

# CHAPTER I

## INTRODUCTION

### 1.1. Background of Ingredient

Dragon fruit (English: Pitaya) is a fruit of several types of cactus from the genera *Hylocereus* and *Selenicereus*. This fruit comes from Mexico, Central America and South America but is now also cultivated in Asian countries such as Taiwan, Vietnam, the Philippines, Indonesia and Malaysia. This fruit can also be found in Okinawa, Israel, northern Australia and southern China. Indonesia has great potential to cultivate crops for export. This is due to Indonesia has a tropical climate, according to the climate needed by this plant to grow well. The Ministry of Agriculture (2010) states that dragon fruit in the export market is still in number a little because this fruit has not been widely known in many countries. However, market demand is deep a country that very much makes dragon fruit centers generally still marketed for domestic needs only (Nugroho, 2009).

Red dragon fruit is usually consumed directly or processed first. Some processed red dragon fruit products include smoothies bowl, ice cream, pudding, salads. In the process of consumption and production there are food waste, namely the skin part. Red dragon fruit skin as a by-product of the fruit itself has nutritional value that can be considered so that it can add economic value to the skin and reduce red dragon fruit waste (reduce the problem of waste disposal).

Some nutritional components of the red dragon fruit peel that have been studied by the Physico-chemical characteristics of red pitaya (*Hylocereus polyrhizus*) peel at Universitas Putra Malaysia. Pitaya peel (*Hylocereus polyrhizus*), which consists of approximately 22% of the whole fruit weight, is discarded during processing. The moisture content of the peel was approximately 92.7% and it was low in total soluble solids, protein, ash and fat content. Betacyanin pigment ( $150.46 \pm 2.19$  mg/100 g) and pectin (10.8%) were high in the peel. Glucose, maltose and fructose were detected in the peel but not sucrose and galactose. The peel also had very high insoluble and soluble dietary fibre

which had exhibited a good ratio of insoluble dietary fibre to soluble dietary fibre(3.8: 1.0). ( Dzulkifly et al.,2011)

Indonesia's demand for wheat commodities is currently relatively high. Data from the Central Statistics Agency (BPS) recorded that Indonesia's total wheat imports in 2016 reached 10.53 million tons, up 42% from the previous year of only 7.4 million tons. Likewise, the value also rose 15.6% to US \$ 2.4 billion from the previous year of US \$ 2.08 billion. It is hoped that the utilization of dragon fruit skin as flour can reduce the number of wheat flour imports in Indonesia. ( Reily, 2018 )

Food that uses wheat flour as a raw material is one of them namely cookies. This study aims to utilize the dragon fruit peels instead of wheat flour as a cookies, Because the texture of the red dragon fruit peel flour is suitable for cookies.

## **1.2. Objective**

- Requirement to continue the internship
- Know the benefits of dragon fruit
- Know the nutrients contained in red dragon fruit peel flour cookies