SOY PROTEINS ON OIL ABSORPTION DURING FRIED INSTANT NOODLES PREPARATION

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A study was conducted to understand the effect of soy proteins on oil absorption during fried instant noodles preparation. Five formulae, 100% wheat flour, 95% wheat flour and 5% full fat soy flour, 90% wheat flour and 10% full fat soy flour, 90% wheat flour and 10% defatted soy flour, 90% wheat flour and 10% isolated soy protein were tested. Noodle samples were prepared according to Sri Lanka Standards (SLS 420: 1989) and analyzed for crude fat content. Acceptability was determined by a sensory panel 15 trained and 07 untrained panelists. Further, MC, ash, acid insoluble ash, protein, solids in gruel, free fatty acids and peroxide value were analyzed. The samples were packed in polyethylene bags and stored under 30 ^{0}C and 70% RH for three months and free fatty acids, peroxide value, aroma and taste were determined at one month intervals. Parametric data were analyzed using ANOVA ($\alpha = 0.05$) and mean separation was done with LSD. Non parametric data were analyzed using non parametric Friedman test with statistical software MINITAB. Full fat soy flour (5%, 10%) and isolated soy protein significantly ($\alpha = 0.05$) reduced oil absorption while defatted soy flour did not. Free fatty acids and peroxide value significantly ($\alpha = 0.05$) increased during storage. Fried instant noodles with low fat absorption and superior textural properties could be prepared by replacing the noodle flour mixture with soy proteins and product could be stored at 30 ^{0}C, 70% RH for three months without any quality deterioration.

Key words: Fried instant noodles, Oil absorption, Soy protein