

NUTRITIONAL EVALUATION OF WHEAT CAKES ENRICHED WITH EDIBLE AFRICAN TERMITES (*MACROTERMES NIGERIENSIS*)

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Abstract

The nutritional and economic value of Termites Macrotermes nigeriensis is often neglected and as such the effect of substitution of wheat flour with the milled paste of edible African termite, M. nigeriensis in cake production was studied. The M. nigeriensis paste obtained was used at different levels of substitution (0% - 20%) with wheat flour for cake production. The sensory attributes including colour, taste, texture, flavour, aroma, appearance and general acceptance were evaluated by twenty member semi-trained panelist using a 9-point Hedonic scale in which one represents the least score (dislike extremely) and nine the most desirable score (liked extremely) for any attribute. The result of the organoleptic properties showed that no significant difference ($p < 0.05$) existed in all the attributes tested. However the sample containing 5% termite paste was most preferred. The proximate composition of the cake samples were determined using standard methods. The result of the proximate analysis showed the protein content of the cake samples increased as the level of incorporation of the edible African termite paste increased. The protein contents of the cake samples ranged from 10.04 to 19.57%. There was significant difference in the moisture content of the cake samples which ranged from 2.44 – 3.31%. There were significant difference in the magnesium, potassium and phosphorous values of the cake samples. The antinutrients (tannins, phytate, saponins, oxalate) determined all had low values signifying that the cake product will pose no threat to human consumption.

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