

9. Protein preparations of animal origin in the technology of broiled semifinished products

Igor Strashynskiy, Olena Vernigora, Veniamin Fomenko

National University of Food Technologies, Kyiv, Ukraine

Introduction. Refrigeration and frozen semi-finished products occupy a weighty niche in the assortment of meat products. However, such processes as the accumulation of products of decomposition of proteins and lipids lead to a decrease in nutritional value and organoleptic properties of products. To solve this problem, protein preparations are used that can simulate the functional and technological properties of meat systems with different biological and physico-chemical characteristics and improve the quality and composition of meat products.

Materials and methods. In the market of protein products of animal origin for the manufacture of meat products, including salted semifinished products, representing proteins of foreign and domestic production. In particular, collagen animal beef proteins NOVAPRO (JBS S / A, Brazil), SCANPRO T95, SCANPRO BR 95, SCANPRO SUPER, SCANPRO BEEF 95 (Denmark, England, Sweden), HELIOS-11 (Ukraine), BILKOZIN (Ukraine) and a number of others.

Results The drug "NOVAPRO" – is the only protein on the market that has the ability to gel at temperatures from 70 ° C to 120 ° C, maintaining a high level of ultrasound during the entire heat treatment process. The recommended content in the formulation is from 0.5 to 2%. The degree of hydration with cold water is 1: 8, hot – 1:16 [1].

Animal protein "SCANPRO" can reduce the cost of production and increase output, increasing the nutritional value and organoleptic characteristics of the finished product. The degree of hydration is 1: 10 a 20 [2].

Beef protein "HELIOS-11" increases the content of animal protein in broiled semis, increases the nutritional value of finished products, helps to reduce the loss of moisture during heat treatment and storage. Its use helps to reduce weight loss when cooking from 5 to 10%, depending on the type of product and its output. Recommended hydration with water (temperature 80 ° C 90 ° C) is 1:15–20 [3].

Beef collagen protein "BILKOSIN" well emulsifies fats in cold form and in the process of heat treatment at high temperatures. Improves the physicochemical properties of the finished product, produced by the recipes with large substitutes for the main raw material and meatmechanical collapse [4]. The protein is hydrated at a temperature of 80 ° C to 90 ° C in a protein ratio: water – 1: 29 [5].

Conclusions: The results of the monitoring and study of the domestic market of protein preparations indicate their positive effect on the meat systems of broiled meat semifinished products, which in fact becomes the basis for the use of collagen-containing proteins of animal origin in further research.

References

1. <http://grandcasing.com.ua/ru/the-beef-protein-novapro>
2. http://www.infomeat.ru/sprav_tmp/spr_pre.php?select=5&ref=891
3. <http://www.tomig.com.ua/2018/01/>
4. <https://vsi-rekordy.com.ua/p63467418-belok-govvazhij-kollagenovvj.html>
5. <https://cyberleninka.ru/article/n/primenenie-kollagenovogo-zhivotnogo-belka-belkozin-v-tehnologii-varenyh-kolbasnyh-izdeliv.pdf>