THE STUDY OF MICROFLORA OF KOUMISS AND ITS ANTIMICROBIAL PROPERTIES

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Introduction. Today the increase in the tendency of people to a healthy lifestyle is observed; the consumption of high-quality food is one of the constituents of this tendency. The development of composition and technology of functional products is carried out at the department of biotechnology of NUPh, the non-traditional for our region dairy drink – koumiss is interest. Koumiss is obtained by fermentation of milk with lactic acid bacteria and yeast that synthesize vitamins C and B to form an alcohol, carbon dioxide actively. It is known that the mare has pronounced healing properties, antimicrobial activity that is related to their content of antibiotic substances, which increase the body's resistance to infections, normalize digestion, improve the secretory activity of the gastro - intestinal tract heals and has a prophylactic effect in diseases of the respiratory tract. Drink restores the human body after a serious illness. Koumiss has a positive effect on the composition and properties of blood. It increases red blood cells and white blood cells, which fight with alien microorganisms. The drink improves metabolism, improves the body's absorption of fats, proteins, carbohydrates, and is a source of the essential amino acids needed for tissue growth. The composition and technology of several kinds of koumiss beverages based on cow's milk, alcohol flora and lactic flora are developed at the department of biotechnology.

Results and discussion. This paper presents the results of studying the antimicrobial activity of the drink based on bread-yeast as an alcohol microflora and sour cream as a lactic flora. Determination of antimicrobial activity beverage is carried a conventional microbiology diffusion method in agar against such a model microorganisms: *Candida albicans*, *Staphylococcus aureus*, *Bacillus subtilis*, *Escherichia coli*, and determination of antimicrobial activity was conducted on the first day of preparation (young koumiss), third and fifth days (intermediate koumiss) and seventh days (strong koumiss). We used industrial designs of kefir and biokefir as a control. The results showed that the greatest antimicrobial activity is manifested for the intermediate koumiss, so, growth inhibitory zone *E. coli* is 14 mm, *B. subtilis* - 13 mm, *S. aureus* - 14 mm, *C. albicans* - 12 mm. For strong koumiss inhibitory zone is absent; it appears only bacteriostatic effect.

Conclusion. Thus, preliminary studies showed the presence of anti-microbial effect for the new functional fermented beverage koumiss, that making it a promising for further studies.