

ABSTRACT

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Milk and milk products are an important component of the nutritional menu. Among the products available on the market, fermented milk drinks deserve special attention, valued mainly for their unique nutritional and preventive properties. They are a valuable source of nutrients with high nutritional and biological value. Despite the growing demand for milk and fermented milk drinks, not all types are equally sought after, especially among young consumers. An example of such products is kefir, which is consumed much less frequently than, for example, yogurt. The increase in consumer awareness of rational nutrition translates into their high interest in functional food. Consumers are increasingly looking for product innovations also in the field of dairy products. In recent years, functional additives that are natural substitutes for nutrients have gained popularity. An example of such an addition are marine algae, specifically spirulina, which is valued for its high content of nutrients, especially high-quality protein.

The aim of the doctoral dissertation was to determine the impact of spirulina, as a functional additive, on the quality and consumer acceptance of an enriched fermented milk drink, such as kefir, during the storage period.

The work was divided into two parts - theoretical and empirical. In the theoretical part, the tendencies to enrich fermented milk drinks with functional ingredients were characterized, with particular emphasis on the kefir product. Then, the properties and possibilities of using spirulina in the food industry were characterized.

The empirical part of the work began with presenting the research assumptions and the characteristics of the experimental material and research methods. The work presented five scientific and research hypotheses, which were then verified using physicochemical analyses, microbiological analysis and consumer analysis.

The conducted physicochemical, microbiological and consumer tests showed that the addition of spirulina had a significant impact on the analyzed parameters of the newly created products. It was shown that enriching kefir with spirulina significantly influenced, among others, on acidity, protein content and marked amino acids and on changes in the color parameters of products, without affecting their overall quality. Microbiological analysis confirmed the presence of probiotic lactic acid bacteria throughout the entire storage period of the newly created product, thus the produced kefirs retained their health-promoting properties. Consumer analysis confirmed moderate acceptance of kefir, but it was shown that the color of the newly created products had no significant impact on consumer evaluations.