# NANOSTRUCTURE OF BUTTER WITH BIOPOLYMER PECTIN ADDITIVE

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Pectin polysaccharide is a highmolecular natural compound. It removes ions of heavy and radioactive metals from organism so it is broadly used in medicine and food industry for ftinctional products. Addition of pectin will add butter medical-preventive characteristics that have confirmed by our clinical test. By method of electronic microscopy we explored nanostructure of butter with pectin (BP). It is a disperse system fat/water/pectin. In solution of the pectin in plasma of butter are iorming differen: structures: filamentous, spherical and fiircated fibrils. They term fibrillar three-dimensional highmolecular aggregates, which serve as central for shaping of BP nanostructure - In it are forming crystalline aggregates, having polyhedral, spherical and cylindrical iorm, including cochleate structure 100-800 nm size. Nanostructure of aggregates consists of threedimensional crystalline cylindrical and polyhedral form nanoblocks (20-50 nm) with nanoparticles of the water phase with diameter around lOnm on base and lateral surface block. Nanoblocks consist of nanograins (5-10 nm). In process of storage runs fractionating of glycerols and selforganization of BP nanostructure: are fonned nanolayers from nanograins; on surfaces aggregate are formed amorphous-crystalline and fluid-crystalline pectinlipidic nanolayers with layer from nanoparticles of water phase by diameter beside 2-8 nm on border of nanolayers and crystalline phase. Seliorganization of BP nanostructure is connected with thermodynamic processes. It is revealed that contributing the pectin brings about finer dispersion of moisture in BP on micro- and nanoscale. For the first time was researched influence of system nanostructure on inhibition of microbiological and oxidative processes.