

Method Path : Z:\VOASRV\HPCHEM1\MSV0A\_X\METHOD\  
 Method File : 624X011520W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Wed Jan 15 12:41:12 2020  
 Response Via : Initial Calibration

## Calibration Files

5 =VX014609.D 20 =VX014610.D 50 =VX014611.D  
 100 =VX014612.D 150 =VX014613.D

|       | Compound            | 5              | 20    | 50    | 100   | 150   | Avg    | %RSD  |
|-------|---------------------|----------------|-------|-------|-------|-------|--------|-------|
| ----- |                     |                |       |       |       |       |        |       |
| 1) I  | Bromochloromethane  | -----ISTD----- |       |       |       |       |        |       |
| 2) M  | Dichlorodifluoromet | 1.712          | 2.087 | 2.217 | 2.154 | 2.196 | 2.073  | 10.04 |
| 3) M  | Chloromethane       | 2.035          | 2.267 | 2.387 | 2.330 | 2.331 | 2.270  | 6.07  |
| 4) M  | Vinyl Chloride      | 2.190          | 2.527 | 2.710 | 2.657 | 2.660 | 2.549  | 8.31  |
| 5) M  | Bromomethane        | 1.562          | 1.319 | 1.576 | 1.715 | 1.781 | 1.590  | 11.18 |
| 6) M  | Chloroethane        | 1.422          | 1.443 | 1.467 | 1.436 | 1.415 | 1.437  | 1.40  |
| 7) M  | Trichlorofluorometh | 2.928          | 2.672 | 2.875 | 2.808 | 2.829 | 2.822  | 3.40  |
| 8) T  | Diethyl Ether       | 1.219          | 1.155 | 1.276 | 1.250 | 1.264 | 1.233  | 3.91  |
| 9)    | 1,1,2-Trichlorotrif | 1.634          | 1.594 | 1.690 | 1.665 | 1.672 | 1.651  | 2.29  |
| 10) M | 1,1-Dichloroethene  | 1.602          | 1.560 | 1.717 | 1.695 | 1.729 | 1.661  | 4.53  |
| 11)   | Methyl Iodide       | 1.620          | 2.040 | 2.427 | 2.540 | 2.509 | 2.227  | 17.70 |
| 12)   | Methyl Acetate      | 2.597          | 2.925 | 3.159 | 3.134 | 3.186 | 3.000  | 8.27  |
| 13) M | Acrolein            | 0.345          | 0.301 | 0.309 | 0.310 | 0.310 | 0.315  | 5.44  |
| 14) M | Acrylonitrile       | 0.942          | 1.002 | 1.065 | 1.048 | 1.077 | 1.027  | 5.40  |
| 15) M | Acetone             | 0.300          | 0.351 | 0.372 | 0.345 | 0.353 | 0.344  | 7.76  |
| 16) M | Carbon Disulfide    | 4.139          | 4.235 | 4.761 | 4.777 | 4.894 | 4.561  | 7.61  |
| 17)   | Allyl chloride      | 2.924          | 2.866 | 3.177 | 3.193 | 3.207 | 3.074  | 5.35  |
| 18) M | Methylene Chloride  | 2.002          | 1.874 | 1.970 | 1.936 | 1.935 | 1.944  | 2.45  |
| 19) M | trans-1,2-Dichloroe | 1.722          | 1.688 | 1.853 | 1.827 | 1.849 | 1.788  | 4.31  |
| 20) T | Diisopropyl ether   | 5.810          | 5.816 | 6.303 | 6.252 | 6.223 | 6.081  | 4.05  |
| 21) M | 1,1-Dichloroethane  | 3.274          | 3.144 | 3.379 | 3.355 | 3.366 | 3.304  | 2.98  |
| 22) M | cis-1,2-Dichloroeth | 2.019          | 1.928 | 2.093 | 2.100 | 2.132 | 2.054  | 3.98  |
| 23) M | tert-Butyl Alcohol  | 0.455          | 0.395 | 0.435 | 0.407 | 0.431 | 0.425  | 5.60  |
