

Data Path : Z:\voasrv\HPCHEM1\MSVOA N\Data\VN110718\  
 Data File : VN052211.D  
 Acq On : 7 Nov 2018 16:58  
 Operator : MD\SY  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 17 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Nov 08 07:26:09 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N110118W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Nov 02 05:39:38 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                    | AvqRF | CCRF   | %Dev   | Area% | Dev(min) |
|------|-----------------------------|-------|--------|--------|-------|----------|
| 1 I  | Bromochloromethane          | 1.000 | 1.000  | 0.0    | 109   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 2.004 | 2.157  | -7.6   | 115   | 0.00     |
| 3 M  | Chloromethane               | 2.290 | 2.316  | -1.1   | 107   | 0.00     |
| 4 M  | Vinyl Chloride              | 2.246 | 2.175  | 3.2    | 100   | 0.00     |
| 5 M  | Bromomethane                | 1.533 | 1.495  | 2.5    | 106   | 0.00     |
| 6 M  | Chloroethane                | 1.436 | 1.291  | 10.1   | 96    | 0.00     |
| 7 M  | Trichlorofluoromethane      | 3.042 | 3.005  | 1.2    | 106   | 0.00     |
| 8 T  | Diethyl Ether               | 1.027 | 1.047  | -1.9   | 109   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.778 | 1.798  | -1.1   | 111   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.659 | 1.665  | -0.4   | 112   | 0.00     |
| 11   | Methyl Iodide               | 2.399 | 2.365  | 1.4    | 114   | 0.00     |
| 12   | Methyl Acetate              | 1.396 | 1.369  | 1.9    | 106   | 0.00     |
| 13 M | Acrolein                    | 0.148 | 0.133  | 10.1   | 100   | 0.00     |
| 14 M | Acrylonitrile               | 0.619 | 0.587  | 5.2    | 101   | 0.00     |
| 15 M | Acetone                     | 0.146 | 0.148  | -1.4   | 105   | 0.00     |
| 16 M | Carbon Disulfide            | 4.899 | 4.518  | 7.8    | 104   | 0.00     |
| 17   | Allyl chloride              | 2.817 | 2.678  | 4.9    | 105   | 0.00     |
| 18 M | Methylene Chloride          | 2.048 | 1.871  | 8.6    | 100   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.818 | 1.822  | -0.2   | 110   | 0.00     |
| 20 T | Diisopropyl ether           | 6.121 | 6.000  | 2.0    | 105   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.577 | 3.429  | 4.1    | 102   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.123 | 2.092  | 1.5    | 106   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.096 | 0.104  | -8.3   | 99    | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 4.703 | 4.441  | 5.6    | 100   | 0.00     |
| 25 M | Chloroform                  | 3.592 | 3.442  | 4.2    | 102   | 0.00     |
| 26   | Cyclohexane                 | 3.207 | 3.073  | 4.2    | 106   | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.227 | 2.124  | 4.6    | 98    | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0    | 110   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.476 | 0.449  | 5.7    | 102   | 0.00     |
| 30 M | 2-Butanone                  | 0.127 | 0.120  | 5.5    | 98    | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.491 | 0.452  | 7.9    | 101   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.533 | 0.496  | 6.9    | 103   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.474 | 0.442  | 6.8    | 105   | 0.00     |
| 34 M | Benzene                     | 1.395 | 1.328  | 4.8    | 104   | 0.00     |
| 35   | Methacrylonitrile           | 0.174 | 0.233  | -33.9# | 135   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.466 | 0.422  | 9.4    | 99    | 0.00     |
| 37 M | Trichloroethene             | 0.349 | 0.343  | 1.7    | 113   | 0.00     |
| 38   | Methylcyclohexane           | 0.581 | 0.534  | 8.1    | 102   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.371 | 0.356  | 4.0    | 101   | 0.00     |
| 40   | Dibromomethane              | 0.229 | 0.214  | 6.6    | 101   | 0.00     |
| 41 M | Bromodichloromethane        | 0.468 | 0.434  | 7.3    | 102   | 0.00     |
| 42 M | Vinyl Acetate               | 0.743 | 0.703  | 5.4    | 102   | 0.00     |
| 43   | Ethyl Acetate               | 0.637 | 0.906  | -42.2# | 148   | 0.00     |
| 44   | Isopropyl Acetate           | 0.528 | 0.513  | 2.8    | 106   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.002 | 0.002# | 0.0    | 93    | 0.00     |

