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Proximate composition of donkua made from three varieties of maize, groundnut and alligator pepper

Adeyanju Bridget Ebunoluwa
Adeyemi College of Education, Nigeria

Dokua is a snack made from the mixture of maize and groundnut. Maize is produced annually than any other grain. It has been used for the production of many snacks in Nigeria. The white and yellow varieties are preferred by most people depending on the region. Groundnut is a good source of protein; it reduces colon cancer and contains some antioxidants. It contains vitamin B3 which boost memory and helps in reducing cholesterol level. The evaluation of the proximate and functional properties of dokua made from mixture of three different ratios of maize varieties, alligator pepper and groundnut was carried out using standard methods of analysis. The three maize varieties are ART, BR99 and SUWAN, all mixed with alligator pepper and groundnut in the ratio 720:260:20; 826:157:16 and 759:236:5 respectively. The result of the analysis showed that at 100%, SUWAN maize variety has the highest moisture content (9.64 ± 0.01), ash (1.36 ± 0.01) and fat (5.64 ± 0.02), while ART maize variety had the highest crude protein (15.16 ± 0.03), fiber (0.91 ± 0.01) and carbohydrate (72.54 ± 0.23). Dokua made from BR99 maize in ratio 826:157:16 had the highest carbohydrate content (77.86 ± 0.08) while the one made with SUWAN and ART in ratios 720:260:20 and 759:236:5 had the highest protein contents of 21.06 ± 0.04 and 17.91 ± 0.02 respectively. The functional properties such as water holding capacity, oil holding capacity and foaming capacity increased in these varieties while least gelation concentration and emulsifying capacity decreased. The mixing of maize variety in different ratios with alligator pepper and groundnut can therefore be used to improve the nutritional content of dokua significantly.

Biography

Adryanju Bridget Ebunoluwa is a Lecturer at Adeyemi College of Education. She is presently pursuing her PhD at the Federal University of Technology Akure, Ondo state Nigeria. She has published about 14 papers in reputable journals.

ebundaropale@yahoo.co.uk

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