

***The Effect of Dough Fermentation Time on the Physical, Chemical, and
Organoleptic Properties of Cilembu Sweet Potato (*Ipomoea batatas* (L.) Lam.)
Puree Substitute Crackers***

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ABSTRACT

Crackers are snacks that are generally low in fiber. Fiber content can be increased by adding Cilembu sweet potato puree. Dough fermentation time is a factor that can influence cracker characteristics. This study aimed to determine the effect of fermentation time and Cilembu sweet potato puree substitution on the physical, chemical, and organoleptic properties of the crackers. A Completely Randomized Design (CRD) with two factors was employed: fermentation time (0, 30, and 60 minutes) and Cilembu sweet potato puree substitution (0%, 10%, and 20%), with three replications for each treatment. The parameters observed included texture, color, moisture content, ash content, protein content, dietary fiber, and organoleptic properties. Data were analyzed using ANOVA followed by DMRT at the 5% significance level. The results showed that the interaction between fermentation time and Cilembu sweet potato puree substitution significantly affected protein content, dietary fiber, and the hedonic attributes of aroma, texture, and texture quality. The F2X1 treatment (60-minute fermentation and 10% Cilembu sweet potato puree substitution) yielded the best results compared to the other treatments. This study contributes to the development of Cilembu sweet potato puree-based crackers by optimizing fermentation time to produce a superior product with higher nutritional value.

Keywords: *crackers, fermentation, Cilembu sweet potato puree.*