

Method Path : Z:\voasrv\HPCHEM1\MSVOA\_X\Method\  
 Method File : 624X011823W.M  
 Title : METHOD 624 VOLATILE ORGANIC ANALYSIS  
 Last Update : Wed Jan 18 14:40:07 2023  
 Response Via : Initial Calibration

## Calibration Files

5 =VX033768.D 20 =VX033769.D 50 =VX033770.D 100 =VX033771.D 150 =VX033772.D

| Compound |                     | 5              | 20    | 50    | 100   | 150   | Avg   | %RSD     |
|----------|---------------------|----------------|-------|-------|-------|-------|-------|----------|
| -----    |                     |                |       |       |       |       |       |          |
| 1) I     | Bromochloromethane  | -----ISTD----- |       |       |       |       |       |          |
| 2) M     | Dichlorodifluoro... | 2.764          | 2.893 | 2.969 | 2.375 | 2.741 | 2.748 | 8.33     |
| 3) M     | Chloromethane       | 3.410          | 3.164 | 3.286 | 2.584 | 3.009 | 3.091 | 10.34    |
| 4) M     | Vinyl Chloride      | 3.224          | 3.165 | 3.255 | 2.505 | 3.018 | 3.034 | 10.19    |
| 5) M     | Bromomethane        | 2.119          | 1.949 | 2.074 | 1.664 | 1.973 | 1.956 | 9.08     |
| 6) M     | Chloroethane        | 1.808          | 1.764 | 1.737 | 1.313 | 1.492 | 1.623 | 13.08    |
| 7) M     | Trichlorofluorom... | 4.986          | 4.676 | 4.757 | 3.718 | 4.290 | 4.485 | 11.08    |
| 8) T     | Diethyl Ether       | 1.778          | 1.724 | 1.784 | 1.430 | 1.737 | 1.691 | 8.75     |
| 9)       | 1,1,2-Trichlorot... | 2.937          | 2.825 | 2.789 | 2.300 | 2.721 | 2.714 | 9.02     |
| 10) M    | 1,1-Dichloroethene  | 2.929          | 2.754 | 2.710 | 2.250 | 2.689 | 2.666 | 9.42     |
| 11)      | Methyl Iodide       | 4.128          | 4.034 | 4.372 | 3.443 | 4.135 | 4.022 | 8.62     |
| 12)      | Methyl Acetate      | 5.026          | 4.817 | 4.958 | 3.884 | 4.578 | 4.653 | 9.94     |
| 13) M    | Acrolein            | 0.626          | 0.469 | 0.487 | 0.457 | 0.564 | 0.520 | 13.83    |
| 14) M    | Acrylonitrile       | 1.631          | 1.591 | 1.613 | 1.263 | 1.481 | 1.516 | 10.08    |
| 15) M    | Acetone             | 0.506          | 0.475 | 0.485 | 0.370 | 0.443 | 0.456 | 11.63    |
| 16) M    | Carbon Disulfide    | 6.922          | 6.472 | 6.992 | 5.593 | 6.701 | 6.536 | 8.65     |
| 17)      | Allyl chloride      | 5.131          | 5.003 | 5.133 | 4.022 | 4.773 | 4.812 | 9.67     |
| 18) M    | Methylene Chloride  | 3.371          | 3.108 | 3.178 | 2.464 | 2.889 | 3.002 | 11.55    |
| 19) M    | trans-1,2-Dichlo... | 3.137          | 2.987 | 3.043 | 2.367 | 2.817 | 2.870 | 10.61    |
| 20) T    | Diisopropyl ether   | 1.057          | 0.977 | 0.994 | 0.776 | 0.913 | 0.943 | E1 11.32 |
| 21) M    | 1,1-Dichloroethane  | 5.795          | 5.316 | 5.416 | 4.261 | 5.024 | 5.162 | 11.12    |
| 22) M    | cis-1,2-Dichloro... | 3.673          | 3.494 | 3.577 | 2.806 | 3.313 | 3.373 | 10.18    |
| 23) M    | tert-Butyl Alcohol  | 0.570          | 0.560 | 0.549 | 0.424 | 0.516 | 0.524 | 11.32    |
| 24) M    | Methyl tert-Buty... | 9.442          | 8.956 | 9.420 | 7.420 | 8.902 | 8.828 | 9.36     |
| 25) M    | Chloroform          | 5.782          | 5.355 | 5.487 | 4.286 | 5.049 | 5.192 | 10.99    |
