

The texture of the new kinds of dessert butter with the additives of plant raw criopowders.

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Great attention is paid to the production of food with some taste additives that have medical and preventive properties. The additives made of natural plant raw, obtained by the method of criodehydration, are worthy of special attention. These criopowders are a natural combination of bioactive components which are included into the human ration evolutionally. The purpose of this work is to investigate the influence of natural raw criopowders on the formation of the fat-containing milk desserts' texture.

We have made a number of new kinds of butter with the additives of the criopowders of vegetables, fruit, berries, and some non-traditional plant raw: red beet, carrot, berries, and black currant buds. The evaluation of the obtained products showed that the criopowders are the ideal natural components of the fat-containing milk desserts, giving an exquisite taste and plasticity to the final product.

Criopowders' influence on the product's rheological properties have also been studied. By the method of microstructure analysis and microphotography in polarized light, investigated have been the influence on the formation of the crystals in the product's fat phase. With the help of different physical methods, including the differential scanning calorimetry, X-ray structure analysis, thermogravimetry, and laser Raman-spectroscopy, we have studied the phasal transformations and defined the quantity of crystal fat in the product, affirmed the conformation of carbohydrate radicals in the system, as well as the polymorph modifications of fat glycerides, their quantity, the water state in the system.

The investigations showed that the addition of criopowders gave the product a significant plasticity, improved its ability to spread, decreased its hardness. Along with that, the quantity of the crystal fat in such a product gave not so less decrease than in the control samples with no criopowders added.

The introduction of the criopowders made essential changes in carbohydrate radicals conformation. We exposed that criopowders could hamper the polymorph transformation of fat triglycerides from B1 to B form, and also led to the increase of the firmly-connected moisture content.

The influence of these factors on the product's texture formation and plastification is now being discussed.