

CHAPTER I

INTRODUCTION

1.1 Background of the Study

In an effort to develop healthy and nutritious snack alternatives, many studies have highlighted the potential of natural ingredients in food products. Kenikir (*Cosmos caudatus*) and mangosteen peel (*Garcinia mangostana*) are two natural ingredients that have long been known for their health benefits and bioactive compounds. According to a study conducted in 2017, a significant portion of the population still relied on traditional medicine, with many using plants to cure diseases (Barnes et al., 2017).

In Indonesia, kenikir has long been considered part of its traditional culinary heritage. The young parts of kenikir leaves are often used as fresh vegetables or appetizers because they have a distinctive taste and aroma (Lutpiatina et al., 2017). However, apart from being used as a food ingredient, kenikir has also been proven to have significant health benefits. The health benefits of kenikir are not only limited to its properties as a traditional medicine. Antioxidants, which are molecules capable of neutralizing free radicals in the body, are also found in kenikir. These antioxidants play an important role in maintaining body health by reducing damage caused by free radicals (Ng, Tan, & Yong, 2017; Ismail et al., 2016). On the other hand, mangosteen peel is also known to contain various bioactive compounds, including xanthones.

Gartanin, one of the xanthones compounds in mangosteen peel, has attracted the attention of researchers because of its diverse biological activities. Studies have shown that gartanin has strong anti-cancer, anti-influenza virus, and antioxidant activity. In addition, gartanin has also been shown to be effective against early-stage lung cancer cells (Rahman et al., 2017; Thao et al., 2018; Prasad et al., 2019). With the extraordinary health benefits of these two ingredients, proposing to create snack products that utilize

it is a relevant and beneficial step. Manufacturing methods that include, low-temperature baking and short-term frying will make it possible to maintain the nutritional content and health benefits of these natural ingredients, while creating snack products that are attractive and beneficial to modern consumers.

Kenikir (*Cosmos caudatus*) shows promise as a substitute for nori (seaweed) due to its rich nutritional profile and potential environmental benefits. Kenikir is abundant in fiber, vitamins, and minerals, which can enhance the nutritional value of food products. This makes it an appealing option for health-conscious consumers looking for nutritious alternatives to traditional seaweed products (Rombach, M., Botero, J., & Dean, D. L. .,2024). Furthermore, kenikir's fast growth rate and low resource requirements contribute to its potential as a sustainable food source. By utilizing kenikir instead of seaweed, there could be a reduction in the environmental impact typically associated with seaweed farming, such as the depletion of marine resources and habitat disturbance. This aligns with broader efforts in the food industry to develop environmentally friendly and sustainable food products (Chaudhary, A., & Tremorin, D. .,2020).

1.2 The Objective of The Study

The objective of this study are following below:

1. Exploring the potential of kenikir and mangosteen peel as raw materials for making delicious snack products, and utilizing mangosteen peel waste as a complementary ingredient.
2. Determine consumer acceptance of nori crispy snacks made from kenikir leaves and mangosteen peel.