PHYSICAL AND FUNCTIONAL PROPERTIES OF BREAKFAST CEREALS FROM MAIZE, AFRICAN YAM BEAN AND COCONUT CAKE

Okafor G. I. ¹ and G. O. Usman²
¹Department of Food Science and Technology, University of Nigeria, Nsukka, Enugu State, Nigeria.
²Department of Food, Nutrition and Home Sciences, Kogi State University, Anyingba, Kogi State, Nigeria  email:gabriel.okafor@unn.edu.ng;

ABSTRACT
The physical and functional attributes of ready-to-eat breakfast cereals produced from blends of maize (Zea mays), African yam bean (Sphenostylis stenocarpa) (AYB), defatted coconut (Cocos nucifera) cake and sorghum (Sorghum bicolor L. Moench) malt extract, were evaluated, to generate essential data on the products. Six samples were formulated by mixing the AYB and maize composite flour with graded levels of defatted coconut (100:0, 90:10, 80:20, 70:30, 60:40, 50:50), sugar, salt and water. The samples were mixed and toasted at 280°C for 5mins each in a non-stick metallic pan, cooled and packaged. The results revealed the following ranges of physical and functional properties; pH (4.70- 6.56), bulk density (0.29 - 0.71g/ml), water absorption capacity (68.31- 76.39%), oil absorption capacity (0.87- 1.32%), foam capacity (2.48- 3.49%), viscosity (19.73-31.08%), gelation temperature (121-157°C), emulsification capacity (5.79-9.86 g/100g), wettability (15.67-23.22 sec.) and invitro-protein digestibility (66.30- 82.2%). It is evident that there are significant variations of physical and functional attributes with addition of defatted coconut fibre in the formulations.

Contact us for full article. Email: info@agrosciencejournal.com