

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX050719\  
 Data File : VX009368.D  
 Acq On : 07 May 2019 10:18  
 Operator : JC/SP  
 Sample : VSTDCCC020  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 3 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 LabSampleId :  
 VSTDCCC020

Quant Time: May 08 02:15:44 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA X\METHOD\624X050119W.M  
 Quant Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 QLast Update : Thu May 02 06:46:57 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  | 110   | 0.00     |
| 2 M  | Dichlorodifluoromethane     | 1.594 | 1.530  | 4.0  | 106   | 0.00     |
| 3 M  | Chloromethane               | 2.143 | 2.073  | 3.3  | 108   | 0.00     |
| 4 M  | Vinyl Chloride              | 2.138 | 2.033  | 4.9  | 105   | 0.00     |
| 5 M  | Bromomethane                | 1.355 | 1.271  | 6.2  | 116   | 0.00     |
| 6 M  | Chloroethane                | 1.402 | 1.318  | 6.0  | 102   | 0.00     |
| 7 M  | Trichlorofluoromethane      | 2.640 | 2.661  | -0.8 | 113   | 0.00     |
| 8 T  | Diethyl Ether               | 1.226 | 1.210  | 1.3  | 111   | 0.00     |
| 9    | 1,1,2-Trichlorotrifluoroeth | 1.634 | 1.700  | -4.0 | 116   | 0.00     |
| 10 M | 1,1-Dichloroethene          | 1.641 | 1.650  | -0.5 | 112   | 0.00     |
| 11   | Methyl Iodide               | 1.784 | 1.553  | 12.9 | 104   | 0.00     |
| 12   | Methyl Acetate              | 3.091 | 2.952  | 4.5  | 109   | 0.00     |
| 13 M | Acrolein                    | 0.424 | 0.326  | 23.1 | 93    | 0.00     |
| 14 M | Acrylonitrile               | 1.341 | 1.315  | 1.9  | 110   | 0.00     |
| 15 M | Acetone                     | 0.385 | 0.403  | -4.7 | 114   | 0.00     |
| 16 M | Carbon Disulfide            | 4.440 | 4.141  | 6.7  | 105   | 0.00     |
| 17   | Allyl chloride              | 3.939 | 3.889  | 1.3  | 112   | 0.00     |
| 18 M | Methylene Chloride          | 1.983 | 1.979  | 0.2  | 112   | 0.00     |
| 19 M | trans-1,2-Dichloroethene    | 1.750 | 1.737  | 0.7  | 112   | 0.00     |
| 20 T | Diisopropyl ether           | 7.758 | 7.768  | -0.1 | 112   | 0.00     |
| 21 M | 1,1-Dichloroethane          | 3.754 | 3.702  | 1.4  | 112   | 0.00     |
| 22 M | cis-1,2-Dichloroethene      | 2.107 | 2.118  | -0.5 | 113   | 0.00     |
| 23 M | tert-Butyl Alcohol          | 0.567 | 0.536  | 5.5  | 110   | 0.00     |
| 24 M | Methyl tert-Butyl Ether     | 6.422 | 6.393  | 0.5  | 114   | 0.00     |
| 25 M | Chloroform                  | 3.426 | 3.437  | -0.3 | 112   | 0.00     |
| 26   | Cyclohexane                 | 3.499 | 3.456  | 1.2  | 109   | 0.00     |
| 27 s | 1,2-Dichloroethane-d4       | 2.489 | 2.447  | 1.7  | 109   | 0.00     |
| 28 I | 1,4-Difluorobenzene         | 1.000 | 1.000  | 0.0  | 111   | 0.00     |
| 29   | 1,1-Dichloropropene         | 0.440 | 0.434  | 1.4  | 110   | 0.00     |
| 30 M | 2-Butanone                  | 0.345 | 0.346  | -0.3 | 112   | 0.00     |
| 31   | 2,2-Dichloropropane         | 0.485 | 0.485  | 0.0  | 113   | 0.00     |
| 32 M | 1,1,1-Trichloroethane       | 0.477 | 0.480  | -0.6 | 116   | 0.00     |
| 33 M | Carbon Tetrachloride        | 0.399 | 0.405  | -1.5 | 115   | 0.00     |
| 34 M | Benzene                     | 1.357 | 1.362  | -0.4 | 112   | 0.00     |
| 35   | Methacrylonitrile           | 0.361 | 0.358  | 0.8  | 111   | 0.00     |
| 36 M | 1,2-Dichloroethane          | 0.492 | 0.492  | 0.0  | 112   | 0.00     |
| 37 M | Trichloroethene             | 0.327 | 0.325  | 0.6  | 114   | 0.00     |
| 38   | Methylcyclohexane           | 0.544 | 0.549  | -0.9 | 114   | 0.00     |
| 39 M | 1,2-Dichloropropane         | 0.386 | 0.389  | -0.8 | 113   | 0.00     |
| 40   | Dibromomethane              | 0.219 | 0.223  | -1.8 | 114   | 0.00     |
| 41 M | Bromodichloromethane        | 0.448 | 0.455  | -1.6 | 116   | 0.00     |
| 42 M | Vinyl Acetate               | 1.138 | 1.132  | 0.5  | 111   | 0.00     |
| 43   | Ethyl Acetate               | 0.623 | 0.598  | 4.0  | 105   | 0.00     |
| 44   | Isopropyl Acetate           | 1.009 | 0.976  | 3.3  | 111   | 0.00     |
