

Data Path : Z:\voasrv\HPCHEM1\MSVOA N\Data\VN091419\  
 Data File : VN058003.D  
 Acq On : 13 Sep 2019 9:12  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Sep 14 01:27:01 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N090919W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Sep 09 12:14:07 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   | 115   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.813 | 1.874  | -3.4  | 121   | 0.00     |
| 3 M  | Chloromethane               | 2.260 | 1.993  | 11.8  | 102   | 0.00     |
| 4 M  | Vinyl Chloride              | 2.312 | 1.991  | 13.9  | 98    | 0.00     |
| 5 M  | Bromomethane                | 1.443 | 1.195  | 17.2  | 91    | 0.00     |
| 6 M  | Chloroethane                | 1.437 | 1.278  | 11.1  | 100   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.672 | 2.455  | 8.1   | 93    | 0.00     |
| 8 T  | Diethyl Ether               | 1.078 | 1.064  | 1.3   | 115   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.668 | 1.695  | -1.6  | 117   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.586 | 1.534  | 3.3   | 114   | 0.00     |
| 11   | Methyl Iodide               | 2.122 | 1.735  | 18.2  | 97    | 0.00     |
| 12   | Methyl Acetate              | 2.177 | 2.095  | 3.8   | 110   | 0.00     |
| 13 M | Acrolein                    | 0.118 | 0.005# | 95.8# | 5#    | 0.00     |
| 14 M | Acrylonitrile               | 0.887 | 0.836  | 5.7   | 109   | 0.00     |
| 15 M | Acetone                     | 0.252 | 0.275  | -9.1  | 117   | 0.00     |
| 16 M | Carbon Disulfide            | 3.694 | 3.171  | 14.2  | 106   | 0.00     |
| 17   | Allyl chloride              | 2.907 | 2.789  | 4.1   | 116   | 0.00     |
| 18 M | Methylene Chloride          | 1.999 | 1.940  | 3.0   | 114   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.768 | 1.767  | 0.1   | 118   | 0.00     |
| 20 T | Diisopropyl ether           | 6.796 | 6.676  | 1.8   | 116   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.747 | 3.759  | -0.3  | 116   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.166 | 2.189  | -1.1  | 119   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.290 | 0.255  | 12.1  | 100   | -0.01    |
| 24 M | Methyl tert-Butyl Ether     | 6.080 | 5.824  | 4.2   | 112   | 0.00     |
| 25 M | Chloroform                  | 3.815 | 3.834  | -0.5  | 118   | 0.00     |
| 26   | Cyclohexane                 | 3.148 | 3.075  | 2.3   | 116   | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.654 | 2.678  | -0.9  | 111   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0   | 109   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.472 | 0.473  | -0.2  | 116   | 0.00     |
| 30 M | 2-Butanone                  | 0.213 | 0.226  | -6.1  | 119   | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.498 | 0.483  | 3.0   | 116   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.531 | 0.519  | 2.3   | 113   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.433 | 0.414  | 4.4   | 115   | 0.00     |
| 34 M | Benzene                     | 1.398 | 1.404  | -0.4  | 115   | 0.00     |
| 35   | Methacrylonitrile           | 0.197 | 0.170  | 13.7  | 108   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.543 | 0.557  | -2.6  | 118   | 0.00     |
| 37 M | Trichloroethene             | 0.340 | 0.341  | -0.3  | 117   | 0.00     |
| 38   | Methylcyclohexane           | 0.537 | 0.531  | 1.1   | 116   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.393 | 0.397  | -1.0  | 118   | 0.00     |
| 40   | Dibromomethane              | 0.239 | 0.247  | -3.3  | 118   | 0.00     |
| 41 M | Bromodichloromethane        | 0.482 | 0.471  | 2.3   | 118   | 0.00     |
| 42 M | Vinyl Acetate               | 0.855 | 0.889  | -4.0  | 113   | 0.00     |
| 43   | Ethyl Acetate               | 0.434 | 0.409  | 5.8   | 106   | 0.00     |
| 44   | Isopropyl Acetate           | 0.757 | 0.802  | -5.9  | 127   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.006 | 0.005# | 16.7  | 109   | 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                    | AvqRF | CCRF  | %Dev | Area% | Dev(min) |
