



## **Molecular Interactions in Ternary Liquid Mixtures at different Temperatures – An Ultrasonic Study**

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### **ABSTRACT**

*Ultrasonic velocity, density and viscosity have been measured in pure Quinoline, o-xylene and methanol and in their ternary liquid mixtures with methanol as common compound at temperatures 303.15, 308.15, 313.15 and 318.15 K over the entire composition range. From these experimental values various parameters like adiabatic compressibility, free volume, intermolecular free length and internal pressure and their excess values have been evaluated. The excess parameters were plotted against the mole fraction of quinoline over the whole composition range. The observed negative and positive values of excess parameters were explained on the basis of intermolecular interactions present in these mixtures.*

**Keywords:** o-xylene, quinoline, ultrasonic speed, viscosity, density.

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