

Method Path : Z:\VOASRV\HPCHEM1\MSV0A X\METHOD\  
 Method File : 624X121219W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Fri Dec 13 01:35:34 2019  
 Response Via : Initial Calibration

## Calibration Files

5 =VX013991.D 20 =VX013992.D 50 =VX013993.D  
 100 =VX013994.D 150 =VX013995.D

|       | Compound            | 5              | 20    | 50    | 100   | 150   | Avg    | %RSD  |
|-------|---------------------|----------------|-------|-------|-------|-------|--------|-------|
| ----- |                     |                |       |       |       |       |        |       |
| 1) I  | Bromochloromethane  | -----ISTD----- |       |       |       |       |        |       |
| 2) M  | Dichlorodifluoromet | 1.630          | 1.467 | 1.483 | 1.518 | 1.478 | 1.515  | 4.42  |
| 3) M  | Chloromethane       | 2.181          | 2.146 | 2.085 | 2.129 | 2.139 | 2.136  | 1.62  |
| 4) M  | Vinyl Chloride      | 2.211          | 2.131 | 2.153 | 2.260 | 2.192 | 2.190  | 2.32  |
| 5) M  | Bromomethane        | 1.872          | 1.523 | 1.473 | 1.563 | 1.571 | 1.601  | 9.80  |
| 6) M  | Chloroethane        | 1.379          | 1.297 | 1.358 | 1.378 | 1.350 | 1.352  | 2.49  |
| 7) M  | Trichlorofluorometh | 2.688          | 2.670 | 2.683 | 2.803 | 2.778 | 2.725  | 2.25  |
| 8) T  | Diethyl Ether       | 1.170          | 1.225 | 1.239 | 1.327 | 1.300 | 1.252  | 4.99  |
| 9)    | 1,1,2-Trichlorotrif | 1.666          | 1.570 | 1.588 | 1.668 | 1.633 | 1.625  | 2.74  |
| 10) M | 1,1-Dichloroethene  | 1.653          | 1.619 | 1.632 | 1.764 | 1.732 | 1.680  | 3.82  |
| 11)   | Methyl Iodide       | 1.541          | 1.984 | 2.277 | 2.509 | 2.502 | 2.163  | 18.88 |
| 12)   | Methyl Acetate      | 2.553          | 2.568 | 2.608 | 2.665 | 2.609 | 2.601  | 1.67  |
| 13) M | Acrolein            | 0.222          | 0.333 | 0.331 | 0.345 | 0.347 | 0.315  | 16.78 |
| 14) M | Acrylonitrile       | 0.971          | 0.983 | 1.030 | 1.060 | 1.039 | 1.017  | 3.73  |
| 15) M | Acetone             | 0.300          | 0.284 | 0.338 | 0.297 | 0.274 | 0.299  | 8.25  |
| 16) M | Carbon Disulfide    | 4.088          | 4.288 | 4.524 | 4.928 | 4.927 | 4.551  | 8.28  |
| 17)   | Allyl chloride      | 2.744          | 2.942 | 2.993 | 3.224 | 3.190 | 3.019  | 6.49  |
| 18) M | Methylene Chloride  | 2.296          | 2.008 | 1.951 | 2.044 | 1.992 | 2.058  | 6.66  |
| 19) M | trans-1,2-Dichloroe | 1.823          | 1.769 | 1.793 | 1.917 | 1.896 | 1.840  | 3.49  |
| 20) T | Diisopropyl ether   | 5.925          | 6.121 | 6.085 | 6.484 | 6.355 | 6.194  | 3.61  |
| 21) M | 1,1-Dichloroethane  | 3.318          | 3.275 | 3.264 | 3.501 | 3.451 | 3.362  | 3.21  |
| 22) M | cis-1,2-Dichloroeth | 2.113          | 2.069 | 2.065 | 2.209 | 2.207 | 2.133  | 3.35  |
| 23) M | tert-Butyl Alcohol  | 0.369          | 0.391 | 0.404 | 0.417 | 0.413 | 0.399  | 4.91  |
