

# CHAPTER I

## INTRODUCTION

### 1.1. Background of The Study

Candy is a type of confectionery enjoyed by both children and adults. The candies available in the market come in various shapes, types, and flavors (Rismandari, Agustini, & Amalia, 2017). Jelly candy is a type of soft candy with distinctive characteristics. Jelly candy is a type of soft candy with a chewy texture (Andini, Elida, Faridah, & Siregar, 2023). Ready-to-eat food products have become a preferred choice for parents amidst high mobility. Jelly candy is one such ready-to-eat product that is easy to distribute, has a long shelf life, and is generally favored by children aged 3-12 years. Children like jelly candy because of its chewy texture, making it enjoyable to eat during playtime or study time (Masri, Shella, & Ahriyasna, 2022).

In Indonesia, the consumption of jelly candy ranges between 20-30 grams per capita. Sales data from Nestle between 2012 and 2015 show that semi-moist, high-sugar food products, including candy and chocolate, generated more than 15 billion rupiah annually (Rahim, Fadhilla, Ronitawati, Swamilaksita, & Harna, 2019). Jelly candy typically has an excessively sweet taste due to its high sugar content and very low nutritional value (Dewi, Pertiwi, Fitriani, Rahmawati, & Wijaningsih, 2023). The selection of jelly candy as a formulated product is due to the suboptimal nutritional content in the jelly candies currently available in the market. To optimize the nutritional content of jelly candy, one method is to add rosella flowers and andaliman.

The addition of rosella and andaliman to jelly candy not only provides a fresh sour taste and a unique citrus sensation but also enhances the antioxidant and nutrient content, helps lower blood pressure, supports liver health, and reduces the need for artificial colors and flavors. Rosella plants offer numerous

benefits, including serving as a natural fiber source and having potential as a functional food and bio-pharmaceutical ingredient due to their high pharmacological activity from potent phytochemicals (Nurnasari & Khuluq, 2017). This potential could be economically advantageous, particularly in improving farmers' livelihoods and national rosella production. Additionally, andaliman plants contain terpenoid compounds with significant antioxidant activity beneficial for health, preserving food quality, and acting as antimicrobials, presenting opportunities for use in the food and pharmaceutical industries (Helmalia, D., & Dirpan, 2019).

To maximize the effective use of kecombrang and rosella flowers, the bioactive compounds within their plant cells need to be extracted. Extraction is the process of drawing out soluble chemical contents, separating them from the insoluble material using a liquid solvent (Putri, Sudimartini, & Dharmayudha, 2020). The extraction process is influenced by several factors, including the power and duration of extraction. These factors need to be controlled to ensure the highest quality extract is produced.

## **1.2. The Objectives of The Study**

The objectives of this study are following below:

1. To create a healthier alternative to conventional candies by enhancing nutritional value and contribute to promoting healthier snacking options for children and the general population
2. To develop a formulation for jelly candy using natural ingredients such as rosella and andaliman.