A. Slashcheva, Ph. D. (Tech.), As. Prof. *(DonNUET, Kryvyi Rih)*
I. Zolotukhina, Ph. D. (Tech.), As. Prof. *(KSUFTT, Kharkiv)*

TECHNOLOGY OF HERODIETICAL SEMI-FINISHED PRODUCTS FOR FISH AND MEAT MINCED PRODUCTS

In the last decade in Ukraine there is a process of accelerated aging, increasing the proportion of elderly people while reducing life expectancy.

One of the important reasons for the deterioration of the demographic situation in the country is the non-compliance of the population of Ukraine with the principles of rational nutrition, which is associated with a deterioration in the financial and economic situation in recent years. In this case, insufficient caloric intake, deficiency of proteins in general and animals in particular, violation of physiological relations between proteins, fats and carbohydrates, the predominance of fat component of food and easily digestible carbohydrates, severe deficiency of vitamins and mineral salts. All this leads to the development and progression of the morbidity of the elderly, increasing the degree of aging and reducing the life span [1].

When aging, there is a gradual decrease in the intensity of metabolic processes underlying the human body's function. As the aging of the body begins to prevail in the gut of rotten microflora, which causes intoxication products of life. Normal microflora in the healthy intestine largely determines the vitamin content of the body. So, aerobic microflora synthesizes vitamins: phylloquinone, riboflavin, pyridoxine, cyanocobalamin, biotin, pantothenic and folic acid, promotes the removal of cholesterol and its metabolites from the body, increases its immune defense [2]; forming short-chain fatty acids, contributes to the energy supply of the body. It is in elderly age that the role of normal intestinal microflora increases in optimization of metabolic processes.

Elderly foods should be enriched with hero-protectors, that is, the carriers that inhibit aging and prolong life. Experimentally [3] has shown that life expectancy in animals increases the caloric intake of the diet, reduced protein intake, fat loss, tryptophan deficiency, diet with a predominance of products with alkaline reaction, intestines that inhibit free radical and peroxide processes in the body, that is, antioxidants.

Part of the solution to the problem of providing the elderly with rational nutrition allows the introduction of technologies of combined food products with a targeted physiological effect. Creation of combined products provides more rational use of raw materials – both animal and plant, as well as the maximum approximation of food to the ideal, balanced by all indicators.

Among the variety of products of mass consumption (as objects of enrichment), scientists of particular interest are broken fish masses, the technology of which allows the introduction of plant additives into their composition. This allows you to expand the range of broken products and give them the status of functional products.

The research is based on the idea of creating a semi-finished product based on Jerusalem artichokes, a lactulose pumpkin that can simultaneously act as a technological additive (water-binding component) in the technology of cross-linked fish products and as a source of functional ingredients.

The optimum ratio of artichoke, pumpkin and lactulose in the semi-finished product was established: 70: 29: 1. The fact of increasing the biological value of broken products through the use of semi-finished product, which allows producing products of high biological value with functional properties, is established. Complex quality indices have been developed, which include: for the «Heroprotect» semi-finished product – 0.798, for the control sample – 0.757.

We investigated the basic chemical characteristics of the minced meat and noted that the replacement of the grain component with «Heroprotect» allows the production of reduced caloric content in the background of a radical change in the quality of the carbohydrate composition: in the minced meat, the proportion of polysaccharides is almost 100% compared with the total content of carbohydrates, along with the absence starch At the same time, in the control samples, the carbohydrate fraction is represented mainly by starch. With regard to the content of protein, then in experimental samples there is a slight decrease: 5% in meat and 2% in fish. This is due to the higher content of protein in bread than in the Jerusalem artichoke. But to conclude that changes in the biological value of products in one way or another can be made only after an investigation of the amino acid composition.

Thus, products with the use of the developed semi-finished product are particularly appropriate to include in hero-diet food rations.

References

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