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Abbas Mehrdad, Mohsen Hajikarimi

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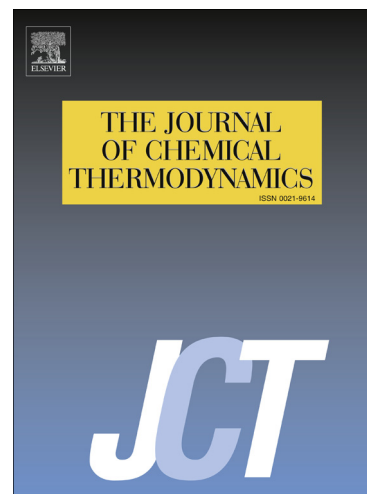
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Conductometric investigation of ceftriaxone disodium in aqueous solutions of 1-propanol and 2-propanol

Abbas Mehrdad*, Mohsen Hajikarimi

Department of Physical Chemistry, Faculty of Chemistry, University of Tabriz, Tabriz, Iran

Abstract

Often common organic solvents have been used in extraction and purification of ceftriaxone disodium from aqueous solution. Therefore, in this study the conductometric properties of ceftriaxone disodium were investigated in aqueous solutions of 1-propanol and 2-propanol at $T/K=(288.15-308.15)$. The conductivities data were analysed by Fuoss-Onsager conductivity equation. The obtained results indicate that the molar conductivity increases with temperature. Also, the molar conductivity increases with increasing concentration of 1-propanol and 2-propanol. The activation enthalpy of charge transfer is calculated from the temperature dependency of molar conductivity. The activation enthalpy of charge transfer in water is lower than that of aqueous solutions of 1-propanol and 2-propanol. The calculated Walden products reveal that ion-solvent interactions in aqueous solutions of 1-propanol and 2-propanol are weaker than that of water.

Keywords: Ceftriaxone disodium; Molar conductivity; 1-propanol; 2-propanol

*Corresponding Author; E-mail address: a_mehrdad@tabrizu.ac.ir

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