

*Svitlana OLIINYK, Vitalii PRYBYLSKII,
Natalia CHUPRYNA, Iryna DOVGUN
National University of Food Technologies, Kyiv
UKRAINE*

Improvement of Water Treatment Technology for the Preparation of Honey-Based Fermented Beverages

Honey-based fermented beverages are promising products of biomedical orientation in which a natural balanced complex of biologically active substances forms. During water treatment a method of filtering through gravel and quartz sand is used to produce fermented beverages, which does not fully ensure the quality of prepared water by the organoleptic indicators.

Microporous minerals can be used for simultaneous efficient filtering from the mechanical impurities, improvement of the organoleptic indicators and stabilization of the oxidation-reduction water potential due to their structural and ion-exchange properties. Accordingly the improvement of the mechanical water filtering method using new effective filter microporous materials (garnet, flint, smoky quartz, rock crystal and morion) is essential.

During the study microporous minerals were investigated, modelling of the improved method of mechanical filtration was carried out; influence of the treated water on the quality of honey-based fermented beverages is studied.

It was found out that the studied microporous minerals have higher mechanical strength by 2...5%; ash content is 1,2...3 times lower than with quartz sand. It reduces the start-up period, the costs of water and reagents for washing by 1,2...2 times, in addition the specific volume of prepared water increases by 30...80%.

The adsorption properties and structure of microporous minerals promotes more efficient water filtration from the mechanical impurities, the reduction and stabilization of the oxidation-reduction water potential. The use of water that is

treated with different microporous minerals significantly improves the organoleptic indicators of honey-based fermented beverages and reduces the oxidation-reduction potential by 25% stabilizing it to +170 mV.

Investigated microporous minerals are promising and enable to reduce the content of the mechanical impurities and improve the organoleptic indicators of both water and honey-based fermented beverages produced with its use.

KEY WORDS: *innovation, alcohol drinks, technology*