| 26)      | Cyclohexane         | 5.303          | 4.891 | 4.942 | 3.865 | 4.521 | 4.704 | 11.58    |
| 27) s    | 1,2-Dichloroetha... | 2.546          | 2.328 | 2.266 | 2.270 | 2.198 | 2.322 | 5.76     |
|          |                     |                |       |       |       |       |       |          |
| 28) I    | 1,4-Difluorobenzene | -----ISTD----- |       |       |       |       |       |          |
| 29)      | 1,1-Dichloropropene | 0.658          | 0.581 | 0.596 | 0.476 | 0.570 | 0.576 | 11.33    |
| 30) M    | 2-Butanone          | 0.372          | 0.327 | 0.330 | 0.259 | 0.304 | 0.318 | 12.98    |
| 31)      | 2,2-Dichloropropane | 0.594          | 0.535 | 0.570 | 0.464 | 0.570 | 0.547 | 9.31     |
| 32) M    | 1,1,1-Trichloroe... | 0.752          | 0.667 | 0.683 | 0.549 | 0.666 | 0.664 | 11.03    |
| 33) M    | Carbon Tetrachlo... | 0.647          | 0.600 | 0.614 | 0.502 | 0.606 | 0.594 | 9.17     |
| 34) M    | Benzene             | 1.875          | 1.776 | 1.784 | 1.432 | 1.685 | 1.710 | 9.92     |
| 35)      | Methacrylonitrile   | 0.381          | 0.354 | 0.366 | 0.286 | 0.346 | 0.347 | 10.43    |
| 36) M    | 1,2-Dichloroethane  | 0.732          | 0.602 | 0.611 | 0.486 | 0.576 | 0.602 | 14.66    |
| 37) M    | Trichloroethene     | 0.481          | 0.498 | 0.521 | 0.410 | 0.504 | 0.483 | 8.96     |
| 38)      | Methylcyclohexane   | 0.695          | 0.698 | 0.758 | 0.598 | 0.716 | 0.693 | 8.47     |
| 39) M    | 1,2-Dichloropropane | 0.430          | 0.413 | 0.460 | 0.357 | 0.433 | 0.419 | 9.17     |
| 40)      | Dibromomethane      | 0.319          | 0.296 | 0.321 | 0.251 | 0.301 | 0.298 | 9.51     |
| 41) M    | Bromodichloromet... | 0.587          | 0.566 | 0.606 | 0.484 | 0.595 | 0.568 | 8.62     |
| 42) M    | Vinyl Acetate       | 1.181          | 1.086 | 1.126 | 0.889 | 1.067 | 1.070 | 10.29    |
| 43)      | Ethyl Acetate       | 0.754          | 0.615 | 0.639 | 0.502 | 0.602 | 0.622 | 14.51    |
| 44)      | Isopropyl Acetate   | 0.980          | 0.948 | 1.005 | 0.809 | 0.989 | 0.946 | 8.38     |
| 45) T    | 1,4-Dioxane         | 0.010          | 0.010 | 0.011 | 0.008 | 0.010 | 0.010 | 9.03     |
| 46)      | Methyl methacrylate | 0.492          | 0.485 | 0.516 | 0.413 | 0.496 | 0.480 | 8.18     |
| 47)      | n-amyl Acetate      | 0.778          | 0.759 | 0.906 | 0.719 | 0.829 | 0.798 | 9.03     |
| 48) M    | t-1,3-Dichloropr... | 0.586          | 0.546 | 0.648 | 0.550 | 0.661 | 0.598 | 9.03     |
| 49) T    | cis-1,3-Dichloro... | 0.680          | 0.654 | 0.722 | 0.604 | 0.716 | 0.675 | 7.22     |
| 50) M    | 1,1,2-Trichloroe... | 0.502          | 0.419 | 0.467 | 0.380 | 0.440 | 0.441 | 10.55    |
| 51)      | Ethyl methacrylate  | 0.682          | 0.613 | 0.705 | 0.587 | 0.685 | 0.654 | 7.84     |
| 52)      | 1,3-Dichloropropane | 0.871          | 0.704 | 0.779 | 0.639 | 0.726 | 0.744 | 11.72    |
| 53) M    | Dibromochloromet... | 0.505          | 0.444 | 0.516 | 0.431 | 0.514 | 0.482 | 8.53     |
| 54) M    | 1,2-Dibromoethane   | 0.543          | 0.447 | 0.502 | 0.413 | 0.479 | 0.477 | 10.42    |
| 55) M    | 2-Chloroethyl vi... | 0.318          | 0.299 | 0.322 | 0.287 | 0.309 | 0.307 | 4.64     |
| 56) M    | Bromoform           | 0.349          | 0.358 | 0.412 | 0.342 | 0.410 | 0.374 | 9.20     |

