

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN080119\  
 Data File : VN057023.D  
 Acq On : 1 Aug 2019 9:03  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Aug 02 10:23:50 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N072419W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Jul 24 04:19:57 2019  
 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                    | AvqRF | CCRF   | %Dev   | Area% | Dev(min) |
|------|-----------------------------|-------|--------|--------|-------|----------|
| 1 I  | Bromochloromethane          | 1.000 | 1.000  | 0.0    | 136   | -0.02    |
| 2 M  | Dichlorodifluoromethane     | 1.794 | 1.876  | -4.6   | 144   | 0.00     |
| 3 M  | Chloromethane               | 2.189 | 2.076  | 5.2    | 130   | 0.00     |
| 4 M  | Vinyl Chloride              | 2.110 | 1.977  | 6.3    | 129   | 0.00     |
| 5 M  | Bromomethane                | 1.296 | 1.203  | 7.2    | 130   | 0.00     |
| 6 M  | Chloroethane                | 1.171 | 1.072  | 8.5    | 126   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.570 | 2.705  | -5.3   | 147   | -0.01    |
| 8 T  | Diethyl Ether               | 0.958 | 0.953  | 0.5    | 137   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.614 | 1.664  | -3.1   | 144   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.602 | 1.554  | 3.0    | 136   | 0.00     |
| 11   | Methyl Iodide               | 2.369 | 2.172  | 8.3    | 132   | 0.00     |
| 12   | Methyl Acetate              | 1.960 | 1.421  | 27.5   | 107   | -0.02    |
| 13 M | Acrolein                    | 0.222 | 0.243  | -9.5   | 149   | 0.00     |
| 14 M | Acrylonitrile               | 0.756 | 0.667  | 11.8   | 123   | -0.02    |
| 15 M | Acetone                     | 0.195 | 0.279  | -43.1# | 194#  | -0.02    |
| 16 M | Carbon Disulfide            | 4.319 | 4.180  | 3.2    | 140   | 0.00     |
| 17   | Allyl chloride              | 2.680 | 2.372  | 11.5   | 127   | -0.01    |
| 18 M | Methylene Chloride          | 1.864 | 1.789  | 4.0    | 133   | -0.01    |
| 19 M | trans-1,2-Dichloroethene    | 1.695 | 1.661  | 2.0    | 139   | -0.02    |
| 20 T | Diisopropyl ether           | 5.442 | 5.027  | 7.6    | 126   | -0.02    |
| 21 M | 1,1-Dichloroethane          | 3.162 | 2.998  | 5.2    | 131   | -0.02    |
| 22 M | cis-1,2-Dichloroethene      | 1.964 | 1.896  | 3.5    | 133   | -0.02    |
| 23 M | tert-Butyl Alcohol          | 0.252 | 0.230  | 8.7    | 114   | -0.03    |
| 24 M | Methyl tert-Butyl Ether     | 4.842 | 4.475  | 7.6    | 131   | -0.03    |
| 25 M | Chloroform                  | 3.085 | 3.023  | 2.0    | 136   | -0.01    |
| 26   | Cyclohexane                 | 2.905 | 2.778  | 4.4    | 136   | -0.01    |
| 27 s | 1,2-Dichloroethane-d4       | 1.963 | 1.931  | 1.6    | 135   | -0.01    |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0    | 136   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.426 | 0.424  | 0.5    | 140   | -0.02    |
| 30 M | 2-Butanone                  | 0.171 | 0.177  | -3.5   | 142   | -0.02    |
| 31   | 2,2-Dichloropropane         | 0.395 | 0.417  | -5.6   | 147   | -0.02    |
| 32 M | 1,1,1-Trichloroethane       | 0.468 | 0.474  | -1.3   | 141   | -0.01    |
| 33 M | Carbon Tetrachloride        | 0.408 | 0.409  | -0.2   | 142   | 0.00     |
| 34 M | Benzene                     | 1.341 | 1.299  | 3.1    | 133   | -0.01    |
| 35   | Methacrylonitrile           | 0.171 | 0.225  | -31.6# | 168#  | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.417 | 0.412  | 1.2    | 136   | -0.01    |
| 37 M | Trichloroethene             | 0.360 | 0.363  | -0.8   | 141   | 0.00     |
| 38   | Methylcyclohexane           | 0.542 | 0.541  | 0.2    | 143   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.358 | 0.343  | 4.2    | 133   | 0.00     |
| 40   | Dibromomethane              | 0.220 | 0.215  | 2.3    | 136   | 0.00     |
| 41 M | Bromodichloromethane        | 0.422 | 0.414  | 1.9    | 138   | -0.01    |
| 42 M | Vinyl Acetate               | 0.762 | 0.676  | 11.3   | 123   | -0.02    |
| 43   | Ethyl Acetate               | 0.351 | 0.295  | 16.0   | 118   | -0.03    |
| 44   | Isopropyl Acetate           | 0.584 | 0.532  | 8.9    | 125   | -0.01    |
| 45 T | 1,4-Dioxane                 | 0.006 | 0.005# | 16.7   | 130   | -0.02    |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
