Effect of Substitution of Wheat Flour with Nile Tilapia Bone Powder on The Quality Characteristics of Cashew Nut Cookies

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ABSTRACT

This study was conducted to determine the effects on the quality of cashew nut cookies substituted with Nile tilapia bone powder (NTBP), at various levels. Cookies had a w, hardness and their spread ratio varied significantly. Color parameters showed significant changes after enhancement with NTBP. The L*, b*, and whiteness values decreased but the a* value increased. Results showed that the addition of NTBP significantly increased the moisture, protein, fiber and ash content of the samples, while the carbohydrate content decreased. Additionally, a drastic increase in calcium content was observed in the substituted cashew nut cookies, when compared with wheat cookie samples used as a control. The cashew nut cookies substituting NTBP up to 20% had the highest scores of sensory properties. These results suggested that the NTBP substitution level at 20% was the suitable level which having acceptable physicochemical and organoleptic qualities while further increasing high calcium richness.

Keywords: Nile tilapia bone, Cashew nut cookies, Calcium, Substitution