

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_X\Data\VX110421\  
 Data File : VX025078.D  
 Acq On : 04 Nov 2021 18:30  
 Operator : JC/MD  
 Sample : VX1104WBSD02  
 Misc : 5.0mL/MSVOA\_X/WATER  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :  
 VX1104WBSD02

Manual Integrations  
 APPROVED

Reviewed By : John Carlone 11/08/2021  
 Supervised By : Mahesh Dadoda 11/10/2021

Quant Time: Nov 07 00:04:13 2021  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_X\Method\624X110421W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Nov 03 23:52:56 2021  
 Response via : Initial Calibration

| Compound                     | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|------------------------------|----------------|------|------------|----------|--------|----------|
| -----                        |                |      |            |          |        |          |
| Internal Standards           |                |      |            |          |        |          |
| 1) Bromochloromethane        | 4.903          | 128  | 19945      | 30.000   | ug/l   | 0.00     |
| 28) 1,4-Difluorobenzene      | 6.769          | 114  | 107558     | 30.000   | ug/l   | 0.00     |
| 57) Chlorobenzene-d5         | 10.055         | 117  | 96977      | 30.000   | ug/l   | 0.00     |
|                              |                |      |            |          |        |          |
| System Monitoring Compounds  |                |      |            |          |        |          |
| 27) 1,2-Dichloroethane-d4    | 5.964          | 65   | 57012      | 29.951   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 110 |      | Recovery = | 99.833%  |        |          |
| 60) 4-Bromofluorobenzene     | 11.085         | 95   | 53465      | 30.216   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 63 - 112 |      | Recovery = | 100.733% |        |          |
| 63) Toluene-d8               | 8.653          | 98   | 125074     | 27.925   | ug/l   | 0.00     |
| Spiked Amount 30.000         | Range 91 - 112 |      | Recovery = | 93.067%  |        |          |
|                              |                |      |            |          |        |          |
| Target Compounds             |                |      |            |          |        |          |
|                              |                |      |            |          | Qvalue |          |
| 2) Dichlorodifluoromethane   | 1.166          | 85   | 34175      | 22.376   | ug/l   | 94       |
| 3) Chloromethane             | 1.294          | 50   | 27162      | 33.851   | ug/l   | 99       |
| 4) Vinyl Chloride            | 1.374          | 62   | 27734      | 30.140   | ug/l   | 96       |
| 5) Bromomethane              | 1.611          | 94   | 21311      | 28.209   | ug/l   | 96       |
| 6) Chloroethane              | 1.691          | 64   | 16960      | 32.689   | ug/l   | 99       |
| 7) Trichlorofluoromethane    | 1.892          | 101  | 60801      | 27.378   | ug/l   | 96       |
| 8) Diethyl Ether             | 2.130          | 74   | 15608      | 29.657   | ug/l   | 96       |
| 9) 1,1,2-Trichlorotrifluo... | 2.331          | 101  | 26491      | 22.867   | ug/l   | 91       |
| 10) 1,1-Dichloroethene       | 2.325          | 96   | 21778      | 22.170   | ug/l   | 93       |
| 11) Methyl Iodide            | 2.453          | 142  | 23296      | 21.143   | ug/l   | 84       |
| 12) Methyl Acetate           | 2.709          | 43   | 37517      | 18.177   | ug/l   | 91       |
| 13) Acrolein                 | 2.239          | 56   | 12115      | 128.875  | ug/l   | 92       |
