

**EFFECT OF PUMPKIN (*CUCURBITA
MAXIMA*) FLOUR SUPPLEMENTATION
ON THE PHYSICAL, CHEMICAL
AND SENSORY PROPERTIES
OF WHEAT BREAD**

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ABSTRACT

In response to considerable interest generated in the development of composite flour in most foreign countries, the idea of developing wheat-pumpkin composite flour in Malaysia for bread making was investigated. Thus, the aim of this study was to determine the effect of supplementation of pumpkin flour (to wheat flour at 0%, 5%, 10% and 15%) on physical (loaf weight, loaf height, loaf volume and specific volume), chemical (moisture, ash, fat, protein and fiber) and sensory properties (appearance, aroma, taste, texture and overall acceptability) of the supplemented breads – wheat-pumpkin composite breads. Bread with 10% pumpkin flour was the highest in terms of loaf weight (619.90 g), loaf height (12.35 cm), loaf volume (2717 cm³) and specific volume (4.38 cm³/g), while 15% pumpkin flour bread was the lowest in loaf weight (613.92 g), loaf height (8.11 cm), loaf volume (1773 cm³) and specific volume (2.89 cm³/g) which were significantly different ($p < 0.05$) compared to the control bread. Increasing the level of supplementation from 5% to 15% pumpkin flour significantly ($p < 0.05$) increased moisture (from 34.06 to 34.96%), ash (from 2.15 to 2.33%), fat (from 7.46 to 8.58%) and also fiber contents. However, there was a significant ($p < 0.05$) decrease in protein content to 11.63% (at 15% pumpkin flour substitution) compared to 13.09% of protein in the control bread. Bread with 10% pumpkin flour received the highest hedonic ratings for taste (6.08) and overall rated as the most acceptable (6.32) in Hedonic Test, which was not significantly ($p > 0.05$) different compared to the control in terms of overall acceptability. It was also the most preferred sample in Ranking Test.

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