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The Effect of Addition of White Mulberry Fruit on the Polyphenol Content in the New Developed Bioactive Bread

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Abstract : In recent years, proceed to the attractiveness of typical bakery products. Expanding the education and nutrition knowledge society will develop the production of functional foods, which has a positive impact on human health. Therefore, the aim of the present study was to evaluate the effect of the addition of white mulberry fruit on the content of biologically active compounds in the new designed functional bread premixes designed for selected disease: anemia, diabetes, obesity and cardiovascular disease. For flavonols and phenolic acids content UPLC was conducted, using an NovaPack C18 column and a gradient elution system. It was found that all attempts bread characterized by a high content of biologically active compounds: polyphenols, phenolic acids, and flavonoids. The highest total content of polyphenolic compounds found in the samples of bread for anemia, diabetes and cardiovascular disease both before and after storage. The analyzed sample differed in content of phenolic acids. The highest content of these compounds were found in samples of bread for anemia and diabetes. It was found that the analyzed sample contained phenolic acids that are derivatives of hydroxybenzoic and hydroxycinnamic acid. The new designed bread contained significant amounts of flavonols, of which the dominant was routine.

Keywords : mulberry, antioxidant, polyphenols, phenolic acids, flavonols
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