

Data Path : Z:\voasrv\HPCHEM1\MSVOA X\Data\VX012919\  
 Data File : VX007276.D  
 Acq On : 29 Jan 2019 09:36  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 30 01:08:06 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X012519W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Jan 28 10:35:22 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                    | Amount  | Calc.   | %Dev | Area% | Dev(min) |
|------|-----------------------------|---------|---------|------|-------|----------|
| 1 I  | Bromochloromethane          | 30.000  | 30.000  | 0.0  | 97    | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 20.000  | 18.421  | 7.9  | 99    | 0.00     |
| 3 M  | Chloromethane               | 20.000  | 20.289  | -1.4 | 104   | 0.00     |
| 4 M  | Vinyl Chloride              | 20.000  | 18.645  | 6.8  | 95    | 0.00     |
| 5 M  | Bromomethane                | 20.000  | 18.284  | 8.6  | 94    | 0.00     |
| 6 M  | Chloroethane                | 20.000  | 18.297  | 8.5  | 97    | 0.00     |
| 7 M  | Trichlorofluoromethane      | 20.000  | 18.473  | 7.6  | 96    | 0.00     |
| 8 T  | Diethyl Ether               | 20.000  | 19.017  | 4.9  | 97    | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 20.000  | 19.332  | 3.3  | 102   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 20.000  | 19.025  | 4.9  | 98    | 0.00     |
| 11   | Methyl Iodide               | 20.000  | 17.119  | 14.4 | 89    | 0.00     |
| 12   | Methyl Acetate              | 20.000  | 18.599  | 7.0  | 95    | 0.00     |
| 13 M | Acrolein                    | 100.000 | 92.950  | 7.0  | 103   | 0.00     |
| 14 M | Acrylonitrile               | 100.000 | 93.339  | 6.7  | 93    | 0.00     |
| 15 M | Acetone                     | 100.000 | 98.988  | 1.0  | 97    | 0.00     |
| 16 M | Carbon Disulfide            | 20.000  | 17.150  | 14.3 | 94    | 0.00     |
| 17   | Allyl chloride              | 20.000  | 18.753  | 6.2  | 96    | 0.00     |
| 18 M | Methylene Chloride          | 20.000  | 19.881  | 0.6  | 100   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 20.000  | 18.971  | 5.1  | 99    | 0.00     |
| 20 T | Diisopropyl ether           | 20.000  | 19.796  | 1.0  | 100   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 20.000  | 20.023  | -0.1 | 100   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 20.000  | 19.206  | 4.0  | 98    | 0.00     |
| 23 M | tert-Butyl Alcohol          | 100.000 | 92.971  | 7.0  | 92    | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 20.000  | 18.933  | 5.3  | 97    | 0.00     |
| 25 M | Chloroform                  | 20.000  | 19.422  | 2.9  | 98    | 0.00     |
| 26   | Cyclohexane                 | 20.000  | 19.211  | 3.9  | 99    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 30.000  | 30.514  | -1.7 | 99    | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 30.000  | 30.000  | 0.0  | 99    | 0.00     |
| 29   | 1,1-Dichloropropene         | 20.000  | 19.511  | 2.4  | 99    | 0.00     |
| 30 M | 2-Butanone                  | 100.000 | 96.461  | 3.5  | 94    | 0.00     |
| 31   | 2,2-Dichloropropane         | 20.000  | 19.041  | 4.8  | 100   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 20.000  | 18.774  | 6.1  | 97    | 0.00     |
| 33 M | Carbon Tetrachloride        | 20.000  | 18.736  | 6.3  | 100   | 0.00     |
| 34 M | Benzene                     | 20.000  | 19.343  | 3.3  | 98    | 0.00     |
| 35   | Methacrylonitrile           | 20.000  | 18.686  | 6.6  | 95    | 0.00     |
| 36 M | 1,2-Dichloroethane          | 20.000  | 19.431  | 2.8  | 99    | 0.00     |
| 37 M | Trichloroethene             | 20.000  | 19.446  | 2.8  | 99    | 0.00     |
| 38   | Methylcyclohexane           | 20.000  | 19.137  | 4.3  | 102   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 20.000  | 19.108  | 4.5  | 98    | 0.00     |
| 40   | Dibromomethane              | 20.000  | 19.410  | 2.9  | 100   | 0.00     |
| 41 M | Bromodichloromethane        | 20.000  | 18.560  | 7.2  | 99    | 0.00     |
| 42 M | Vinyl Acetate               | 100.000 | 98.992  | 1.0  | 102   | 0.00     |
| 43   | Ethyl Acetate               | 20.000  | 17.887  | 10.6 | 91    | 0.00     |
| 44   | Isopropyl Acetate           | 20.000  | 18.532  | 7.3  | 97    | 0.00     |
| 45 T | 1,4-Dioxane                 | 400.000 | 378.596 | 5.4  | 94    | 0.00     |

