

## 1. Theoretical substantiation of the use of functional compounds based on hydrocolloids and enzymes in the technology of boiled sausages

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**Introduction.** The topic of my dissertation is "The use of functional compounds based on hydrocolloids and enzyme transglutaminase in the technology of boiled sausages". The research is devoted to the development of an assortment of meat boiled sausages using highly functional compounds. The scientific paper aims to develop a new technological concept of boiled sausages using hydrocolloids and enzyme, as well as research organoleptic parameters, physicochemical and technological characteristics of new products. Innovative technologies of boiled sausages provide for effective regulation of the properties of raw materials and finished products. One of the ways to solve this problem is in particular the use of complex food mixtures based on highly functional components.

**Materials and methods.** Methods for determining the total chemical composition; organoleptic indicators (taste, smell, texture, appearance, color); research of functional and technological indicators; mathematical processing of results.

**Results.** When developing the technology of new types of meat products, it is necessary to know the ability of structure-forming components to retain and absorb water and fat, emulsifying ability, gelling and heat resistance, compatibility conditions of the main and auxiliary raw materials.

Modern technologies of meat products involve the use of various food compounds that improve the organoleptic, structural-mechanical and physicochemical characteristics of the finished product. At the same time, sausage factories receive a large amount of meat raw materials with low quality, the actual use of food functional compounds, consistency stabilizers, gelling agents, etc., a significant part of which is taken by hydrocolloids. They are high-molecular compounds that dissolve or swell in water and improve the consistency of products. When using individual hydrocolloids and the enzyme transglutaminase, it is necessary to clearly know and understand the nature of their interaction between each other, as well as with other components of the product. It is necessary to study and take into account the characteristics of each hydrocolloid and take into account the activity of the enzyme depending on the scope and technology of production of certain types of meat products. All hydrocolloids are able to modify and control the rheological properties of meat systems by binding a significant amount of moisture and at the same time reduce the cost of the finished product giving it optimal organoleptic characteristics and texture: from fluid, pasty to gel-like, elastic or fragile. This causes the widespread use of this type of functional components in the meat industry and the prospects of scientific research in this direction.

**Conclusions.** Practical application of the dissertation research. The results of the dissertation research will be used in the creation of functional compounds based on hydrocolloids and enzyme transglutaminase to create new boiled sausages.

**References:** Elleuch, M.; Bedigian, D.; Roiseux, O.; Besbes, S.; Blecker, C.; Attia, H. Dietary Fibre and Fibre-Rich By-Products of Food Processing: Characterisation, Technological Functionality and Commercial Applications: A Review. *Food Chemistry*, 2011, pp. 411-421.