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USE OF PUMPKIN SEED PROTEIN IN THE TECHNOLOGY OF CRAFT COOKED SAUSAGES

Introduction. In the modern science of meat and meat products, the priority scientific direction is the search for new raw materials, the use of non-traditional types of raw materials, the creation of new progressive techniques and technologies in order to increase the nutritional and biological value of the finished product, increase its shelf life and provide certain functional and technological properties.

Promising types of non-traditional plant raw materials are oil plants, in particular seeds of hemp, rapeseed, pumpkin, lupine and other species.

Promising raw materials for the fortification of traditional food products are pumpkin seeds and their derivatives, namely vegetable protein isolate from ground seeds (pumpkin protein). [1]. Pumpkin seed protein contains up to 50% protein, in addition, it is rich in fiber (up to 20%), dietary fibers, essential oils, vitamins B_1, B_2, B_6, B_9, E, PP. Contains potassium, manganese, zinc, iron, phosphorus, folic acid, fatty acids, in particular the ω-3 family [2, 3]. Due to the valuable chemical composition of pumpkin seeds and their derivatives (flour, protein, etc.), they are promising raw materials in the production of health and functional craft products.

The purpose of the research is to study the possibility of using protein from pumpkin seeds in the production of craft cooked sausages to increase the nutritional value of the products. Taking into account the theoretical and practical significance of the above-mentioned issues on the basis of experimental studies using computer modeling methods, model

recipes were substantiated and developed, and experimental samples of combined boiled sausages were produced using regional raw materials.

Results. As an analogue, the recipe for cooked sausage "Chayna" was used (DSTU 4436:2005.) In the experimental samples, the proportion of semi-fat pork was reduced by 8, 10 and 12%, and replaced with the appropriate proportion of pumpkin seed protein (produced by Fruity Yummy Ukraine). The amount of salt, sodium nitrite and spices in the experimental and control samples did not change. Sausages were made according to traditional technology according to DSTU 4436:2005. The nutritional value of the model samples was determined according to standard methods.

Table 1 – Nutritional value indicators of experimental samples of cooked combined sausages

Indexes	Analogue	Sample 1	Sample 2	Sample 3
Protein, g/100 g	16.37±0.95	17.64±0.87	17.79±0.69	17.81±0.85
Fat, g/100 g	24.11±0.32	20.13±0.28	19.05±0.41	18.61±0.52
Carbohydrates, g/100 g	1.4±0.21	5.26±0.33	5.27±0.18	5.27±0.24
Fiber, g/100 g	-	2.11±0.09	2.13±0.13	2.13±0.14
Energy value, Kcal	291.33	277.53	271.09	268.46

The analysis of the results presented in the table shows that the protein content in the analogue was 16.37 g/100 g of the product, while in the experimental samples there is a clearly visible tendency for this indicator to increase to 17.81 g/100 g. On average, this indicator increased by 8.3 % compared to the analogue. The fat content in the developed samples decreased relative to the analogue by 16.5-22.8%. In general, the energy value of the experimental samples decreased and was in the range of 277.53-268.46 Kcal per 100 g, which is 4.73-7.85% less, compared to the analog formulation. In the experimental samples, the dietary fiber was 2.12% due to the use of pumpkin seed proteins.

Conclusion. Pumpkin seed protein is a promising raw material for use in the production of craft meat products, in particular cooked sausages. The

introduction of pumpkin seed protein into the recipe allows you to increase the nutritional value of the products, namely the protein content by 8.3%, reduce the mass fraction of fat by 16.5-22.8%, and reduce the energy value by 4.73-7.85%. In addition, the use of this ingredient enriches cooked sausages with soluble fiber, which increases the biological value of the products. In general, the use of pumpkin seed protein as an alternative source of protein allows you to obtain a food product with high nutritional and biological value.

Key words: craft cooked sausage, pumpkin seed protein

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