

# DEVELOPMENT OF CASSAVA-BASED TRADITIONAL CRACKERS WITH SUBSTITUTION OF TILAPIA AND GREEN SEAWEED *ULVA LACTUCA* AS A TRADITIONAL FOOD FROM GUNUNGKIDUL

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## ABSTRACT

Pathilo is a traditional snack of Gunungkidul District, similar to rice crackers, is made from cassava waste and starch seasoned with garlic and salt. The nutritional composition of pathilo is dominated by carbohydrates, so innovation needs to be provided with sources of protein and minerals needed by generation Z, for example by substituting fish and seaweed.

The aim of this research is to develop pathilo products from tilapia fish and *Ulva lactuca* seaweed as a traditional snack source of protein, calcium and iron for generation Z. The specific objectives of this research include: 1) determining the reference pathilo formula and pathilo formula from tilapia fish and *Ulva lactuca* seaweed, 2) testing the physicochemical properties of reference pathilo and pathilo from tilapia fish and *Ulva lactuca* seaweed (color, texture, spread power, microstructure, nutritional composition, Ca, Fe) and the level of Generation Z's preference for pathilo from tilapia fish and *Ulva lactuca* seaweed, and 3) determine information on the nutritional value of pathilo products from tilapia fish and *Ulva lactuca* seaweed as a snack source of protein, calcium and iron.

The results of the research showed that the best tilapia pathilo formula was obtained by substituting 40% of the tilapia meat for the weight of the basic pathilo mixture. The best pathilo formula with the addition of *Ulva lactuca* seaweed is obtained by adding fresh *Ulva lactuca* as much as 7.5% of the weight of the basic pathilo dough. The pathilo formula with 40% substitution of tilapia fish meat and the addition of *Ulva lactuca* seaweed is best obtained by adding fresh *Ulva lactuca* as much as 7.5% of the weight of the pathilo base mixture. Substitution of tilapia and addition of *Ulva lactuca* seaweed caused an increase in weight, diameter, spread power, color, protein, calcium and iron levels in raw and cooked pathilo. Generation Z's level of preference for tilapia pathilo and *Ulva lactuca* seaweed is in the preferred category.

The output of this research consists of a patent entitled "The composition of crackers with substitution of tilapia fish (*Oreochromis nilotis*) and seaweed (*Ulva lactuca*) flours", and a scientific article in a reputable international journal entitled "Physicochemical, texture, and sensory characteristics of fish crackers from tilapia (*Oreochromis nilotis*) and green seaweed (*Ulva lactuca*) flours".

Kata Kunci: *Cassava-based crackers, tilapia, Ulva lactuca, calcium, iron*