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ABSTRACTS

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INFLUENCE OF WATER INDICATORS ON QUALITY KOMBUCHA

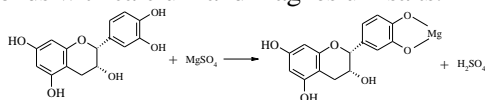
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Abstract:

Kombucha is a fermented drink that is prepared by fermenting a sugar solution with tea infusion with a culture of microorganisms *Medusomyces gisevii*.

During the production of kombucha, it is necessary to take into account the physical and chemical indicators of water, in particular the hardness, the content of iron and chlorides, which affect the course of the fermentation process of the wort, quality indicators and the usefulness of the finished product. The effect of the general hardness of water on the content of polyphenolic substances in the tea solution is due to the formation of coordination bonds with calcium and magnesium salts:



In order to preserve the maximum amount of polyphenolic substances in the wort, and, accordingly, to increase the biological value of the fermented drink, the total hardness of water for the production of kombucha should not exceed $2,0 \text{ mmol/dm}^3$.

Iron, like hardness salts, affects significantly the biological value of kombucha and its organoleptic indicators. Residual free chlorine leads to oxidation of caffeine, which loses its biological activity and decomposes into dimethylsiloxane and methylurea. Caffeine and related xanthines in the tea solution have the ability to stimulate the synthesis of a cellulose film by *Acetobacter* bacteria, which strengthens the connection between bacteria and yeast and has a direct effect on the fermentation process. The content of residual free chlorine in water for the production of kombucha should not exceed $0,1 \text{ mg/dm}^3$.

Key words: *non-alcoholic fermented drinks; kombucha; water; water treatment.*