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**53. IMPROVEMENT OF THE RANGE OF MEAT PRODUCTS WITH  
THE USE OF FUNCTIONAL INGREDIENTS**

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The modern food market is characterized by a growing demand for products that combine high nutritional value, safety and additional beneficial properties. In this

context, improving the range of meat products through the use of functional ingredients is of particular relevance. This approach makes it possible not only to improve the quality characteristics of products, but also to form new consumer properties that meet the requirements of healthy nutrition.

The use of functional ingredients in the meat processing industry is aimed at increasing the nutritional value, balance and bioavailability of nutrients in finished products. The most common functional components include vegetable proteins, dietary fibers, antioxidants of natural origin, probiotics, mineral supplements and vitamins. Vegetable proteins (soy, pea, wheat) increase the content of complete protein structures and allow to reduce the proportion of animal fat. Dietary fibers obtained from vegetable raw materials, legumes or cereals contribute to improving the functioning of the digestive system and allow to optimize the calorie content of products.

Antioxidants, in particular extracts of rosemary, green tea or tocopherols, slow down oxidative processes in meat, ensuring greater stability of color, smell and taste, as well as extending the shelf life of products. In turn, the use of probiotic cultures in cooked sausages or meat pates opens up the possibility of creating products with a potential positive effect on the intestinal microflora. Mineral and vitamin components, in particular calcium, iron, B vitamins, improve the overall level of micronutrient saturation. The formation of the updated range also involves improving recipes and technological processes. Technologists pay attention to the structural and mechanical properties of meat raw materials, the influence of functional ingredients on the texture, juiciness and stability of minced meat. It is important to achieve the optimal ratio between the main raw materials and additional components in order to preserve traditional organoleptic characteristics while simultaneously improving beneficial properties. The latest technologies, such as microencapsulation of biologically active substances or the use of enzymatic processing, allow for more effective introduction of functional ingredients into meat systems and ensure their preservation during the shelf life.

In addition, a current trend is the creation of products with reduced calories and fat content. This is achieved by partially replacing animal fat with structured vegetable

oils or gel systems based on biopolymers. Such innovative solutions allow for a harmonious taste and pleasant texture, while improving the fatty acid composition of the product.

Improving the range of meat products through the use of functional ingredients is a promising direction for the development of the food industry. It allows creating new generation products that meet modern consumer requirements for quality, safety and health benefits. The implementation of such solutions not only increases the competitiveness of producers, but also contributes to the formation of a culture of rational nutrition and improvement of the well-being of the population.

### **References**

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