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Nanostructure Interfaces of Phases and Nanoelements Multicomponent Lipid System. Tamara Rashevskaya, Department of products from milk, NUFT(National University of Food Technologies), Kyiv, Ukraine.

The formation of the lipid systems' nanostructure multicomponent is investigated by the example of butter. On the result of complex researches it is established, that in the process of butter formation ,the formation of butter's nanostructure occurs on a method "from down to up". Nanostructure of a continuous fatty phase of a fresh-made aggregates consists of crystal glycered layers and set of layered many-sided crystal aggregates in size 1000 - 2600 nm. The crystal glycered layers and layers of aggregates consist from monomolecular glycered layers;their thickness is 5 nm; their surface has a lamelle structure.Lamelle are generated from mono - and biolayers of glycered. By electrono - positrono method angliation there were found out nanoporu r ~ 0,22-0,56 nm in dairy-fat structure. The most probable and steady radius of nanoporu is 0,35 nm; it is specified that nanoporu have fylerenosimilas structure.There are indentificate nanoparts waters on electrono - microscopic pictures nanostructure, are formed by the centers of their nanoporu. They are formed from nanoporu paralele crystal layers.On nanocapitals nanostructure's the product difindates continuous water phase. The borders of the amorphous and crystal layers nanogreins' and phases' aggregates of fat have rough with ledges surface; ther are formed nanodrops of moisture adsorptionis connection of moisture's films. During the storage of butter the self the organization nanostructure on a method "from down to up" occurs where crystal units are brocken into nanoblocks, size 40-800 nm. The formation of layered aggrgats and nanoblocks is based on glycered's fractionis. More fusible glycered make a start front cristalisation. On a surface of aggregats and nanoblocks amorphousiy - a crystal layer is formed, and on the surface of their crystal layers nanoparts water phase form, d ~ 3-50 nm; their size decreases with easilyfusibility glycered increasing; they are forming a surface. Adding the vegetative food additives the size of nanoelements decreases by 5 - 25 times, changes nanostructure crystal layers which architecture is influenced by the nature of the additive. So surfaces of crystal layers of aggregats and fatty globul (with the additive food inylina) have butter dentred nanostructure: an external surface - convex and inside of - concave which are connected by a principle, a ledge to a hollow. During the formation of the butter's nanostructure occurs fractionis inylina. The crystal nanoblocks include nanolayers with a various phase condition: crystal, amorphousiy crystal, amorphous and liquid crystal with structure smektives phases. They have various structure: dentred, string - like, fibrilarated, globularated. In nanostructure of butter with pectin superficial pectino - lipid layers of nanoblocks and fatty globul aggegates consist of cambers, many-sided nanocristal and cells,there size is up to 100 nm with nanoparticle and films of water phase on surfaces of borders of the aggregates.The results of researches have shown that the nanostructure surfaces of nanoelements and their borders of the aggregates are influenced by the nature brought additives storage period of the product that allows to operate the architecture and interactions surfaces nanoelements and also the physical and chemical properties of the materials.