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РОЗДІЛ 2

**СУЧАСНІ ТЕНДЕНЦІЇ В ТЕХНОЛОГІЇ ПИТНОЇ ВОДИ ТА  
ПЕРЕРОБЦІ М'ЯСА, МОЛОКА Й МОРЕПРОДУКТІВ**

## POLYFLORAL HONEY AS A BARRIER IN FISH PRESERVES TECHNOLOGY

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Problems of satisfying the population's need for balanced and environmentally friendly foodstuffs, current market conditions dictate the need to produce competitive high-quality prolonged-storage food products based on new advanced technologies [1].

A significant volume of fishery products is occupied by low-salt products, which are in high demand among the population and have become a product of virtually daily consumption due to high production technologies and ease of use in everyday life. However, the main disadvantage is low storage stability.

Ukraine is characterized by the rapid growth of the environmentally friendly products market. These products are in high demand in major cities. Due to the environmental situation in the country, people are trying every possible way to improve their health and therefore agree to pay even several times more for quality products [2]. In this regard, it is topical to find effective barriers and processing methods for fish raw materials that provide microbiological stability, antioxidant effect, safety of low-salt products for a long time while maintaining high organoleptic properties and nutritional value.

Preserving the quality of raw materials and finished products is one of the most important problems of food technology, especially in the fisheries sector. In the production of products from hydrobionts, the solution to this problem is complicated by the high lability and variability of the main components - proteins and lipids. Therefore, many processing steps require using protective measures (deep cooling, freezing at low temperatures, use of preservatives, etc.). The use of preservatives is the most vulnerable area, since it is possible to use only those additives that do not have a negative impact on the body of the consumer. The classic barriers that provide a guarantee for the preservation of preserves are salt, the solutions of which in high concentration provide a preserving effect by blocking the active sites of proteolytic enzymes of both own and microorganisms; preservatives themselves; low storage temperatures, ranging from 0 to minus 8 °C; hermetical packaging.

But to ensure the storage life of preserves at moderate positive temperatures, it is necessary to create additional barriers, because the change in the mass fraction of salt is unacceptable, since the standards for finished products normalize the mass fraction of salt 3-8% and by definition, preserves are low-salted fish products. An increase in the preservative concentration is unacceptable, since the standards for finished products indicate a maximum permissible amount of preservative, which should not exceed 0.1-0.15%.

Nowadays, a new trend of improving food is becoming more widespread - enriching them with useful scarce nutrient materials. Perspective in the technology of fermented fishery products may be the use of natural honey as a powerful source of essential nutrients. It is rich in valuable chemical compounds and possesses healing properties [3]. Has a medium antimicrobial activity against *Helicobacter pylori* ATCC 49503, *Staphylococcus aureus* ATCC 25923, *Bacillus subtilis* ATCC 6633, *Candida tropicalis* ATCC 13803 and *Candida albicans* ATCC 10231, having antioxidant activity due to the presence of phenolic compounds [4]. Also, honey has a bactericidal and stimulating effect, promotes the elimination of toxins from the body [5].

Functional ingredients include pectic substances, which are multifunctional biologically active substances [6]. High molecular pectins are strong adhesion stimulants, dramatically inhibit the development of opportunistic pathogenic enterobacterium,

staphylococcus and pathogens and accelerate the growth of lactic acid microbiota. There is no analysis of the literature on the effect of apiproducs and pectin substances on the microflora of fish preserves, which requires systematic studies of their sanitary and microbiological quality.

The use of polyfloral honey in the production of salted fish - an alternative to synthetic preservatives, the basis for the production of environmentally friendly, organic products. The use of these in the preserves will help solve the current problem of modern fish processing - the creation of technologies of new natural products that have high nutritional and biological value, extended shelf life, without using synthetic preservatives.

The technological process of production of preserves included the following operations: defrosting, washing, filleting, the salting to the mass fraction of salt 5-7%, drainage, preparation of jelly fill with polyfloral honey, using as a structure-forming apple LEP, ripening and refrigerated storage.

For analysis, samples from prepared pieces of herring in spicy filling were used according to the current technological instructions [7] with the addition of 10% honey in one of the samples, 1.5% in the other sample of pectin and preparation of the sample using 10% honey and pectin 1.5. % in filling. The finished samples were kept for 4 days for the maturation and impregnation of the fish by filling at the most favorable for maturing temperature from 4 to 6 ° C. To improve the barriers in the technology of fish preserves, a point scale was developed and an organoleptic evaluation was performed, an integral quality index of the developed preserves of herring with additives was determined. The rational share of honey of polyfloral and apple LEP was determined to ensure a harmonious taste and the recipe quantity of additives (10% and 1.5% respectively) was determined.

Microbiological studies confirm the effectiveness of the use of the polyfloral honey and LEP in the technology of fish preserves to enhance the barrier effect (to inhibit autolytic and bacterial processes). The rapid method of the new generation of the microbiological environment of Compact Dry was used to determine the barrier properties of additives - honey of floral and apple LEP. The amount of nMAFAnM per 4 days in fish preserves with additives is twice less than in the control samples. The experimental data show that in the test specimens after the maturing of the preserves the microbiological parameters were twice lower than in the samples without increasing the barrier effect.

Such results allow to conclude the feasibility of using in the complex of apple LEP and polyflora honey for the preparation of jelly-like fillings in the technology of fish preserves without the additives.

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## DEFENITION OF «BEER STYLE CONCEPT»

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In the so-called “beer community” there are people who are very in need of a beer-style distribution. They insist that beer is art (which is hard to disagree with), and attempts to squeeze it into style limit its grandeur. But you can't get anywhere from styles. They are inseparable from history and the modern market, and in some places they are even protected by law. According to them brewers brew, buyers - choose, and judges - evaluate at competitions. Styles honor the past and streamline the present. And most importantly, styles help people understand the beer world.

So what is style in general? Style is a set of features that together create a coherent, recognizable profile.

A modern understanding of styles began to emerge in the 1980s under the influence of the rapid development of beer competitions among professional and home brewers. When everyone came to the idea that you need to evaluate beer within the style, detailed guides were needed that captured all the style knowledge available at the time (and they were simply a mixture of current commercial reviews). It should be noted that at first all the beer was Ale (higher fermentation), and camps began to appear since 1870, thanks to the discoveries of French microbiologist Louis Pasteur [1, 2].

Thanks to the US, we learned about crafting. This diversity-based country is a true example of intercultural cooperation and innovation. As Americans' desire for creation grew during the 20th century, the taste requirements of beer lovers evolved. They demanded the replacement of a light camp that had long dominated the beer market scene. Many have become interested in home brewing, hoping to bring their product to the people to revive the beer styles that everyone has forgotten about. It was only in 1976 when Sonoma, a California-based New Albion brewery, was founded, and that the entire brewing industry was "revived" in the United States.

Now, though New Albion closed six years after it opened, this brewery has been a pivotal point for the future of craft brewing. New Albion Brewery has inspired hundreds of home brewers, such as Ken Grossman of Sierra Nevada, Sam Calagione of Dogfish Head, to pursue their crafting dreams and share their beer with the world. To date, more than 4,000 breweries operate in more than 350 constituencies across the country [3].

Today there are 10 main styles of beer.

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