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TECHNOLOGY AND CHARACTERISTICS OF SEMI-FINISHED PRODUCTS CONTAINING MINCED MEAT AND ENRICHED WITH THE PREBIOTIC LACTULOSE

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ABSTRACT

The paper demonstrates the expediency of using the lactulose-containing nutritional supplement Lactusan in the production of prebiotic food products from minced meat. The study was aimed at substantiation of recipes and development of the technologies of making food products from meat raw materials (semi-finished products containing minced meat enriched with lactulose: Khabarovskie cutlets with lactulose). During the course of the study organoleptic evaluation of raw meat and semi-finished products containing minced meat has been conducted. Laboratory methods were used for evaluation of the products. The production approbation of innovative food production technologies was carried out at the enterprise Myasnoe Delo LLC. The optimal dosage of the functional food ingredient was established, amounting to 2.5% lactulose. The developed products are characterized by high application properties. Samples of minced meat semi-finished products enriched with lactulose scored 8.2-8.4 points on a 9-point scale during the organoleptic evaluation, exceeding the value of the control sample (7.6 points). It has been demonstrated that the addition of lactulose has a weak effect on the nutrient and amino acid composition of minced meat semi-finished products, slightly reducing the mass fraction of protein and fat against the background of an increase in carbohydrate content. It has been found that samples containing lactulose are characterized by a very high (up to 93.4-93.8%) proportion of bound water and juicy consistency. In turn, due to the increased pH value and the high proportion of bound water, losses during heat treatment of semi-finished products containing minced meat and enriched with lactulose (9.21-9.89%) are on average 1.6 times less than in control samples. It has been noted that the addition of low-value meat raw materials (poultry meat of mechanical separation) and soy textured product negatively affects the biological value of the product, reducing the amino acid score to 63%.

Keywords: Consumer qualities, Ketose, Lactusan, Organoleptic qualities, Poultry meat.