

Data Path : Z:\VOASRV\HPCHEM1\MSVOA N\DATA\VN083018\  
 Data File : VN050970.D  
 Acq On : 30 Aug 2018 18:20  
 Operator : MD\SY  
 Sample : VSTDCCC020  
 Misc : 5.00mL/MSVOA N/WATER  
 ALS Vial : 21 Sample Multiplier: 1

Instrument :  
 MSVOA\_N  
 LabSampleId :  
 VSTDCCC020

Quant Time: Aug 31 06:30:12 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA N\METHODS\624N082818W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Wed Aug 29 01:38:44 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   | 104   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 20.000  | 18.849  | 5.8   | 92    | 0.00     |
| 3 M  | Chloromethane               | 20.000  | 17.901  | 10.5  | 89    | 0.00     |
| 4 M  | Vinyl Chloride              | 20.000  | 18.357  | 8.2   | 93    | 0.00     |
| 5 M  | Bromomethane                | 20.000  | 16.848  | 15.8  | 91    | 0.00     |
| 6 M  | Chloroethane                | 20.000  | 18.072  | 9.6   | 93    | 0.00     |
| 7 M  | Trichlorofluoromethane      | 20.000  | 18.699  | 6.5   | 96    | 0.00     |
| 8 T  | Diethyl Ether               | 20.000  | 17.961  | 10.2  | 96    | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 20.000  | 18.786  | 6.1   | 97    | 0.00     |
| 10 M | 1,1-Dichloroethene          | 20.000  | 18.014  | 9.9   | 94    | 0.00     |
| 11   | Methyl Iodide               | 20.000  | 15.886  | 20.6  | 98    | 0.00     |
| 12   | Methyl Acetate              | 20.000  | 21.186  | -5.9  | 111   | 0.00     |
| 13 M | Acrolein                    | 100.000 | 55.643  | 44.4# | 71    | 0.00     |
| 14 M | Acrylonitrile               | 100.000 | 89.892  | 10.1  | 97    | 0.00     |
| 15 M | Acetone                     | 100.000 | 91.290  | 8.7   | 102   | 0.00     |
| 16 M | Carbon Disulfide            | 20.000  | 17.392  | 13.0  | 91    | 0.00     |
| 17   | Allyl chloride              | 20.000  | 17.944  | 10.3  | 97    | 0.00     |
| 18 M | Methylene Chloride          | 20.000  | 18.659  | 6.7   | 96    | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 20.000  | 18.057  | 9.7   | 95    | 0.00     |
| 20 T | Diisopropyl ether           | 20.000  | 19.008  | 5.0   | 97    | 0.00     |
| 21 M | 1,1-Dichloroethane          | 20.000  | 18.657  | 6.7   | 96    | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 20.000  | 18.191  | 9.0   | 95    | 0.00     |
| 23 M | tert-Butyl Alcohol          | 100.000 | 88.885  | 11.1  | 97    | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 20.000  | 18.421  | 7.9   | 99    | 0.00     |
| 25 M | Chloroform                  | 20.000  | 18.879  | 5.6   | 97    | 0.00     |
| 26   | Cyclohexane                 | 20.000  | 17.658  | 11.7  | 95    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 30.000  | 29.817  | 0.6   | 103   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 30.000  | 30.000  | 0.0   | 105   | 0.00     |
| 29   | 1,1-Dichloropropene         | 20.000  | 18.494  | 7.5   | 97    | 0.00     |
| 30 M | 2-Butanone                  | 100.000 | 86.278  | 13.7  | 97    | 0.00     |
| 31   | 2,2-Dichloropropane         | 20.000  | 20.013  | -0.1  | 108   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 20.000  | 18.938  | 5.3   | 97    | 0.00     |
| 33 M | Carbon Tetrachloride        | 20.000  | 18.703  | 6.5   | 96    | 0.00     |
| 34 M | Benzene                     | 20.000  | 18.643  | 6.8   | 96    | 0.00     |
| 35   | Methacrylonitrile           | 20.000  | 19.013  | 4.9   | 92    | 0.00     |
| 36 M | 1,2-Dichloroethane          | 20.000  | 18.994  | 5.0   | 97    | 0.00     |
| 37 M | Trichloroethene             | 20.000  | 18.342  | 8.3   | 97    | 0.00     |
| 38   | Methylcyclohexane           | 20.000  | 17.737  | 11.3  | 98    | 0.00     |
| 39 M | 1,2-Dichloropropane         | 20.000  | 19.065  | 4.7   | 97    | 0.00     |
| 40   | Dibromomethane              | 20.000  | 18.738  | 6.3   | 97    | 0.00     |
| 41 M | Bromodichloromethane        | 20.000  | 18.759  | 6.2   | 97    | 0.00     |
| 42 M | Vinyl Acetate               | 100.000 | 89.967  | 10.0  | 95    | 0.00     |
| 43   | Ethyl Acetate               | 20.000  | 17.056  | 14.7  | 87    | 0.00     |
| 44   | Isopropyl Acetate           | 20.000  | 24.162  | -20.8 | 127   | 0.00     |
