FORMULATION OF MULTICOMPONENT MIXTURE IN THE PRODUCTION OF COMBINED SOFT CHEESE

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Abstract

Currently, scientists are constantly working to improve the principles of creating new food products, in accordance with changes in consumer requirements. When developing combined products, new sources of raw materials and rational ways of their processing, creation of new formulations, balanced by irreplaceable components of food, as well as the use of effective biotechnological methods are needed. The development of such products' production involves the use of dairy and vegetable raw materials and is an important issue to improve people's health. The aim of this research was to make a formulation of multicomponent mixture in the production of combined soft cheese.

Mathematical modeling methods were used, which were used to validate the recipes of products with specified properties and composition. To obtain reliable experimental research results, all the data obtained were subjected to mathematical processing. The purpose of mathematical processing of the experimental results was to evaluate the criterion for eliminating blunders, finding the critical values of controlled factors and the range of their variation, followed by their use in solving optimization problems.

The authors have developed a recipe for combined soft cheese with bio-additives of plant origin using regression-hydration technology. Soft combined cheese is produced from cow milk with vegetable bio-additive made from carrot and pumpkin cake using biotechnological methods. As a result of the use of regression-hydration technology in the preparation of a combined dairy-herbal mixture, a scheme for mixing the ingredients has been established: milk + bio-additive + starter + calcium chloride + rennet. And also improved structural and mechanical properties in all experimental samples. In the combined cheese with bio-additive, this indicator rises by 10% compared to the control one.

The formulation of combined soft cheese with bio-additives of plant origin using regression-hydration technology has been developed.

Key words*: Milk, Protein, Hydration, Regression-hydration technology.*