

## ABSTRACT

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### **EFFECT OF MODIFIED CASSAVA FLOUR (MOCAF) SUBSTITUTION ON PEARL OYSTER MUSHROOM (*Pleurotus ostreatus*) CRACKER CHARACTERISTICS**

(xviii + 125 pages; 29 tables; 39 figures; 20 appendices)

*Crackers or “kerupuk” in Indonesian is a traditional food that is famous among people. Nevertheless, crackers are not considered as a source of nutrients due to only having high starch content while being low in protein and fiber. Pearl oyster mushroom has been regarded as commercially important edible mushroom because of its good nutritional content. However, its utilization in processed food is still limited on certain food products hence crackers with addition of pearl oyster mushroom to increase crackers nutritional value were developed. Treatment of pearl oyster mushroom processing type (puree and powder) and concentration (0, 10, 20, 30%) was done. The best formulation according to sensory, physical, and chemical analysis was found to be crackers with 10% pearl oyster mushroom powder. The resulted fried crackers has moisture, ash, protein, fat, carbohydrate, soluble, and insoluble fiber of 1.27, 1.27, 2.82, 15.80, 78.85, 2.19, and 11.98%, respectively. There is development of cassava flour through fermentation known as Modified Cassava Flour (MOCAF). After fermentation, the resulted MOCAF has increased of starch content and among other flour, MOCAF has higher calcium content. The treatment of 0, 25, 50, 75, and 100% MOCAF substitution was done in crackers formulation. The selected formulation of 25% MOCAF substitution fried crackers has moisture, ash, protein, fat, carbohydrate, soluble fiber, insoluble fiber, and calcium content of 2.10, 3.04, 3.09, 17.55, 74.24, 1.24, 11.02%, and 83.49 mg/100 g, respectively. This research showed that pearl oyster mushroom addition into crackers can increase nutritional content of crackers in term of its protein and fiber content. MOCAF substitution upon crackers caused crackers to be less crispy in texture hence tapioca flour is superior compared to MOCAF to produce crispy texture of crackers.*

**Keywords:** Pearl oyster mushroom, processing type, concentration, crackers, modified cassava flour (MOCAF), substitution, protein, fiber

**References:** 120 (1977-2012)