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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                    | AvqRF | CCRF  | %Dev  | Area% | Dev(min) |
|------|-----------------------------|-------|-------|-------|-------|----------|
| 46   | Methyl methacrylate         | 0.292 | 0.240 | 17.8  | 117   | -0.01    |
| 47   | n-amyl Acetate              | 0.468 | 0.369 | 21.2  | 116   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.439 | 0.408 | 7.1   | 136   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.512 | 0.492 | 3.9   | 137   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.315 | 0.307 | 2.5   | 131   | 0.00     |
| 51   | Ethyl methacrylate          | 0.456 | 0.399 | 12.5  | 124   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.532 | 0.510 | 4.1   | 131   | 0.00     |
| 53 M | Dibromochloromethane        | 0.328 | 0.315 | 4.0   | 136   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.322 | 0.308 | 4.3   | 134   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.198 | 0.159 | 19.7  | 111   | 0.00     |
| 56 M | Bromoform                   | 0.227 | 0.215 | 5.3   | 139   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0   | 137   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.403 | 0.355 | 11.9  | 117   | 0.00     |
| 59 M | 2-Hexanone                  | 0.274 | 0.258 | 5.8   | 129   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.450 | 0.427 | 5.1   | 132   | 0.00     |
| 61 M | Tetrachloroethene           | 0.420 | 0.451 | -7.4  | 142   | 0.00     |
| 62 M | Toluene                     | 1.632 | 1.605 | 1.7   | 135   | 0.00     |
| 63 S | Toluene-d8                  | 1.417 | 1.454 | -2.6  | 136   | 0.00     |
| 64 M | Chlorobenzene               | 0.983 | 0.986 | -0.3  | 139   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.372 | 0.373 | -0.3  | 137   | 0.00     |
| 66 M | Ethyl Benzene               | 1.719 | 1.684 | 2.0   | 136   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.641 | 0.643 | -0.3  | 139   | 0.00     |
| 68 M | o-Xylene                    | 0.630 | 0.617 | 2.1   | 135   | 0.00     |
| 69 M | Styrene                     | 1.022 | 0.981 | 4.0   | 135   | 0.00     |
| 70   | Isopropylbenzene            | 1.660 | 1.650 | 0.6   | 137   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.465 | 0.450 | 3.2   | 129   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.409 | 0.381 | 6.8   | 129   | 0.00     |
| 73   | Bromobenzene                | 0.428 | 0.418 | 2.3   | 138   | 0.00     |
| 74   | n-propylbenzene             | 1.815 | 1.749 | 3.6   | 137   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.100 | 1.084 | 1.5   | 136   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.397 | 1.411 | -1.0  | 140   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.128 | 0.112 | 12.5  | 132   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.046 | 0.982 | 6.1   | 134   | 0.00     |
| 79   | tert-butylbenzene           | 1.206 | 1.221 | -1.2  | 141   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.362 | 1.348 | 1.0   | 135   | 0.00     |
| 81   | sec-Butylbenzene            | 1.574 | 1.553 | 1.3   | 139   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.414 | 1.378 | 2.5   | 137   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.674 | 0.619 | 8.2   | 133   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.638 | 0.569 | 10.8  | 133   | 0.00     |
| 85   | n-Butylbenzene              | 1.110 | 0.970 | 12.6  | 129   | 0.00     |
| 86 T | Hexachloroethane            | 0.237 | 0.233 | 1.7   | 141   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.670 | 0.639 | 4.6   | 134   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.072 | 0.058 | 19.4  | 112   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.323 | 0.212 | 34.4# | 117   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.246 | 0.274 | -11.4 | 155#  | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev  | Area% | Dev(min) |
|------|------------------------|-------|-------|-------|-------|----------|
| 91 M | Naphthalene            | 0.839 | 0.474 | 43.5# | 103   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.354 | 0.247 | 30.2# | 116   | -0.02    |

(#) = Out of Range

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