

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN090924\  
 Data File : VN083711.D  
 Acq On : 09 Sep 2024 11:14  
 Operator : JC\MD  
 Sample : P3390-09 2.5PPB  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 MDL-WATER-03-QT3-2024

Quant Time: Sep 10 01:18:05 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N090624W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Sep 06 23:42:47 2024  
 Response via : Initial Calibration

### Manual Integrations APPROVED

Reviewed By : John Carlone 09/10/2024  
 Supervised By : Mahesh Dadoda 09/10/2024

| Compound                     | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|------------------------------|----------------|------|------------|----------|--------|----------|
| -----                        |                |      |            |          |        |          |
| Internal Standards           |                |      |            |          |        |          |
| 1) Bromochloromethane        | 7.812          | 128  | 26810      | 30.000   | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 9.100          | 114  | 152873     | 30.000   | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 11.865         | 117  | 131317     | 30.000   | ug/l   | 0.00     |
| System Monitoring Compounds  |                |      |            |          |        |          |
| 27) 1,2-Dichloroethane-d4    | 8.577          | 65   | 73430      | 29.964   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = | 99.867%  |        |          |
| 60) 4-Bromofluorobenzene     | 12.847         | 95   | 63990      | 28.274   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = | 94.233%  |        |          |
| 63) Toluene-d8               | 10.565         | 98   | 184661     | 30.370   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = | 101.233% |        |          |
| Target Compounds             |                |      |            |          |        |          |
|                              |                |      |            |          | Qvalue |          |
| 2) Dichlorodifluoromethane   | 2.124          | 85   | 4116       | 2.293    | ug/l   | 92       |
| 3) Chloromethane             | 2.359          | 50   | 5070       | 2.718    | ug/l   | 98       |
| 4) Vinyl Chloride            | 2.518          | 62   | 4434       | 2.312    | ug/l # | 76       |
| 5) Bromomethane              | 2.900          | 94   | 2687       | 2.508    | ug/l   | 96       |
| 6) Chloroethane              | 3.071          | 64   | 3316m      | 2.582    | ug/l   |          |
| 7) Trichlorofluoromethane    | 3.465          | 101  | 7496       | 2.331    | ug/l # | 81       |
| 8) Diethyl Ether             | 3.953          | 74   | 2630m      | 2.407    | ug/l   |          |
| 9) 1,1,2-Trichlorotrifluo... | 4.353          | 101  | 4189m      | 2.426    | ug/l   |          |
| 10) 1,1-Dichloroethene       | 4.336          | 96   | 3727m      | 2.237    | ug/l   |          |
