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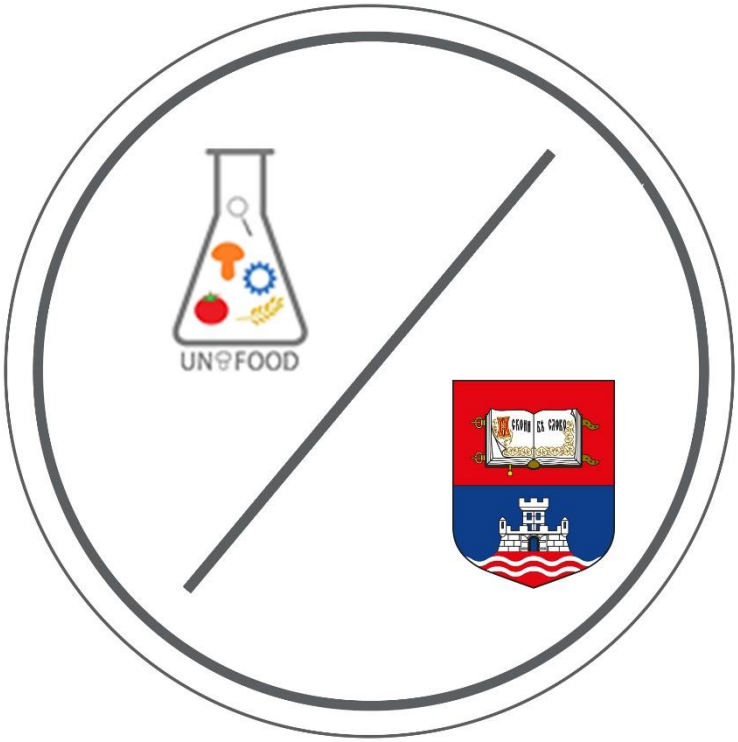

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PUMPKIN SEED CAKE – ANTIOXIDANT AND NUTRITIONAL VALUE OF SELECTED SAMPLES

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Pumpkin seed cake, which remains after cold pressing oil extraction, is a nutritionally valuable but inexpensive raw material that is also considered ~~as~~ a potentially rich source of biologically active substances. Thus, the aim of this study was to measure total phenolics content (TPC) of four samples of pumpkin seed cake flour, as well as their antiradical potency by means of DPPH radical scavenging. In order to determine the nutritional value of each sample, moisture, ash, cellulose, lipids, proteins, carbohydrates, mineral content and fatty acid composition were also investigated using conventional methods. Concerning food safety issues the amounts of heavy metals and pesticides were also determined. The results obtained, pointed out differences between samples in their TPC, anti-DPPH activity and nutritional characteristics. TPC, determined as gallic acid equivalents (GA) using the spectrophotometric method with FC reagent, ranged from 24.9-194.1 mg GA/100 g. Correlated with TPC, observed anti-DPPH activity was modest with SC_{50} values ranged from 0.9-18.5 mg/ml, respectively. As for parameters of nutritional value, obtained results were in the line with previous findings, with protein content *ca*. 50%. Variations, mainly in the mineral (14.61-30.70 mg/100 g) and the carbohydrate content (9.38-21.86%), could be explained by the different geographical origin of the pumpkins. All tested samples complied with the approved health standards related to the content of heavy metals and pesticides. Nevertheless observed differences, it could be concluded that pumpkin seed cake could be considered as a naturally rich source of proteins, cellulose and minerals (Fe, Cu, Zn, Mg) with a reduced amount of oil, safe for human consumption. It is also a good source of polyphenols, thus its potential as a functional food ingredient should not be neglected.

Keywords: pumpkin seed, polyphenols, DPPH, nutritional value.

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