

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN111021\  
 Data File : VN069436.D  
 Acq On : 10 Nov 2021 12:34  
 Operator : JC/MD  
 Sample : VSTDICC005  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 ClientSampleId :  
 VSTDICC005

Manual Integrations  
 APPROVED

Reviewed By :John  
 Carlone

Quant Time: Nov 10 13:57:04 2021  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N111021W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Nov 10 13:52:12 2021  
 Response via : Initial Calibration

11/11/2021  
 Supervised By :Semsettin  
 Yesilyurt

| Compound                | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-------------------------|--------|------|----------|--------|-------|----------|
| -----                   |        |      |          |        |       |          |
| Internal Standards      |        |      |          |        |       |          |
| 1) Bromochloromethane   | 7.659  | 128  | 169357   | 30.000 | ug/l  | 0.00     |
| 28) 1,4-Difluorobenzene | 8.971  | 114  | 975989   | 30.000 | ug/l  | 0.00     |
| 57) Chlorobenzene-d5    | 11.746 | 117  | 868384   | 30.000 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |       |          |          |             |      |
|---------------------------|--------|-------|----------|----------|-------------|------|
| 27) 1,2-Dichloroethane-d4 | 8.440  | 65    | 461957   | 35.021   | ug/l        | 0.00 |
| Spiked Amount             | 30.000 | Range | 91 - 110 | Recovery | = 116.733%# |      |
| 60) 4-Bromofluorobenzene  | 12.733 | 95    | 371785   | 24.969   | ug/l        | 0.00 |
| Spiked Amount             | 30.000 | Range | 63 - 112 | Recovery | = 83.233%   |      |
| 63) Toluene-d8            | 10.443 | 98    | 1247320  | 31.792   | ug/l        | 0.00 |
| Spiked Amount             | 30.000 | Range | 91 - 112 | Recovery | = 105.967%  |      |

## Target Compounds

|                              |       |     |         |        |        | Qvalue |
|------------------------------|-------|-----|---------|--------|--------|--------|
| 2) Dichlorodifluoromethane   | 2.075 | 85  | 42379   | 3.785  | ug/l   | 98     |
| 3) Chloromethane             | 2.303 | 50  | 52916   | 4.545  | ug/l   | 92     |
| 4) Vinyl Chloride            | 2.448 | 62  | 52573   | 3.788  | ug/l   | 99     |
| 5) Bromomethane              | 2.853 | 94  | 40454m  | 4.445  | ug/l   |        |
| 6) Chloroethane              | 3.019 | 64  | 35651   | 3.963  | ug/l   | 97     |
| 7) Trichlorofluoromethane    | 3.373 | 101 | 82434   | 4.587  | ug/l   | 99     |
| 8) Diethyl Ether             | 3.824 | 74  | 27391   | 4.305  | ug/l   | 85     |
