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THE BOOK OF ABSTRACTS

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The authors have full responsibility for the originality and content of their own papers.

EFFECT OF RICE PROTEIN CONCENTRATE ADDITION ON THE PROPERTIES OF GLUTEN-FREE SPONGE CAKE

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ABSTRACT

Considering the commercially available gluten-free products, it can be established that rice and corn flour, as well as starches of different origins are the most common ingredients of gluten-free products. As a consequence of the dominance of carbohydrate components, this type of product is most often characterized by inferior nutritional and sensory quality. The aim of this study was to incorporate different concentrations of rice protein concentrate into rice-based sponge cakes. The physicochemical and sensorial properties of sponge cakes made from rice flour and rice protein concentrate (RPC) were evaluated by varying RPC at the levels of 0, 10, 20 and 30% (w/w). The incorporation of RPC from 0 to 30% (w/w) decreased the specific volume of sponge cake samples and consequently values of hardness were significantly higher. In addition to the undeniable improvement in nutritional quality, protein incorporation has contributed to the much denser and more uniform structure. Addition of proteins caused the loss of bitter taste, flavour and odour on eggs while the crumbliness and degree of dissolving were deteriorated with pronounced sensation of rough particles during consumption. Overall, the results showed that RPC could be a promising ingredient for improving the nutritional and sensory quality of gluten-free rice-based sponge cakes.

Keywords: gluten-free sponge cakes, rice protein concentrate, textural properties, sensory properties.

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