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# Molecular Interaction Studies of Methyl Formate with Primary Alcohols at 303K Using Time Domain Reflectometry

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**Abstract :** Dielectric relaxation studies of methylformate with 1-methanol, 1-ethanol and 1-propanol have been carried out at micro frequency range 9.36 GHz at temperature of 303K.Different dielectric parameters like dielectric constant, dielectric loss, Static dielectric constant and dielectric constant at optical frequency have been determined. The Relaxation time has been obtained by Higasi and Cole-Cole method. The dielectric constant and relaxation time decreased with increasing the concentration of ethylformate in alcohol system. The relaxation time increased with increase in chain length of the alcohols. The result shows that the strength of this molecular interaction depends upon the carbon chain length of the alcohols. Hence the proton donating ability of alcohols is in the order of 1-methanol<1-ethanol<1-propanol.

**Key Words :** methyl formate, Dielectric relaxation, Alcohols.

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