

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Fruit leather is one of the snack foods made from fruits, shaped into thin sheets with a distinctive consistency and flavour depending on the type of fruit used (Winarti, et al., 2020). Because of its novelty and being more attractive in its form and on the other hand as it does not require refrigeration and so it was considered as the best way for incorporation of fruit solids and is mostly preferred by all ages especially for kids and adults (Bandaru, et al., 2020).

Consumption of fruit leather products in Indonesia is still very rare and has not been produced commercially. Many researchers from Indonesia have developed fruit leather products with various innovations, such as horned banana fruit leather, mango fruit leather, cashew fruit leather, and even combining them with other ingredients such as noni-hibiscus fruit leather, red guava and soursop fruit leather, mango-hibiscus fruit leather, and so on (Pulungan, et al., 2020).

Mangosteen (*Garcinia Mangostana* L.) belongs to the Clusiaceae family and grows in tropical Southeast Asian countries such as Malaysia, Indonesia, and Thailand. The mangosteen fruit has a sweet and slightly sour taste. This tropical fruit plant has very slow growth but a fairly long lifespan (Srihari, et al., 2015). The mangosteen fruit is dubbed as the queen of fruits because it has numerous health benefits for the body. The largest component of the mangosteen fruit is its peel, accounting for about 70-75%, while the flesh is only 10-15% and the seeds 15-20%. This abundant mangosteen peel, if not utilized, can have environmental implications (Humaira, et al., 2021).

The most beneficial part of the mangosteen fruit for human health is the flesh of the fruit peel. In this flesh, there are natural super antioxidants known as xanthones, which have many benefits for the body. The flesh of the

mangosteen peel has great potential to be developed into a product because it has various benefits for food ingredients, natural colouring, and herbal medicine (Haryanti, et al., 2015). Mangosteen peel is traditionally used in various treatments in India, Myanmar, Sri Lanka, and Thailand. Broadly, Thai people utilize mangosteen peel for treating diseases such as canker sores, dysentery, cystitis, diarrhea, gonorrhoea, and eczema (Putri, 2015). However, in Indonesia, the utilization of mangosteen peel flesh is currently lacking and needs improvement. Mangosteen peel flesh can be processed into various processed products to diversify and increase both its market value and nutritional value (Haryanti, et al., 2015).

As time progresses, society is increasingly inclined towards consuming natural ingredients due to their perceived health benefits, such as in the case of natural sweeteners. One fruit that can be used as a natural sweetener is dates (Rizqiati, et al., 2021). Dates, known in Latin as *Phoenix dactylifera*, are fruits that typically grow in desert regions (Rahmawati, et al., 2019). In Indonesia, dates are typically consumed more during the fasting month of Ramadan. However, there are some people who may not enjoy this antioxidant-rich fruit, hence it could be innovatively developed into new products on the market (Primurdia, et al., 2014). Besides that, the elasticity of fruit leather is influenced by water, sugar, pectin, and acid (Winarti, et al., 2020). Several studies have also found that dates contain fiber which has beneficial effects on health. Dates contain 0.5-3.9% pectin (Munawwarah, 2015).

1.2 Objectives of the Study

The objectives of this study are following below:

1. To create a new innovative product such as fruit leather from mangosteen peel and dates, as fruit leather production is still rare in Indonesia.
2. Utilizing mangosteen peel not only reduces food waste in Indonesia but also provides an opportunity to inform the public that mangosteen peel can be processed into various products with health benefits and other uses.