| 11) Methyl Iodide            | 4.583          | 142  | 4514m      | 1.994    | ug/l   |          |
| 12) Methyl Acetate           | 5.024          | 43   | 6541       | 3.255    | ug/l # | 82       |
| 13) Acrolein                 | 4.165          | 56   | 2810m      | 9.581    | ug/l   |          |
| 14) Acrylonitrile            | 5.718          | 53   | 9270m      | 11.399   | ug/l   |          |
| 15) Acetone                  | 4.430          | 58   | 2780m      | 10.305   | ug/l   |          |
| 16) Carbon Disulfide         | 4.694          | 76   | 9940       | 2.111    | ug/l # | 95       |
| 17) Allyl chloride           | 5.018          | 41   | 6084m      | 2.082    | ug/l   |          |
| 18) Methylene Chloride       | 5.259          | 84   | 4628m      | 2.539    | ug/l   |          |
| 19) trans-1,2-Dichloroethene | 5.777          | 96   | 3566       | 2.065    | ug/l # | 90       |
| 20) Diisopropyl ether        | 6.671          | 45   | 12198      | 2.067    | ug/l # | 96       |
| 21) 1,1-Dichloroethane       | 6.559          | 63   | 7445       | 2.210    | ug/l # | 79       |
| 22) cis-1,2-Dichloroethene   | 7.483          | 96   | 4674m      | 2.224    | ug/l   |          |
| 23) tert-Butyl Alcohol       | 5.530          | 59   | 3253m      | 10.901   | ug/l   |          |
| 24) Methyl tert-Butyl Ether  | 5.789          | 73   | 13376m     | 2.259    | ug/l   |          |
| 25) Chloroform               | 7.965          | 83   | 8447       | 2.366    | ug/l   | 88       |
| 26) Cyclohexane              | 8.253          | 56   | 5828       | 1.964    | ug/l # | 86       |
| 29) 1,1-Dichloropropene      | 8.371          | 75   | 5012       | 2.067    | ug/l   | 88       |
| 30) 2-Butanone               | 7.483          | 43   | 13776      | 12.052   | ug/l # | 71       |
| 31) 2,2-Dichloropropane      | 7.483          | 77   | 7299       | 2.361    | ug/l # | 69       |
| 32) 1,1,1-Trichloroethane    | 8.159          | 97   | 7810       | 2.412    | ug/l # | 90       |
| 33) Carbon Tetrachloride     | 8.353          | 117  | 6476       | 2.309    | ug/l # | 82       |
| 34) Benzene                  | 8.606          | 78   | 16150      | 2.220    | ug/l # | 78       |
| 35) Methacrylonitrile        | 7.777          | 41   | 3585       | 2.790    | ug/l   | 94       |
| 36) 1,2-Dichloroethane       | 8.671          | 62   | 6842       | 2.502    | ug/l # | 90       |
| 37) Trichloroethene          | 9.353          | 130  | 4093       | 2.396    | ug/l   | 84       |
| 38) Methylcyclohexane        | 9.600          | 83   | 6103       | 2.102    | ug/l   | 95       |
| 39) 1,2-Dichloropropane      | 9.624          | 63   | 4082       | 2.331    | ug/l   | 93       |
| 40) Dibromomethane           | 9.712          | 93   | 2690       | 2.101    | ug/l   | 90       |
| 41) Bromodichloromethane     | 9.888          | 83   | 6032       | 2.216    | ug/l # | 98       |
| 42) Vinyl Acetate            | 6.594          | 43   | 63232      | 13.455   | ug/l   | 96       |

