

TORTILLA CHIPS WITH THE SUBSTITUTION OF TILA FISH AND ULVA LACTUCA SEAWEED AS A SNACK SOURCE OF PROTEIN AND IRON FOR GENERATION Z

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ABSTRACT

One of the nutritional problems in Generation Z is the habit of consuming high-calorie snacks, fat, sugar and sodium. The use of fish and seaweed in snack products favored by generation Z is still limited, so it is necessary to develop healthy snacks based on fish and seaweed which are rich in protein, calcium, and iron. The purpose of this research was to develop a food product based on tilapia and *Ulva lactuca* seaweed in the form of tortilla chips as a snack source of protein, calcium and iron for generation Z. The specific objectives of this research include: 1) to determine the formulation of tortilla chips from tilapia and *Ulva lactuca* seaweed, 2) to determine physicochemical (color, texture, microstructure, nutritional composition, Ca, Fe, and polyphenols) and sensory properties of tortilla chips from tilapia and *Ulva lactuca* seaweed, and 3) to determine the nutritional value information of tortilla chips from tilapia and *Ulva lactuca* seaweed as a snack source of protein, calcium, and iron.

The stages of the research consisted of: 1) preparation of tilapia fish flour and *Ulva lactuca* seaweed flour, 2) formulation of tortilla chips for tilapia and *Ulva lactuca* seaweed, 3) determination of proximate levels, Ca, Fe, polyphenols, color, texture, and microstructure on seaweed flour and tortilla chips products from tilapia and *Ulva lactuca* seaweed, and 4) determination of the nutritional value information of tortilla chips products from tilapia and *Ulva lactuca* seaweed as a snack source of protein, calcium, and iron.

The results showed that the tortilla chips formula from tilapia and *Ulva lactuca* seaweed used fresh yellow corn, maseca corn flour, tapioca, wheat flour, tilapia fish flour, *Ulva lactuca* seaweed flour, whole eggs, margarine, garlic powder, corn flavouring, yellow coloring, salt, baking powder, and mushroom stock powder.

Kata Kunci: tortilla chips, tilapia, Ulva lactuca, protein, iron