| 24) M | Methyl tert-Butyl E | 5.402          | 5.554 | 5.571 | 5.984 | 5.864 | 5.675  | 4.23  |
| 25) M | Chloroform          | 3.034          | 3.166 | 3.154 | 3.372 | 3.300 | 3.205  | 4.14  |
| 26)   | Cyclohexane         | 2.793          | 2.953 | 2.971 | 3.164 | 3.108 | 2.998  | 4.84  |
| 27) s | 1,2-Dichloroethane- | 2.137          | 2.162 | 2.099 | 2.188 | 2.158 | 2.149  | 1.54  |
| ----- |                     |                |       |       |       |       |        |       |
| 28) I | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |        |       |
| 29)   | 1,1-Dichloropropene | 0.410          | 0.420 | 0.440 | 0.453 | 0.444 | 0.433  | 4.04  |
| 30) M | 2-Butanone          | 0.245          | 0.246 | 0.276 | 0.263 | 0.247 | 0.255  | 5.32  |
| 31)   | 2,2-Dichloropropane | 0.371          | 0.391 | 0.404 | 0.425 | 0.413 | 0.401  | 5.22  |
| 32) M | 1,1,1-Trichloroetha | 0.462          | 0.460 | 0.480 | 0.503 | 0.492 | 0.479  | 3.92  |
| 33) M | Carbon Tetrachlorid | 0.371          | 0.391 | 0.415 | 0.435 | 0.425 | 0.407  | 6.35  |
| 34) M | Benzene             | 1.313          | 1.331 | 1.357 | 1.400 | 1.357 | 1.351  | 2.43  |
| 35)   | Methacrylonitrile   | 0.251          | 0.272 | 0.281 | 0.287 | 0.281 | 0.275  | 5.15  |
| 36) M | 1,2-Dichloroethane  | 0.496          | 0.449 | 0.463 | 0.480 | 0.458 | 0.469  | 3.99  |
| 37) M | Trichloroethene     | 0.370          | 0.356 | 0.365 | 0.380 | 0.367 | 0.368  | 2.42  |
| 38)   | Methylcyclohexane   | 0.466          | 0.498 | 0.535 | 0.554 | 0.532 | 0.517  | 6.76  |
| 39) M | 1,2-Dichloropropane | 0.344          | 0.343 | 0.349 | 0.368 | 0.351 | 0.351  | 2.89  |
| 40)   | Dibromomethane      | 0.216          | 0.219 | 0.224 | 0.233 | 0.228 | 0.224  | 2.93  |
| 41) M | Bromodichloromethan | 0.386          | 0.413 | 0.437 | 0.472 | 0.462 | 0.434  | 8.15  |
| 42) M | Vinyl Acetate       | 0.839          | 0.897 | 0.882 | 0.966 | 0.925 | 0.902  | 5.27  |
| 43)   | Ethyl Acetate       | 0.451          | 0.476 | 0.513 | 0.514 | 0.497 | 0.490  | 5.55  |
| 44)   | Isopropyl Acetate   | 0.795          | 0.778 | 0.829 | 0.863 | 0.839 | 0.821  | 4.15  |
| 45) T | 1,4-Dioxane         | 0.007          | 0.008 | 0.008 | 0.008 | 0.008 | 0.008# | 6.54  |
| 46)   | Methyl methacrylate | 0.348          | 0.384 | 0.407 | 0.435 | 0.420 | 0.399  | 8.50  |
| 47)   | n-amyl Acetate      | 0.585          | 0.688 | 0.752 | 0.817 | 0.808 | 0.730  | 13.14 |
| 48) M | t-1,3-Dichloroprope | 0.390          | 0.432 | 0.481 | 0.535 | 0.531 | 0.474  | 13.26 |
| 49) T | cis-1,3-Dichloropro | 0.458          | 0.500 | 0.544 | 0.586 | 0.576 | 0.533  | 10.08 |
| 50) M | 1,1,2-Trichloroetha | 0.342          | 0.340 | 0.344 | 0.359 | 0.345 | 0.346  | 2.25  |
| 51)   | Ethyl methacrylate  | 0.472          | 0.521 | 0.560 | 0.606 | 0.593 | 0.550  | 9.92  |
| 52)   | 1,3-Dichloropropane | 0.572          | 0.581 | 0.586 | 0.609 | 0.591 | 0.588  | 2.35  |

