

Data Path : Z:\voasrv\HPCHEM1\MSVOA\_N\Data\VN113018\  
 Data File : VN052593.D  
 Acq On : 30 Nov 2018 9:03  
 Operator : MD\SY  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 2 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Nov 30 10:13:30 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_N\METHODS\624N112618W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Tue Nov 27 00:48:33 2018  
 Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 20% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 150%

|      | Compound                    | AvgRF | CCRF   | %Dev   | Area% | Dev(min) |
|------|-----------------------------|-------|--------|--------|-------|----------|
| 1 I  | Bromochloromethane          | 1.000 | 1.000  | 0.0    | 85    | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.709 | 1.535  | 10.2   | 74    | 0.00     |
| 3 M  | Chloromethane               | 2.266 | 1.964  | 13.3   | 73    | 0.00     |
| 4 M  | Vinyl Chloride              | 2.287 | 2.032  | 11.1   | 75    | 0.00     |
| 5 M  | Bromomethane                | 1.304 | 1.325  | -1.6   | 87    | 0.00     |
| 6 M  | Chloroethane                | 1.360 | 1.191  | 12.4   | 73    | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.823 | 2.529  | 10.4   | 76    | 0.00     |
| 8 T  | Diethyl Ether               | 1.042 | 0.983  | 5.7    | 82    | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.789 | 1.628  | 9.0    | 75    | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.682 | 1.496  | 11.1   | 76    | 0.00     |
| 11   | Methyl Iodide               | 2.336 | 2.003  | 14.3   | 75    | 0.00     |
| 12   | Methyl Acetate              | 1.429 | 1.435  | -0.4   | 84    | 0.00     |
| 13 M | Acrolein                    | 0.168 | 0.211  | -25.6  | 115   | 0.00     |
| 14 M | Acrylonitrile               | 0.609 | 0.605  | 0.7    | 82    | 0.00     |
| 15 M | Acetone                     | 0.158 | 0.183  | -15.8  | 90    | 0.00     |
| 16 M | Carbon Disulfide            | 5.326 | 4.522  | 15.1   | 72    | 0.00     |
| 17   | Allyl chloride              | 2.934 | 2.390  | 18.5   | 68    | 0.00     |
| 18 M | Methylene Chloride          | 1.948 | 1.754  | 10.0   | 77    | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.810 | 1.622  | 10.4   | 77    | 0.00     |
| 20 T | Diisopropyl ether           | 6.166 | 5.428  | 12.0   | 74    | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.514 | 3.071  | 12.6   | 74    | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.075 | 1.879  | 9.4    | 76    | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.091 | 0.119  | -30.8# | 108   | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 4.413 | 4.281  | 3.0    | 82    | 0.00     |
| 25 M | Chloroform                  | 3.390 | 3.018  | 11.0   | 75    | 0.00     |
| 26   | Cyclohexane                 | 3.314 | 2.849  | 14.0   | 72    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.044 | 2.068  | -1.2   | 85    | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0    | 83    | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.458 | 0.408  | 10.9   | 74    | 0.00     |
| 30 M | 2-Butanone                  | 0.123 | 0.136  | -10.6  | 90    | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.422 | 0.394  | 6.6    | 80    | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.477 | 0.433  | 9.2    | 77    | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.417 | 0.375  | 10.1   | 76    | 0.00     |
| 34 M | Benzene                     | 1.377 | 1.254  | 8.9    | 76    | 0.00     |
| 35   | Methacrylonitrile           | 0.152 | 0.174  | -14.5  | 95    | 0.02     |
| 36 M | 1,2-Dichloroethane          | 0.417 | 0.396  | 5.0    | 80    | 0.00     |
| 37 M | Trichloroethene             | 0.349 | 0.318  | 8.9    | 77    | 0.00     |
| 38   | Methylcyclohexane           | 0.567 | 0.509  | 10.2   | 74    | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.369 | 0.325  | 11.9   | 74    | 0.00     |
| 40   | Dibromomethane              | 0.200 | 0.188  | 6.0    | 79    | 0.00     |
| 41 M | Bromodichloromethane        | 0.441 | 0.398  | 9.8    | 77    | 0.00     |
| 42 M | Vinyl Acetate               | 0.663 | 0.609  | 8.1    | 78    | 0.00     |
| 43   | Ethyl Acetate               | 0.261 | 0.241  | 7.7    | 75    | 0.00     |
| 44   | Isopropyl Acetate           | 0.457 | 0.455  | 0.4    | 85    | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.003 | 0.003# | 0.0    | 108   | 0.00     |