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 Max. RRF Dev : 30% Max. Rel. Area : 150%

|      | Compound                    | AvqRF | CCRF   | %Dev  | Area% | Dev(min) |
|------|-----------------------------|-------|--------|-------|-------|----------|
| 46   | Methyl methacrylate         | 0.263 | 0.258  | 1.9   | 102   | 0.00     |
| 47   | n-amyl Acetate              | 0.478 | 0.432  | 9.6   | 101   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.465 | 0.419  | 9.9   | 100   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.537 | 0.504  | 6.1   | 102   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.303 | 0.287  | 5.3   | 105   | 0.00     |
| 51   | Ethyl methacrylate          | 0.391 | 0.360  | 7.9   | 102   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.527 | 0.496  | 5.9   | 103   | 0.00     |
| 53 M | Dibromochloromethane        | 0.327 | 0.306  | 6.4   | 106   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.307 | 0.286  | 6.8   | 105   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.214 | 0.204  | 4.7   | 101   | 0.00     |
| 56 M | Bromoform                   | 0.189 | 0.175  | 7.4   | 110   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000  | 0.0   | 108   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.321 | 0.312  | 2.8   | 100   | 0.00     |
| 59 M | 2-Hexanone                  | 0.221 | 0.210  | 5.0   | 99    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.480 | 0.442  | 7.9   | 99    | 0.00     |
| 61 M | Tetrachloroethene           | 0.326 | 0.330  | -1.2  | 113   | 0.00     |
| 62 M | Toluene                     | 1.684 | 1.613  | 4.2   | 102   | 0.00     |
| 63 S | Toluene-d8                  | 1.411 | 1.378  | 2.3   | 104   | 0.00     |
| 64 M | Chlorobenzene               | 1.067 | 1.013  | 5.1   | 105   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.363 | 0.369  | -1.7  | 112   | 0.00     |
| 66 M | Ethyl Benzene               | 1.819 | 1.726  | 5.1   | 105   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.700 | 0.651  | 7.0   | 103   | 0.00     |
| 68 M | o-Xylene                    | 0.668 | 0.635  | 4.9   | 104   | 0.00     |
| 69 M | Styrene                     | 1.076 | 0.998  | 7.2   | 100   | 0.00     |
| 70   | Isopropylbenzene            | 1.792 | 1.678  | 6.4   | 104   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.394 | 0.381  | 3.3   | 104   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.347 | 0.289  | 16.7  | 87    | 0.00     |
| 73   | Bromobenzene                | 0.397 | 0.401  | -1.0  | 115   | 0.00     |
| 74   | n-propylbenzene             | 2.087 | 1.894  | 9.2   | 100   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.203 | 1.096  | 8.9   | 100   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.437 | 1.323  | 7.9   | 102   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.108 | 0.092  | 14.8  | 104   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.212 | 1.099  | 9.3   | 100   | 0.00     |
| 79   | tert-butylbenzene           | 1.252 | 1.185  | 5.4   | 103   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.432 | 1.345  | 6.1   | 102   | 0.00     |
| 81   | sec-Butylbenzene            | 1.723 | 1.593  | 7.5   | 102   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.456 | 1.362  | 6.5   | 105   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.703 | 0.689  | 2.0   | 111   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.695 | 0.663  | 4.6   | 111   | 0.00     |
| 85   | n-Butylbenzene              | 1.260 | 1.119  | 11.2  | 101   | 0.00     |
| 86 T | Hexachloroethane            | 0.246 | 0.218  | 11.4  | 101   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.667 | 0.675  | -1.2  | 114   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.054 | 0.050# | 7.4   | 96    | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.271 | 0.287  | -5.9  | 122   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.148 | 0.168  | -13.5 | 129   | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev  | Area% | Dev(min) |
|------|------------------------|-------|-------|-------|-------|----------|
| 91 M | Naphthalene            | 0.625 | 0.686 | -9.8  | 124   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.236 | 0.279 | -18.2 | 139   | 0.00     |

(#) = Out of Range

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