

Refractive Indices, Densities and Excess Molar Volumes of Monoalcohols + Water

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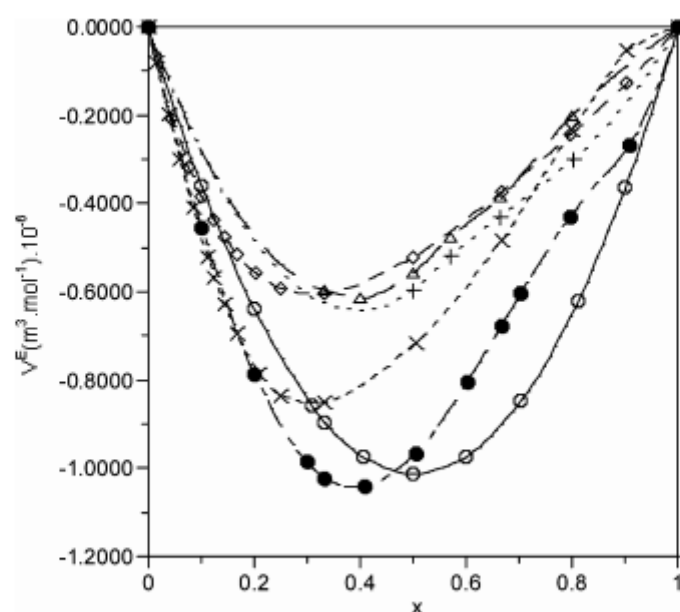


Fig. 8 Excess molar volume, V^E , for monoalcohols-water mixtures versus mole fraction, x , of monoalcohols, (○) methanol, (●) ethanol, (◇) 1-propanol, (×) 2-propanol, (+) 1-butanol and (△) 2-butanol at 298.15 K

Table 3 Experimental measurements of density, ρ , and refractive index, n_D , for ethanol-water mixtures, along with the values obtained for n_G , n_L , Δn_G , ΔR and V^E at a temperature of 298.15 K

x	ρ (kg·m ⁻³)	n_D	n_G	n_L	Δn_G	ΔR (m ³ ·mol ⁻¹) × 10 ⁻⁶	V^E (m ³ ·mol ⁻¹) × 10 ⁻⁶
0.0000	997.02	1.3326	1.33260	1.33261	0.00000	0.00000	0.00000
0.1010	960.05	1.3457	1.34679	1.33968	-0.00109	-0.02260	-0.45476
0.2001	930.02	1.3535	1.35517	1.34452	-0.00167	-0.04039	-0.78770
0.2987	903.49	1.3574	1.35976	1.34801	-0.00236	-0.06021	-0.98588
0.3332	894.81	1.3582	1.36071	1.34914	-0.00251	-0.06492	-1.02180
0.4087	876.73	1.3595	1.36187	1.35102	-0.00237	-0.06727	-1.04150
0.5051	855.63	1.3604	1.36212	1.35309	-0.00172	-0.05721	-0.96649
0.6030	836.60	1.3614	1.36158	1.35484	-0.00018	-0.02147	-0.80368
0.6664	825.77	1.3618	1.36111	1.35685	0.00069	0.00134	-0.67725
0.7032	820.06	1.3617	1.36086	1.35623	0.00084	0.00740	-0.60328
0.7956	807.52	1.3614	1.36040	1.35731	0.00100	0.01798	-0.43115
0.9075	795.40	1.3609	1.36023	1.35850	0.00067	0.01397	-0.26738
1.0000	785.08	1.3593	1.35930	1.35892	0.00000	0.00000	0.00000

Resultados by Irene Huerta

