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The Influence of Second Component on the Structure and Crystallinity Degree of the Blends on the Base of Polysaccharide and Synthetic Polymer. E.M. Ismailova N.D. Burkhanova, S.M. Yugay, G.V. Nikonovich, N.L. Voropaeva, S.Sh. Rashidova, Inst. of Polymer Chemistry and Physics Uzbekistan Acad. of Sciences, Tashkent, Republic Uzbekistan.

Polymer compositions obtaining is at present one of the most effective methods of their properties improving. We have investigated the polymer blends on the base of two polymers chitosan (CS) and polyvinyl alcohol (PVA) in various components ratio and concentration. Crystalline polymers does not compatible to each other because the epitaxial growth of one crystalline phase on other does not take place. But for polymers with low degree of crystallinity their mixing is quite possible at the expense of amorphous phases.

We investigated the structure and some properties of two polymers with low degree of crystallinity (DC) to estimate their mutual influence on the capability to crystallise.

X-ray investigations were carried out. It was shown, that on diffractograms there are maximum in region $2\theta=20^{\circ}$ due to intensive PVA reflection. Less wide and lower CS maximum evidences its pour crystallinity .PVA reflex intensity decreases in inverse proportionality of CS content increasing that indicates to suppressing of components crystallization in the mixtures. Quantitative estimation of DC was carried out by PVA reflection height. It was shown than maxima intensity drops faster than it has to be from calculation. So, crystallization suppressing could promote the growth of polymers compatibility in this mixtures and intermolecular interaction due to H-bonds formation between OH-groups of PVA and NHCO- groups of CS. It is seen from the shifts of corresponding bands on IR-spectra, thermodynamic calculations and appearance of combining phase associates.