

The Influence of Rapeseed Meal Addition on Storage Stability of Fried Potato Snacks

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The aim of the study was to determine the effect of rapeseed meal as a source of antioxidants and protein added to pellets on quality of fried potato snacks during four months of storage. The material used for investigation were potato snacks obtained from pellets with 5% and 10% addition of rapeseed meal as well as without any supplementation. Snacks were obtained by frying pellets in rapeseed oil heated to 180°C. Ready snacks packed in aluminium foil were stored for four months under standard conditions. In fresh and after each month of storage, the samples were analysed for moisture, fat content, colour and texture (instrumentally) as well as for organoleptic properties. Fat extracts were made subject to the following assays: acid, peroxide and anisidine values and fatty acid composition. Additionally in snacks were monitored polyphenols content and antioxidant activity (by ABTS).

It has been stated that addition of rapeseed meal to pellets influenced properties of fried snacks after processing and during storage. Snacks obtained from pellets with rapeseed meal addition exhibited lower fat content, harder texture and darker colour. Independently on pellets supplementation the moisture content of all snacks increased while hardness decreased with longer storage time. The colour of snacks with rapeseed meal addition was stable, while in snacks without any supplementation lightened during storage. Hydrolytic changes exhibited the same model for all analysed snacks. Better oxidative stability exhibited potato snacks with rapeseed meal in pellets used for snacks frying. The lowest decrease of C 18:2 and C 18:3 after four months of storage was detected in the samples with 10% addition of rapeseed meal. Storage deteriorated the organoleptic properties of all snacks. The polyphenols content as well as antioxidant activity in snacks depends on dose of supplementation and decreased during storage.