

# **COCONUT OIL BASED COOKIES FORTIFIED WITH BIO-CALCIUM: CHARACTERISTICS AND NUTRITIONAL COMPOSITIONS**

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## **ABSTRACT**

The main objective of this study was to develop coconut oil based cookie fortified with tuna bone bio-calcium (Bio-Ca) as healthy food rich in medium chain fatty acid and calcium. The impacts of Bio-Ca supplementation and replacement of shortening with coconut oil on the quality and sensory properties of cookie were determined. Colour, diameter, thickness as well as hardness of cookies varied with levels of Bio-Ca powder and coconut oil. Bio-Ca powder at 12% could be fortified into cookie using coconut oil as shortening replacer without the adverse effect on sensory properties. Scanning electron microscopy showed that the developed cookies had less porosity with denser structure, compared to that of the control. The developed cookie showed higher saturated fat, ash and protein contents but lower energy value, compared to the control. It was rich in calcium and phosphorous. Thus, it could serve as the mineral supplement, especially for calcium.