

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN121624\  
 Data File : VN085209.D  
 Acq On : 16 Dec 2024 10:57  
 Operator : JC\MD  
 Sample : VN1216WBSD01  
 Misc : 5.0mL/MSVOA\_N/WATER  
 ALS Vial : 4 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VN1216WBSD01

Manual Integrations  
 APPROVED

Reviewed By : John Carlone 12/16/2024  
 Supervised By : Mahesh Dadoda 12/17/2024

Quant Time: Dec 16 12:21:56 2024  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N120624W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 06 22:50:42 2024  
 Response via : Initial Calibration

| Compound                     | R.T.           | QIon | Response            | Conc    | Units  | Dev(Min) |
|------------------------------|----------------|------|---------------------|---------|--------|----------|
| -----                        |                |      |                     |         |        |          |
| Internal Standards           |                |      |                     |         |        |          |
| 1) Bromochloromethane        | 7.812          | 128  | 29855               | 30.000  | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 9.100          | 114  | 161867              | 30.000  | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 11.865         | 117  | 148673              | 30.000  | ug/l   | 0.00     |
|                              |                |      |                     |         |        |          |
| System Monitoring Compounds  |                |      |                     |         |        |          |
| 27) 1,2-Dichloroethane-d4    | 8.577          | 65   | 72034               | 30.408  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = 101.367% |         |        |          |
| 60) 4-Bromofluorobenzene     | 12.847         | 95   | 73852               | 30.022  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = 100.067% |         |        |          |
| 63) Toluene-d8               | 10.565         | 98   | 202306              | 29.009  | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = 96.700%  |         |        |          |
|                              |                |      |                     |         |        |          |
| Target Compounds             |                |      |                     |         |        |          |
|                              |                |      |                     |         | Qvalue |          |
| 2) Dichlorodifluoromethane   | 2.124          | 85   | 48095               | 20.136  | ug/l   | 96       |
| 3) Chloromethane             | 2.359          | 50   | 40344               | 19.083  | ug/l   | 92       |
| 4) Vinyl Chloride            | 2.512          | 62   | 45267               | 20.934  | ug/l   | 96       |
| 5) Bromomethane              | 2.965          | 94   | 27446               | 19.991  | ug/l   | 99       |
| 6) Chloroethane              | 3.118          | 64   | 28186               | 21.216  | ug/l   | 95       |
| 7) Trichlorofluoromethane    | 3.501          | 101  | 72820               | 20.573  | ug/l   | 97       |
| 8) Diethyl Ether             | 3.959          | 74   | 23793               | 21.222  | ug/l   | 99       |
| 9) 1,1,2-Trichlorotrifluo... | 4.371          | 101  | 39414               | 19.912  | ug/l   | 88       |
