

CHAPTER I

INTRODUCTION

1.1 BACKGROUND STUDY

The reason I choose the product because i like brownies. So i will make mastery of new product, healthier ingredients in this product. Roasted Sweet Potato Brownies is a healthy . Common and main ingredients in making brownies are sweet potatoes, dates as sweeteners . Public awareness of health has increased over time. Food producers are also encouraged to make food products with attractive appearance and contain good nutritional value (Pratiwi, 2008). This encourages the need for research on food products that are beneficial to health, one of them is by making roasted sweet potato brownies.

In 2012, Indonesia's sweet potato productivity reached 13.93 tons per hectare, this number is above the world average productivity. China was the highest-producing tuber country in the world in 2013 (International Labor Organization, 2013), but China still had to import one of the typical sweet potato tuber varieties from Indonesia, Cilembu sweet potato (Aditiasari, 2014).

Cilembu sweet potato is the most popular type of sweet potato which is specific from Cilembu Village, Pemuliha District, Sumedang Regency, West Java (Suriawiria, 2001). The special feature of Cilembu sweet potato is that it has a long tuber and the skin and flesh of the tuber when reddish creamy raw. Cilembu sweet potato when cooked the flesh of the tuber turns yellow, accompanied by melted sticky liquid such as honey which has a sweet taste (Mehran, 2016).

According to Bernade et al. (2005), sweet potato with orange colored tubers is an excellent source of provitamin A so that many developing countries make it the second staple food and has been shown to have an important role in controlling vitamin A deficiency. Human beta-carotene needs of 2 mg to 7 mg per

day. from an analysis of 500,000 women from the United States and Europe (United States Department of Agriculture, 2011).

Sweet potato (*Ipomoea batatas* (L). Lam) cv. Fresh Cilembu has a total carotene content of 136.3 mg / 100 g (wb) (Wardani and Setyawati, 2015), while other types of sweet potatoes only contain between 0.084 mg / 100 g up to 19.6 mg / 100 g (wb) (Woolfe, 1992). The process of cooking Cilembu sweet potato can damage the beta-carotene contained therein. According to Wijayanti (2003), beta-carotene is damaged by heating temperatures of more than 60C.

Almond flour is a super nutritious food that is low in carbohydrates and rich in vitamins, minerals and good fats. In addition, almond flour is higher in protein and is richer in nutrients than wheat flour and is also gluten free. (Elena, 2009)

Nutritional content in almond flour per 28 g, namely 14.2 g fat, 6.1 g protein, 5.6 g carbohydrates, 10.71% fiber, 35% vitamin E of the RDI, 31% manganese of the RDI, 19% magnesium of the RDI , copper 16% of the RDI, phosphorus 13% of the RDI (Ryan, 2017)

In general, brownies made from wheat flour naturally contain gluten protein, which not everyone can consume glutenin protein like in autism sufferers. (Newschaffer, 2007 in Lois, 2017). In addition, wheat flour contains a lot of starch, namely complex carbohydrates that are insoluble in water and also has the ability to absorb less water and will produce a less elastic dough (Subarna, 1992 in Suhaidi, 2014).

A gluten-free diet is a special diet for people with celiac disease, autism and gluten intolerants. In recent years, claims have been circulating that these gluten-free products are healthier because they provide a greater source of energy and promote weight loss. This claim is able to change consumer perceptions to be one

of the factors that triggers the growth of the market for gluten-free food products, such as in America and Europe. (Atiqatul, 2017)

1.2 OBJECTIVES STUDY

roasted sweet potato brownies are a healthy snack, using the main ingredient is sweet potato. sweet potato is a food ingredient of the type of tubers, sweet potato can be processed into a variety of tasty and delicious snacks. In Indonesia, sweet potato is very well known by some people. But sweet potato is not a favorite type of food and is usually better known as rural folk food. In fact, sweet potatoes contain a variety of very good nutrients, even if creative in processing can be a profitable business area.

