

Data Path : Z:\voasrv\HPCHEM1\MSVOA N\Data\VN010419\  
 Data File : VN053276.D  
 Acq On : 4 Jan 2019 8:55  
 Operator : MD\SY  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 2 Sample Multiplier: 28

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Jan 04 10:01:16 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N122818W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 28 10:33:50 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   | 86    | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 20.000  | 18.670  | 6.6   | 79    | 0.00     |
| 3 M  | Chloromethane               | 20.000  | 17.954  | 10.2  | 78    | 0.00     |
| 4 M  | Vinyl Chloride              | 20.000  | 17.286  | 13.6  | 74    | 0.00     |
| 5 M  | Bromomethane                | 20.000  | 17.783  | 11.1  | 79    | 0.00     |
| 6 M  | Chloroethane                | 20.000  | 17.545  | 12.3  | 76    | 0.00     |
| 7 M  | Trichlorofluoromethane      | 20.000  | 18.026  | 9.9   | 79    | 0.00     |
| 8 T  | Diethyl Ether               | 20.000  | 17.468  | 12.7  | 77    | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 20.000  | 18.403  | 8.0   | 80    | 0.00     |
| 10 M | 1,1-Dichloroethene          | 20.000  | 17.235  | 13.8  | 76    | 0.00     |
| 11   | Methyl Iodide               | 20.000  | 17.669  | 11.7  | 78    | 0.00     |
| 12   | Methyl Acetate              | 20.000  | 18.271  | 8.6   | 84    | 0.00     |
| 13 M | Acrolein                    | 100.000 | 100.620 | -0.6  | 91    | 0.00     |
| 14 M | Acrylonitrile               | 100.000 | 93.060  | 6.9   | 81    | 0.00     |
| 15 M | Acetone                     | 100.000 | 123.089 | -23.1 | 105   | 0.00     |
| 16 M | Carbon Disulfide            | 20.000  | 17.167  | 14.2  | 76    | 0.00     |
| 17   | Allyl chloride              | 20.000  | 16.300  | 18.5  | 69    | 0.00     |
| 18 M | Methylene Chloride          | 20.000  | 17.558  | 12.2  | 77    | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 20.000  | 17.555  | 12.2  | 77    | 0.00     |
| 20 T | Diisopropyl ether           | 20.000  | 17.393  | 13.0  | 75    | 0.00     |
| 21 M | 1,1-Dichloroethane          | 20.000  | 17.504  | 12.5  | 76    | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 20.000  | 17.444  | 12.8  | 77    | 0.00     |
| 23 M | tert-Butyl Alcohol          | 100.000 | 91.434  | 8.6   | 83    | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 20.000  | 17.321  | 13.4  | 75    | 0.00     |
| 25 M | Chloroform                  | 20.000  | 17.912  | 10.4  | 78    | 0.00     |
| 26   | Cyclohexane                 | 20.000  | 16.771  | 16.1  | 74    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 30.000  | 29.805  | 0.7   | 85    | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 30.000  | 30.000  | 0.0   | 82    | 0.00     |
| 29   | 1,1-Dichloropropene         | 20.000  | 18.122  | 9.4   | 77    | 0.00     |
| 30 M | 2-Butanone                  | 100.000 | 107.593 | -7.6  | 88    | 0.00     |
| 31   | 2,2-Dichloropropane         | 20.000  | 17.827  | 10.9  | 75    | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 20.000  | 18.129  | 9.4   | 76    | 0.00     |
| 33 M | Carbon Tetrachloride        | 20.000  | 18.105  | 9.5   | 76    | 0.00     |
| 34 M | Benzene                     | 20.000  | 18.379  | 8.1   | 76    | 0.00     |
| 35   | Methacrylonitrile           | 20.000  | 18.690  | 6.5   | 76    | -0.01    |
| 36 M | 1,2-Dichloroethane          | 20.000  | 18.665  | 6.7   | 76    | 0.00     |
| 37 M | Trichloroethene             | 20.000  | 18.655  | 6.7   | 78    | 0.00     |
| 38   | Methylcyclohexane           | 20.000  | 18.188  | 9.1   | 78    | 0.00     |
| 39 M | 1,2-Dichloropropane         | 20.000  | 18.401  | 8.0   | 77    | 0.00     |
| 40   | Dibromomethane              | 20.000  | 18.653  | 6.7   | 78    | 0.00     |
| 41 M | Bromodichloromethane        | 20.000  | 18.658  | 6.7   | 79    | 0.00     |
| 42 M | Vinyl Acetate               | 100.000 | 91.664  | 8.3   | 76    | 0.00     |
| 43   | Ethyl Acetate               | 20.000  | 5.983   | 70.1# | 24    | 0.28     |
| 44   | Isopropyl Acetate           | 20.000  | 18.960  | 5.2   | 81    | 0.00     |
| 45 T | 1,4-Dioxane                 | 400.000 | 370.111 | 7.5   | 78    | 0.00     |

