



Densities, Speeds of Sound and Viscosities of Binary Mixtures of Nonan-1-ol with *o*-Chlorotoluene, *m*-Chlorotoluene and *p*-Chlorotoluene at $T = (298.15, 303.15 \text{ and } 308.15) \text{ K}$

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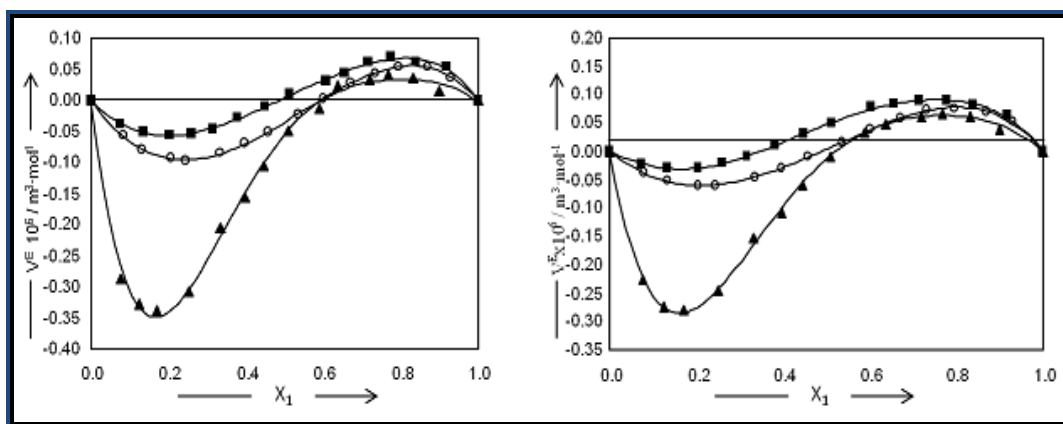
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Accepted on 7th December 2017, Published online on 27th January 2018

ABSTRACT

Densities, speeds of sound, and viscosities of binary mixtures of nonan-1-ol with *o*-chlorotoluene, *m*-chlorotoluene and *p*-chlorotoluene were measured over the entire range of composition from $T = (298.15, 303.15 \text{ and } 308.15) \text{ K}$ and at a pressure of 0.1 MPa. The experimental values of densities were used to calculate the excess molar volumes of the binary liquid mixtures. Excess molar volumes have been fitted to the Redlich-Kister polynomial equation to derive the binary coefficients, and the standard errors between the experimental and the calculated quantities. For the binary mixtures of nonan-1-ol with *o*-chlorotoluene, *m*-chlorotoluene and *p*-chlorotoluene, the curves show sigmoid trend, and the excess molar volumes are negative in the low mole fraction region and positive in the high mole fraction region.

Graphical Abstract:



Keywords: Nonan-1-ol, Excess molar Volume, Densities, Speeds of sound.