |
| 44) Isopropyl Acetate         | 8.688  | 43   | 94295    | 15.018  | ug/l   | 91       |
| 45) 1,4-Dioxane               | 9.694  | 88   | 10691    | 299.395 | ug/l # | 92       |
| 46) Methyl methacrylate       | 9.683  | 41   | 45744    | 15.472  | ug/l   | 82       |
| 47) n-amyl Acetate            | 12.494 | 43   | 81626    | 14.488  | ug/l # | 87       |
| 48) t-1,3-Dichloropropene     | 10.835 | 75   | 59299    | 13.658  | ug/l   | 99       |
| 49) cis-1,3-Dichloropropene   | 10.312 | 75   | 64983    | 14.102  | ug/l # | 87       |
| 50) 1,1,2-Trichloroethane     | 11.024 | 97   | 34688    | 15.001  | ug/l   | 94       |
| 51) Ethyl methacrylate        | 10.871 | 69   | 58416    | 14.614  | ug/l # | 67       |
| 52) 1,3-Dichloropropane       | 11.165 | 76   | 65333    | 15.008  | ug/l   | 98       |
| 53) Dibromochloromethane      | 11.359 | 129  | 31619    | 13.664  | ug/l   | 96       |
| 54) 1,2-Dibromoethane         | 11.471 | 107  | 33412    | 14.699  | ug/l   | 97       |
| 55) 2-Chloroethyl vinyl ether | 10.159 | 63   | 152216   | 74.085  | ug/l   | 94       |
| 56) Bromoform                 | 12.576 | 173  | 17979    | 13.153  | ug/l # | 94       |
| 58) 4-Methyl-2-Pentanone      | 10.441 | 43   | 267237   | 80.946  | ug/l # | 83       |
| 59) 2-Hexanone                | 11.194 | 43   | 189464   | 76.863  | ug/l # | 86       |
| 61) Tetrachloroethene         | 11.106 | 164  | 26580    | 15.910  | ug/l   | 97       |
| 62) Toluene                   | 10.630 | 91   | 161733   | 16.022  | ug/l   | 99       |
| 64) Chlorobenzene             | 11.894 | 112  | 84616    | 15.050  | ug/l   | 96       |
| 65) 1,1,1,2-Tetrachloroethane | 11.959 | 131  | 29170    | 14.440  | ug/l   | 91       |
| 66) Ethyl Benzene             | 11.965 | 91   | 171613   | 16.164  | ug/l   | 91       |
| 67) m/p-Xylenes               | 12.071 | 106  | 118909   | 31.162  | ug/l   | 95       |
| 68) o-Xylene                  | 12.400 | 106  | 60054    | 15.780  | ug/l   | 96       |
| 69) Styrene                   | 12.412 | 104  | 98468    | 15.401  | ug/l   | 98       |
| 70) Isopropylbenzene          | 12.694 | 105  | 147727   | 15.883  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane | 12.935 | 83   | 45834    | 15.097  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane    | 12.994 | 75   | 46152m   | 16.040  | ug/l   |          |
| 73) Bromobenzene              | 12.982 | 156  | 30201    | 15.234  | ug/l   | 75       |
| 74) n-propylbenzene           | 13.035 | 91   | 178176   | 15.884  | ug/l   | 98       |
| 75) 2-Chlorotoluene           | 13.123 | 91   | 107255   | 15.205  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene    | 13.171 | 105  | 120192   | 15.526  | ug/l   | 96       |
| 77) t-1,4-Dichloro-2-butene   | 12.735 | 75   | 17689    | 14.996  | ug/l   | 93       |
| 78) 4-Chlorotoluene           | 13.223 | 91   | 106849   | 15.153  | ug/l   | 98       |
| 79) tert-butylbenzene         | 13.441 | 119  | 96439    | 15.960  | ug/l   | 97       |
| 80) 1,2,4-Trimethylbenzene    | 13.482 | 105  | 117744   | 15.546  | ug/l   | 100      |
| 81) sec-Butylbenzene          | 13.618 | 105  | 139907   | 15.728  | ug/l   | 94       |
| 82) p-Isopropyltoluene        | 13.729 | 119  | 108491   | 15.993  | ug/l   | 97       |
| 83) 1,3-Dichlorobenzene       | 13.735 | 146  | 55298    | 16.078  | ug/l   | 97       |
| 84) 1,4-Dichlorobenzene       | 13.812 | 146  | 53249    | 15.376  | ug/l   | 97       |
| 85) n-Butylbenzene            | 14.059 | 91   | 102500   | 15.293  | ug/l   | 96       |
| 86) Hexachloroethane          | 14.335 | 117  | 18234    | 14.294  | ug/l   | 77       |
| 87) 1,2-Dichlorobenzene       | 14.106 | 146  | 54375    | 16.116  | ug/l   | 98       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.729 | 75   | 7646m    | 12.097  | ug/l   |          |
| 89) 1,2,4-Trichlorobenzene    | 15.841 | 180  | 24106    | 14.245  | ug/l   | 98       |
| 90) Hexachlorobutadiene       | 15.500 | 225  | 10748    | 13.862  | ug/l   | 96       |
| 91) Naphthalene               | 15.641 | 128  | 95056    | 14.409  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene    | 15.841 | 180  | 24106    | 14.245  | ug/l   | 98       |

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

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Acq On : 22 Jan 2024 20:56  
Operator : JC\MD  
Sample : VSTDCCC020  
Misc : 5.0mL/MSVOA\_N/WATER  
ALS Vial : 23 Sample Multiplier: 1

## Instrument :

MSVOA\_N

## ClientSampleId :

VSTDCCC020EC

## Manual Integrations

## APPROVED

Reviewed By :John

Carlone

01/23/2024

Supervised By :Mahesh

Dadoda

01/23/2024

Quant Time: Jan 23 01:32:53 2024  
Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N011124W.M  
Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
QLast Update : Fri Jan 12 05:20:11 2024  
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