ABSTRACT

Increase in bread consumption, health awareness and demand for nutritious foods has necessitated research on composite bread to meet these needs. Sorghum (Sorghum bicolar L.) is nutritious, this study used a new sorghum genotype EUS130 in development of sorghum composite bread in the proportions wheat: sorghum flour 100:0 (Control), 96:4, 92;8, 88: and 84:16. Baking was done using Straight dough method. Nutrient content, shelf life, physical properties: height (dough strength), length (dough resistance to extensibility) and W (deformation energy), and baking properties: specific loaf volume, P/L ratio, loaf weight were determined. Sensory acceptability was done using 50 semi-trained panellists. The study observed that protein content was highest in 8% but decreased ≥ 12% sorghum, fat was higher in 8% sorghum bread compared to control. Dough height and P/L ratio were highest in 8% sorghum while length was highest in control. At 16% sorghum, loaf texture, crumb colour, mouth feel and general appearance decreased. Microbial count was highest in wheat bread while shelf life increased with increase in sorghum. In conclusion, 8% sorghum flour can be partially substituted with wheat flour to develop bread with improved nutritional and sensory quality.

Keywords: Physical properties, shelf life, composite bread, nutritional quality, sensory quality.