| 9) 1,1,2-Trichlorotrifluo... | 4.207 | 101 | 38915   | 3.986  | ug/l # | 72     |
| 10) 1,1-Dichloroethene       | 4.178 | 96  | 35329   | 3.709  | ug/l   | 90     |
| 11) Methyl Iodide            | 4.414 | 142 | 42976   | 3.209  | ug/l   | 89     |
| 12) Methyl Acetate           | 4.859 | 43  | 105281  | 5.804  | ug/l # | 87     |
| 13) Acrolein                 | 4.049 | 56  | 20313   | 18.586 | ug/l   | 100    |
| 14) Acrylonitrile            | 5.564 | 53  | 142911m | 27.765 | ug/l   |        |
| 15) Acetone                  | 4.291 | 58  | 42276   | 26.274 | ug/l   | 79     |
| 16) Carbon Disulfide         | 4.524 | 76  | 72999   | 2.852  | ug/l   | 98     |
| 17) Allyl chloride           | 4.838 | 41  | 69376   | 4.230  | ug/l   | 91     |
| 18) Methylene Chloride       | 5.092 | 84  | 50053m  | 4.422  | ug/l   |        |
| 19) trans-1,2-Dichloroethene | 5.594 | 96  | 37646   | 3.640  | ug/l   | 92     |
| 20) Diisopropyl ether        | 6.500 | 45  | 157011  | 4.481  | ug/l # | 93     |
| 21) 1,1-Dichloroethane       | 6.391 | 63  | 81383   | 4.161  | ug/l   | 99     |
| 22) cis-1,2-Dichloroethene   | 7.324 | 96  | 47359m  | 3.820  | ug/l   |        |
| 23) tert-Butyl Alcohol       | 5.385 | 59  | 47247m  | 22.372 | ug/l   |        |
| 24) Methyl tert-Butyl Ether  | 5.618 | 73  | 136797  | 3.787  | ug/l # | 69     |
| 25) Chloroform               | 7.817 | 83  | 85251   | 4.079  | ug/l   | 92     |
| 26) Cyclohexane              | 8.099 | 56  | 72019   | 3.998  | ug/l # | 85     |
| 29) 1,1-Dichloropropene      | 8.220 | 75  | 57696   | 3.756  | ug/l   | 96     |
| 30) 2-Butanone               | 7.343 | 43  | 213161  | 28.903 | ug/l # | 89     |
| 31) 2,2-Dichloropropane      | 7.329 | 77  | 59391   | 3.228  | ug/l   | 99     |
| 32) 1,1,1-Trichloroethane    | 8.016 | 97  | 68373   | 3.578  | ug/l   | 95     |
| 33) Carbon Tetrachloride     | 8.204 | 117 | 52307   | 3.222  | ug/l   | 98     |
| 34) Benzene                  | 8.461 | 78  | 181848  | 3.965  | ug/l # | 67     |
| 35) Methacrylonitrile        | 7.640 | 41  | 40157   | 5.463  | ug/l   | 92     |
| 36) 1,2-Dichloroethane       | 8.531 | 62  | 72900   | 4.404  | ug/l   | 98     |
| 37) Trichloroethene          | 9.220 | 130 | 43587   | 3.737  | ug/l   | 91     |
| 38) Methylcyclohexane        | 9.461 | 83  | 70123   | 3.586  | ug/l   | 90     |
| 39) 1,2-Dichloropropane      | 9.491 | 63  | 47877   | 4.094  | ug/l   | 99     |
| 40) Dibromomethane           | 9.579 | 93  | 32804   | 4.012  | ug/l   | 99     |
| 41) Bromodichloromethane     | 9.764 | 83  | 55085   | 3.371  | ug/l   | 96     |
| 42) Vinyl Acetate            | 6.439 | 43  | 567996m | 21.584 | ug/l   |        |