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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Mon Jan 28 10:35:22 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                    | Amount  | Calc.  | %Dev | Area% | Dev(min) |
|------|-----------------------------|---------|--------|------|-------|----------|
| 46   | Methyl methacrylate         | 20.000  | 18.973 | 5.1  | 97    | 0.00     |
| 47   | n-amyl Acetate              | 20.000  | 18.968 | 5.2  | 98    | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 20.000  | 17.828 | 10.9 | 97    | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 20.000  | 18.324 | 8.4  | 97    | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 20.000  | 19.798 | 1.0  | 101   | 0.00     |
| 51   | Ethyl methacrylate          | 20.000  | 19.262 | 3.7  | 100   | 0.00     |
| 52   | 1,3-Dichloropropane         | 20.000  | 19.296 | 3.5  | 99    | 0.00     |
| 53 M | Dibromochloromethane        | 20.000  | 18.489 | 7.6  | 99    | 0.00     |
| 54 M | 1,2-Dibromoethane           | 20.000  | 19.484 | 2.6  | 98    | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 100.000 | 97.819 | 2.2  | 98    | 0.00     |
| 56 M | Bromoform                   | 20.000  | 17.812 | 10.9 | 99    | 0.00     |
| 57 I | Chlorobenzene-d5            | 30.000  | 30.000 | 0.0  | 101   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 100.000 | 96.151 | 3.8  | 97    | 0.00     |
| 59 M | 2-Hexanone                  | 100.000 | 96.945 | 3.1  | 96    | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 30.000  | 31.521 | -5.1 | 104   | 0.00     |
| 61 M | Tetrachloroethene           | 20.000  | 20.206 | -1.0 | 98    | 0.00     |
| 62 M | Toluene                     | 20.000  | 19.271 | 3.6  | 99    | 0.00     |
| 63 S | Toluene-d8                  | 30.000  | 29.935 | 0.2  | 99    | 0.00     |
| 64 M | Chlorobenzene               | 20.000  | 19.846 | 0.8  | 103   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 20.000  | 18.976 | 5.1  | 101   | 0.00     |
| 66 M | Ethyl Benzene               | 20.000  | 19.770 | 1.2  | 102   | 0.00     |
| 67 M | m/p-Xylenes                 | 40.000  | 39.488 | 1.3  | 102   | 0.00     |
| 68 M | o-Xylene                    | 20.000  | 19.216 | 3.9  | 100   | 0.00     |
| 69 M | Styrene                     | 20.000  | 19.779 | 1.1  | 104   | 0.00     |
| 70   | Isopropylbenzene            | 20.000  | 20.119 | -0.6 | 104   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 20.000  | 18.930 | 5.4  | 97    | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 20.000  | 19.305 | 3.5  | 97    | 0.00     |
| 73   | Bromobenzene                | 20.000  | 19.508 | 2.5  | 101   | 0.00     |
| 74   | n-propylbenzene             | 20.000  | 20.443 | -2.2 | 106   | 0.00     |
| 75   | 2-Chlorotoluene             | 20.000  | 20.223 | -1.1 | 104   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 20.000  | 19.949 | 0.3  | 103   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 20.000  | 16.845 | 15.8 | 100   | 0.00     |
| 78   | 4-Chlorotoluene             | 20.000  | 19.884 | 0.6  | 103   | 0.00     |
| 79   | tert-butylbenzene           | 20.000  | 20.289 | -1.4 | 107   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 20.000  | 20.483 | -2.4 | 105   | 0.00     |
| 81   | sec-Butylbenzene            | 20.000  | 20.406 | -2.0 | 105   | 0.00     |
| 82   | p-Isopropyltoluene          | 20.000  | 20.289 | -1.4 | 107   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 20.000  | 20.067 | -0.3 | 104   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 20.000  | 20.078 | -0.4 | 103   | 0.00     |
| 85   | n-Butylbenzene              | 20.000  | 19.785 | 1.1  | 108   | 0.00     |
| 86 T | Hexachloroethane            | 20.000  | 18.617 | 6.9  | 105   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 20.000  | 19.837 | 0.8  | 103   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 20.000  | 18.199 | 9.0  | 99    | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 20.000  | 19.820 | 0.9  | 106   | 0.00     |
| 90   | Hexachlorobutadiene         | 20.000  | 20.699 | -3.5 | 111   | 0.00     |

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

|      | Compound               | Amount | Calc.  | %Dev | Area% | Dev(min) |
|------|------------------------|--------|--------|------|-------|----------|
| 91 M | Naphthalene            | 20.000 | 19.481 | 2.6  | 103   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 20.000 | 20.191 | -1.0 | 106   | 0.00     |

(#) = Out of Range

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