



## Study on the impact of pumpkin seed flour on mineral content of wheat bread

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### Abstract

*The incorporation of various flours from seeds into wheat bread can improve its nutritional value. Pumpkin seeds flour can be a good alternative for nutritional enrichment of food products because of its high content of protein, oil, dietary fibers and minerals. The aim of the present study was to investigate the effect of pumpkin seed flour (PSF), added in the amount of 5% and 10% by the weight of flour, on the content of minerals in wheat bread. It was found that wheat bread with pumpkin seed flour had a significantly higher levels of minerals as compared to the control; except for sodium. Moreover, the minerals content of bread was found to increase markedly with increasing the substitutions ratio. The most pronounced was the effect of enrichment on the content of iron - at the addition of 10% PSF it was 8.98 mg/kg, which is 6.7 times higher than the control sample (1.34 mg/kg). A considerable increase in the content of magnesium and phosphorus was also found. Regarding the microelements, the amount of zinc increased most significantly – 5.09 mg/kg in the control sample; 9.27 mg/kg into the sample with 5% PSF; 12.7 mg/kg in the bread with 10% PSF added.*

### Author Keywords

Pumpkin seed flour, wheat bread, mineral content, microelements, macroelements

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