| 14) Acrylonitrile            | 3.068          | 53   | 54395      | 93.570   | ug/l   | 90       |
| 15) Acetone                  | 2.386          | 58   | 22899      | 128.922  | ug/l # | 63       |
| 16) Carbon Disulfide         | 2.514          | 76   | 48560      | 19.367   | ug/l   | 98       |
| 17) Allyl chloride           | 2.666          | 41   | 31762      | 20.270   | ug/l   | 96       |
| 18) Methylene Chloride       | 2.794          | 84   | 22672      | 19.718   | ug/l   | 94       |
| 19) trans-1,2-Dichloroethene | 3.093          | 96   | 22229      | 20.585   | ug/l   | 97       |
| 20) Diisopropyl ether        | 3.770          | 45   | 69493      | 20.500   | ug/l # | 76       |
| 21) 1,1-Dichloroethane       | 3.617          | 63   | 44156      | 19.629   | ug/l   | 100      |
| 22) cis-1,2-Dichloroethene   | 4.495          | 96   | 26912      | 21.002   | ug/l # | 77       |
| 23) tert-Butyl Alcohol       | 2.977          | 59   | 29728m     | 84.091   | ug/l   |          |
| 24) Methyl tert-Butyl Ether  | 3.117          | 73   | 83915      | 20.211   | ug/l # | 90       |
| 25) Chloroform               | 5.099          | 83   | 51772      | 19.848   | ug/l   | 97       |
| 26) Cyclohexane              | 5.477          | 56   | 34745      | 19.361   | ug/l # | 96       |
| 29) 1,1-Dichloropropene      | 5.702          | 75   | 35973      | 20.799   | ug/l   | 85       |
| 30) 2-Butanone               | 4.568          | 43   | 125352     | 143.700  | ug/l   | 92       |
| 31) 2,2-Dichloropropane      | 4.483          | 77   | 49666      | 22.607   | ug/l # | 90       |
| 32) 1,1,1-Trichloroethane    | 5.385          | 97   | 50600      | 20.338   | ug/l   | 95       |
| 33) Carbon Tetrachloride     | 5.684          | 117  | 44545      | 20.402   | ug/l   | 98       |
| 34) Benzene                  | 6.050          | 78   | 88852      | 20.142   | ug/l   | 97       |
| 35) Methacrylonitrile        | 4.928          | 41   | 16830      | 19.563   | ug/l   | 97       |
| 36) 1,2-Dichloroethane       | 6.092          | 62   | 44239      | 20.697   | ug/l # | 95       |
| 37) Trichloroethene          | 7.129          | 130  | 24379      | 19.774   | ug/l # | 68       |
| 38) Methylcyclohexane        | 7.385          | 83   | 42117      | 22.677   | ug/l   | 88       |
| 39) 1,2-Dichloropropane      | 7.434          | 63   | 27194      | 22.590   | ug/l   | 93       |
| 40) Dibromomethane           | 7.586          | 93   | 19888      | 21.206   | ug/l   | 85       |
| 41) Bromodichloromethane     | 7.824          | 83   | 42027      | 21.106   | ug/l   | 97       |
| 42) Vinyl Acetate            | 3.727          | 43   | 254830     | 97.638   | ug/l   | 97       |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
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| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 43) Ethyl Acetate             | 4.721  | 43   | 48002    | 28.709  | ug/l   | 98       |
| 44) Isopropyl Acetate         | 6.348  | 43   | 53197    | 20.341  | ug/l   | 99       |
| 45) 1,4-Dioxane               | 7.690  | 88   | 11022    | 396.873 | ug/l # | 78       |
| 46) Methyl methacrylate       | 7.696  | 41   | 37170    | 29.071  | ug/l   | 96       |
| 47) n-amyl Acetate            | 10.848 | 43   | 40950    | 19.416  | ug/l   | 94       |
| 48) t-1,3-Dichloropropene     | 8.982  | 75   | 43258    | 20.167  | ug/l   | 97       |
| 49) cis-1,3-Dichloropropene   | 8.372  | 75   | 35172    | 16.426  | ug/l   | 90       |
| 50) 1,1,2-Trichloroethane     | 9.153  | 97   | 25185    | 19.833  | ug/l   | 94       |