Roasted sweet potato brownies are delicious and healthy snacks. This product will be processed using the basic ingredients of sweet potato. So as to produce a distinctive taste in the form of roasted sweet potato brownies.

At this time a lot of people who prefer fast food with good taste and relatively cheap price but still guaranteed quality. To meet the demands of the community, a business activity that is creative, innovative and has high competitiveness must be created so that it can attract the attention of the public to buy the products we offer. From this thought, we have conducted field observations regarding business opportunities that can be carried out. One of them is a business selling roasted sweet potato brownies. In addition to this type of food that is still rarely offered, the availability of raw materials and ways of making that are not too difficult are also things that can be considered so that this business activity is feasible to run.

Making roasted sweet potato brownies which is done in a very simple way, but more hygienic, and uses selected ingredients. With the development of concepts that are different from other types of businesses that already exist both in

terms of recipes, presentation, packaging and trademarks we will have the power to bring the interests of buyers to be interested in the products we offer.

1.3 BENEFITS STUDY

Sweet potato (*Ipomoea Batatas*) is a sweet potato originating from the American continent. However, this plant entered Indonesia in the 16th century through the Spaniards and is currently widely spread on the island of Java and Papua. However, sweet potatoes are not potatoes, but are known as vegetables as “sweet potatoes”.

Sweet potato is one of the oldest plants or vegetables ever known to mankind. Christopher Columbus first brought these vegetables to Europe and spread to China, Asia, Africa, and Latin America. Generally, it grows in the tropics with a soil pH around 5.8 – 6.2 and is sensitive to cold weather.

Sweet potato have a variety of sizes and colors such as orange, purple, and white. Contains rich in vitamins, minerals, antioxidants, and fiber.

The content of sweet potatoes, In every 100 grams of sweet potato, contains:

- Energy
- Fat
- Carbohydrate
- Fiber
- Mineral
- Protein
- Vitamin A
- Vitamins B1 and B2
- Vitamin C
- Beta carotene
- Potassium

In addition to the above content, many sweet potatoes contain antioxidants to protect the body from free radical attacks that can trigger inflammation and damage DNA in the body.

Benefits of sweet potatoes, you can find many benefits in sweet potato, which are:

- Lose weight, the content of sweet potato fiber helps you feel quickly and can be used as food for use in the diet program menu.
- Preventing diabetes, sweet potato is a good source of carbohydrates for diabetics without worrying about rising blood sugar levels.
- Reducing the risk of heart disease, high potassium content can help reduce heart attacks, strokes, and excess sodium which causes hypertension.
- Anti – inflammatory, the choline content of sweet potatoes can help the digestive system because it contains fiber that is good for dealing with constipation, constipation, and diarrhea.
- Maintaining healthy bones and teeth, the sweet potato mineral content has the main function to help maintain healthy bones and teeth. In addition, its vitamin C content can prevent gum bleeding and improve dental and gum health.
- Overcoming stress, the content of vitamin B complex in sweet potatoes can help the formation of pantothenic acid which works to reduce the production of stress-causing hormones.
- Maintaining intestinal health, fiber and antioxidants sweet potatoes can increase the growth of good intestinal bacteria, such as Bifidobacterium and Lactobacillus.
- Against cancer, the content of anthocyanin sweet potato can slow the growth of several types of cancer cells according to several studies and research tubes, such as colon cancer, breast, and bladder.
- Maintaining eye health, the content of beta carotene, anthocyanins, and vitamin A sweet potato can help prevent blindness and protect eye cells from damage that gives significant results for overall eye health.

- Improve brain function, a study that has been done on animals using sweet potatoes, states it can improve brain health by reducing inflammation and preventing mental decline.
- Helping the immune system, sweet potato is a good source of beta carotene to help the immune system and intestinal health.
- Increasing fertility, vitamins and iron in sweet potatoes is good for reproductive health and supports fertility.