

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX121719\  
 Data File : VX014069.D  
 Acq On : 17 Dec 2019 22:48  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 22 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 LabSampleId :  
 VSTDCCC020

Quant Time: Dec 18 08:06:14 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X121219W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 13 01:35:34 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    | 102   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.515 | 1.354  | 10.6   | 94    | 0.00     |
| 3 M  | Chloromethane               | 2.136 | 2.091  | 2.1    | 99    | 0.00     |
| 4 M  | Vinyl Chloride              | 2.190 | 2.124  | 3.0    | 101   | 0.00     |
| 5 M  | Bromomethane                | 1.601 | 1.334  | 16.7   | 89    | 0.00     |
| 6 M  | Chloroethane                | 1.352 | 1.298  | 4.0    | 102   | 0.01     |
| 7 M  | Trichlorofluoromethane      | 2.725 | 2.679  | 1.7    | 102   | 0.00     |
| 8 T  | Diethyl Ether               | 1.252 | 1.262  | -0.8   | 105   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.625 | 1.604  | 1.3    | 104   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.680 | 1.657  | 1.4    | 104   | 0.00     |
| 11   | Methyl Iodide               | 2.163 | 1.959  | 9.4    | 100   | 0.00     |
| 12   | Methyl Acetate              | 2.601 | 2.673  | -2.8   | 106   | 0.00     |
| 13 M | Acrolein                    | 0.315 | 0.351  | -11.4  | 107   | 0.00     |
| 14 M | Acrylonitrile               | 1.017 | 1.072  | -5.4   | 111   | 0.00     |
| 15 M | Acetone                     | 0.299 | 0.433  | -44.8# | 155#  | 0.00     |
| 16 M | Carbon Disulfide            | 4.551 | 4.390  | 3.5    | 104   | 0.00     |
| 17   | Allyl chloride              | 3.019 | 2.945  | 2.5    | 102   | 0.00     |
| 18 M | Methylene Chloride          | 2.058 | 1.916  | 6.9    | 97    | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.840 | 1.786  | 2.9    | 103   | 0.00     |
| 20 T | Diisopropyl ether           | 6.194 | 5.979  | 3.5    | 99    | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.362 | 3.204  | 4.7    | 100   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.133 | 2.027  | 5.0    | 100   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.399 | 0.444  | -11.3  | 115   | -0.02    |
| 24 M | Methyl tert-Butyl Ether     | 5.675 | 5.499  | 3.1    | 101   | 0.00     |
| 25 M | Chloroform                  | 3.205 | 3.148  | 1.8    | 101   | 0.00     |
| 26   | Cyclohexane                 | 2.998 | 2.884  | 3.8    | 99    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.149 | 2.136  | 0.6    | 100   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0    | 100   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.433 | 0.424  | 2.1    | 101   | 0.00     |
| 30 M | 2-Butanone                  | 0.255 | 0.304  | -19.2  | 123   | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.401 | 0.399  | 0.5    | 102   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.479 | 0.472  | 1.5    | 102   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.407 | 0.395  | 2.9    | 101   | 0.00     |
| 34 M | Benzene                     | 1.351 | 1.350  | 0.1    | 101   | 0.00     |
| 35   | Methacrylonitrile           | 0.275 | 0.276  | -0.4   | 101   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.469 | 0.459  | 2.1    | 102   | 0.00     |
| 37 M | Trichloroethene             | 0.368 | 0.375  | -1.9   | 105   | 0.00     |
| 38   | Methylcyclohexane           | 0.517 | 0.499  | 3.5    | 100   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.351 | 0.336  | 4.3    | 98    | 0.00     |
| 40   | Dibromomethane              | 0.224 | 0.224  | 0.0    | 102   | 0.00     |
| 41 M | Bromodichloromethane        | 0.434 | 0.418  | 3.7    | 101   | 0.00     |
| 42 M | Vinyl Acetate               | 0.902 | 0.616  | 31.7#  | 69    | 0.00     |
| 43   | Ethyl Acetate               | 0.490 | 0.519  | -5.9   | 109   | -0.01    |
| 44   | Isopropyl Acetate           | 0.821 | 0.829  | -1.0   | 106   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.008 | 0.008# | 0.0    | 105   | 0.00     |

