THEORETICAL AND PRACTICAL PREREQUISITES FOR THE IMPROVEMENT OF THE TECHNOLOGY OF GLUED GUTS CASINGS

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The world market for sausage casings is dynamically developing. At the same time, despite the decline in the share of natural casings, consumer preferences, the necessity of efficient use of natural ingredients in food technology and the formation of a significant amount of spoilage in the production of guts casings determine the feasibility of scientific substantiation of new and improvement of known technologies for glued guts casings.

Physical and chemical fundamentals of gluing natural casings are the ability of adhesion (gluing in the process of drying without additional substances), which is achieved due to natural properties of the walls of guts. Their chemical composition, morphological features, and technological processing operations stipulate main physicochemical and biochemical factors of guts casings adhesion. Collagen and elastin fibers of submucosal layer play crucial role in gluing casings.

The main disadvantage of agglutinate casing by the known technology is that their preparation presupposes only cautious wetting by water as against conventional natural casings. Prolonged soaking in water is not allowed because of the stratification of sliced guts strips; the same problem may arise in case of producing sausages, the raw mincemeat of which contains sufficient amount of water. Therefore, searching for the ways for reducing the level of reversibility of agglutination-stratification process in agglutinate guts’ technology is actual.

Analysis of scientific and practical literature shows that the proposed known technical solutions concerning the improvement of the technology of agglutinate guts casings solve such tasks as achieving the required strength by increasing the amount and specificity of the location of layers of sliced strips of guts, diversity of shapes and sizes of shells, and provision of the required elasticity by moistening, and longer shelf life under mild conditions due to the use of salty mixtures with the preserving action. The problem of reducing the level of the reversibility of the agglutination-stratification process in the technology of agglutinate guts remains unsolved.

The analysis theoretically predicted the ways for the reduction of the reversibility of the agglutination-stratification process in the technology of agglutinate guts, which are concluded in limited (controlled) tanning with the use of tanning agents, introduction of additional adhesive compositions, combination of traditional gluing with stitching, application of electro physical methods of gluing – fixation.

**Keywords:** glued guts casings, protective properties, reversibility of the agglutination-stratification process.