JUSTIFICATION OF USING ENRICHED BEAN FLOUR DURING THE PRODUCTION OF SAUSAGES

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Rational composition of the recipe of cooked-and-smoked sausages with the use of enriched bean flour is determined. It is found that the use of fortified legume flour increases the swelling of muscle and fat fibers by reducing the content of beef, pork and lard. As the content of the legume flour increases, the color of the finished products changes in the direction from dark red to yellow-pink. Use of the legume flour does not influence the taste and smell. The expediency of using 10% of the enriched legume flour in the ratio (1:1) due to the reduction of raw meat is determined. According to the ratio of the prescription ingredients, complex quality indicator achieves 0.96.

Use of the fortified legume flour influences moisture content of the finished products in the direction of reducing it from 48% to 39.9%. New products increase the protein content from 13% to 24% and reduce mass fraction of fat from 45% to 35%. The developed cooked-and-smoked sausages enriched with iodine and selenium are carriers of 25 μg and 26 μg per 100 g, respectively. Use of the legume flour does not increase bacteria of the Escherichia coli group, Staphylococcus aureus and bacteria of the genus Salmonella and does not increase toxicity. Sausage formation conditions and their monolithicity improved due to the increase in the degree of muscle fibers swelling, and active accumulation of fine-grained protein mass in the interfiber space.

The conducted set of research gives grounds to state that according to the requirements of UNICEF and WHO to quantitative values on foodstuffs enrichment with iodine and selenium, and the requirements approved by the Ministry of Health of Ukraine, consumption of 100 g of new cooked-and-smoked sausages satisfies 36% and 86.6% of daily need in iodine and selenium for school-age children (respectively) and 6% and 34.6% of the daily need in iodine and selenium for adults and the elderly, which will allow non-drug correction of iodine and selenium deficiency in humans.

Keywords: legume flour, cooked-and-smoked sausages, iodine deficiency, selenium deficiency, soy, chickpeas.