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DIELECTRIC BEHAVIOROF BINARY MIXTURE OF 2-CHLOROANILINE WITH 2-PROPOXYETHANOL

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ABSTRACT

Dielectric constant $(\in')$ and dielectric loss $(\in'')$ of 2-Chloroaniline(2-CA) and 2-Propoxyethanol(2-PE) for different mole fractions of 2-Chloroaniline(2-CA) in binary mixture have been measured at single microwave frequency 10.985 GHz by Surber method at microwave X-band. The values of dielectric parameters $(\in' and \in'')$ have been used to evaluate the molar polarization (P_{12}) and loss tangent $(\tan\delta)$, these parameters have been used to explain the formation of complexes in the system. It is found that dielectric constant $(\in')$, dielectric loss $(\in'')$, loss tangent $(\tan\delta)$, molar polarization (P_{12}) varies non-linearly with increasing mole fraction in binary mixture of 2-Chloroaniline(2-CA) and 2-Propoxyethanol(2-PE). Hence, solute-solvent molecular associations have been reported.

Keywords: Molecular Interaction Of Polar Liquids, 2-Chloroaniline(2-CA), 2-Propoxyethanol, Binary Mixture.