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Intermolecular Interaction Studies of Binary Liquid Mixtures Using Time Domain Reflectometry at 303K

Sampanam Elangovan* and Yilak Alemu Abbo

Department of Physics, Wollega University, Nekemte-395, Ethiopia

Abstract : Intermolecular interactions of propylformate with 1-methanol, 1-ethanol and 1-propanol have been studied at micro frequency range 9.36 GHz at 303K. Dielectric constant, dielectric losses were determined. Relaxation time was calculated using Higasi and Cole-Cole method. Dielectric constant and Relaxation time decreased while concentration of alcohols in propyl formate system. Strength of dissociation of liquid mixtures was based on the carbon chain length of alcohols with propyl formate which was in the order of 1-methanol<1-ethanol<1-propanol.

Key Words: propyl formate, Dielectric relaxation, Alcohols.

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