

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_N\DATA\VN112718\  
 Data File : VN052504.D  
 Acq On : 28 Nov 2018 3:25  
 Operator : MD\SY  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA\_N/WATER  
 ALS Vial : 41 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Nov 28 07:41:06 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                    | Amount  | Calc.   | %Dev  | Area% | Dev(min) |
|------|-----------------------------|---------|---------|-------|-------|----------|
| 1 I  | Bromochloromethane          | 30.000  | 30.000  | 0.0   | 101   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 20.000  | 19.169  | 4.2   | 93    | 0.00     |
| 3 M  | Chloromethane               | 20.000  | 19.782  | 1.1   | 99    | 0.00     |
| 4 M  | Vinyl Chloride              | 20.000  | 20.253  | -1.3  | 101   | 0.00     |
| 5 M  | Bromomethane                | 20.000  | 19.954  | 0.2   | 101   | 0.00     |
| 6 M  | Chloroethane                | 20.000  | 20.244  | -1.2  | 100   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 20.000  | 19.752  | 1.2   | 99    | 0.00     |
| 8 T  | Diethyl Ether               | 20.000  | 20.354  | -1.8  | 105   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 20.000  | 19.243  | 3.8   | 94    | 0.00     |
| 10 M | 1,1-Dichloroethene          | 20.000  | 20.035  | -0.2  | 101   | 0.00     |
| 11   | Methyl Iodide               | 20.000  | 19.777  | 1.1   | 103   | 0.00     |
| 12   | Methyl Acetate              | 20.000  | 20.017  | -0.1  | 100   | 0.00     |
| 13 M | Acrolein                    | 100.000 | 93.111  | 6.9   | 101   | 0.00     |
| 14 M | Acrylonitrile               | 100.000 | 100.292 | -0.3  | 98    | 0.00     |
| 15 M | Acetone                     | 100.000 | 84.861  | 15.1  | 78    | 0.00     |
| 16 M | Carbon Disulfide            | 20.000  | 18.446  | 7.8   | 93    | 0.00     |
| 17   | Allyl chloride              | 20.000  | 19.341  | 3.3   | 97    | 0.00     |
| 18 M | Methylene Chloride          | 20.000  | 20.120  | -0.6  | 102   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 20.000  | 20.118  | -0.6  | 102   | 0.00     |
| 20 T | Diisopropyl ether           | 20.000  | 19.869  | 0.7   | 99    | 0.00     |
| 21 M | 1,1-Dichloroethane          | 20.000  | 19.976  | 0.1   | 101   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 20.000  | 20.157  | -0.8  | 101   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 100.000 | 110.465 | -10.5 | 108   | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 20.000  | 20.875  | -4.4  | 105   | 0.00     |
| 25 M | Chloroform                  | 20.000  | 20.676  | -3.4  | 104   | 0.00     |
| 26   | Cyclohexane                 | 20.000  | 18.974  | 5.1   | 95    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 30.000  | 29.758  | 0.8   | 100   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 30.000  | 30.000  | 0.0   | 100   | 0.00     |
| 29   | 1,1-Dichloropropene         | 20.000  | 19.730  | 1.3   | 98    | 0.00     |
| 30 M | 2-Butanone                  | 100.000 | 96.385  | 3.6   | 94    | 0.00     |
| 31   | 2,2-Dichloropropane         | 20.000  | 16.508  | 17.5  | 84    | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 20.000  | 20.135  | -0.7  | 102   | 0.00     |
| 33 M | Carbon Tetrachloride        | 20.000  | 19.989  | 0.1   | 100   | 0.00     |
| 34 M | Benzene                     | 20.000  | 20.268  | -1.3  | 101   | 0.00     |
| 35   | Methacrylonitrile           | 20.000  | 21.619  | -8.1  | 107   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 20.000  | 20.571  | -2.9  | 103   | 0.00     |
| 37 M | Trichloroethene             | 20.000  | 20.072  | -0.4  | 101   | 0.00     |
| 38   | Methylcyclohexane           | 20.000  | 18.983  | 5.1   | 93    | 0.00     |
| 39 M | 1,2-Dichloropropane         | 20.000  | 19.882  | 0.6   | 99    | 0.00     |
| 40   | Dibromomethane              | 20.000  | 21.097  | -5.5  | 105   | 0.00     |
| 41 M | Bromodichloromethane        | 20.000  | 20.012  | -0.1  | 102   | 0.00     |
| 42 M | Vinyl Acetate               | 100.000 | 98.027  | 2.0   | 99    | 0.00     |
| 43   | Ethyl Acetate               | 20.000  | 20.512  | -2.6  | 99    | 0.00     |
| 44   | Isopropyl Acetate           | 20.000  | 20.855  | -4.3  | 106   | 0.00     |
| 45 T | 1,4-Dioxane                 | 400.000 | 447.034 | -11.8 | 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                    | Amount  | Calc.   | %Dev  | Area% | Dev(min) |