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Manual Integrations  
 APPROVED

Reviewed By :John Carlone 09/10/2024  
 Supervised By :Mahesh Dadoda 09/10/2024

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 43) Ethyl Acetate             | 7.559  | 43   | 5646     | 2.454  | ug/l   | 97       |
| 44) Isopropyl Acetate         | 8.688  | 43   | 9339     | 2.347  | ug/l # | 88       |
| 45) 1,4-Dioxane               | 9.700  | 88   | 1503     | 48.427 | ug/l # | 90       |
| 46) Methyl methacrylate       | 9.677  | 41   | 4587     | 2.382  | ug/l   | 83       |
| 47) n-amyl Acetate            | 12.494 | 43   | 6358     | 1.804  | ug/l   | 99       |
| 48) t-1,3-Dichloropropene     | 10.835 | 75   | 5824     | 2.034  | ug/l # | 84       |
| 49) cis-1,3-Dichloropropene   | 10.312 | 75   | 6203     | 2.083  | ug/l # | 71       |
| 50) 1,1,2-Trichloroethane     | 11.018 | 97   | 4014     | 2.464  | ug/l   | 93       |
| 51) Ethyl methacrylate        | 10.871 | 69   | 6024     | 2.164  | ug/l   | 82       |
| 52) 1,3-Dichloropropane       | 11.159 | 76   | 6495     | 2.208  | ug/l   | 98       |
| 53) Dibromochloromethane      | 11.359 | 129  | 3879     | 1.985  | ug/l   | 88       |
| 54) 1,2-Dibromoethane         | 11.471 | 107  | 3733     | 2.215  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether | 10.153 | 63   | 13038    | 11.754 | ug/l   | 99       |
| 56) Bromoform                 | 12.570 | 173  | 2462     | 1.983  | ug/l # | 86       |
| 58) 4-Methyl-2-Pentanone      | 10.441 | 43   | 25423    | 12.210 | ug/l # | 87       |
| 59) 2-Hexanone                | 11.194 | 43   | 19640    | 12.483 | ug/l # | 85       |
| 61) Tetrachloroethene         | 11.106 | 164  | 3024     | 2.176  | ug/l # | 85       |
| 62) Toluene                   | 10.629 | 91   | 17349    | 2.299  | ug/l   | 99       |
| 64) Chlorobenzene             | 11.888 | 112  | 10547    | 2.257  | ug/l   | 90       |
| 65) 1,1,1,2-Tetrachloroethane | 11.959 | 131  | 3618     | 2.222  | ug/l   | 99       |
| 66) Ethyl Benzene             | 11.965 | 91   | 18028    | 2.100  | ug/l   | 94       |
| 67) m/p-Xylenes               | 12.070 | 106  | 12425    | 3.935  | ug/l   | 94       |
| 68) o-Xylene                  | 12.394 | 106  | 6554     | 2.144  | ug/l   | 98       |
| 69) Styrene                   | 12.412 | 104  | 10050    | 1.946  | ug/l   | 98       |
| 70) Isopropylbenzene          | 12.694 | 105  | 15795    | 1.958  | ug/l   | 97       |
| 71) 1,1,2,2-Tetrachloroethane | 12.935 | 83   | 5216     | 2.368  | ug/l   | 94       |
| 72) 1,2,3-Trichloropropane    | 12.994 | 75   | 4538m    | 2.350  | ug/l   |          |
| 73) Bromobenzene              | 12.982 | 156  | 4123     | 2.226  | ug/l   | 96       |
| 74) n-propylbenzene           | 13.035 | 91   | 18098    | 1.917  | ug/l   | 99       |
| 75) 2-Chlorotoluene           | 13.117 | 91   | 12305    | 2.088  | ug/l   | 98       |
| 76) 1,3,5-Trimethylbenzene    | 13.170 | 105  | 13323    | 1.977  | ug/l   | 100      |
| 77) t-1,4-Dichloro-2-butene   | 12.735 | 75   | 1580     | 1.935  | ug/l   | 75       |
| 78) 4-Chlorotoluene           | 13.217 | 91   | 11858    | 1.984  | ug/l   | 97       |
| 79) tert-butylbenzene         | 13.435 | 119  | 12470    | 2.117  | ug/l   | 97       |
| 80) 1,2,4-Trimethylbenzene    | 13.482 | 105  | 12936    | 1.900  | ug/l   | 100      |
| 81) sec-Butylbenzene          | 13.617 | 105  | 15644    | 1.944  | ug/l   | 99       |
| 82) p-Isopropyltoluene        | 13.729 | 119  | 12107    | 1.788  | ug/l   | 96       |
| 83) 1,3-Dichlorobenzene       | 13.729 | 146  | 7161     | 2.008  | ug/l   | 94       |
| 84) 1,4-Dichlorobenzene       | 13.812 | 146  | 7258     | 2.036  | ug/l   | 98       |
| 85) n-Butylbenzene            | 14.053 | 91   | 10455    | 1.750  | ug/l   | 96       |
| 86) Hexachloroethane          | 14.335 | 117  | 2923     | 2.278  | ug/l   | 86       |
| 87) 1,2-Dichlorobenzene       | 14.106 | 146  | 7123     | 2.058  | ug/l   | 95       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.717 | 75   | 971      | 2.006  | ug/l   | 93       |
| 89) 1,2,4-Trichlorobenzene    | 15.841 | 180  | 3180     | 1.677  | ug/l   | 93       |
| 90) Hexachlorobutadiene       | 15.494 | 225  | 1784     | 2.274  | ug/l   | 77       |
| 91) Naphthalene               | 15.641 | 128  | 9922     | 1.601  | ug/l # | 90       |
| 92) 1,2,3-Trichlorobenzene    | 15.841 | 180  | 3180     | 1.677  | ug/l   | 93       |

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

