LIST OF POSSIBLE EXPERIMENTS WITH **ULTRASONIC INTERFEROMETER**

1. To determine the acoustical Parameters of a given Liquid.
2. Determination of Isentropic compressibility and Excess isentropic compressibility of binary liquid mixtures using Ultrasonic Interferometer.
3. Determination of apparent molal compressibility and partial molar compressibility of urea and KCl/ NaCl/ Na_2SO_4/K_2SO_4 solutions using Ultrasonic Interferometer.
4. Study of solution process of non- electrolyte / electrolyte solutions (water/alcohol/dioxane etc.) by ultrasonic method.
5. Estimation of thermodynamic properties of liquids and liquid mixtures from ultrasonic velocity and density measurement (thermal expansivity, isothermal compressibility, internal pressure, solubility parameter and cohesive energy density).
6. Interaction studies in binary liquid mixtures from ultrasonic velocity measurement on the basis Rao and Wada Constant.
7. Determination of intermolecular free length and free volume of pure liquids using ultrasonic velocity and density data.
8. Determination of deviation in sound velocity of binary liquid mixtures.
9. Determination of ultrasonic velocity experimentally and correlate it with theoretical models proposed for liquid mixtures.

Reference Books:

1. Experiments in Physical Chemistry by Dr. P.H.Parsania and Dr. Falguni Karia.
2. Sonochemistry; The use of Ultrasound in Chemistry by Dr.T.J. Mason, Royal Chemistry 1990.
3. Characterization and Properties of Petroleum Fractions by M.R.Riazi.

MITTAL ENTERPRISES
2151/T-7C, New Patel Nagar, New Delhi – 110008
Telefax. : 011-25702784 ; Fax : 011-25120261
Mobile:+91-9810681132, +91-9868532156
E-mail : mittalenterprises@bol.net.in