Abstract

Densities of binary mixture of N, N-dimethylformamide (DMF) + 1-Butanol were determined using a vibrating-tube densimeter DMA 5000, over the entire range of molar fractions in the range temperatures from 283.15 K to 313.15 K and 1.011 bar. Excess molar volumes (V\textsubscript{e m}), partial molar volumes (V\textsubscript{i}), partial molar volumes at infinite dilution (V\textsubscript{i}\textsubscript{0}), excess partial molar volumes (V\textsubscript{i}E) of the solute and solvent were calculated. The excess molar volumes were correlated using the Redlich-Kister equation. Additionally, the virial coefficients (b\textsubscript{v}) were calculated according to the McMillan-Mayer theory. The values obtained for these parameters were discussed in terms of the interactions present in solution.

Keywords

Density, Excess molar volumes, Interactions.