| 24) M | Methyl tert-Butyl E | 5.240          | 5.255 | 5.709 | 5.710 | 5.720 | 5.527  | 4.61  |
| 25) M | Chloroform          | 3.240          | 3.028 | 3.267 | 3.230 | 3.235 | 3.200  | 3.04  |
| 26)   | Cyclohexane         | 2.907          | 2.876 | 3.162 | 3.112 | 3.180 | 3.047  | 4.76  |
| 27) s | 1,2-Dichloroethane- | 2.123          | 2.090 | 2.098 | 2.107 | 2.124 | 2.109  | 0.72  |
| ----- |                     |                |       |       |       |       |        |       |
| 28) I | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |        |       |
| 29)   | 1,1-Dichloropropene | 0.425          | 0.419 | 0.461 | 0.451 | 0.444 | 0.440  | 3.93  |
| 30) M | 2-Butanone          | 0.265          | 0.277 | 0.292 | 0.280 | 0.279 | 0.279  | 3.54  |
| 31)   | 2,2-Dichloropropane | 0.470          | 0.445 | 0.478 | 0.487 | 0.473 | 0.471  | 3.32  |
| 32) M | 1,1,1-Trichloroetha | 0.492          | 0.460 | 0.500 | 0.496 | 0.485 | 0.487  | 3.28  |
| 33) M | Carbon Tetrachlorid | 0.410          | 0.393 | 0.432 | 0.430 | 0.425 | 0.418  | 3.93  |
| 34) M | Benzene             | 1.350          | 1.325 | 1.405 | 1.375 | 1.344 | 1.360  | 2.26  |
| 35)   | Methacrylonitrile   | 0.258          | 0.270 | 0.290 | 0.289 | 0.285 | 0.278  | 4.99  |
| 36) M | 1,2-Dichloroethane  | 0.508          | 0.461 | 0.473 | 0.469 | 0.454 | 0.473  | 4.39  |
| 37) M | Trichloroethene     | 0.372          | 0.360 | 0.381 | 0.378 | 0.370 | 0.372  | 2.19  |
| 38)   | Methylcyclohexane   | 0.507          | 0.525 | 0.576 | 0.566 | 0.565 | 0.548  | 5.48  |
| 39) M | 1,2-Dichloropropane | 0.356          | 0.341 | 0.363 | 0.357 | 0.351 | 0.354  | 2.35  |
| 40)   | Dibromomethane      | 0.228          | 0.216 | 0.234 | 0.230 | 0.228 | 0.227  | 2.86  |
| 41) M | Bromodichloromethan | 0.426          | 0.417 | 0.460 | 0.463 | 0.458 | 0.445  | 4.84  |
| 42) M | Vinyl Acetate       | 0.851          | 0.824 | 0.885 | 0.884 | 0.851 | 0.859  | 3.00  |
| 43)   | Ethyl Acetate       | 0.478          | 0.499 | 0.523 | 0.512 | 0.511 | 0.505  | 3.41  |
| 44)   | Isopropyl Acetate   | 0.751          | 0.777 | 0.844 | 0.846 | 0.852 | 0.814  | 5.74  |
| 45) T | 1,4-Dioxane         | 0.009          | 0.008 | 0.009 | 0.008 | 0.008 | 0.008# | 6.05  |
| 46)   | Methyl methacrylate | 0.354          | 0.381 | 0.421 | 0.421 | 0.425 | 0.400  | 7.83  |
| 47)   | n-amyl Acetate      | 0.555          | 0.615 | 0.719 | 0.749 | 0.772 | 0.682  | 13.64 |
| 48) M | t-1,3-Dichloroprope | 0.404          | 0.453 | 0.508 | 0.528 | 0.535 | 0.486  | 11.48 |
| 49) T | cis-1,3-Dichloropro | 0.486          | 0.514 | 0.575 | 0.586 | 0.576 | 0.547  | 8.17  |
| 50) M | 1,1,2-Trichloroetha | 0.344          | 0.337 | 0.357 | 0.348 | 0.342 | 0.346  | 2.17  |
| 51)   | Ethyl methacrylate  | 0.474          | 0.491 | 0.566 | 0.576 | 0.584 | 0.538  | 9.59  |
| 52)   | 1,3-Dichloropropane | 0.587          | 0.563 | 0.600 | 0.595 | 0.584 | 0.586  | 2.45  |

