Natalia SUHODOL
Dr., assoc. prof., Technical University of Moldova
https://orcid.org/0000-0002-5609-5139
E-mail: natalia.suhodol@toap.utm.md
Eugenia COVALIOV
Dr., assoc. prof., Technical University of Moldova
https://orcid.org/0000-0003-4574-2959
E-mail: eugenia.covaliov@toap.utm.md
Olga DESEATNICOVA
Dr., prof., Technical University of Moldova
https://orcid.org/0000-0003-4801-8173
E-mail: olga.deseatnicova@toap.utm.md

Marinated jujube fruits – between culinary tradition and biological functionality in sustainable nutrition

Fructele de zizifus marinate – între tradiție culinară și funcționalitate biologică în alimentația durabilă

Marinated vegetables and fruits represent an important component of the traditional culinary heritage of the Republic of Moldova, reflecting the historical adaptation of rural communities to agroclimatic conditions and the seasonal need to preserve plant-based products. From a gastronomic perspective, marinated plant products ensure the sensory balance of Moldovan dishes by providing taste contrasts and complementing meals rich in proteins or lipids. Nutritionally, fermentation enhances nutrient bioavailability and increases the intake of bioactive compounds, thus supporting a functional and sustainable diet. In the contemporary context, marinated vegetables and fruits are being reinterpreted in modern gastronomy and culinary tourism as identity elements of the national gastronomic heritage, contributing to the promotion of local food traditions, the support of domestic

producers, and the sustainable development of tourist destinations. Since ancient times, plants have been used not only as food but also for therapeutic purposes. The genus *Ziziphus* comprises approximately 86 species (up to 170 according to some authors), cultivated mainly in arid regions. In the Republic of Moldova, *Ziziphus jujuba* Mill. remains a marginal and underutilized crop, yet it holds considerable potential in the context of global warming and the promotion of sustainable agriculture. The fruits of *Z. jujuba* are valuable sources of minerals, vitamins, dietary fiber, and antioxidants.

The present research involved a comprehensive evaluation of *Ziziphus jujuba* fruits for the development of a marinated product. Experimental data confirmed their high content of vitamin C, polyphenols, and other bioactive compounds, a significant proportion of which was retained even after thermal processing. The developed marination technology, based on mild temperature regimes and natural preservative components, limited vitamin C losses to 15–17% while maintaining polyphenol retention at up to 86%. Chemical-analytical and sensory evaluations indicated an increased dry matter content and high organoleptic acceptability of the final product. The results demonstrate the potential of *Ziziphus jujuba* fruits for the development of functional food products with enhanced nutritional value and preventive properties, as well as the feasibility of adapting the developed marinade for industrial production.

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