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## Ultrasonic studies on aqueous monosaccharides with enzyme amylase

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### Abstract

Ultrasonic velocity ( $U$ ), density ( $\rho$ ) and viscosity ( $\eta$ ) measurements have been carried out in three ternary mixtures of glucose, fructose and galactose with amylase in aqueous medium at 298.15 K. The experimental data have been used to calculate the further thermo acoustical parameters such as adiabatic compressibility( $\beta$ ), free length( $L_f$ ), free volume( $V_f$ ), internal pressure( $\pi_i$ ), acoustical impedance( $Z$ ), relative association( $Ra$ ), molar sound velocity ( $R$ ) and molar compressibility ( $W$ ) with Gibb's energy ( $\Delta G^E$ ) of activation. The excess values are evaluated and discussed in the light of molecular interactions existing in the mixture. The above said derived and excess parameters are computed with excel environment. And the experimental and calculated derived and excess parameters are used to study the nature of molecular interaction and other behavior between the mixture components. The chances for change in structure, splitting

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