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Research Article

EFFECT OF WHEAT FLOUR REPLACEMENT WITH GARDEN NIGHTSHADE (SOLANUM NIGRUM) FRUITS POWDER ON THE NUTRITIONAL, PHYSICAL, COLOR, RHEOLOGICAL AND SENSORY CHARACTERISTICS OF PAN BREAD

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ABSTRACT

The objective of this study was to evaluate the nutritional, physical, color rheological and sensory effects that the replacement of garden nightshade powder (GNFP) would have in different percentages 5, 10, and 15%, in a formulation of pan bread. The results showed that GNFP had higher protein, fibers, Antioxidant activity and carbohydrate contents of 16.50, 12.91, 93.68 and 77.41%, respectively. Pan bread containing GNFP exhibited higher crude protein, fibers, and antioxidant activity. All of the mixes' physical attributes, such as weight and density, rose compared with the control, but their specific volume and volume dropped. Pan bread containing GNFP has a lower L* and b* values and higher a* values for both crust and crumb compared with control samples. Also, the addition of GNFP to wheat flour at different proportions is due to an increase in water absorption (%), dough time, stability, mixing tolerance, dough weakening. On the contrary, degree of elasticity, extensibility, elasticity after 5 min, proportional number and energy decrease compared with dough WF. Results of sensory evaluation indicated that brightness of the pan bread decreased with increasing fruit powder and that 15% fruit powder pan bread had the lowest score for overall acceptability.