

## DEVELOPMENT OF COMPOSITION AND TECHNOLOGY OF FERMENTED BEVERAGES SUCH AS A «BREW»

Koloyanova M. V., Strilets O. P., Zhukova Y. A., Strelnikov L. S.

National University of Pharmacy, Kharkiv, Ukraine

koloyanova95@mail.ru

**Introduction.** Brew or kvass is a traditional Slavic sour drink that is prepared based on the fermentation of flour and malt (wheat, barley) or from dry rye bread, sometimes with the addition of fragrant herbs, honey. Well-known expert on national cuisines V.V.Pohlebkin successfully described the brew as a "living product of living systems". There are several varieties of kvass: bread, hash, fruit, milk, honey.

There are a variety of fruit and berry varieties of kvass: pear, cranberry, cherry, lemon and others. Brews of this kind are common or bread kvass, juice or flavored jam of these fruits and berries, or they are prepared directly from the juice of berries, without the addition of bread or flour. Preventive action of brew is manifested in the regulation of the gastrointestinal tract and the cardiovascular system, improve metabolism. The use of kvass prevents to development of pathogens, raises the tone of the body.

Currently, set of synthetic substitutes of brew is also available for the industry (so-called "kvass drinks"). They usually consist of soda (a solution of carbon dioxide), sweeteners, flavoring - simulated taste of kvass, and sold in plastic bottles.

**Results and discussion.** Experimental works at testing the technology of different varieties of brew and studying of their properties are carried out at the department of biotechnology NUPh.

The microbiological composition, physico-chemical and medical-prophylactic properties of brew are studied experimentally.

The study was conducted in two stages: the first was the preparation of the drink, the second was the study of its properties: determination of pH (acidity), organoleptic, chemical and microbiological composition. During studying of the organoleptic properties it was found: brew is a drink of dark brown color with a slight opalescence and sediment natural raw materials, the drink has a pleasant aroma of rye bread and sweet-sour taste.

**Conclusion.** Investigation of microbiological composition is showed the presence of brew yeast cultures, belonging to the species *Saccharomyces minor* (M race), *Saccharomyces mines cesevisiae* kvass, and lactic acid bacteria belonging to the species *Lactobasillus fermenti*. Acidity of beverage is ranged from 1.5 to 7 units due to the accumulation in the drink various organic acids (oxalic, tartaric, formic, malic, citric, succinic, lactic and acetic), in the process of microorganisms. Works to the study of the different varieties of brew will be continued due to their actuality.