

# CHAPTER I

## INTRODUCTION

### 1.1. Background of Study

Noodles are one of the most important traditional staple foods in Asia. Noodles are typically made from unleavened wheat dough and are stretched, extruded, or rolled, and then cut into varying shapes. Noodles account for approximately 20%–50% of the total wheat consumed in Asia, and its popularity has extended to many countries outside of Asia (Meng Niu, Gary G. Hou, in *Asian Noodle Manufacturing*, 2020). Noodles are accepted by people from all over the world. The industrial revolution and the development of the food industry realized the transition from a traditional handicraft industry to mass production using machinery.

Due to the increasing popularity of noodles, the introduction of noodles made from whole grains can be an effective way to promote high-fibre food consumption and increase health benefits for people throughout the world. Following what is trending globally, gluten free noodle is selected to replace the use of wheat flour in Noodle. The ingredients in the making of the gluten free noodle are oatmeal, rice flour, tapioca starch. Oats are rich in minerals that are needed by the body, such as magnesium, calcium, iron, phosphorus, potassium, folic acid and pantothenic acid. The peculiarity of contained by oats is one of the antioxidant contents. Oats also contain three components other natural antioxidants from other fibrous foods commonly called avenanthramides. The three natural antioxidants include trichotrienol, ferulic acid, and caffeic acid which functions to protect body cells from free radicals. Not only that oats contains a lot of benefit towards our body it also versatile and become the replacement of flour in making the noodle. Rice flour has many unique characteristics, such as tasteless, white in colour, easily digestible, and hypoallergenic (Shin et al., 2010). The consistency of rice flour helps the

noodle to have more chewy texture. Tapioca flour which is also often referred to as cassava flour, starch, or aci is flour derived from cassava roots or what is usually called cassava. Tapioca flour is often used as a thickener or binder in industry food. Tapioca flour has a fairly good nutrition compared to corn flour, potatoes, and wheat or flour . Tapioca flour help the noodle consistency to be flexible and chewy.

## **1.2 The Objectives of the Study**

The objectives of this study are following below:

1. In order to follow the global trend and high demand due to the increasing popularity of noodles. The study aims to make a healthy noodle.
2. To make a healthy and gluten free noodle that everyone can enjoy. Using ingredients likes oatmeal, rice flour, and tapioca starch that are vegan, vegetarian, and plant based friendly.
3. To be marketed internationally, gluten free has been a global trend and these day people have more knowledge about healthy lifestyle so this product has a big chance in the market.