

EFFECTS OF ADDING FLAXSEED FLOUR (*Linum usitatissimum*) ON SENSORY AND NUTRITIONAL PROPERTIES IN FROZEN CRISPY CHICKEN

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Extended storage of partially fried frozen crispy chicken coated with breadcrumbs can result in off-flavors and odors. This study examined the impact of a flaxseed flour-enriched coating on improving the shelf life of the product and determined the optimum level to incorporate flaxseed flour by analyzing the sensory and nutritional properties of crispy chicken. Two treatments, containing 5% and 10% flaxseed flour, were compared to a control (commercially available breeding without flaxseed). All three products were blast-frozen and stored at identical frozen conditions. Proximate analysis was done for the blast-frozen product. A sensory analysis, microbial evaluation, fatty acid, and peroxide value evaluation were done at the beginning and after two months of storage. The proximate analysis compared the nutrient profiles of the samples, revealing a lower fat content in the flaxseed-treated samples compared to the control. Oil absorption was effectively reduced by incorporating flaxseed flour into the coating of frozen crispy chicken, resulting in lower oiliness. Favorable sensory attributes were maintained in samples at the initial sensory evaluation and after 2 months of storage, incorporating 5% of flaxseed. The product's extended shelf life was indicated by microbial counts, which remained consistently low without an increase over time. No significant difference was shown in the free fatty acid levels of the samples, though slightly lower free fatty acid development was exhibited in the 5% flaxseed treatment. Therefore, the lipid oxidation was comparatively reduced in the 5% flaxseed flour incorporated sample while the product's shelf life was increased. In conclusion, incorporating 5% flaxseed flour into the breeding mixture improves the nutritional profile and shelf life of frozen crispy chicken without compromising sensory quality.

Keywords: Blast-frozen, Free fatty acid, Proximate analysis, Shelf life, Total plate count