| 51) Ethyl methacrylate        | 9.116  | 69   | 39657    | 19.376  | ug/l   | 77       |
| 52) 1,3-Dichloropropane       | 9.311  | 76   | 43055    | 19.842  | ug/l   | 99       |
| 53) Dibromochloromethane      | 9.525  | 129  | 29729    | 20.506  | ug/l   | 97       |
| 54) 1,2-Dibromoethane         | 9.616  | 107  | 27963    | 19.714  | ug/l   | 97       |
| 55) 2-Chloroethyl vinyl ether | 8.244  | 63   | 70924    | 77.873  | ug/l   | 96       |
| 56) Bromoform                 | 10.805 | 173  | 19870    | 20.643  | ug/l # | 98       |
| 58) 4-Methyl-2-Pentanone      | 8.580  | 43   | 199331   | 121.930 | ug/l   | 94       |
| 59) 2-Hexanone                | 9.433  | 43   | 122463   | 97.491  | ug/l   | 90       |
| 61) Tetrachloroethene         | 9.275  | 164  | 24081    | 21.192  | ug/l   | 92       |
| 62) Toluene                   | 8.720  | 91   | 100200   | 20.199  | ug/l   | 96       |
| 64) Chlorobenzene             | 10.079 | 112  | 62662    | 20.914  | ug/l   | 97       |
| 65) 1,1,1,2-Tetrachloroethane | 10.165 | 131  | 27010    | 20.180  | ug/l   | 95       |
| 66) Ethyl Benzene             | 10.195 | 91   | 121034   | 20.635  | ug/l   | 98       |
| 67) m/p-Xylenes               | 10.305 | 106  | 84923    | 42.107  | ug/l   | 81       |
| 68) o-Xylene                  | 10.646 | 106  | 42509    | 21.583  | ug/l   | 83       |
| 69) Styrene                   | 10.659 | 104  | 69339    | 20.724  | ug/l   | 94       |
| 70) Isopropylbenzene          | 10.963 | 105  | 123874   | 21.647  | ug/l   | 95       |
| 71) 1,1,2,2-Tetrachloroethane | 11.213 | 83   | 38421    | 20.340  | ug/l   | 98       |
| 72) 1,2,3-Trichloropropane    | 11.244 | 75   | 38217m   | 20.888  | ug/l   |          |
| 73) Bromobenzene              | 11.201 | 156  | 27112    | 21.203  | ug/l   | 88       |
| 74) n-propylbenzene           | 11.305 | 91   | 144820   | 21.340  | ug/l   | 96       |
| 75) 2-Chlorotoluene           | 11.366 | 91   | 87395    | 20.549  | ug/l   | 93       |
| 76) 1,3,5-Trimethylbenzene    | 11.457 | 105  | 109131   | 21.867  | ug/l   | 89       |
| 77) t-1,4-Dichloro-2-butene   | 11.024 | 75   | 11674    | 18.951  | ug/l   | 91       |
| 78) 4-Chlorotoluene           | 11.457 | 91   | 101367   | 20.883  | ug/l   | 93       |
| 79) tert-butylbenzene         | 11.719 | 119  | 99925    | 21.251  | ug/l   | 94       |
| 80) 1,2,4-Trimethylbenzene    | 11.756 | 105  | 102496   | 20.885  | ug/l   | 92       |
| 81) sec-Butylbenzene          | 11.896 | 105  | 127883   | 21.860  | ug/l   | 97       |
| 82) p-Isopropyltoluene        | 12.012 | 119  | 104703   | 21.579  | ug/l   | 95       |
| 83) 1,3-Dichlorobenzene       | 11.969 | 146  | 50560    | 21.263  | ug/l   | 96       |
| 84) 1,4-Dichlorobenzene       | 12.042 | 146  | 48339    | 20.414  | ug/l   | 94       |
| 85) n-Butylbenzene            | 12.335 | 91   | 96908    | 21.898  | ug/l   | 98       |
| 86) Hexachloroethane          | 12.542 | 117  | 18261    | 21.110  | ug/l   | 85       |
| 87) 1,2-Dichlorobenzene       | 12.335 | 146  | 49741    | 21.247  | ug/l   | 96       |
| 88) 1,2-Dibromo-3-Chloropr... | 12.945 | 75   | 9530     | 18.445  | ug/l   | 93       |
| 89) 1,2,4-Trichlorobenzene    | 13.591 | 180  | 31254    | 22.038  | ug/l   | 95       |
| 90) Hexachlorobutadiene       | 13.725 | 225  | 15204    | 21.219  | ug/l   | 93       |
| 91) Naphthalene               | 13.780 | 128  | 100702   | 20.778  | ug/l   | 99       |
| 92) 1,2,3-Trichlorobenzene    | 13.963 | 180  | 30658    | 21.194  | ug/l   | 97       |

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

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