

Supplementary information to “**Molecular clusters in aqueous solutions of pyridine and its methyl derivatives**” by W. Marczak, B. Czech, L. Almásy and D. Lairez

Coefficients of the polynomials (eq. 3) for density of binary systems in the temperature limits (278.15 – 323.15) K and standard deviations of the fit  $\delta$

2,6-dimethylpyridine (1) + methanol (2)

$x_1$	$a_0$	$a_1 \times 10$	$a_2 \times 10^4$	$\delta$
0	786.560	-9.453	-4.148	0.016
0.0200	796.041	-9.466	-4.312	0.016
0.0600	813.082	-9.497	-4.455	0.014
0.0995	827.841	-9.528	-4.650	0.013
0.2001	857.136	-9.585	-4.794	0.012
0.2999	877.587	-9.583	-4.694	0.011
0.3997	891.611	-9.511	-4.739	0.010
0.4991	901.167	-9.398	-4.856	0.008
0.5990	907.613	-9.278	-4.811	0.008
0.7007	912.055	-9.172	-4.642	0.006
0.8006	914.976	-9.094	-4.296	0.006
0.8989	916.865	-9.037	-3.959	0.006
1	918.015	-9.004	-3.434	0.005

2-methylpyridine (1) + methanol (2)

$x_1$	$a_0$	$a_1 \times 10$	$a_2 \times 10^4$	$\delta$
0	786.556	-9.453	-4.150	0.015
0.0200	795.290	-9.476	-4.294	0.015
0.0599	811.398	-9.518	-4.468	0.014
0.0998	825.780	-9.556	-4.639	0.013
0.1992	855.337	-9.625	-4.697	0.012
0.3000	877.694	-9.640	-4.555	0.010
0.3993	894.479	-9.612	-4.487	0.010
0.4817	904.912	-9.571	-4.334	0.009
0.6003	916.912	-9.502	-4.053	0.009
0.6994	924.487	-9.451	-3.803	0.007
0.7965	930.499	-9.410	-3.446	0.006
0.8993	935.268	-9.381	-3.009	0.005
1	939.115	-9.361	-2.450	0.006

pyridine (1) + methanol (2)

$x_1$	$a_0$	$a_1 \times 10$	$a_2 \times 10^4$	$\delta$
0	786.519	-9.454	-4.146	0.017
0.0200	795.038	-9.487	-4.271	0.016
0.0600	810.982	-9.551	-4.474	0.015
0.1000	825.565	-9.609	-4.544	0.013
0.2000	857.164	-9.720	-4.737	0.013
0.3000	882.846	-9.789	-4.695	0.010
0.4001	903.980	-9.827	-4.620	0.010
0.4999	921.485	-9.856	-4.306	0.008
0.5997	936.223	-9.882	-4.026	0.007
0.6999	948.936	-9.914	-3.612	0.007
0.7999	959.863	-9.957	-3.223	0.009
0.8989	969.395	-10.011	-2.563	0.007
1	978.034	-10.083	-1.860	0.004

pyridine (1) + water (2)

$x_1$	$a_0$	$a_1 \times 10$	$a_2 \times 10^4$	$a_3 \times 10^5$	$\delta$
0.0100	998.184	-3.033	-45.853	2.472	0.008
0.0200	999.176	-3.527	-41.696	2.026	0.006
0.0400	1000.573	-4.388	-34.486	1.308	0.004
0.0600	1001.501	-5.088	-29.353	0.467	0.012
0.0800	1002.151	-5.672	-25.297	0.487	0.002
0.1000	1002.652	-6.170	-21.817		0.007
0.2000	1003.584	-7.879	-13.793		0.004
0.3000	1002.757	-8.792	-10.911		0.005
0.4000	1000.343	-9.286	-9.820		0.005
0.5000	996.583	-9.524	-9.206		0.003
0.6000	992.141	-9.642	-8.384		0.004
0.7000	987.755	-9.751	-6.871		0.005
0.8000	983.810	-9.867	-5.043		0.007
0.9000	980.477	-9.982	-3.348		0.006
1	978.038	-10.084	-1.748		0.006