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Viscometric study of *myo*-inositol in aqueous Deep Eutectic Solvent solutions

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Abstract

A viscometric study of *myo*-inositol in pure water and in Deep Eutectic Solvent (DES) aqueous solutions is presented. Two DES based on choline chloride as acceptor group and urea or glycerol as donor group are used. Experimental measurements of viscosities at p = 99.0 kPa and at six temperatures from 293.15 to 318.15 K were performed. In addition, the viscometric properties such as the B-coefficient, the hydration number, and the activation parameters of viscous flow were calculated. From these properties, the intermolecular interactions were evaluated. The results show that the studied sweetener is a structure-maker compound in all solvents of this work. The solute co-solute interactions are strongest in the system containing glycerol.

Keywords: *Myo*-inositol; DES; Viscosity; Hydration number; Activation parameters of viscous flow.