



Acoustic and Viscometric Studies on Aqueous N-1-Naphthyl Ethylene Diamine Dihydrochloride

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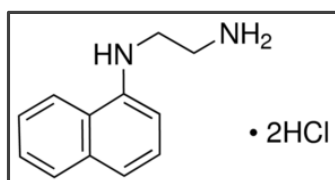
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ABSTRACT

The acoustic and viscometric studies are being increasingly used as tools for investigation of the properties of pure components and the nature, strength and order of intermolecular interactions between the constituents in solutions. The density, viscosity and ultrasonic velocity of aqueous N-1-Naphthyl Ethylene Diamine Dihydrochloride of different concentrations at 298.15 K and 300.15 K have been studied. From the experimentally measured data, various thermo acoustic parameters such as adiabatic compressibility, free length, free volume, internal pressure, acoustic impedance, relaxation time, molar sound velocity and Gibb's free energy have been evaluated. In terms of these thermo acoustic parameters, the molecular interactions between the components of this system were also discussed.

Graphical Abstract



N-1-Naphthyl ethylenediamine dihydrochloride

Keywords: Ultrasonic velocity, Molecular interactions, Free length.