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|       | Compound             | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD  |
|-------|----------------------|----------------|-------|-------|-------|-------|-------|-------|
| 53) M | Dibromochloromethan  | 0.277          | 0.323 | 0.357 | 0.388 | 0.385 | 0.346 | 13.51 |
| 54) M | 1,2-Dibromoethane    | 0.333          | 0.343 | 0.361 | 0.377 | 0.366 | 0.356 | 4.97  |
| 55) M | 2-Chloroethyl vinyl  | 0.225          | 0.237 | 0.250 | 0.253 | 0.248 | 0.243 | 4.80  |
| 56) M | Bromoform            | 0.204          | 0.242 | 0.274 | 0.311 | 0.318 | 0.270 | 17.74 |
| 57) I | Chlorobenzene-d5     | -----ISTD----- |       |       |       |       |       |       |
| 58) M | 4-Methyl-2-Pentanone | 0.533          | 0.556 | 0.579 | 0.580 | 0.559 | 0.561 | 3.40  |
| 59) M | 2-Hexanone           | 0.389          | 0.419 | 0.453 | 0.443 | 0.427 | 0.426 | 5.76  |
| 60) S | 4-Bromofluorobenzene | 0.462          | 0.483 | 0.484 | 0.495 | 0.498 | 0.484 | 2.93  |
| 61) M | Tetrachloroethene    | 0.386          | 0.378 | 0.460 | 0.388 | 0.372 | 0.397 | 9.02  |
| 62) M | Toluene              | 1.592          | 1.584 | 1.599 | 1.635 | 1.567 | 1.596 | 1.57  |
| 63) S | Toluene-d8           | 1.368          | 1.377 | 1.341 | 1.310 | 1.310 | 1.341 | 2.33  |
| 64) M | Chlorobenzene        | 0.965          | 0.991 | 0.999 | 1.033 | 1.010 | 1.000 | 2.50  |
| 65)   | 1,1,1,2-Tetrachloro  | 0.357          | 0.355 | 0.367 | 0.390 | 0.382 | 0.370 | 4.20  |
| 66) M | Ethyl Benzene        | 1.633          | 1.721 | 1.769 | 1.841 | 1.767 | 1.746 | 4.38  |
| 67) M | m/p-Xylenes          | 0.609          | 0.661 | 0.678 | 0.707 | 0.683 | 0.667 | 5.51  |
| 68) M | o-Xylene             | 0.623          | 0.651 | 0.660 | 0.696 | 0.677 | 0.661 | 4.19  |
| 69) M | Styrene              | 1.013          | 1.081 | 1.141 | 1.205 | 1.183 | 1.125 | 6.96  |
| 70)   | Isopropylbenzene     | 1.586          | 1.684 | 1.731 | 1.799 | 1.745 | 1.709 | 4.67  |
| 71) M | 1,1,2,2-Tetrachloro  | 0.589          | 0.599 | 0.589 | 0.630 | 0.623 | 0.606 | 3.20  |
| 72)   | 1,2,3-Trichloroprop  | 0.494          | 0.537 | 0.548 | 0.569 | 0.549 | 0.539 | 5.16  |
| 73)   | Bromobenzene         | 0.426          | 0.443 | 0.458 | 0.479 | 0.476 | 0.456 | 4.86  |
| 74)   | n-propylbenzene      | 1.733          | 1.888 | 1.981 | 2.067 | 2.023 | 1.938 | 6.84  |
| 75)   | 2-Chlorotoluene      | 1.094          | 1.151 | 1.169 | 1.229 | 1.212 | 1.171 | 4.56  |
| 76)   | 1,3,5-Trimethylbenz  | 1.314          | 1.415 | 1.459 | 1.542 | 1.518 | 1.450 | 6.24  |
| 77)   | t-1,4-Dichloro-2-bu  | 0.122          | 0.156 | 0.191 | 0.209 | 0.212 | 0.178 | 21.47 |
| 78)   | 4-Chlorotoluene      | 1.199          | 1.301 | 1.347 | 1.429 | 1.415 | 1.338 | 6.98  |
| 79)   | tert-butylbenzene    | 1.239          | 1.366 | 1.331 | 1.529 | 1.521 | 1.397 | 8.96  |
| 80)   | 1,2,4-Trimethylbenz  | 1.299          | 1.416 | 1.466 | 1.550 | 1.516 | 1.449 | 6.77  |
| 81)   | sec-Butylbenzene     | 1.492          | 1.603 | 1.683 | 1.776 | 1.755 | 1.662 | 7.01  |
| 82)   | p-Isopropyltoluene   | 1.292          | 1.438 | 1.534 | 1.632 | 1.603 | 1.500 | 9.21  |
| 83) M | 1,3-Dichlorobenzene  | 0.718          | 0.755 | 0.797 | 0.854 | 0.852 | 0.795 | 7.49  |
| 84) M | 1,4-Dichlorobenzene  | 0.708          | 0.756 | 0.787 | 0.851 | 0.856 | 0.792 | 8.00  |
| 85)   | n-Butylbenzene       | 0.987          | 1.160 | 1.298 | 1.424 | 1.435 | 1.261 | 15.03 |
| 86) T | Hexachloroethane     | 0.223          | 0.242 | 0.272 | 0.308 | 0.316 | 0.272 | 14.75 |
| 87) M | 1,2-Dichlorobenzene  | 0.743          | 0.766 | 0.810 | 0.858 | 0.860 | 0.808 | 6.54  |
| 88)   | 1,2-Dibromo-3-Chlor  | 0.096          | 0.116 | 0.125 | 0.134 | 0.132 | 0.121 | 12.72 |
| 89)   | 1,2,4-Trichlorobenz  | 0.406          | 0.467 | 0.529 | 0.590 | 0.588 | 0.516 | 15.42 |
| 90)   | Hexachlorobutadiene  | 0.215          | 0.233 | 0.249 | 0.265 | 0.265 | 0.245 | 8.79  |
| 91) M | Naphthalene          | 1.165          | 1.417 | 1.631 | 1.791 | 1.754 | 1.551 | 16.82 |
| 92)   | 1,2,3-Trichlorobenz  | 0.431          | 0.475 | 0.536 | 0.587 | 0.588 | 0.524 | 13.28 |

(#) = Out of Range