

## EFFECT OF XANTHAN GUM ON SENSORY AND PHYSICAL PROPERTIES OF WHEAT-PLANTAIN FLOUR BREAD

O. B. Ocheme<sup>\*</sup>, O. O. Oloyede, A. D. Abdulganiyu

Federal University of Technology, School of Agriculture and Agricultural  
Technology, Dept of Food Science and Technology, Minna, Nigeria

Bread was produced from 70:30 blend of wheat and plantain flour. A previous study revealed that replacement of wheat flour with plantain flour caused a reduction in loaf volume, loaf height and specific loaf volume of bread. The objective of this study was to investigate the effect of xanthan gum on the sensory and physical properties of wheat-plantain flour bread. The straight dough method of bread making was used. The physical and sensory properties of the bread samples were measured using standard methods. Xanthan gum inclusion had a significant ( $p < 0.05$ ) effect on the taste, aroma, colour and overall acceptability of the bread samples at 3 and 4% levels of inclusion. The scores for these attributes decreased with increasing level of xanthan gum. For physical attributes, xanthan gum level had no significant ( $p > 0.05$ ) effect on loaf weight. However, loaf height, loaf volume and oven spring were significantly ( $p < 0.05$ ) affected by xanthan gum levels. Loaf height increased with increasing levels of inclusion while the loaf volume decreased except at 4% level where it increased significantly to  $500\text{cm}^3$  as against  $367\text{cm}^3$ ,  $335\text{cm}^3$ ,  $275\text{cm}^3$  and  $350\text{cm}^3$  for 0, 1, 2 and 3% levels respectively. Oven spring was highest at 1% xanthan gum level and lowest at 3 and 4% levels. For acceptable wheat plantain-flour bread, xanthan gum inclusion should not exceed 2%.

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\* Corresponding author: [ochemedo@futminna.edu.ng](mailto:ochemedo@futminna.edu.ng)