

# FUNCTIONAL PROPERTIES AND BISCUIT MAKING POTENTIALS OF SORGHUM-WHEAT FLOUR COMPOSITE

American Journal of Food Technology

Year: 2012 | Volume: 7 | Issue: 6 | Page No.: 372-379

DOI: 10.3923/ajft.2012.372.379

A.A. Adebowale, M.T. Adegoke, S.A. Sanni, M.O. Adegunwa and G.O. Fetuga

## Abstract

The rapid urbanization and increase in population in recent years have resulted in an increase in the consumption of wheat-based products especially biscuits in sub-Saharan Africa. This has spurred pragmatic research on compositing flour from locally cultivated cereals to reduce wheat importation. This study was therefore, conducted to investigate the functional properties of sorghum-wheat composite flour and its biscuit making potentials. Sorghum grain was processed into flour and used to substitute wheat flour at different proportions (0, 5, 10, 15 and 20%). The functional and pasting properties of the different sorghum-wheat flour blends were determined. The composite flours were thereafter, processed into biscuit and the physical dimensions and proximate composition of the biscuits were determined. There were significant differences ( $p < 0.05$ ) in the functional properties of the composite flour except for bulk density. There were no significant differences ( $p > 0.05$ ) in the pasting profile of the wheat-sorghum flour blends except for set back viscosity and pasting temperature. Highest values of 11.84, 2.36, 1.95 and 5.31% were recorded by biscuit from 90:10% wheat-sorghum composite flours in terms of protein, ash, fibre and sugar, respectively. There were significant differences ( $p < 0.05$ ) in the proximate composition of the biscuits samples. However, no significant difference ( $p > 0.05$ ) was found in the physical dimensions of the wheat-sorghum flour biscuits. The study concluded that biscuits of acceptable quality, comparable to the quality of 100% wheat flour biscuits are obtainable from sorghum-wheat composite flour. The use of sorghum in biscuits making would greatly enhance the utilization of this crop in many sorghum cultivating developing countries where the crop has not been optimally utilized.