| 45 T | 1,4-Dioxane                 | 400.000 | 347.866 | 13.0  | 89    | 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  | 18.969 | 5.2  | 104   | 0.00     |
| 47   | n-amyl Acetate              | 20.000  | 16.712 | 16.4 | 95    | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 20.000  | 18.059 | 9.7  | 99    | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 20.000  | 18.628 | 6.9  | 100   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 20.000  | 18.989 | 5.1  | 96    | 0.00     |
| 51   | Ethyl methacrylate          | 20.000  | 17.218 | 13.9 | 97    | 0.00     |
| 52   | 1,3-Dichloropropane         | 20.000  | 18.450 | 7.8  | 95    | 0.00     |
| 53 M | Dibromochloromethane        | 20.000  | 18.210 | 8.9  | 97    | 0.00     |
| 54 M | 1,2-Dibromoethane           | 20.000  | 17.872 | 10.6 | 94    | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 100.000 | 87.774 | 12.2 | 97    | 0.00     |
| 56 M | Bromoform                   | 20.000  | 17.333 | 13.3 | 93    | 0.00     |
| 57 I | Chlorobenzene-d5            | 30.000  | 30.000 | 0.0  | 100   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 100.000 | 91.885 | 8.1  | 95    | 0.00     |
| 59 M | 2-Hexanone                  | 100.000 | 89.643 | 10.4 | 96    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 30.000  | 29.486 | 1.7  | 99    | 0.00     |
| 61 M | Tetrachloroethene           | 20.000  | 18.980 | 5.1  | 93    | 0.00     |
| 62 M | Toluene                     | 20.000  | 19.331 | 3.3  | 95    | 0.00     |
| 63 S | Toluene-d8                  | 30.000  | 30.988 | -3.3 | 101   | 0.00     |
| 64 M | Chlorobenzene               | 20.000  | 18.615 | 6.9  | 93    | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 20.000  | 19.496 | 2.5  | 97    | 0.00     |
| 66 M | Ethyl Benzene               | 20.000  | 18.228 | 8.9  | 93    | 0.00     |
| 67 M | m/p-Xylenes                 | 40.000  | 37.480 | 6.3  | 93    | 0.00     |
| 68 M | o-Xylene                    | 20.000  | 18.483 | 7.6  | 93    | 0.00     |
| 69 M | Styrene                     | 20.000  | 18.527 | 7.4  | 93    | 0.00     |
| 70   | Isopropylbenzene            | 20.000  | 18.615 | 6.9  | 92    | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 20.000  | 19.112 | 4.4  | 94    | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 20.000  | 19.027 | 4.9  | 94    | 0.00     |
| 73   | Bromobenzene                | 20.000  | 18.405 | 8.0  | 93    | 0.00     |
| 74   | n-propylbenzene             | 20.000  | 18.223 | 8.9  | 91    | 0.00     |
| 75   | 2-Chlorotoluene             | 20.000  | 18.729 | 6.4  | 93    | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 20.000  | 18.497 | 7.5  | 91    | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 20.000  | 17.831 | 10.8 | 98    | 0.00     |
| 78   | 4-Chlorotoluene             | 20.000  | 18.228 | 8.9  | 91    | 0.00     |
| 79   | tert-butylbenzene           | 20.000  | 18.538 | 7.3  | 92    | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 20.000  | 18.749 | 6.3  | 92    | 0.00     |
| 81   | sec-Butylbenzene            | 20.000  | 18.310 | 8.5  | 92    | 0.00     |
| 82   | p-Isopropyltoluene          | 20.000  | 18.026 | 9.9  | 91    | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 20.000  | 18.043 | 9.8  | 91    | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 20.000  | 17.903 | 10.5 | 91    | 0.00     |
| 85   | n-Butylbenzene              | 20.000  | 16.802 | 16.0 | 90    | 0.00     |
| 86 T | Hexachloroethane            | 20.000  | 18.779 | 6.1  | 96    | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 20.000  | 18.331 | 8.3  | 91    | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 20.000  | 18.395 | 8.0  | 90    | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 20.000  | 15.256 | 23.7 | 90    | 0.00     |
| 90   | Hexachlorobutadiene         | 20.000  | 18.927 | 5.4  | 95    | 0.00     |

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|      | Compound               | Amount | Calc.  | %Dev | Area% | Dev(min) |
|------|------------------------|--------|--------|------|-------|----------|
| 91 M | Naphthalene            | 20.000 | 18.898 | 5.5  | 97    | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 20.000 | 16.428 | 17.9 | 92    | 0.00     |

(#) = Out of Range

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