| 10) 1,1-Dichloroethene       | 4.342          | 96   | 36096               | 19.853  | ug/l   | 96       |
| 11) Methyl Iodide            | 4.589          | 142  | 46064               | 18.268  | ug/l   | 97       |
| 12) Methyl Acetate           | 5.024          | 43   | 46738               | 21.790  | ug/l   | 96       |
| 13) Acrolein                 | 4.177          | 56   | 35773               | 114.765 | ug/l   | 99       |
| 14) Acrylonitrile            | 5.718          | 53   | 91712               | 102.973 | ug/l   | 96       |
| 15) Acetone                  | 4.424          | 58   | 29139               | 120.730 | ug/l   | 83       |
| 16) Carbon Disulfide         | 4.712          | 76   | 105348              | 19.385  | ug/l   | 97       |
| 17) Allyl chloride           | 5.024          | 41   | 52512               | 20.184  | ug/l   | 99       |
| 18) Methylene Chloride       | 5.277          | 84   | 41210               | 19.976  | ug/l   | 92       |
| 19) trans-1,2-Dichloroethene | 5.777          | 96   | 36574               | 19.353  | ug/l   | 92       |
| 20) Diisopropyl ether        | 6.671          | 45   | 118990              | 20.841  | ug/l   | 96       |
| 21) 1,1-Dichloroethane       | 6.565          | 63   | 71674               | 20.339  | ug/l   | 99       |
| 22) cis-1,2-Dichloroethene   | 7.483          | 96   | 44718               | 20.587  | ug/l   | 99       |
| 23) tert-Butyl Alcohol       | 5.512          | 59   | 35358               | 110.664 | ug/l # | 100      |
| 24) Methyl tert-Butyl Ether  | 5.795          | 73   | 121741              | 21.432  | ug/l # | 74       |
| 25) Chloroform               | 7.965          | 83   | 74641               | 20.218  | ug/l   | 100      |
| 26) Cyclohexane              | 8.253          | 56   | 56899               | 19.610  | ug/l # | 93       |
| 29) 1,1-Dichloropropene      | 8.371          | 75   | 51348               | 19.659  | ug/l   | 95       |
| 30) 2-Butanone               | 7.477          | 43   | 130125              | 108.562 | ug/l   | 98       |
| 31) 2,2-Dichloropropane      | 7.483          | 77   | 65963               | 19.694  | ug/l # | 100      |
| 32) 1,1,1-Trichloroethane    | 8.165          | 97   | 68382               | 19.342  | ug/l   | 97       |
| 33) Carbon Tetrachloride     | 8.365          | 117  | 61882               | 19.398  | ug/l   | 93       |
| 34) Benzene                  | 8.600          | 78   | 159828              | 19.479  | ug/l # | 97       |
| 35) Methacrylonitrile        | 7.777          | 41   | 27030               | 20.039  | ug/l   | 93       |
| 36) 1,2-Dichloroethane       | 8.665          | 62   | 54876               | 19.646  | ug/l   | 99       |
| 37) Trichloroethene          | 9.347          | 130  | 38098               | 19.498  | ug/l   | 95       |
| 38) Methylcyclohexane        | 9.600          | 83   | 53887               | 18.974  | ug/l   | 96       |
| 39) 1,2-Dichloropropane      | 9.618          | 63   | 38165               | 19.203  | ug/l   | 89       |
| 40) Dibromomethane           | 9.706          | 93   | 28463               | 19.966  | ug/l   | 98       |
| 41) Bromodichloromethane     | 9.888          | 83   | 61025               | 20.024  | ug/l   | 92       |
| 42) Vinyl Acetate            | 6.600          | 43   | 445381              | 106.188 | ug/l   | 100      |

