

## DESIGNING AND DEVELOPMENT OF WALNUT-BASED INNOVATIVE FOODS: TECHNOLOGICAL AND NUTRITIONAL IMPACT

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With growing understanding of the relationship between diet and health has come the emergence of so-called innovations in food industry in order to design and develop healthy and nutritious foods. The idea of using food for health purposes and not merely as a source of nutrients opens up a new field in walnuts processing. In addition to traditional presentations, there is a number of ways in which the walnut sector can modify the qualitative and quantitative walnut food composition and produce designer foods with specific properties (sensory, technological, hygiene, stability, etc.), nutritional value (balanced composition and bioactive substances) and their health effects. This research reviews a comprehensive approach for the development of walnut-based foods (Figure 1). Potentially walnuts were used to obtain these foods, not only able to exert health benefits, but also as an alternative to other food products. Processing steps and conditions to ensure chemical composition, quality, nutritional properties, structure and rheological behavior of walnut-based food products were analyzed. Results show high potential and positive view on walnut industrial processing, in agreement with the current demand of healthy and innovative food products.

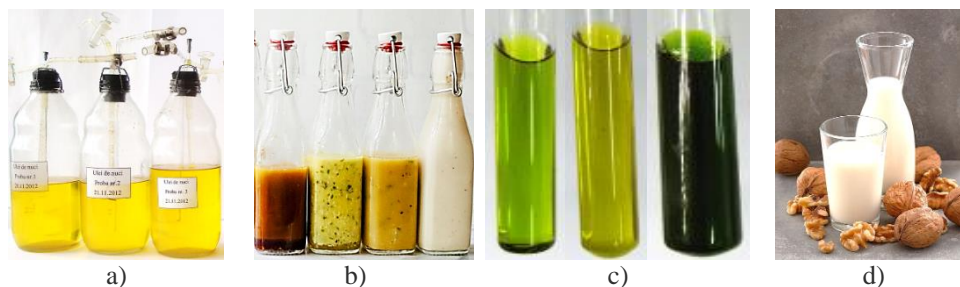


Figure 1. Samples of walnut-based food products: a) Walnut oils with high oxidative stability, b) Walnut dressings, c) Walnut by-products bioactive compounds, d) Walnut beverage emulsion

**Keywords:** walnuts, nutrition value, processing, innovative food

**Acknowledgment:** This work was done in the framework of Project 15.817.02.30A, “Development of methods and techniques for modernization of nuts (*Juglans Regia* L.) processing technology using their biologically active constituents in the functional foods”, founded by the Academy of Science of Moldova.