

The possibility of proton magnetic relaxation in the analysis of the Gibbs adsorption of water on plant polymers

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Abstract

Possibility of a nuclear magnetic resonance relaxation in studying of the interphase superficial phenomena in biopolymer-water system in the framework of Gibbs thermodynamics is established. Link of times of a nuclear magnetic relaxation is established with the chemical potential and coefficient of a superficial tension on limit of the section of phases in the adsorptive system. Nature of change of thermodynamic and relaxation parameters in the course of formation of the adsorptive layer of Gibbs in various samples of cellulose at their moistening is shown. The analysis of a condition of water in the adsorptive layer is given and its average width is determined.