

CHAPTER I

INTRODUCTION

1.1 Background of The Study

Tempeh is type of fermented food using *Rhizopus sp.* To make tempeh that is relatively fresh, it takes less than 48 hours. Tempeh can also be accessible, from the soaking process to the fermentation process and the wrapping. There are several types of wrapping tempeh before it is fermented, such as wrapping plastic or using banana leaves. The ingredients used also affect the components contained in the tempeh, such as the water content in tempeh wrapped in plastic is higher than tempeh wrapped in banana leaves.

Tempeh is one of the original fermented foods from Indonesia. In general, tempeh is made using the essential ingredients of soybeans. Soybeans must initially go through a soaking process to hydrate the soybeans; after going through the following soaking process, the soybeans will be boiled to kill bacteria that can cause spoilage before the soybeans become tempeh.

Using the same method as making tempeh in general, to making tempeh from lotus seeds will also use the same process, the lotus will be soaked first, open the seed and cleaned, and then boiled. The fermentation process of lotus tempeh is similar using the tempeh yeast mixed with mocaf flour (cassava flour) to keep the product still categorized as gluten-free.

Most Indonesian people consume soybeans every day; this causes the demand for soybeans in the market to increase. According to a journal entitled "Analysis of the effects of soybean production, soybean consumption, per capita income, and the exchange rate on soybean imports in Indonesia", states that soybean production in Indonesia is still low because every year, the area of agricultural land decreases due to the conversion of agricultural land to agricultural land. Settlement. The reduced size of agrarian land impacts soybean production, where there is a decrease in output while the demand for soybeans

continues to increase. To meet food needs, the government must import soybeans from other countries.

Soybeans are one of the main ingredients in the process of making tempeh and tofu; for this reason, people must find ways to participate in reducing Indonesia's import level. One way that can be done is to use a substitute for soybeans which can be used in the process of making tempeh. Not just replacing the main ingredient, but the nutritional content contained in the replacement material must have the same or better nutrition than the nutrients contained in soybeans.

Crackers are one of the most frequently light snack for children and adults. Crackers have many flavours, from sweet to salty. Along with the development of science and technology that can help humans create delicious and healthy food and snack creations. In this modern era, many people are aware of the importance of maintaining health and maintaining the ideal body weight, so it is common for many people do a balanced diet with some exercise and consume foods and snacks that are healthy and rich in nutrients.

A journal entitled "Local Food Innovation Can Increase Food Security, Nutrition, and the Economy of the Indonesian Society" explains that there are several ways to utilize local food, which aims to fulfil the nutrition of the Indonesian people. The processing methods for these local foodstuffs include local technologies such as roasting, fermentation, frying and packaging, minimal processing technology, such as cassava flour, and advanced processing technology, namely technology used for semi-finished foods such as noodles and bread.

To increase the creation of processed Indonesian specialities, namely tempeh, make crackers with a mixture of tempeh made from lotus seeds with lots of vitamins and good for skin health. In the tempeh fermentation process, the ingredients for the tempeh yeast mixture, which usually uses rice flour, are replaced with mocaf flour (cassava flour), which generally only takes about one

day for the lotus seeds to become tempeh. If the tempeh is ready, the tempeh made from lotus seeds has a more pungent fermented smell and differs from soybean tempeh's fermented smell.

1.2 The Objective of The Study

The objective of the study are following below

1. To make variation of tempeh material from lotus seed.
2. To develop an innovation food product from tempeh lotus seed into healthy crackers.
3. To analyze healthy crackers nutritional content.