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Instrument :  
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 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Fri Dec 13 01:35:34 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) |
|------|-----------------------------|-------|-------|--------|-------|----------|
| 46   | Methyl methacrylate         | 0.399 | 0.403 | -1.0   | 105   | 0.00     |
| 47   | n-amyl Acetate              | 0.730 | 0.671 | 8.1    | 97    | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.474 | 0.457 | 3.6    | 106   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.533 | 0.524 | 1.7    | 105   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.346 | 0.344 | 0.6    | 101   | 0.00     |
| 51   | Ethyl methacrylate          | 0.550 | 0.535 | 2.7    | 103   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.588 | 0.576 | 2.0    | 99    | 0.00     |
| 53 M | Dibromochloromethane        | 0.346 | 0.331 | 4.3    | 102   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.356 | 0.352 | 1.1    | 102   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.243 | 0.239 | 1.6    | 101   | 0.00     |
| 56 M | Bromoform                   | 0.270 | 0.251 | 7.0    | 103   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0    | 101   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.561 | 0.590 | -5.2   | 107   | 0.00     |
| 59 M | 2-Hexanone                  | 0.426 | 0.468 | -9.9   | 112   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.484 | 0.472 | 2.5    | 98    | 0.00     |
| 61 M | Tetrachloroethene           | 0.397 | 0.576 | -45.1# | 153#  | 0.00     |
| 62 M | Toluene                     | 1.596 | 1.591 | 0.3    | 101   | 0.00     |
| 63 S | Toluene-d8                  | 1.341 | 1.362 | -1.6   | 100   | 0.00     |
| 64 M | Chlorobenzene               | 1.000 | 0.994 | 0.6    | 101   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.370 | 0.355 | 4.1    | 101   | 0.00     |
| 66 M | Ethyl Benzene               | 1.746 | 1.711 | 2.0    | 100   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.667 | 0.652 | 2.2    | 99    | 0.00     |
| 68 M | o-Xylene                    | 0.661 | 0.638 | 3.5    | 99    | 0.00     |
| 69 M | Styrene                     | 1.125 | 1.056 | 6.1    | 98    | 0.00     |
| 70   | Isopropylbenzene            | 1.709 | 1.668 | 2.4    | 100   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.606 | 0.534 | 11.9   | 90    | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.539 | 0.553 | -2.6   | 104   | 0.00     |
| 73   | Bromobenzene                | 0.456 | 0.432 | 5.3    | 98    | 0.00     |
| 74   | n-propylbenzene             | 1.938 | 1.854 | 4.3    | 99    | 0.00     |
| 75   | 2-Chlorotoluene             | 1.171 | 1.127 | 3.8    | 98    | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.450 | 1.365 | 5.9    | 97    | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.178 | 0.169 | 5.1    | 109   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.338 | 1.263 | 5.6    | 98    | 0.00     |
| 79   | tert-butylbenzene           | 1.397 | 1.179 | 15.6   | 87    | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.449 | 1.358 | 6.3    | 97    | 0.00     |
| 81   | sec-Butylbenzene            | 1.662 | 1.575 | 5.2    | 99    | 0.00     |
| 82   | p-Isopropyltoluene          | 1.500 | 1.415 | 5.7    | 99    | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.795 | 0.740 | 6.9    | 99    | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.792 | 0.722 | 8.8    | 96    | 0.00     |
| 85   | n-Butylbenzene              | 1.261 | 1.137 | 9.8    | 99    | 0.00     |
| 86 T | Hexachloroethane            | 0.272 | 0.242 | 11.0   | 101   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.808 | 0.745 | 7.8    | 98    | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.121 | 0.116 | 4.1    | 100   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.516 | 0.456 | 11.6   | 98    | 0.00     |
| 90   | Hexachlorobutadiene         | 0.245 | 0.233 | 4.9    | 101   | 0.00     |

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

|      | Compound               | AvgRF | CCRF  | %Dev | Area% | Dev(min) |
|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 1.551 | 1.429 | 7.9  | 101   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.524 | 0.481 | 8.2  | 102   | 0.00     |

(#) = Out of Range

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