

THE STUDY OF STRUCTURE AND PROPERTIES OF KOMBUCHA MEDUSOMYCES GISEVI

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Kombucha (*Medusomyces gisevi*), also in the household is “mushroom”, is a symbiosis of yeast and acetic acid bacteria. In this work, we had studied the microbiological structure, physico-chemical, microbial and therapeutic properties of this object. Therapeutic effect of Kombucha *Medusomyces gisevi* is shown in improving of digestion, strengthening of the Central nervous system, reduction of blood pressure in patients with hypertension, and the drink has a tonic and calming effect, helps with diabetes, diseases of the prostate and kidney problems.

The study was conducted in two stages: the first is the cooking of the drink Kombucha (cultivation); the second is the study of its properties: determination of pH of a solution (active acidity), organoleptic, chemical and microbiological structure.

As a result of studying of organoleptic properties it was found that during the time of cultivation of the mushroom they was changing: the color of the drink from the light changed to light brown; the taste was fickle; primary sugar solution during cooking of the beverage acquired a sour taste, which eventually became richer; also observed the separation of carbon dioxide, the drink was acquired a slightly carbonated taste.

The study of the microbiological structure of Kombucha showed the presence of cultures of microorganisms is in a symbiotic relationship: yeast-like fungi (*Saccharomyces ludwigii*, *Saccharomyces cerevisiae*, *Candida stellata*, *Schizosaccharomyces pombe*, *Torulaspora delbrueckii*, *Zygosaccharomyces bailii* etc.) and bacteria (*Acetobacter xylinum* and other species of the genus of *Acetobacter*).

Due to the accumulation in the drink different organic acids (gluconic, citric, lactic, acetic, malic), in the process of vital activity of microorganisms, the pH of the beverage decreases over time, it has become a high acidity.

When Kombucha is culturing is formed natural antibiotic Medusan, which is perfectly cope with the infection and doesn't weakens the human immune system. Medusan affects the bacteria that are not able to develop resistance to it. So drink of Kombucha can be used in the fight against organisms such as *Staphylococcus*, *Streptococcus*, *Pneumococcus* etc. The Department of biotechnology of NUPh conducts experimental research on the cultivation conditions of Kombucha *Medusomyces gisevi*, properties of the drink and antimicrobial action.