Features of Criomodificationly Types of Starch
Relevance of Paper

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Introduction. Development of criomodificationly starch production method which has certain properties and can be used in many areas of industry, is an important task of our time. Natural starches have limited properties and for many years scientists are working on their creation and research. Therefore, development of a new type of starch is a key issue of our time. The article summarized the data of this type of starch and its micrographs.

Materials and methods. Modification of starch allows to change its properties, such as the ability to dissolve in cold water, and the ability to gelatinization and to form galantine, resistance to heat, to impact acids, alkalis and others. Modified starch is increasingly attracting the attention of specialists in food industry who are developing new composition and shape of foods - yogurt, dairy products, and desserts and other pastries, sausages, various sauces, convenience foods, baked goods and food concentrates [2].

Starch is a good adsorbent for drug substances and is widely used in the pharmaceutical industry, in the form of tablets shells, fillers, and dietary nutritional care [1].

Results. Currently a large amount of data on porous (criomodificationly) types of starch has been accumulated. However, the theory and practice of creating and using criomodificationly types of starch are not well developed and require clarification and further research. In order to use starch as an encapsulating agent one must thoroughly study its properties.

To create a new type of high-quality natural sorbent for encapsulation of bioactive compounds is the main objective of this paper. And also to study its physical, chemical, structural, mechanical and sorption properties.

The tasks of the study:

1. to study features of market starches rationale for a new kind of starch based on an analysis of the theoretical sources;
2. to learn the basic types of modified starch and the difference of their properties from those of native starch;
3. to investigate the process of obtaining criomodificationly different concentrations of starch from potato, corn and wheat starch native;
4. to develop a new product based on sorption on the surface vitamin-like substance - quercetin, study their interactions;
5. to define qualitative characteristics and investigate physical, chemical, structural, mechanical and sorption properties of the starch types.

Conclusions. Micrographs of starch paste by the scanning electron microscope

1. The analysis of the literature on the production of modified starch types, as well as the range of starchy products in the world that is produced and consumed prove that a new kind of sorption properties of starch is the important task of our time.

2. Criomodificationly several types of starch and investigation of their internal structure by scanning electron microscopy suggest the possibility of using such starches as encapsulating agents in food industry.