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DEVELOPMENT OF PROCESS FLUIDS FOR BLOOD PRODUCTS

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Introductions. The modern level of a social and economic condition of our country, the high price of domestic meat raw materials (to a considerable degree - beef and pork), and also fast ripeness, intensive growth, high reproducing ability, productivity and viability of poultry cause necessity of working out and application of progressive scientifically proved technologies of its processing.

Resource-saving technologies of the poultry industry provide for complex processing of poultry and the fullest possible use of all its products. Preservation and rational attraction of poultry meat to food technologies through the introduction of deep industrial processing methods to obtain a wide range of products for various purposes is an urgent government problem.

Aim. Development and study of protein and fat emulsion (PFE) for use in blood sausage formulations.

Materials and methods. The tasks set in the work were solved experimentally using generally accepted research methods.

Results and discussion. In functional-biological and functional-technological aspects, blood proteins play a most important role, as they account for about 18-21%. Blood proteins are well studied and information about them is presented in literature. In terms of protein content, blood practically does not differ from meat and contains only 10-15% more water. At the same time, the cells contain 2/3 of all blood proteins.

A limited assortment of the group of blood sausages of high biological value, the imperfection of existing technologies, cause the necessity of more complete attraction of biologically full raw sources, and also search of new, non-standard technical decisions of rational use of the most valuable by-products of processing of meat of farm animals and poultry for the manufacture of emulsions as a basis for creation of products with the set properties and chemical composition.

When producing gutted poultry meat, the skin yield is 5-9% of the carcass weight, and with the use of rational processing methods - from 10 to 17%. Taking into account significant volumes of poultry processing, as well as trends in the development of a range of natural semi-finished products from poultry meat, at the stage of production of which the hide is removed and its accumulation, it is of interest to rational and maximum use of the hide.

No less important is the organization of processing and pork hides, also due to increased pork production, which requires new approaches and methods of its use.

The amount of pork skin in the production of pork products depends on the method of primary treatment of carcasses, the type of production, and is from 4-5% of carcass weight. Real stocks of pork hides at the enterprises are formed at the expense of formation spikes during the processing of pork. Pork hide as a source of additional raw materials for protein and fat emulsions, stabilizers, and separate ingredients is widely enough used in the production of meat products of different assortment groups and is steadily popular among producers.

When developing emulsions, by-products of meat production and processing of crop products were used as auxiliary components for rational pricing of final products. Prepared products containing proteins of plant origin chickpea and lentils were used as products ensuring emulsion stability.

Food grain legumes play an important role in increasing the quantity and quality of protein nutrition in the population. This group of crops includes peas, lentils, beans, soybeans, chickpeas and other crops. They are characterized by high protein content among cereals, for which they are valued throughout the world.

In addition to the high content of protein (25-50%), legume grain contains about 50% carbohydrates, 2-4% mineral substances, 1-3% fat (in soybeans up to 26%), vitamins A, B₁, B₂, B₆, C, E, K, PP, and others. The protein content is determined not only by the variety and growing area but also by the conditions created for symbiotic fixation of nitrogen from the air. Therefore, fluctuations of protein content in the grain of the same crop can be significant.

Model specimens (PFE) were produced using blood, land poultry skins, and products containing vegetable proteins of origin.

Vegetable and animal proteins have high functional and technological properties, in particular emulsifying and fat-connective ability. They are active emulsifiers and can be adsorbed on the surface of fat particles to form a strong adsorption layer, preventing the likely formation of fat surges.

The stability of the samples developed by (PFE) before and after heat treatment was studied under conditions of bringing the blood sausages to the culinary readiness.

Conclusions. Analyze the data, to learn about the saving of high stability of the thermal enclosure - close to 80% (79.1 - 81.3%). For heat treatment this figure was slightly higher - 82-89%, so the decrease in (ES - emulsion stability) is 2.9 - 7.7%, which does not significantly affect the quality and storage of heat-treated emulsions.