| 45 T | 1,4-Dioxane                 | 0.010 | 0.010# | 0.0  | 112   | 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         | 0.504 | 0.485 | 3.8  | 109   | 0.00     |
| 47   | n-amyl Acetate              | 0.909 | 0.876 | 3.6  | 112   | 0.00     |
| 48 M | t-1,3-Dichloropropene       | 0.523 | 0.510 | 2.5  | 114   | 0.00     |
| 49 T | cis-1,3-Dichloropropene     | 0.574 | 0.568 | 1.0  | 114   | 0.00     |
| 50 M | 1,1,2-Trichloroethane       | 0.336 | 0.347 | -3.3 | 116   | 0.00     |
| 51   | Ethyl methacrylate          | 0.621 | 0.604 | 2.7  | 111   | 0.00     |
| 52   | 1,3-Dichloropropane         | 0.596 | 0.603 | -1.2 | 113   | 0.00     |
| 53 M | Dibromochloromethane        | 0.335 | 0.343 | -2.4 | 119   | 0.00     |
| 54 M | 1,2-Dibromoethane           | 0.345 | 0.343 | 0.6  | 113   | 0.00     |
| 55 M | 2-Chloroethyl vinyl ether   | 0.331 | 0.263 | 20.5 | 86    | 0.00     |
| 56 M | Bromoform                   | 0.257 | 0.253 | 1.6  | 118   | 0.00     |
| 57 I | Chlorobenzene-d5            | 1.000 | 1.000 | 0.0  | 113   | 0.00     |
| 58 M | 4-Methyl-2-Pentanone        | 0.738 | 0.726 | 1.6  | 112   | 0.00     |
| 59 M | 2-Hexanone                  | 0.579 | 0.573 | 1.0  | 112   | 0.00     |
| 60 S | 4-Bromofluorobenzene        | 0.510 | 0.507 | 0.6  | 111   | 0.00     |
| 61 M | Tetrachloroethene           | 0.331 | 0.339 | -2.4 | 116   | 0.00     |
| 62 M | Toluene                     | 1.603 | 1.604 | -0.1 | 112   | 0.00     |
| 63 S | Toluene-d8                  | 1.422 | 1.427 | -0.4 | 111   | 0.00     |
| 64 M | Chlorobenzene               | 0.965 | 0.977 | -1.2 | 116   | 0.00     |
| 65   | 1,1,1,2-Tetrachloroethane   | 0.353 | 0.358 | -1.4 | 117   | 0.00     |
| 66 M | Ethyl Benzene               | 1.786 | 1.803 | -1.0 | 114   | 0.00     |
| 67 M | m/p-Xylenes                 | 0.652 | 0.658 | -0.9 | 115   | 0.00     |
| 68 M | o-Xylene                    | 0.641 | 0.651 | -1.6 | 117   | 0.00     |
| 69 M | Styrene                     | 1.125 | 1.136 | -1.0 | 116   | 0.00     |
| 70   | Isopropylbenzene            | 1.724 | 1.765 | -2.4 | 116   | 0.00     |
| 71 M | 1,1,2,2-Tetrachloroethane   | 0.631 | 0.630 | 0.2  | 115   | 0.00     |
| 72   | 1,2,3-Trichloropropane      | 0.544 | 0.563 | -3.5 | 117   | 0.00     |
| 73   | Bromobenzene                | 0.426 | 0.431 | -1.2 | 115   | 0.00     |
| 74   | n-propylbenzene             | 1.998 | 2.041 | -2.2 | 117   | 0.00     |
| 75   | 2-Chlorotoluene             | 1.198 | 1.213 | -1.3 | 115   | 0.00     |
| 76   | 1,3,5-Trimethylbenzene      | 1.461 | 1.486 | -1.7 | 116   | 0.00     |
| 77   | t-1,4-Dichloro-2-butene     | 0.220 | 0.204 | 7.3  | 115   | 0.00     |
| 78   | 4-Chlorotoluene             | 1.361 | 1.379 | -1.3 | 117   | 0.00     |
| 79   | tert-butylbenzene           | 1.412 | 1.418 | -0.4 | 115   | 0.00     |
| 80   | 1,2,4-Trimethylbenzene      | 1.464 | 1.497 | -2.3 | 117   | 0.00     |
| 81   | sec-Butylbenzene            | 1.678 | 1.720 | -2.5 | 118   | 0.00     |
| 82   | p-Isopropyltoluene          | 1.526 | 1.565 | -2.6 | 118   | 0.00     |
| 83 M | 1,3-Dichlorobenzene         | 0.761 | 0.774 | -1.7 | 119   | 0.00     |
| 84 M | 1,4-Dichlorobenzene         | 0.758 | 0.774 | -2.1 | 121   | 0.00     |
| 85   | n-Butylbenzene              | 1.396 | 1.422 | -1.9 | 121   | 0.00     |
| 86 T | Hexachloroethane            | 0.260 | 0.259 | 0.4  | 115   | 0.00     |
| 87 M | 1,2-Dichlorobenzene         | 0.766 | 0.777 | -1.4 | 117   | 0.00     |
| 88   | 1,2-Dibromo-3-Chloropropane | 0.147 | 0.144 | 2.0  | 114   | 0.00     |
| 89   | 1,2,4-Trichlorobenzene      | 0.546 | 0.560 | -2.6 | 123   | 0.00     |
| 90   | Hexachlorobutadiene         | 0.273 | 0.287 | -5.1 | 125   | 0.00     |

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|      | Compound               | AvgRF | CCRF  | %Dev | Area% | Dev(min) |
|------|------------------------|-------|-------|------|-------|----------|
| 91 M | Naphthalene            | 1.787 | 1.854 | -3.7 | 119   | 0.00     |
| 92   | 1,2,3-Trichlorobenzene | 0.555 | 0.586 | -5.6 | 123   | 0.00     |

(#) = Out of Range

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