

CHAPTER 1

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Dodol is a traditional food in Indonesia which is quite popular. Dodol is a type of sweet candy and the base of the candy is glutinous rice flour, liquid and sugar that is formed into dense, slightly sticky squares or diamonds. Dodol has relatively low nutritional value with high sugar content. But several studies on modifying dodol production to increase efficiency and nutritional value of dodol have been carried out. The use of low glycemic index as sweeteners such as fructose, low calorie sweetener or brown sugar can also reduce the glycemic index of dodol. Basically, dodol is a semi-wet food made from glutinous rice flour, and sugar. Over time, dodol is mostly made with the addition of fruits or milk to add flavor to dodol.

Milk dodol is a dairy product made from three main ingredients such as glutinous rice flour as a binding agent, milk as a basic ingredient and source of nutrients, and sugar as a preservative and texture shaper. The manufacture of milk dodol aims to diversify food, increase economic value, and extend shelf life.

Susu kuda liar or wild horse milk is one of the pure milk produced by wild horses raised by organic farmers on the island of Sumbawa, West Nusa Tenggara, Indonesia. In Sumbawa, wild horse milk is only consumed directly by drinking. The idea for using wild horse milk as main ingredients is because I want to tell everyone that wild horse milk is not only can consume by drink directly but also can be made into various kinds of foods, for example is 'Dodol Susu Kuda Liar'. As for dodol susu, it is made from dodol in general, but added liquid milk to add flavor. This wild horse milk has various benefits. Like other types of milk, horses also produce delicious liquids complete with compound components including fat, calcium various

vitamins such as A, B, C and also E, potassium, calcium, magnesium, protein, iron and many others. In every 100 grams of horse milk sumbawa produces 44 calories, which is less than cow's milk which is 64 calories so that people who consume it do not get fat quickly. Moreover, Sumbawa wild horse milk has a milk composition closer to breast milk (ASI) when compared to cow's milk (Saragih et al, 2013), it also has a special feature, its resistance to contamination with spoilage microorganisms so that this milk is more durable (Laili et al., 2014).

Sugar as a sweetener is widely consumed by people on a daily basis, but if people consume too much sugar, it can cause adverse health effects. Therefore, in this recipe the sugar is replaced with stevia. Stevia is a Sweetener derived from the leaves of *Stevia rebaudiana*. Stevia leaves contain non-caloric natural sweeteners and are able to produce a sweet taste 70-400 times the sweetness of cane sugar. Stevia offers many health benefits that have been proven by more than 500 studies, including does not affect blood sugar levels, is safe for diabetics, prevents tooth decay by inhibiting the growth of bacteria in the mouth, helps improve digestion, can relieve stomach pain and is also good for regulating weight. Stevia is also not damaged at high temperatures such as saccharin or aspartame. Stevia withstands heating up to 200°C (392° Fahrenheit).

Coconut flour is a good source of protein, gluten free and has low digestible carbohydrate and fat content. Nevertheless, coconut flour is special because of its dietary fiber content. Several studies show that it has highest dietary fiber content among other fiber sources such as banana, cassava, and wheat and rice flour. High content of dietary fiber in coconut flour was found plays an important role in preventing and controlling chronic diseases such as colon cancer, heart attack, hypotension, stroke and diabetes mellitus. Also, dietary fiber has long been associated with prevention and management of overweight gaining (obesity), mineral availability and constipation. According to Yulvianti et al., (2015) Coconut

flour contains 12% fat, 4.12% protein, 37.1% crude fiber, and 0.33% moisture content.

Brown rice flour is informed to contain carbohydrates, fats, fiber, folic acid, magnesium, niacin, phosphorus, protein, vitamins A, B, C, Zn, 6 and B complexes that are efficacious to prevent various diseases, such as bowel cancer, kidney stones, insomnia beriberi, constipation, and hemorrhoids, and are able to reduce sugar and cholesterol levels (Indrasari, 2006).

In addition to the above materials. Glutinous rice flour is the main ingredient in the manufacture of dodol (Parayana, et al., 2015). The function of glutinous rice flour in making dodol is as a shaper and binder of other ingredients, namely when glutinous rice flour is heated with enough liquid material, glutinous rice flour will undergo gelatinization, and also glutinous rice flour contains amylopectin which will make dodol dough compact and dense to obtain the desired texture of dodol (Mahmud et al, 2001 in Fatma, 2015).

To produce the best texture of dodol it takes 4-8 hours to cook it. The dodol mixture must be stirred constantly while it is simmering. This is because, if the sugary mixture rests for too long over the heat without moving, it will scorch and the texture and flavors will be destroyed. After the ingredients begin to come together and the sugar has been incorporated, flavorings can be added to the liquid and simmered. Once the dodol has cooked long enough that it is separating from the walls of the pan and pour it out into a vessel to cool. Once it has cooled, it is cut into strips, squares or diamond shapes. Although the candy will not be too sticky to the touch, it is chewy and dense when actually eaten.

Typical characteristic of Dodol Susu Kuda Liar is have a milky taste from the milk and also have a bit coconut taste and smell from coconut flour, and have pinkish color from brown rice flour.

1.2. THE OBJECTIVE OF THE STUDY

1. Develop healthy “dodol” that safe to consume by diabetics.
2. Making new innovation of wild horse milk.
3. To reduce coconut waste.
4. Identify the correct way to make a good nutrition on food.
5. Investigate and plan the market target
6. Prepare cost and a definite price range for final product.