

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX121219\  
 Data File : VX014004.D  
 Acq On : 13 Dec 2019 05:03  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 45 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 LabSampleId :  
 VSTDCCC020

Quant Time: Dec 13 05:35:53 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    | 103   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.515 | 1.368  | 9.7    | 96    | 0.00     |
| 3 M  | Chloromethane               | 2.136 | 2.020  | 5.4    | 97    | 0.00     |
| 4 M  | Vinyl Chloride              | 2.190 | 2.122  | 3.1    | 103   | 0.00     |
| 5 M  | Bromomethane                | 1.601 | 1.351  | 15.6   | 91    | 0.00     |
| 6 M  | Chloroethane                | 1.352 | 1.858  | -37.4# | 148   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.725 | 2.536  | 6.9    | 98    | 0.00     |
| 8 T  | Diethyl Ether               | 1.252 | 1.241  | 0.9    | 104   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.625 | 1.473  | 9.4    | 97    | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.680 | 1.575  | 6.2    | 100   | 0.00     |
| 11   | Methyl Iodide               | 2.163 | 2.144  | 0.9    | 111   | 0.00     |
| 12   | Methyl Acetate              | 2.601 | 2.422  | 6.9    | 97    | 0.00     |
| 13 M | Acrolein                    | 0.315 | 0.128  | 59.4#  | 40    | 0.00     |
| 14 M | Acrylonitrile               | 1.017 | 0.973  | 4.3    | 102   | 0.00     |
| 15 M | Acetone                     | 0.299 | 0.270  | 9.7    | 98    | 0.00     |
| 16 M | Carbon Disulfide            | 4.551 | 4.418  | 2.9    | 106   | 0.00     |
| 17   | Allyl chloride              | 3.019 | 2.762  | 8.5    | 97    | 0.00     |
| 18 M | Methylene Chloride          | 2.058 | 2.052  | 0.3    | 105   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.840 | 1.749  | 4.9    | 102   | 0.00     |
| 20 T | Diisopropyl ether           | 6.194 | 6.040  | 2.5    | 102   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.362 | 3.212  | 4.5    | 101   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.133 | 2.010  | 5.8    | 100   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.399 | 0.385  | 3.5    | 101   | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 5.675 | 5.484  | 3.4    | 102   | 0.00     |
| 25 M | Chloroform                  | 3.205 | 3.090  | 3.6    | 101   | 0.00     |
| 26   | Cyclohexane                 | 2.998 | 2.759  | 8.0    | 96    | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.149 | 2.115  | 1.6    | 101   | 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 | 0.246  | 3.5    | 100   | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.401 | 0.328  | 18.2   | 84    | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.479 | 0.468  | 2.3    | 102   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.407 | 0.391  | 3.9    | 100   | 0.00     |
| 34 M | Benzene                     | 1.351 | 1.343  | 0.6    | 101   | 0.00     |
| 35   | Methacrylonitrile           | 0.275 | 0.273  | 0.7    | 101   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.469 | 0.469  | 0.0    | 105   | 0.00     |
| 37 M | Trichloroethene             | 0.368 | 0.342  | 7.1    | 96    | 0.00     |
| 38   | Methylcyclohexane           | 0.517 | 0.491  | 5.0    | 99    | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.351 | 0.343  | 2.3    | 100   | 0.00     |
| 40   | Dibromomethane              | 0.224 | 0.229  | -2.2   | 104   | 0.00     |
| 41 M | Bromodichloromethane        | 0.434 | 0.432  | 0.5    | 105   | 0.00     |
| 42 M | Vinyl Acetate               | 0.902 | 0.924  | -2.4   | 103   | 0.00     |
| 43   | Ethyl Acetate               | 0.490 | 0.473  | 3.5    | 100   | -0.01    |
| 44   | Isopropyl Acetate           | 0.821 | 0.793  | 3.4    | 102   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.008 | 0.008# | 0.0    | 100   | 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                    | AvqRF | CCRF  | %Dev | Area% | Dev(min) |
