

F.44. THE TECHNOLOGICAL QUALITY AND NUTRITIVE POTENTIAL OF FOOD BAKERY PRODUCTS

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Abstract. The purpose of this work presents the scientific study of the problem of insurance of the nutritive value and drawing up an adequate technology for manufacturing bakery products with the addition of waste of walnuts, which would be based on the use of natural additives/by-products, taking into consideration the requirements and norms of the normative-technical documents. Waste of walnuts are the products remaining after pressing

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the nuts and extracting the walnut oil. Extremely rich in protein, essential amino acids, minerals, vitamins, polyphenols with antioxidant activity, these by-products have attracted the attention of the leading scientists. They can have applications as food additives with nutritional benefits. For the present research, an innovative bakery product with the addition of walnut flour (*Juglans regia L.*) in different proportions (2, 4 and 6%) was prepared. The rheological characteristics of the doughs, analyzed at Mixolabul Chopin, demonstrate that increasing the amount of walnut flour reduces the hydration capacity, the content of free water of dough, the enzymatic activity (proteolytic, amylolytic) as well as and shelf life of bakery products. Fortification with walnut flour (*Juglans regia L.*) ensures the improvement of bread quality: porosity and sensory characteristics of the products, such as aroma, color and consistency. The results revealed that the fortified innovative product obtained is well accepted by the consumers.

Keywords: bakery products, by-product, functional, rheology, walnuts waste, walnut flour.