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Comments on “Investigation of molecular interactions in binary liquid mixture: Measurements and correlation through thermos physicochemical study”

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Abstract

A polemic is given regarding the excess molar volumes reported by Nayeem for binary mixtures containing dimethyl carbonate and diisopropyl ether. The published excess molar volumes exceed $15 \text{ cm}^3 \text{ mol}^{-1}$ at composition of 0.5 mole fraction, and are inconsistent with the experimental densities reported in the published paper. Moreover, the calculated partial molar volumes of the mixture components do not obey the standard thermodynamic relationship that the molar volume of the binary mixture must equal the mole fraction sum of the partial molar volumes of the two mixture components.

Key Words and Phrases: Excess molar volumes; Partial molar volumes; Binary dimethyl carbonate and diisopropyl mixtures; Thermodynamic properties

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