Available online at www.joac.info

ISSN: 2278-1862

Journal of Applicable Chemistry

2013, 2 (3): 619-623

(International Peer Reviewed Journal)

Studies on some of the Acoustic properties of Binary Liquid Mixtures of Benzene and Carbon tetrachloride with Cumene and Pseudocumene

K. Yadav[1*] and Anita Kumari[2]

1. P.G. Deptt. of Chemistry, Samastipur College, Samastipur-8481348, **INDIA**
2. Research Scholar, LNMU- Darbhanga, **INDIA**

Email: yadav.kusheshwar@yahoo.com, yadavkspj@gmail.com

Received on 7th April and finalized on 30th April 2013.

ABSTRACT

The study of equilibrium properties of the binary system benzene+carbon tetrachloride have been measured as a function of mole fraction by using ultrasonic interferometer at 303.15K and 298.15K to understand the nature of molecular interactions. In this study the theoretical ultrasonic velocities were derived on the basis of Nomoto's relation and ideal mixture relation due to Van Deal. Percentage deviation of ultrasonic velocity from Nomoto's relation, Percentage deviation of Rao's constant, percentage deviation of Wada's constant, molecular interaction term (α) and available volume of Rao's constant (R) have also been calculated. Since excess functions are better measure of the extent of interaction present between the component molecules of any system. It is used in several fields of scientific research in physics, chemistry, biology, medicine and industry.

Keywords: Binary system, Rao's constant, Wada's constant, Van Deal, Interferometer.