|------|-----------------------------|-------|-------|------|-------|----------|
| 46   | Methyl methacrylate         | 0.370 | 0.349 | 5.7  | 113   | 0.00     |
| 47   | n-amyl Acetate              | 0.695 | 0.622 | 10.5 | 110   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.513 | 0.480 | 6.4  | 117   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.575 | 0.552 | 4.0  | 118   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.346 | 0.344 | 0.6  | 114   | 0.00     |
| 51   | Ethyl methacrylate          | 0.537 | 0.488 | 9.1  | 110   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.606 | 0.616 | -1.7 | 118   | 0.00     |
| 53 M | Dibromochloromethane        | 0.342 | 0.300 | 12.3 | 113   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.345 | 0.326 | 5.5  | 112   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.255 | 0.225 | 11.8 | 98    | 0.00     |
| 56 M | Bromoform                   | 0.212 | 0.174 | 17.9 | 109   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0  | 110   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.465 | 0.485 | -4.3 | 111   | 0.00     |
| 59 M | 2-Hexanone                  | 0.349 | 0.365 | -4.6 | 115   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.513 | 0.508 | 1.0  | 112   | 0.00     |
| 61 M | Tetrachloroethene           | 0.305 | 0.313 | -2.6 | 118   | 0.00     |
| 62 M | Toluene                     | 1.661 | 1.709 | -2.9 | 116   | 0.00     |
| 63 S | Toluene-d8                  | 1.440 | 1.441 | -0.1 | 108   | 0.00     |
| 64 M | Chlorobenzene               | 1.030 | 1.029 | 0.1  | 115   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.358 | 0.349 | 2.5  | 118   | 0.00     |
| 66 M | Ethyl Benzene               | 1.813 | 1.897 | -4.6 | 116   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.692 | 0.694 | -0.3 | 117   | 0.00     |
| 68 M | o-Xylene                    | 0.678 | 0.661 | 2.5  | 116   | 0.00     |
| 69 M | Styrene                     | 1.156 | 1.136 | 1.7  | 116   | 0.00     |
| 70   | Isopropylbenzene            | 1.792 | 1.857 | -3.6 | 115   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.560 | 0.556 | 0.7  | 116   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.497 | 0.456 | 8.2  | 108   | 0.00     |
| 73   | Bromobenzene                | 0.429 | 0.419 | 2.3  | 119   | 0.00     |
| 74   | n-propylbenzene             | 2.048 | 2.188 | -6.8 | 117   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.275 | 1.288 | -1.0 | 119   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.526 | 1.580 | -3.5 | 118   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.147 | 0.112 | 23.8 | 108   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.301 | 1.317 | -1.2 | 121   | 0.00     |
| 79   | tert-butylbenzene           | 1.331 | 1.319 | 0.9  | 114   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.521 | 1.569 | -3.2 | 118   | 0.00     |
| 81   | sec-Butylbenzene            | 1.766 | 1.808 | -2.4 | 117   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.582 | 1.611 | -1.8 | 116   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.798 | 0.789 | 1.1  | 119   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.785 | 0.774 | 1.4  | 121   | 0.00     |
| 85   | n-Butylbenzene              | 1.474 | 1.470 | 0.3  | 115   | 0.00     |
| 86 T | Hexachloroethane            | 0.252 | 0.215 | 14.7 | 114   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.774 | 0.771 | 0.4  | 120   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.099 | 0.083 | 16.2 | 106   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.473 | 0.453 | 4.2  | 120   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.217 | 0.209 | 3.7  | 113   | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev | Area% | Dev(min) |
|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 1.301 | 1.182 | 9.1  | 109   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.451 | 0.437 | 3.1  | 118   | 0.00     |

(#) = Out of Range

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