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 Operator : JC/MD  
 Sample : VSTDICC005  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 6 Sample Multiplier: 1

## Instrument :

MSVOA\_N

## ClientSampleId :

VSTDICC005

## Manual Integrations

## APPROVED

Reviewed By :John  
 Carlone

11/11/2021

Supervised By :Semsettin  
 Yesilyurt

11/16/2021

Quant Time: Nov 10 13:57:04 2021  
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA\_N\methods\624N111021W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Nov 10 13:52:12 2021  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 43) Ethyl Acetate             | 7.420  | 43   | 89897m   | 6.249  | ug/l   |          |
| 44) Isopropyl Acetate         | 8.566  | 43   | 118421   | 4.445  | ug/l   | 99       |
| 45) 1,4-Dioxane               | 9.569  | 88   | 19171    | 89.922 | ug/l # | 76       |
| 46) Methyl methacrylate       | 9.563  | 41   | 53833    | 4.470  | ug/l   | 85       |
| 47) n-amyl Acetate            | 12.390 | 43   | 74973    | 3.315  | ug/l   | 98       |
| 48) t-1,3-Dichloropropene     | 10.717 | 75   | 49806    | 2.635  | ug/l   | 98       |
| 49) cis-1,3-Dichloropropene   | 10.191 | 75   | 58384    | 2.967  | ug/l # | 87       |
| 50) 1,1,2-Trichloroethane     | 10.902 | 97   | 45648    | 3.890  | ug/l   | 97       |
| 51) Ethyl methacrylate        | 10.762 | 69   | 68778    | 3.555  | ug/l   | 89       |
| 52) 1,3-Dichloropropane       | 11.046 | 76   | 78743    | 3.988  | ug/l   | 97       |
| 53) Dibromochloromethane      | 11.240 | 129  | 34514    | 2.755  | ug/l   | 100      |
| 54) 1,2-Dibromoethane         | 11.350 | 107  | 43240    | 3.525  | ug/l   | 97       |
| 55) 2-Chloroethyl vinyl ether | 10.043 | 63   | 81711    | 13.304 | ug/l   | 97       |
| 56) Bromoform                 | 12.460 | 173  | 21688    | 2.402  | ug/l # | 60       |
| 58) 4-Methyl-2-Pentanone      | 10.333 | 43   | 398504   | 27.201 | ug/l # | 93       |
| 59) 2-Hexanone                | 11.089 | 43   | 286200   | 25.869 | ug/l   | 93       |
| 61) Tetrachloroethene         | 10.977 | 164  | 40112    | 4.250  | ug/l   | 93       |
| 62) Toluene                   | 10.507 | 91   | 198355   | 3.922  | ug/l   | 98       |
| 64) Chlorobenzene             | 11.771 | 112  | 117834   | 3.841  | ug/l   | 100      |
| 65) 1,1,1,2-Tetrachloroethane | 11.843 | 131  | 36291    | 3.180  | ug/l   | 97       |
| 66) Ethyl Benzene             | 11.846 | 91   | 205719   | 3.618  | ug/l   | 99       |
| 67) m/p-Xylenes               | 11.956 | 106  | 147357   | 6.891  | ug/l   | 96       |
| 68) o-Xylene                  | 12.283 | 106  | 73136    | 3.415  | ug/l   | 94       |
| 69) Styrene                   | 12.296 | 104  | 108814   | 3.067  | ug/l   | 96       |
| 70) Isopropylbenzene          | 12.581 | 105  | 190501   | 3.393  | ug/l   | 97       |
| 71) 1,1,2,2-Tetrachloroethane | 12.830 | 83   | 68192    | 4.144  | ug/l   | 95       |
| 72) 1,2,3-Trichloropropane    | 12.884 | 75   | 67674m   | 4.787  | ug/l   |          |
| 73) Bromobenzene              | 12.862 | 156  | 44537    | 3.500  | ug/l   | 95       |
| 74) n-propylbenzene           | 12.921 | 91   | 209344   | 3.247  | ug/l   | 99       |
| 75) 2-Chlorotoluene           | 13.010 | 91   | 133588   | 3.384  | ug/l   | 95       |
| 76) 1,3,5-Trimethylbenzene    | 13.061 | 105  | 152094   | 3.251  | ug/l   | 98       |
| 77) t-1,4-Dichloro-2-butene   | 12.629 | 75   | 11077    | 2.003  | ug/l   | 79       |
| 78) 4-Chlorotoluene           | 13.109 | 91   | 123178   | 3.184  | ug/l   | 94       |
| 79) tert-butylbenzene         | 13.326 | 119  | 137889   | 3.356  | ug/l   | 99       |
| 80) 1,2,4-Trimethylbenzene    | 13.369 | 105  | 147147m  | 3.204  | ug/l   |          |
| 81) sec-Butylbenzene          | 13.503 | 105  | 178707   | 3.107  | ug/l   | 100      |
| 82) p-Isopropyltoluene        | 13.618 | 119  | 139341   | 2.970  | ug/l   | 98       |
| 83) 1,3-Dichlorobenzene       | 13.618 | 146  | 70367    | 3.141  | ug/l   | 98       |
| 84) 1,4-Dichlorobenzene       | 13.696 | 146  | 68423    | 3.137  | ug/l   | 99       |
| 85) n-Butylbenzene            | 13.943 | 91   | 111373   | 2.839  | ug/l   | 98       |
| 86) Hexachloroethane          | 14.214 | 117  | 19540    | 2.225  | ug/l   | 94       |
| 87) 1,2-Dichlorobenzene       | 13.991 | 146  | 71263    | 3.329  | ug/l   | 99       |
| 88) 1,2-Dibromo-3-Chloropr... | 14.605 | 75   | 9728     | 3.174  | ug/l   | 90       |
| 89) 1,2,4-Trichlorobenzene    | 15.268 | 180  | 31438m   | 2.913  | ug/l   |          |
| 90) Hexachlorobutadiene       | 15.370 | 225  | 18042    | 3.198  | ug/l   | 84       |
| 91) Naphthalene               | 15.509 | 128  | 92055    | 2.949  | ug/l   | 98       |
| 92) 1,2,3-Trichlorobenzene    | 15.702 | 180  | 32246    | 3.126  | ug/l   | 99       |

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

