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Research Article

Association Constant and Free Energy Change Properties of Sodium Stearate in Aqueous CH_3OH and Aqueous DMSO Composition

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ABSTRACT

Various facets, similar to density, viscosity, medium dielectric constant, ion-solvent interactions, and calculations of solvent-solvent and ion-conductance and ion solvent related to different electrolytes in solvents. In curing it, ion-solvent relations pacify that ion. Throughout the study of ion solvent associations and overcoming activities of ions, conductance data and association constant figures of distant electrolytes have been used. Property of conductance and ion solvation of Sodium stearate measured in aqueous methanol and aqueous DMSO of diverse composition in the temperature range of 298K to 318K. Limiting molar conductance, Association constant of ion pair, KA figure out using Shedlovsky limiting law. Λ0 increase with percentage of water in the solvent mixture. KA value and free energy change are maximum in 80% aqueous-methanol mixture suggesting that ion-solvent interactions are maximum at this composition of solvent blend and ion conductance properties as a purpose of specific ion-solvent connections including structural effect.

Keywords: Molar Conductance, Association constant, free energy change, Aqueous-MeOH, Aqueous DMSO, Sodium stearate.

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