



Tropentag, October 9-11, 2007, Witzenhausen

“Utilisation of diversity in land use systems:
Sustainable and organic approaches to meet human needs”

Influence of the Addition of Okra Seed Flour on the Properties of ‘Ogi’, a Nigerian Fermented Maize Food

EZEKIEL TEJUMOLA OTUNOLA, ELIZABETH OLUWASEUN SUNNY-ROBERTS, ADERONKE
OLUWATOYIN SOLADEMI

Ladoke Akintola University of Technology, Food Science and Engineering, Nigeria

Abstract

‘Ogi’ is a popular infant weaning food and breakfast meal for adults in Nigeria and in most part of West Africa. Traditionally, it is prepared from maize, sorghum and millets paste. It is often marketed as a wet cake wrapped in leaves or transparent polythene bags. Enhancement of the nutritional quality of foods is a means of combating diet related diseases in human race.

Okra seed flour was added in various proportions (0-50 %), to ‘Ogi’ a Nigerian fermented maize food. The effects of such additions on some nutritional, physico-chemical and sensory properties of the products were investigated. Data obtained indicated significant increases in the levels of protein, ash and fat, but reductions in the levels of carbohydrate and moisture with increases in the proportion of okra seed flour. Increases were also recorded with respect to the contents of Vitamin C, Calcium, Sodium and Iron. Moreover, while the pasting temperature (T_p), gelatinisation time (M_g), and the time to reach peak viscosity (M_n) all increased, though gradually, the peak viscosity during heating (V_p), viscosity after 30 min (V_r) and final viscosity on cooling to 50°C (V_e) showed significant decreases with increasing proportions of okra seed flour. These produced consequent effects on the stability of starch and ease of cooking of each mixture. Although the addition of okra seed flour to ‘ogi’ may have the potential to improve the nutritional status of ‘ogi’, data on sensory evaluation indicated only a slight level of consumer acceptability of the resulting products. The need for supplementation with colouring and flavouring agents may therefore be advocated.

Keywords: Nutritional value, Ogi, Okra, physicochemical properties, sensory evaluation