|------|-----------------------------|---------|---------|-------|-------|----------|
| 46   | Methyl methacrylate         | 20.000  | 20.343  | -1.7  | 103   | 0.00     |
| 47   | n-amyl Acetate              | 20.000  | 19.314  | 3.4   | 102   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 20.000  | 19.003  | 5.0   | 100   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 20.000  | 19.016  | 4.9   | 97    | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 20.000  | 20.944  | -4.7  | 102   | 0.00     |
| 51   | Ethyl methacrylate          | 20.000  | 20.303  | -1.5  | 105   | 0.00     |
| 52   | 1,3-Dichloropropane         | 20.000  | 20.344  | -1.7  | 101   | 0.00     |
| 53 M | Dibromochloromethane        | 20.000  | 19.981  | 0.1   | 100   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 20.000  | 20.955  | -4.8  | 105   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 100.000 | 92.975  | 7.0   | 92    | 0.00     |
| 56 M | Bromoform                   | 20.000  | 19.954  | 0.2   | 102   | 0.00     |
| 57 I | Chlorobenzene-d5            | 30.000  | 30.000  | 0.0   | 100   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 100.000 | 105.704 | -5.7  | 102   | 0.00     |
| 59 M | 2-Hexanone                  | 100.000 | 99.282  | 0.7   | 95    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 30.000  | 29.752  | 0.8   | 99    | 0.00     |
| 61 M | Tetrachloroethene           | 20.000  | 21.599  | -8.0  | 105   | 0.00     |
| 62 M | Toluene                     | 20.000  | 20.420  | -2.1  | 100   | 0.00     |
| 63 S | Toluene-d8                  | 30.000  | 30.085  | -0.3  | 99    | 0.00     |
| 64 M | Chlorobenzene               | 20.000  | 20.340  | -1.7  | 101   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 20.000  | 20.465  | -2.3  | 103   | 0.00     |
| 66 M | Ethyl Benzene               | 20.000  | 20.176  | -0.9  | 100   | 0.00     |
| 67 M | m/p-Xylenes                 | 40.000  | 40.852  | -2.1  | 100   | 0.00     |
| 68 M | o-Xylene                    | 20.000  | 20.683  | -3.4  | 103   | 0.00     |
| 69 M | Styrene                     | 20.000  | 20.279  | -1.4  | 101   | 0.00     |
| 70   | Isopropylbenzene            | 20.000  | 20.505  | -2.5  | 101   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 20.000  | 21.041  | -5.2  | 102   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 20.000  | 22.106  | -10.5 | 115   | 0.00     |
| 73   | Bromobenzene                | 20.000  | 20.559  | -2.8  | 103   | 0.00     |
| 74   | n-propylbenzene             | 20.000  | 19.717  | 1.4   | 97    | 0.00     |
| 75   | 2-Chlorotoluene             | 20.000  | 20.295  | -1.5  | 100   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 20.000  | 20.498  | -2.5  | 100   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 20.000  | 17.455  | 12.7  | 92    | 0.00     |
| 78   | 4-Chlorotoluene             | 20.000  | 20.279  | -1.4  | 100   | 0.00     |
| 79   | tert-butylbenzene           | 20.000  | 20.807  | -4.0  | 102   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 20.000  | 20.485  | -2.4  | 100   | 0.00     |
| 81   | sec-Butylbenzene            | 20.000  | 20.051  | -0.3  | 98    | 0.00     |
| 82   | p-Isopropyltoluene          | 20.000  | 19.982  | 0.1   | 99    | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 20.000  | 20.002  | -0.0  | 100   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 20.000  | 20.007  | -0.0  | 100   | 0.00     |
| 85   | n-Butylbenzene              | 20.000  | 18.298  | 8.5   | 91    | 0.00     |
| 86 T | Hexachloroethane            | 20.000  | 19.428  | 2.9   | 98    | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 20.000  | 20.725  | -3.6  | 102   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 20.000  | 20.341  | -1.7  | 103   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 20.000  | 18.909  | 5.5   | 98    | 0.00     |
| 90   | Hexachlorobutadiene         | 20.000  | 19.905  | 0.5   | 93    | 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               | Amount | Calc.  | %Dev | Area% | Dev(min) |
|------|------------------------|--------|--------|------|-------|----------|
| 91 M | Naphthalene            | 20.000 | 19.207 | 4.0  | 99    | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 20.000 | 19.507 | 2.5  | 99    | 0.00     |

(#) = Out of Range

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