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Min. RRF : 0.050 Min. Rel. Area : 20% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 30% Max. Rel. Area : 150%

|      | Compound                    | AvgRF | CCRF  | %Dev  | Area% | Dev(min) |
|------|-----------------------------|-------|-------|-------|-------|----------|
| 46   | Methyl methacrylate         | 0.237 | 0.236 | 0.4   | 84    | 0.00     |
| 47   | n-amyl Acetate              | 0.379 | 0.386 | -1.8  | 90    | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.427 | 0.390 | 8.7   | 81    | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.521 | 0.466 | 10.6  | 76    | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.283 | 0.277 | 2.1   | 80    | 0.00     |
| 51   | Ethyl methacrylate          | 0.355 | 0.345 | 2.8   | 85    | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.503 | 0.471 | 6.4   | 78    | 0.00     |
| 53 M | Dibromochloromethane        | 0.311 | 0.289 | 7.1   | 78    | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.276 | 0.270 | 2.2   | 82    | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.208 | 0.203 | 2.4   | 81    | 0.00     |
| 56 M | Bromoform                   | 0.204 | 0.195 | 4.4   | 82    | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0   | 86    | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.291 | 0.309 | -6.2  | 88    | 0.00     |
| 59 M | 2-Hexanone                  | 0.199 | 0.224 | -12.6 | 93    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.459 | 0.467 | -1.7  | 87    | 0.00     |
| 61 M | Tetrachloroethene           | 0.369 | 0.351 | 4.9   | 79    | 0.00     |
| 62 M | Toluene                     | 1.654 | 1.486 | 10.2  | 76    | 0.00     |
| 63 S | Toluene-d8                  | 1.391 | 1.360 | 2.2   | 83    | 0.00     |
| 64 M | Chlorobenzene               | 1.009 | 0.920 | 8.8   | 78    | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.350 | 0.313 | 10.6  | 78    | 0.00     |
| 66 M | Ethyl Benzene               | 1.782 | 1.609 | 9.7   | 77    | 0.00     |
| 67 M | m/p-Xylenes                 | 0.664 | 0.615 | 7.4   | 78    | 0.00     |
| 68 M | o-Xylene                    | 0.645 | 0.596 | 7.6   | 79    | 0.00     |
| 69 M | Styrene                     | 1.040 | 0.944 | 9.2   | 77    | 0.00     |
| 70   | Isopropylbenzene            | 1.715 | 1.571 | 8.4   | 78    | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.373 | 0.381 | -2.1  | 85    | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.320 | 0.307 | 4.1   | 86    | 0.00     |
| 73   | Bromobenzene                | 0.415 | 0.391 | 5.8   | 81    | 0.00     |
| 74   | n-propylbenzene             | 1.998 | 1.833 | 8.3   | 77    | 0.00     |
| 75   | 2-Chlorotoluene             | 1.160 | 1.068 | 7.9   | 78    | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.385 | 1.294 | 6.6   | 79    | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.101 | 0.095 | 5.9   | 85    | 0.00     |
| 78   | 4-Chlorotoluene             | 1.158 | 1.073 | 7.3   | 79    | 0.00     |
| 79   | tert-butylbenzene           | 1.206 | 1.135 | 5.9   | 79    | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.386 | 1.300 | 6.2   | 78    | 0.00     |
| 81   | sec-Butylbenzene            | 1.680 | 1.562 | 7.0   | 78    | 0.00     |
| 82   | p-Isopropyltoluene          | 1.431 | 1.346 | 5.9   | 80    | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.729 | 0.681 | 6.6   | 80    | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.705 | 0.664 | 5.8   | 81    | 0.00     |
| 85   | n-Butylbenzene              | 1.229 | 1.123 | 8.6   | 78    | 0.00     |
| 86 T | Hexachloroethane            | 0.242 | 0.211 | 12.8  | 76    | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.694 | 0.664 | 4.3   | 81    | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.052 | 0.058 | -11.5 | 96    | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.342 | 0.328 | 4.1   | 85    | 0.00     |
| 90   | Hexachlorobutadiene         | 0.224 | 0.222 | 0.9   | 79    | 0.00     |

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|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 0.691 | 0.717 | -3.8 | 92    | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.315 | 0.318 | -1.0 | 88    | 0.00     |

(#) = Out of Range

SPCC's out = 0 CCC's out = 0