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|       | Compound             | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD  |
|-------|----------------------|----------------|-------|-------|-------|-------|-------|-------|
| 53) M | Dibromochloromethan  | 0.321          | 0.327 | 0.368 | 0.376 | 0.376 | 0.354 | 7.76  |
| 54) M | 1,2-Dibromoethane    | 0.342          | 0.348 | 0.374 | 0.366 | 0.362 | 0.359 | 3.63  |
| 55) M | 2-Chloroethyl vinyl  | 0.249          | 0.234 | 0.253 | 0.253 | 0.248 | 0.247 | 3.21  |
| 56) M | Bromoform            | 0.226          | 0.251 | 0.284 | 0.295 | 0.306 | 0.272 | 12.19 |
| 57) I | Chlorobenzene-d5     | -----ISTD----- |       |       |       |       |       |       |
| 58) M | 4-Methyl-2-Pentanone | 0.540          | 0.558 | 0.594 | 0.568 | 0.565 | 0.565 | 3.47  |
| 59) M | 2-Hexanone           | 0.392          | 0.433 | 0.467 | 0.445 | 0.448 | 0.437 | 6.45  |
| 60) S | 4-Bromofluorobenzen  | 0.466          | 0.478 | 0.489 | 0.478 | 0.489 | 0.480 | 2.02  |
| 61) M | Tetrachloroethene    | 0.436          | 0.435 | 0.473 | 0.435 | 0.439 | 0.443 | 3.75  |
| 62) M | Toluene              | 1.595          | 1.553 | 1.661 | 1.591 | 1.558 | 1.592 | 2.71  |
| 63) S | Toluene-d8           | 1.389          | 1.375 | 1.356 | 1.336 | 1.319 | 1.355 | 2.10  |
| 64) M | Chlorobenzene        | 0.983          | 0.965 | 1.021 | 1.001 | 0.998 | 0.994 | 2.10  |
| 65)   | 1,1,1,2-Tetrachloro  | 0.353          | 0.357 | 0.382 | 0.371 | 0.371 | 0.367 | 3.24  |
| 66) M | Ethyl Benzene        | 1.654          | 1.666 | 1.816 | 1.772 | 1.761 | 1.734 | 4.05  |
| 67) M | m/p-Xylenes          | 0.617          | 0.642 | 0.697 | 0.682 | 0.683 | 0.664 | 5.05  |
| 68) M | o-Xylene             | 0.609          | 0.620 | 0.687 | 0.655 | 0.663 | 0.647 | 4.96  |
| 69) M | Styrene              | 0.958          | 1.039 | 1.168 | 1.150 | 1.163 | 1.096 | 8.49  |
| 70)   | Isopropylbenzene     | 1.607          | 1.621 | 1.788 | 1.730 | 1.724 | 1.694 | 4.56  |
| 71) M | 1,1,2,2-Tetrachloro  | 0.551          | 0.554 | 0.580 | 0.582 | 0.587 | 0.571 | 2.97  |
| 72)   | 1,2,3-Trichloroprop  | 0.527          | 0.471 | 0.497 | 0.471 | 0.475 | 0.488 | 4.94  |
| 73)   | Bromobenzene         | 0.443          | 0.430 | 0.461 | 0.453 | 0.458 | 0.449 | 2.84  |
| 74)   | n-propylbenzene      | 1.781          | 1.828 | 2.066 | 2.008 | 1.996 | 1.936 | 6.40  |
| 75)   | 2-Chlorotoluene      | 1.147          | 1.105 | 1.208 | 1.175 | 1.165 | 1.160 | 3.29  |
| 76)   | 1,3,5-Trimethylbenz  | 1.283          | 1.349 | 1.500 | 1.455 | 1.471 | 1.412 | 6.49  |
| 77)   | t-1,4-Dichloro-2-bu  | 0.134          | 0.167 | 0.202 | 0.214 | 0.221 | 0.188 | 19.47 |
| 78)   | 4-Chlorotoluene      | 1.250          | 1.248 | 1.374 | 1.356 | 1.360 | 1.318 | 4.77  |
| 79)   | tert-butylbenzene    | 1.256          | 1.247 | 1.368 | 1.368 | 1.365 | 1.321 | 4.79  |
| 80)   | 1,2,4-Trimethylbenz  | 1.296          | 1.358 | 1.478 | 1.450 | 1.457 | 1.408 | 5.51  |
| 81)   | sec-Butylbenzene     | 1.530          | 1.533 | 1.722 | 1.685 | 1.702 | 1.634 | 5.81  |
| 82)   | p-Isopropyltoluene   | 1.336          | 1.414 | 1.580 | 1.555 | 1.575 | 1.492 | 7.43  |
| 83) M | 1,3-Dichlorobenzene  | 0.734          | 0.742 | 0.812 | 0.812 | 0.820 | 0.784 | 5.39  |
| 84) M | 1,4-Dichlorobenzene  | 0.734          | 0.721 | 0.805 | 0.818 | 0.810 | 0.777 | 5.92  |
| 85)   | n-Butylbenzene       | 1.098          | 1.177 | 1.398 | 1.410 | 1.444 | 1.305 | 11.98 |
| 86) T | Hexachloroethane     | 0.229          | 0.243 | 0.280 | 0.288 | 0.297 | 0.268 | 11.08 |
| 87) M | 1,2-Dichlorobenzene  | 0.765          | 0.751 | 0.815 | 0.809 | 0.815 | 0.791 | 3.87  |
| 88)   | 1,2-Dibromo-3-Chlor  | 0.105          | 0.115 | 0.130 | 0.127 | 0.132 | 0.122 | 9.34  |
| 89)   | 1,2,4-Trichlorobenz  | 0.433          | 0.478 | 0.560 | 0.559 | 0.582 | 0.522 | 12.20 |
| 90)   | Hexachlorobutadiene  | 0.249          | 0.242 | 0.269 | 0.273 | 0.272 | 0.261 | 5.55  |
| 91) M | Naphthalene          | 1.226          | 1.483 | 1.720 | 1.714 | 1.739 | 1.576 | 14.11 |
| 92)   | 1,2,3-Trichlorobenz  | 0.466          | 0.491 | 0.553 | 0.574 | 0.574 | 0.532 | 9.37  |

(#) = Out of Range