# ACOUSTIC PROPERTIES OF TISSUES. DEPENDENCE ON STRUCTURE AND CONTENT

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The object of this work is the analysis of the contributions of molecular constituents and structural properties of tissues to the velocity and attenuation of longitudinal and shear ultrasonic waves in tissues. The additivity of contributions of different factors is analysed. Special attention is paid to the role of supramolecular structure of tissues in the values of their acoustical characteristics. It is shown that the structural contribution to the velocity of longitudinal ultrasonic waves in tissues does not exceed 0.1%.

New experimental data on the propagation of shear waves in tissues are presented. The sensitivity of shear characteristics to the state of tissues and diagnostic importance of these characteristics are considered.