



## EFFECT OF INCORPORATION OF BIOPROCESSED LENTILS ON NUTRITIONAL AND TECHNOFUNCTIONAL PROPERTIES OF FLAT BREAD

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**ABSTRACT**

The present study was carried out to observe the effect of incorporation of raw and processed lentils on nutritional and technofunctional characteristics of flat bread. Lentils were processed by soaking (25 °C for 12 hours), atmospheric boiling (25 minutes), and germination (25 °C for 48 hours) methods. Raw and processed lentil flours were used in production of flat bread which was evaluated for rheological, compositional and color characteristics. Shelf stability studies (textural properties, water activity and free fatty acid) of flat bread were carried out by storing in food-grade LDPE bags under refrigeration (4±1 °C) for up to 7 days. Significant (p<0.05) variations were observed in rheological properties which were found to be optimum upon incorporation of raw and processed lentil flour at level of 10 % for flat bread dough. Processing treatments considerably enhanced the nutritional value, with germination and boiling leading to increased protein and fiber content and decreased fat content. Color analysis also exhibited substantial changes upon incorporation of raw and processed lentil flours. There was rise in hardness, gumminess and chewiness in control and lentil incorporated flat breads upon storage. Water activity ranged between 0.85-0.92 from 0th to 7th day. Elevation in free fatty acids was observed in all the products wherein rate of increase was highest in the control sample (133 %) during storage. Based on nutrition development, functional characteristics and organoleptic acceptability of flat breads, lentil flour, raw and processed, is a potential ingredient which can be utilized in development of functional foods.

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