

ISOMERIC STRUCTURAL STUDY OF DIAMINES IN LIQUID STATE AND ITS INTERACTIONS WITH ALCOHOLS THROUGH DIELECTRIC SPECTROSCOPIC METHOD

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Dielectric relaxation parameters of diamines $\text{HI}_2\text{N} - (\text{CHI}_2)_n - \text{NHI}_2$ ($n=0-6$) in alcohols in microwave frequency range 10 MHz to 20 GHz has been determined using time domain reflectometry^a. The HP54750A digitizing oscilloscope with HP54754A TDR module is used for these measurements. The time dependent data is processed to obtain complex reflection coefficient. The complex permittivity spectra is obtained by applying bilinear calibration method. The Excess dielectric parameters and thermodynamic parameters are obtained using dielectric constant and relaxation time. These systems show interesting change in dielectric parameters with change in concentration and temperature. The paper discusses the conformation obtained regarding isomeric forms of diamines through their excess parameters.

^aA.C. Kumbharkhane, S.M. Puranik and S.C.Mehrotra, Faraday Transactions, 1569-1573, JCFTEV(10)-1499-1665 (1991).