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 ALS Vial : 4 Sample Multiplier: 1

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 ClientSampleId :  
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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 06 22:50:42 2024  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 43) Ethyl Acetate             | 7.553  | 43   | 49449    | 20.734  | ug/l # | 92       |
| 44) Isopropyl Acetate         | 8.683  | 43   | 85730    | 20.685  | ug/l   | 97       |
| 45) 1,4-Dioxane               | 9.694  | 88   | 14082    | 407.451 | ug/l # | 92       |
| 46) Methyl methacrylate       | 9.677  | 41   | 37774    | 19.915  | ug/l   | 93       |
| 47) n-amyl Acetate            | 12.488 | 43   | 69551    | 19.945  | ug/l   | 98       |
| 48) t-1,3-Dichloropropene     | 10.835 | 75   | 59485    | 19.884  | ug/l   | 100      |
| 49) cis-1,3-Dichloropropene   | 10.306 | 75   | 64591    | 19.833  | ug/l   | 97       |
| 50) 1,1,2-Trichloroethane     | 11.012 | 97   | 37876    | 19.717  | ug/l # | 93       |
| 51) Ethyl methacrylate        | 10.871 | 69   | 59503    | 20.365  | ug/l   | 90       |
| 52) 1,3-Dichloropropane       | 11.159 | 76   | 65044    | 20.232  | ug/l   | 98       |
| 53) Dibromochloromethane      | 11.359 | 129  | 46465    | 19.848  | ug/l   | 96       |
| 54) 1,2-Dibromoethane         | 11.465 | 107  | 38069    | 19.669  | ug/l   | 99       |
| 55) 2-Chloroethyl vinyl ether | 10.159 | 63   | 157517   | 116.053 | ug/l   | 100      |
| 56) Bromoform                 | 12.576 | 173  | 31005    | 19.753  | ug/l # | 97       |
| 58) 4-Methyl-2-Pentanone      | 10.441 | 43   | 251194   | 103.526 | ug/l   | 98       |
| 59) 2-Hexanone                | 11.194 | 43   | 189877   | 103.278 | ug/l   | 97       |
| 61) Tetrachloroethene         | 11.100 | 164  | 35715    | 19.837  | ug/l   | 95       |
| 62) Toluene                   | 10.630 | 91   | 169444   | 19.542  | ug/l   | 100      |
| 64) Chlorobenzene             | 11.888 | 112  | 105294   | 19.669  | ug/l   | 99       |
| 65) 1,1,1,2-Tetrachloroethane | 11.959 | 131  | 41250    | 20.641  | ug/l   | 93       |
| 66) Ethyl Benzene             | 11.959 | 91   | 180260   | 19.592  | ug/l   | 95       |
| 67) m/p-Xylenes               | 12.071 | 106  | 139966   | 39.552  | ug/l   | 99       |
| 68) o-Xylene                  | 12.394 | 106  | 67500    | 20.311  | ug/l   | 98       |
| 69) Styrene                   | 12.406 | 104  | 113349   | 20.099  | ug/l   | 100      |
| 70) Isopropylbenzene          | 12.694 | 105  | 170936   | 19.942  | ug/l   | 99       |
| 71) 1,1,2,2-Tetrachloroethane | 12.935 | 83   | 53129    | 20.363  | ug/l   | 99       |
| 72) 1,2,3-Trichloropropane    | 12.988 | 75   | 42929m   | 16.657  | ug/l   |          |
| 73) Bromobenzene              | 12.976 | 156  | 43049    | 20.050  | ug/l   | 99       |
| 74) n-propylbenzene           | 13.035 | 91   | 197415   | 19.157  | ug/l   | 99       |
| 75) 2-Chlorotoluene           | 13.123 | 91   | 126567   | 19.864  | ug/l   | 99       |
| 76) 1,3,5-Trimethylbenzene    | 13.171 | 105  | 143813   | 19.583  | ug/l   | 98       |
| 77) t-1,4-Dichloro-2-butene   | 12.729 | 75   | 19066    | 20.358  | ug/l   | 92       |
| 78) 4-Chlorotoluene           | 13.218 | 91   | 126224   | 19.518  | ug/l   | 100      |
| 79) tert-butylbenzene         | 13.435 | 119  | 119154   | 19.754  | ug/l   | 98       |
| 80) 1,2,4-Trimethylbenzene    | 13.476 | 105  | 145777   | 20.096  | ug/l   | 99       |
| 81) sec-Butylbenzene          | 13.618 | 105  | 169356   | 19.763  | ug/l   | 98       |
| 82) p-Isopropyltoluene        | 13.723 | 119  | 140763   | 19.813  | ug/l   | 99       |
| 83) 1,3-Dichlorobenzene       | 13.729 | 146  | 77122    | 19.578  | ug/l   | 100      |
| 84) 1,4-Dichlorobenzene       | 13.812 | 146  | 76595    | 19.952  | ug/l   | 99       |
| 85) n-Butylbenzene            | 14.053 | 91   | 114947   | 19.288  | ug/l   | 99       |
| 86) Hexachloroethane          | 14.335 | 117  | 27662    | 19.558  | ug/l   | 97       |
| 87) 1,2-Dichlorobenzene       | 14.106 | 146  | 75009    | 20.174  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.717 | 75   | 11257    | 21.598  | ug/l   | 99       |
| 89) 1,2,4-Trichlorobenzene    | 15.841 | 180  | 37581    | 20.638  | ug/l   | 96       |
| 90) Hexachlorobutadiene       | 15.500 | 225  | 19537    | 20.647  | ug/l   | 96       |
| 91) Naphthalene               | 15.635 | 128  | 116630   | 20.616  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene    | 15.841 | 180  | 37581    | 20.638  | ug/l   | 96       |

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

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Sample : VN1216WBSD01  
Misc : 5.0mL/MSVOA\_N/WATER  
ALS Vial : 4 Sample Multiplier: 1

Instrument :  
MSVOA\_N  
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