

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN070919\  
 Data File : VN056621.D  
 Acq On : 9 Jul 2019 10:04  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Jul 09 13:38:11 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N070319W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Jul 03 11:05:14 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   | 110   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.504 | 1.499  | 0.3   | 110   | 0.00     |
| 3 M  | Chloromethane               | 2.183 | 1.994  | 8.7   | 104   | 0.00     |
| 4 M  | Vinyl Chloride              | 2.055 | 1.976  | 3.8   | 110   | 0.00     |
| 5 M  | Bromomethane                | 1.096 | 1.214  | -10.8 | 117   | 0.00     |
| 6 M  | Chloroethane                | 1.138 | 1.147  | -0.8  | 115   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.638 | 2.588  | 1.9   | 110   | 0.00     |
| 8 T  | Diethyl Ether               | 1.119 | 1.070  | 4.4   | 109   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.671 | 1.666  | 0.3   | 113   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.640 | 1.611  | 1.8   | 111   | 0.00     |
| 11   | Methyl Iodide               | 2.345 | 1.979  | 15.6  | 102   | 0.00     |
| 12   | Methyl Acetate              | 2.212 | 2.027  | 8.4   | 110   | 0.00     |
| 13 M | Acrolein                    | 0.216 | 0.179  | 17.1  | 95    | 0.00     |
| 14 M | Acrylonitrile               | 0.971 | 0.892  | 8.1   | 105   | 0.00     |
| 15 M | Acetone                     | 0.271 | 0.336  | -24.0 | 137   | 0.00     |
| 16 M | Carbon Disulfide            | 3.943 | 3.792  | 3.8   | 115   | 0.00     |
| 17   | Allyl chloride              | 2.870 | 2.703  | 5.8   | 110   | 0.00     |
| 18 M | Methylene Chloride          | 1.939 | 1.861  | 4.0   | 109   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.779 | 1.693  | 4.8   | 108   | 0.00     |
| 20 T | Diisopropyl ether           | 5.929 | 5.740  | 3.2   | 110   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.345 | 3.198  | 4.4   | 108   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.092 | 2.023  | 3.3   | 111   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.363 | 0.305  | 16.0  | 105   | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 5.424 | 5.137  | 5.3   | 109   | 0.00     |
| 25 M | Chloroform                  | 3.278 | 3.205  | 2.2   | 110   | 0.00     |
| 26   | Cyclohexane                 | 3.081 | 2.951  | 4.2   | 110   | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.068 | 2.029  | 1.9   | 108   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0   | 110   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.443 | 0.430  | 2.9   | 110   | 0.00     |
| 30 M | 2-Butanone                  | 0.246 | 0.257  | -4.5  | 116   | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.426 | 0.423  | 0.7   | 115   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.472 | 0.457  | 3.2   | 110   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.400 | 0.390  | 2.5   | 113   | 0.00     |
| 34 M | Benzene                     | 1.385 | 1.351  | 2.5   | 110   | 0.00     |
| 35   | Methacrylonitrile           | 0.218 | 0.206  | 5.5   | 101   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.450 | 0.437  | 2.9   | 110   | 0.00     |
| 37 M | Trichloroethene             | 0.361 | 0.352  | 2.5   | 112   | 0.00     |
| 38   | Methylcyclohexane           | 0.555 | 0.540  | 2.7   | 111   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.373 | 0.363  | 2.7   | 109   | 0.00     |
| 40   | Dibromomethane              | 0.231 | 0.225  | 2.6   | 110   | 0.00     |
| 41 M | Bromodichloromethane        | 0.427 | 0.416  | 2.6   | 113   | 0.00     |
| 42 M | Vinyl Acetate               | 0.874 | 0.839  | 4.0   | 109   | 0.00     |
| 43   | Ethyl Acetate               | 0.475 | 0.441  | 7.2   | 104   | 0.00     |
| 44   | Isopropyl Acetate           | 0.741 | 0.703  | 5.1   | 109   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.007 | 0.007# | 0.0   | 104   | 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         | 0.364 | 0.330 | 9.3  | 106   | 0.00     |
| 47   | n-amyl Acetate              | 0.616 | 0.546 | 11.4 | 105   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.458 | 0.442 | 3.5  | 116   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.528 | 0.515 | 2.5  | 115   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.340 | 0.333 | 2.1  | 111   | 0.00     |
| 51   | Ethyl methacrylate          | 0.535 | 0.492 | 8.0  | 105   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.577 | 0.555 | 3.8  | 109   | 0.00     |
| 53 M | Dibromochloromethane        | 0.333 | 0.329 | 1.2  | 116   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.354 | 0.332 | 6.2  | 108   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.273 | 0.252 | 7.7  | 105   | 0.00     |
| 56 M | Bromoform                   | 0.242 | 0.230 | 5.0  | 118   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0  | 110   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.539 | 0.503 | 6.7  | 105   | 0.00     |
| 59 M | 2-Hexanone                  | 0.400 | 0.390 | 2.5  | 111   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.461 | 0.460 | 0.2  | 113   | 0.00     |
| 61 M | Tetrachloroethene           | 0.377 | 0.384 | -1.9 | 113   | 0.00     |
| 62 M | Toluene                     | 1.674 | 1.634 | 2.4  | 110   | 0.00     |
| 63 S | Toluene-d8                  | 1.394 | 1.404 | -0.7 | 109   | 0.00     |
| 64 M | Chlorobenzene               | 1.009 | 1.001 | 0.8  | 113   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.363 | 0.359 | 1.1  | 115   | 0.00     |
| 66 M | Ethyl Benzene               | 1.815 | 1.741 | 4.1  | 109   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.670 | 0.661 | 1.3  | 113   | 0.00     |
| 68 M | o-Xylene                    | 0.663 | 0.640 | 3.5  | 110   | 0.00     |
| 69 M | Styrene                     | 1.102 | 1.057 | 4.1  | 110   | 0.00     |
| 70   | Isopropylbenzene            | 1.729 | 1.712 | 1.0  | 112   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.572 | 0.542 | 5.2  | 108   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.481 | 0.465 | 3.3  | 105   | 0.00     |
| 73   | Bromobenzene                | 0.446 | 0.429 | 3.8  | 110   | 0.00     |
| 74   | n-propylbenzene             | 1.961 | 1.916 | 2.3  | 114   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.173 | 1.151 | 1.9  | 112   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.464 | 1.447 | 1.2  | 112   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.154 | 0.138 | 10.4 | 115   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.141 | 1.106 | 3.1  | 112   | 0.00     |
| 79   | tert-butylbenzene           | 1.251 | 1.222 | 2.3  | 112   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.446 | 1.430 | 1.1  | 114   | 0.00     |
| 81   | sec-Butylbenzene            | 1.659 | 1.614 | 2.7  | 112   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.491 | 1.459 | 2.1  | 113   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.740 | 0.719 | 2.8  | 114   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.714 | 0.679 | 4.9  | 113   | 0.00     |
| 85   | n-Butylbenzene              | 1.253 | 1.181 | 5.7  | 113   | 0.00     |
| 86 T | Hexachloroethane            | 0.225 | 0.216 | 4.0  | 118   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.752 | 0.723 | 3.9  | 110   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.102 | 0.088 | 13.7 | 106   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.416 | 0.350 | 15.9 | 110   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.258 | 0.254 | 1.6  | 114   | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev | Area% | Dev(min) |
|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 1.166 | 0.920 | 21.1 | 104   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.436 | 0.376 | 13.8 | 109   | 0.00     |

(#) = Out of Range

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