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

|      | Compound                    | Amount  | Calc.  | %Dev  | Area% | Dev(min) |
|------|-----------------------------|---------|--------|-------|-------|----------|
| 46   | Methyl methacrylate         | 20.000  | 18.188 | 9.1   | 77    | 0.00     |
| 47   | n-amyl Acetate              | 20.000  | 17.600 | 12.0  | 77    | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 20.000  | 17.673 | 11.6  | 75    | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 20.000  | 17.897 | 10.5  | 76    | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 20.000  | 18.933 | 5.3   | 78    | 0.00     |
| 51   | Ethyl methacrylate          | 20.000  | 18.168 | 9.2   | 78    | 0.00     |
| 52   | 1,3-Dichloropropane         | 20.000  | 18.732 | 6.3   | 78    | 0.00     |
| 53 M | Dibromochloromethane        | 20.000  | 18.373 | 8.1   | 79    | 0.00     |
| 54 M | 1,2-Dibromoethane           | 20.000  | 18.463 | 7.7   | 77    | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 100.000 | 98.269 | 1.7   | 82    | 0.00     |
| 56 M | Bromoform                   | 20.000  | 18.089 | 9.6   | 78    | 0.00     |
| 57 I | Chlorobenzene-d5            | 30.000  | 30.000 | 0.0   | 84    | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 100.000 | 96.114 | 3.9   | 80    | 0.00     |
| 59 M | 2-Hexanone                  | 100.000 | 99.322 | 0.7   | 82    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 30.000  | 30.595 | -2.0  | 87    | 0.00     |
| 61 M | Tetrachloroethene           | 20.000  | 19.186 | 4.1   | 81    | 0.00     |
| 62 M | Toluene                     | 20.000  | 18.203 | 9.0   | 78    | 0.00     |
| 63 S | Toluene-d8                  | 30.000  | 30.378 | -1.3  | 84    | 0.00     |
| 64 M | Chlorobenzene               | 20.000  | 18.156 | 9.2   | 78    | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 20.000  | 17.999 | 10.0  | 77    | 0.00     |
| 66 M | Ethyl Benzene               | 20.000  | 17.724 | 11.4  | 76    | 0.00     |
| 67 M | m/p-Xylenes                 | 40.000  | 36.873 | 7.8   | 79    | 0.00     |
| 68 M | o-Xylene                    | 20.000  | 18.169 | 9.2   | 78    | 0.00     |
| 69 M | Styrene                     | 20.000  | 18.189 | 9.1   | 78    | 0.00     |
| 70   | Isopropylbenzene            | 20.000  | 18.172 | 9.1   | 78    | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 20.000  | 17.986 | 10.1  | 77    | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 20.000  | 18.428 | 7.9   | 76    | 0.00     |
| 73   | Bromobenzene                | 20.000  | 18.474 | 7.6   | 78    | 0.00     |
| 74   | n-propylbenzene             | 20.000  | 18.600 | 7.0   | 80    | 0.00     |
| 75   | 2-Chlorotoluene             | 20.000  | 18.502 | 7.5   | 78    | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 20.000  | 18.837 | 5.8   | 80    | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 20.000  | 16.695 | 16.5  | 75    | 0.00     |
| 78   | 4-Chlorotoluene             | 20.000  | 18.535 | 7.3   | 80    | 0.00     |
| 79   | tert-butylbenzene           | 20.000  | 18.622 | 6.9   | 80    | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 20.000  | 18.890 | 5.5   | 80    | 0.00     |
| 81   | sec-Butylbenzene            | 20.000  | 19.045 | 4.8   | 82    | 0.00     |
| 82   | p-Isopropyltoluene          | 20.000  | 19.253 | 3.7   | 83    | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 20.000  | 18.877 | 5.6   | 81    | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 20.000  | 18.703 | 6.5   | 81    | 0.00     |
| 85   | n-Butylbenzene              | 20.000  | 18.995 | 5.0   | 83    | 0.00     |
| 86 T | Hexachloroethane            | 20.000  | 17.454 | 12.7  | 77    | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 20.000  | 18.257 | 8.7   | 76    | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 20.000  | 12.493 | 37.5# | 52    | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 20.000  | 7.656  | 61.7# | 34    | 0.00     |
| 90   | Hexachlorobutadiene         | 20.000  | 14.977 | 25.1  | 60    | 0.00     |

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|      | Compound               | Amount | Calc. | %Dev  | Area% | Dev(min) |
|------|------------------------|--------|-------|-------|-------|----------|
| 91 M | Naphthalene            | 20.000 | 5.089 | 74.6# | 23    | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 20.000 | 4.805 | 76.0# | 22    | 0.00     |

(#) = Out of Range

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