

## INCREASING OF PROTEIN-FAT CONFECTIONERY PRODUCT BIOLOGICAL VALUE FOR SPECIAL NUTRITION

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World manufacturing of products is insufficient for satisfaction of people biological needs in protein component. As is well known, soy protein is promising from the point of view of essential amino acids presence, cheapness and raw materials availability. But one of the factors, that prevent widespread introduction of soy processing products into food industry, is specific bean taste of soy products [1].

The purpose of research is try to enrich protein-fat product of special nutrition for people, who are exposed to physical stress, with soy isolate to increase biological value of the products. Curd cheese-pumpkin dessert was chosen as an object of enrichment. This choice is based on the expediency of increasing biological value of the corresponding product protein with aromatic (phenylalanine, tyrosine) and sulfur-containing amino acids (methionine, cystine), as well as on tryptophan, which are present in high amounts in soy isolate [2]. Curd cheese-pumpkin dessert is a homogeneous, paste-like mass which consists of sour milk cheese, cow's milk, pumpkin and a mixture of sweeteners (E968, stevia), with a fat's mass fraction not less 4%.

Effect of soy isolate on the organoleptic characteristics of the curd cheese-pumpkin mixture of reasonable composition (curd cheese - 48%, milk - 27%, pumpkin pulp - 25%), in particular, on viscosity, as well as on taste, smell and texture, was studied. Results of experimental studies showed that addition of soy isolate significantly affects both organoleptic characteristics of the curd cheese-pumpkin mixture samples and on their effective viscosity. Soy isolate has a number of positive technological properties, in particular, water-absorbing and fat-binding capacities, which leads to a thickening effect.

In view of the conducted studies, if concentration of soy isolate is higher than 2.5%, it is not appropriate due to deterioration of organoleptic characteristics of the food system under study, therefore, mentioned concentration was chosen as rational. It is worth noting that addition of this amount of soy isolate increases of curd cheese-pumpkin mixture effective viscosity from 3.2 Pa·s to 6.4 Pa·s, which can be considered as a positive technological aspect of this product manufacturing.

### References:

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2. Jingwang Ch., Hongnan S., Taihua M. (2022). Effect of temperature on rheological, structural, and textural properties of soy protein isolate pastes for 3D food printing. *Journal of Food Engineering*, 323, 110917.