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Effects of the Addition of Partially Defatted Peanut Paste on Some Properties of ‘kokoro’, a Popular Nigerian Maize Snack

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Abstract

‘Kokoro’ a popular Nigerian snack obtained from maize, because of its nutritional deficiencies, especially in terms of its protein and amino acid contents, was enriched with partially defatted peanut paste by partially substituting the maize with the groundnut paste in varying proportions ranging from ten to forty percent paste. The various mixtures obtained were separately processed into snacks following essentially the traditional method of production, involving thorough mixing, dough formation and deep frying in vegetable oil. The products obtained were analysed for proximate composition, some physico-chemical properties and pasting characteristics. The sensory attributes were also evaluated.

Results obtained indicated substantial increases in the level of protein with increases in the level of substitution with peanut paste, ranging from 12.33 to 23.77 % in the zero and 40 % levels of substitution with peanut paste. This may be an indication of the potentials of the peanut paste in improving the nutritional status of the snack. While similar trends were observed with respect to the fat contents, the levels of ash, crude fibre and carbohydrate showed a reverse trend.

The swelling capacity of the resulting flour mixtures before frying decreased in value with increases in the level of substitution, but increases, although only slightly in the values of water absorption capacity respectively. Slight increases were also recorded with respect to the generally low values of bulk density, an indication of a possible positive impact on the ease of packaging and transportation of products. There were no significant changes in the pasting properties of the resulting flour mixes regardless of the level of substitution.

Sensory evaluation of the products obtained indicated that the greater the level of substitution with the defatted peanut paste in the mixture, the more acceptable the product is to consumers.

Keywords: Maize, peanut, snacks, Nigeria