

CHAPTER I

INTRODUCTION

1.1 Background of the Study

In recent years, the habit of consuming snacks is part of the daily diet that cannot be separated from the lifestyle of modern society. However, if the selection of snacks is not done wisely, then this can be one of the factors that triggers unhealthy eating patterns. People tend to choose instant snacks that are easily found in minimarkets, which generally contain high calories, excess sugar levels, and saturated fats that are risky for health (Lonnie et al.,2018).

In response to these problems, healthy snack products have begun to be developed as alternative snacks that are friendly to health. Gluten-free is a food that does not contain a protein called gluten which is usually found in grains, such as barley and wheat. Gluten-free products are becoming popular on the market because gluten-free products are usually made with natural ingredients, which are rich in fiber, low in sugar, making them the right choice for people with heart disease, or individuals who have gluten sensitivity.

Gluten can pose health risks to certain individuals. For people with celiac disease, consuming gluten triggers an autoimmune response that damages the lining of the small intestine, leading to malabsorption of nutrients and various health complications. Even in individuals without celiac disease, gluten sensitivity or intolerance can cause symptoms such as bloating, abdominal pain, fatigue, and headaches (Bianchi et al., 2024). Long-term exposure to gluten in sensitive individuals can lead to chronic inflammation and digestive disorders. Therefore, avoiding gluten is especially important for those with gluten-related health conditions.

Cookies are baked products containing three major ingredients, such as flour, fat, and sugar (Dogruer et al.,2023). Cookies are a product that is popular with both adults and children because of its sweet, rich taste and crunchy texture. They form

the largest category of bakery snacks because of their low cost, good taste, texture and storability. Cookies are usually developed with wheat flour because it forms unique visco-elastic dough when mixed with water, due to the presence of gluten (Joan& Luke, 2025). For this reason, the demand for gluten-free products is increasing, leading to a considerable growth in the gluten-free food market (Martinez, 2021).

Date palm (*Phoenix dactylifera L*) is a plant cultivated in many countries. Dates also consist of various types. Dates are rich in carbohydrates, especially glucose and fructose, making them a high-energy food source. Also, maintaining digestive health, increasing immunity, improving brain function (Ayad et al., 2020).

Cashew nut (*Anacardium occidentale L*) is a type of nut that contains vitamins and minerals that are good for health. This nut has simple growing conditions so it is easy to grow and has various health benefits. Cashew nuts have a savory taste, but these nuts must be processed before consumption.

Dates and cashews are two ingredients that align with this trend. Dates are a natural source of sugar, fiber, and essential nutrients, making them a great alternative to processed sugars in baked goods. Cashews provide healthy fats, plant-based protein, and essential minerals like magnesium and zinc (El Khoury dan El Khoury, 2021). Combining these two ingredients creates a nutrient-dense base that can support the development of gluten-free cookies with an appealing flavor and texture profile.

The increasing health awareness and dietary needs have led to an increased demand for gluten-free food products. Therefore, the innovation of gluten-free cookies using dates and cashews presents a healthy snack alternative that is suitable for individuals with gluten intolerance and health-conscious consumers. This product has strong market potential and supports the increasing trend of healthier eating habits.

1.2 Objectives of the Study

1. Provide a healthier alternative snack option for individuals with gluten intolerance
2. Develop a gluten-free cookie formulation using dates and cashew nuts as the main ingredients that focus on nutritional value and taste
3. To be able to make gluten-free cookies with good sensory characteristics (taste, texture, aroma, and appearance).