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Czech J. Food Sci.

**T. Bojňanská, H.
Frančáková, P. Chlebo,**

A. Vollmannova: Rutin Content in Buckwheat Enriched Bread and Influence of its Consumption on Plasma Total Antioxidant Status

Czech J. Food Sci., 27 (2009): S236-S240

The goal of this study is the evaluation of enriched bread prepared with an addition of buckwheat as a source of biologically active components in nutrition.

Experimental pastry was baked using buckwheat wholegrain flour blended with wheat flour in different portions (10%, 20%, 30%, 40% and 50%) in order to observe the influence of buckwheat addition on dough processing and the quality of the final baked products. Taking into account the overall acceptability rating, it was concluded that bread with an addition of up to 30% of buckwheat could be baked with satisfactory evaluation results. The content of rutin in

loaves in a consumable form prepared with a buckwheat addition varied between 7.76 mg/kg and 26.90 mg/kg. The clinical study which followed the baking experiment was based on the consumption of enriched bread (30% buckwheat, between 34.7 mg/kg and 38.2 mg/kg rutin content in dry matter) by a group of volunteers during a period of four weeks. The results approved the increase of the total antioxidant status thanks to the buckwheat enriched bread consumption from the value of 1.135 ± 0.066 mmol/dm³ at the beginning of the study to 1.46 ± 0.083 mmol/dm³ at the end of the study, i.e. significant differences.

Keywords:

total antioxidant status; buckwheat enriched bread; rutin

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