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|       |                     | -----ISTD----- |       |       |       |       |       |       |
|-------|---------------------|----------------|-------|-------|-------|-------|-------|-------|
| 57) I | Chlorobenzene-d5    |                |       |       |       |       |       |       |
| 58) M | 4-Methyl-2-Penta... | 0.563          | 0.577 | 0.572 | 0.461 | 0.523 | 0.539 | 9.03  |
| 59) M | 2-Hexanone          | 0.427          | 0.433 | 0.431 | 0.347 | 0.388 | 0.405 | 9.20  |
| 60) S | 4-Bromofluoroben... | 0.530          | 0.550 | 0.542 | 0.530 | 0.529 | 0.536 | 1.77  |
| 61) M | Tetrachloroethene   | 0.433          | 0.381 | 0.423 | 0.332 | 0.406 | 0.395 | 10.14 |
| 62) M | Toluene             | 1.711          | 1.796 | 1.789 | 1.407 | 1.687 | 1.678 | 9.46  |
| 63) S | Toluene-d8          | 0.944          | 0.981 | 0.950 | 0.950 | 0.960 | 0.957 | 1.52  |
| 64) M | Chlorobenzene       | 1.195          | 1.165 | 1.189 | 0.935 | 1.110 | 1.119 | 9.68  |
| 65)   | 1,1,1,2-Tetrachl... | 0.419          | 0.436 | 0.438 | 0.359 | 0.430 | 0.417 | 7.88  |
| 66) M | Ethyl Benzene       | 2.015          | 2.020 | 2.044 | 1.617 | 1.906 | 1.920 | 9.26  |
| 67) M | m/p-Xylenes         | 0.792          | 0.795 | 0.816 | 0.636 | 0.753 | 0.758 | 9.51  |
| 68) M | o-Xylene            | 0.803          | 0.785 | 0.805 | 0.632 | 0.735 | 0.752 | 9.67  |
| 69) M | Styrene             | 1.266          | 1.300 | 1.338 | 1.048 | 1.234 | 1.237 | 9.09  |
| 70)   | Isopropylbenzene    | 2.068          | 2.041 | 2.084 | 1.605 | 1.888 | 1.937 | 10.39 |
| 71) M | 1,1,2,2-Tetrachl... | 0.623          | 0.604 | 0.629 | 0.481 | 0.569 | 0.581 | 10.46 |
| 72)   | 1,2,3-Trichlorop... | 0.546          | 0.558 | 0.581 | 0.442 | 0.519 | 0.529 | 10.15 |
| 73)   | Bromobenzene        | 0.558          | 0.555 | 0.556 | 0.433 | 0.521 | 0.525 | 10.17 |
| 74)   | n-propylbenzene     | 2.280          | 2.320 | 2.387 | 1.851 | 2.166 | 2.201 | 9.60  |
| 75)   | 2-Chlorotoluene     | 1.409          | 1.378 | 1.394 | 1.089 | 1.275 | 1.309 | 10.23 |
| 76)   | 1,3,5-Trimethylb... | 1.675          | 1.721 | 1.729 | 1.338 | 1.569 | 1.607 | 10.14 |
| 77)   | t-1,4-Dichloro-2... | 0.127          | 0.159 | 0.184 | 0.152 | 0.191 | 0.163 | 15.93 |
| 78)   | 4-Chlorotoluene     | 1.554          | 1.538 | 1.588 | 1.233 | 1.452 | 1.473 | 9.73  |
| 79)   | tert-butylbenzene   | 1.717          | 1.743 | 1.772 | 1.379 | 1.610 | 1.644 | 9.75  |
| 80)   | 1,2,4-Trimethylb... | 1.664          | 1.688 | 1.722 | 1.333 | 1.558 | 1.593 | 9.91  |
| 81)   | sec-Butylbenzene    | 2.083          | 2.107 | 2.150 | 1.677 | 1.988 | 2.001 | 9.53  |
| 82)   | p-Isopropyltoluene  | 1.776          | 1.843 | 1.873 | 1.446 | 1.729 | 1.733 | 9.83  |
| 83) M | 1,3-Dichlorobenzene | 0.992          | 0.988 | 1.019 | 0.787 | 0.953 | 0.948 | 9.78  |
| 84) M | 1,4-Dichlorobenzene | 0.996          | 0.983 | 1.014 | 0.800 | 0.958 | 0.950 | 9.08  |
| 85)   | n-Butylbenzene      | 1.385          | 1.467 | 1.532 | 1.222 | 1.442 | 1.410 | 8.34  |
| 86) T | Hexachloroethane    | 0.256          | 0.275 | 0.297 | 0.242 | 0.299 | 0.274 | 9.08  |
| 87) M | 1,2-Dichlorobenzene | 0.946          | 0.976 | 0.975 | 0.767 | 0.905 | 0.914 | 9.53  |
| 88)   | 1,2-Dibromo-3-Ch... | 0.111          | 0.121 | 0.135 | 0.102 | 0.125 | 0.119 | 10.71 |
| 89)   | 1,2,4-Trichlorob... | 0.608          | 0.657 | 0.691 | 0.545 | 0.679 | 0.636 | 9.46  |
| 90)   | Hexachlorobutadiene | 0.303          | 0.304 | 0.320 | 0.252 | 0.311 | 0.298 | 9.03  |
| 91) M | Naphthalene         | 1.773          | 1.951 | 2.046 | 1.581 | 1.967 | 1.864 | 10.02 |
| 92)   | 1,2,3-Trichlorob... | 0.565          | 0.655 | 0.683 | 0.543 | 0.672 | 0.624 | 10.35 |

(#) = Out of Range