|------|-----------------------------|-------|-------|------|-------|----------|
| 46   | Methyl methacrylate         | 0.399 | 0.392 | 1.8  | 102   | 0.00     |
| 47   | n-amyl Acetate              | 0.730 | 0.697 | 4.5  | 102   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.474 | 0.437 | 7.8  | 101   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.533 | 0.493 | 7.5  | 99    | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.346 | 0.341 | 1.4  | 101   | 0.00     |
| 51   | Ethyl methacrylate          | 0.550 | 0.521 | 5.3  | 100   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.588 | 0.572 | 2.7  | 99    | 0.00     |
| 53 M | Dibromochloromethane        | 0.346 | 0.335 | 3.2  | 104   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.356 | 0.355 | 0.3  | 104   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.243 | 0.228 | 6.2  | 96    | 0.00     |
| 56 M | Bromoform                   | 0.270 | 0.246 | 8.9  | 102   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0  | 101   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.561 | 0.560 | 0.2  | 102   | 0.00     |
| 59 M | 2-Hexanone                  | 0.426 | 0.418 | 1.9  | 101   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.484 | 0.487 | -0.6 | 102   | 0.00     |
| 61 M | Tetrachloroethene           | 0.397 | 0.354 | 10.8 | 94    | 0.00     |
| 62 M | Toluene                     | 1.596 | 1.584 | 0.8  | 101   | 0.00     |
| 63 S | Toluene-d8                  | 1.341 | 1.376 | -2.6 | 101   | 0.00     |
| 64 M | Chlorobenzene               | 1.000 | 0.979 | 2.1  | 100   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.370 | 0.360 | 2.7  | 103   | 0.00     |
| 66 M | Ethyl Benzene               | 1.746 | 1.730 | 0.9  | 102   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.667 | 0.651 | 2.4  | 99    | 0.00     |
| 68 M | o-Xylene                    | 0.661 | 0.636 | 3.8  | 99    | 0.00     |
| 69 M | Styrene                     | 1.125 | 1.078 | 4.2  | 101   | 0.00     |
| 70   | Isopropylbenzene            | 1.709 | 1.662 | 2.8  | 100   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.606 | 0.609 | -0.5 | 103   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.539 | 0.512 | 5.0  | 96    | 0.00     |
| 73   | Bromobenzene                | 0.456 | 0.435 | 4.6  | 99    | 0.00     |
| 74   | n-propylbenzene             | 1.938 | 1.871 | 3.5  | 100   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.171 | 1.143 | 2.4  | 100   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.450 | 1.387 | 4.3  | 99    | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.178 | 0.149 | 16.3 | 96    | 0.00     |
| 78   | 4-Chlorotoluene             | 1.338 | 1.272 | 4.9  | 99    | 0.00     |
| 79   | tert-butylbenzene           | 1.397 | 1.397 | 0.0  | 103   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.449 | 1.382 | 4.6  | 99    | 0.00     |
| 81   | sec-Butylbenzene            | 1.662 | 1.584 | 4.7  | 100   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.500 | 1.420 | 5.3  | 100   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.795 | 0.745 | 6.3  | 100   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.792 | 0.738 | 6.8  | 99    | 0.00     |
| 85   | n-Butylbenzene              | 1.261 | 1.128 | 10.5 | 98    | 0.00     |
| 86 T | Hexachloroethane            | 0.272 | 0.246 | 9.6  | 103   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.808 | 0.772 | 4.5  | 102   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.121 | 0.116 | 4.1  | 101   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.516 | 0.463 | 10.3 | 100   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.245 | 0.216 | 11.8 | 94    | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev | Area% | Dev(min) |
|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 1.551 | 1.457 | 6.1  | 104   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.524 | 0.482 | 8.0  | 103   | 0.00     |

(#) = Out of Range

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