THE EFFECT OF SELECTED PLANT EXTRACT ON THE NUTRITIONAL VALUE OF CORN EXTRUDATES.

Małgorzata Kobus-Moryson, Joanna Kobus-Cisowska, Anna Gramza-Michałowska, Ewa Flaczyk. Poznan University of Life Sciences, 31 Wojska Polskiego Str., 60-624 Poznan, Poland

Recent research has highlighted the value of bioactive compounds in human nutrition. Greater demand of consumers for “healthful” products with enhanced bioactive substances has shifted research focus towards incorporation of bioactive ingredients into traditionally products like extruded corn materials. The aim of research was to evaluate the effect of selected plant extract on the nutritional value of corn extrudates. Enriching materials (extracts) used in experiment were: cacao powder, leaves of mulberry and yellow tea. Nutritional assessment was based on the total: dietary fibre, polyphenols, protein, fat, moisture, mineral contents, and phenolic composition. Three methods were used to assess the antiradical potential, namely: radical scavenging DPPH, ABTS and chelating activity. Evaluation of flavones and phenolic acids was performed using HPLC equipment. Results of corn extrudates are quite varied and depended on the used additive. Antioxidant capacity (AC) of samples with addiction of mulberry and yellow tea, was higher than control by 46 - 68%. Also mix: leaves of mulberry (1%) and yellow tea (1%) gave high results of AC. Sensory evaluation showed an overall acceptability in all samples. There was no statistically significant increase in moisture of products, achieving level close to 2%. All snacks characterized low amount of lipids (about 1 %), with the highest value when cacao was added. Phenolic profiles resembled the added ingredient. Thus, extruded snacks enhanced with extracts of cacao powder, leaves of mulberry and yellow tea may be a convenient functional food, offering high nutritional value.

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