

Antioxidant Potential, Nutritional Value and Sensory Profiles of Bread Fortified with Kenaf Leaves

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Abstract : The aim of this study was to determine the antioxidant potential, nutritional composition, and functional properties of kenaf leaves powder. Besides, the effect of kenaf leaves powder in bread qualities, properties, and consumer acceptability were evaluated. Different formulations of bread fortified with 0%, 4% and 8% kenaf leaves powder, respectively were produced. Physical properties of bread, such as loaf volume, dough expansion, crumb colour, and bread texture, were determined. Nine points hedonic scale was utilized in sensory evaluation to determine the best formulation (the highest overall acceptability). Proximate composition, calcium content, and antioxidant properties were also determined for the best formulation. 4% leaves powder bread was the most preferred by the panelists followed by control bread, and the least preferred was being 8% leaves powder bread. 4% leaves powder bread had significantly higher value of DPPH radical scavenging capacity (8.05 mg TE/100g), total phenolic content (12.88 mg GAE/100g) and total flavonoid content (13.26 mg QE/100g) compared to control bread (1.38 mg TE/100g, 8.17 mg GAE/100g, and 8.77 mg QE/100g respectively). Besides, 4% leaves powder bread also showed higher in calcium content and total dietary fiber compared to control bread. Kenaf leaves powder is suitable to be used as a source of natural antioxidant for fortification and nutrient improver in bread.

Keywords : dietary fibre, calcium, total phenolic content, total flavonoid content

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