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Density, viscosity, Excess molar Volume and viscosity deviation for [chloroform (1) + di-isopropyl- ether(2) + 1-propanol (3)] ternary system at 298.15 K.

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Abstract

Densities ρ and viscosity η of the [chloroform (1) + di-isopropyl ether (DIPE) (2) + 1-propanol (3)] ternary system have been measured at 298.15 K and pressure of 960 hPa using an Anton Paar DMA 500 stavigmeter. Excess molar volumes $\boldsymbol{V^E}$ and viscosity deviation Δη were calculated. The excess molar volume $\boldsymbol{V^E}$ and viscosity deviation $\boldsymbol{\Delta\eta}$ for binary and ternary systems were correlated by a Redlich-Kister and Nagata and Tamura type equation. Also, the ternary excess molar volume and viscosity deviation Y_{123}^{E} were predicted using the Radojković equation. From the macroscopic behavior inferences were made about the molecular interactions in the ternary mixture

Keywords: Ternary system, Excess molar volume, Viscosity deviations, Nagata-Tamura equation, Radojkovi`c equation

Subject area	*Physical Chemistry*
Compounds	Chloroform; di-isopropyl ether (DIPE); 1-propanol
Data category	*Physicochemical*
Data acquisition format	*Physical properties*
Data type	*Raw, analyzed, and calculated*