

CHAPTER I

INTRODUCTION

A. Background

Nowadays taking good care of our body and the food intake is crucial as recently CoVID-19 has been declared a pandemic by the World Health Organization. Therefore, it is important to take care of healthier habits, with nutritional and balanced diets. Several studies have shown that fruits and vegetables supply micronutrients that can boost immune function. The World Health Organization also recommends people to consume immune boosting foods as for now there are no cure or prevention for the virus (WHO, 2020).

To prevent the spread of the virus, Indonesia government followed the WHO regulations and made PSBB rules where the majority of the citizens stay at home under quarantine. This results in many activities occurring at home, including school, jobs, including purchasing stuff through online shopping platforms and may result in tedious routine and boredom. Boredom is associated with higher energy intake where it is usually high in fats, carbohydrates, and proteins (Moynihan et al., 2015)

Food is one of the basic human needs and its fulfillment is part of human rights, it is everything that comes from a source of biological products of agriculture, plantation, forestry, fisheries, livestock, water, which are both processed or not processed designated as a food or drink for human consumption (*Undang-Undang No. 18, 2012*). When food is being

served, there is always a composition usually starting from appetizer, soup, main course, and usually ends with dessert (Barrows et al., 2018). Dessert is well known in almost every culture around the world as a course that comes at the end of a meal. The French noun “dessert” originates with the verb un-serve, which leads to removing what has been served (Alija & Talens, 2012). According to Kronl (Kronl, 2011, pp. 10, 198):

“Dessert is composed of fruits, pastry, confectionery, cheese, etc. It is a sweet course or dish commonly served at the end of the meal. Creamy dishes like pudding and ice cream, baked goods including cakes and pies, but also cookies and doughnuts.”

There is a significant growth in the rate of consumption of cake, an average increase of 23,4% has been calculated from 2014 to 2018 and it is expected to fluctuate in each upcoming year (*Stat. Konsumsi Pangan*, 2018).

Even though nowadays the pandemic due to corona virus may threaten various business chain, bakery and other food chain that have implemented takeaway and deliveries apparently shows no sign of a decrease in their daily income, in fact an increase is showing rather than decrease. This can show that the growth of food business is still high and expected to fluctuate (Sugianto, 2020).

In the massive growth of cake consumption in Southeast Asia, consumer tend to look for a new innovative flavors, freshness, and healthiness for value additions during purchasing. As the increase of obesity and also the consumer demand for healthier alternative, bakery industry has increased its availability and variety for a healthier baked goods such as

high-fiber breads, gluten free. As for cakes and bread, according to a study of Southeast Asia bakery products market from 2016 and still on going, the cakes, breads and pastry products has also been creating a healthier product with healthier ingredients such as whole grain, and also by not using any additives or preservatives. Up until recently Southeast Asian consumers are still on the lookout for new flavors and bakers are still creating an innovative and tasty product for the market (*Mordor Intelligence*, n.d.)

Cream cheese is a soft, mild, rich, unaged cheese with a slight acidic taste to it. It is usually made by mixing cream and milk before adding the starter culture to make cheese. The Food and Drug Administration (FDA) in the United States proclaim that cream cheese has to have at least 33% fat and not more than 55% moisture content (Coutouly et al., 2014)

A few of popular dessert like cheesecake, cream cake, tiramisu, and many others mainly uses cream cheese as one of its main ingredients (Gisslen, 2016). Cream cake is a cake that comes with various types either filled, layered, or topped with various forms of cream or custard (Humble, 2010).

However, an excessive consumption of cream cheese may threaten the health of the consumer as it has a fair amount of cholesterol for artery-clogging and it does not provide any significant amount of important nutrients (Lordan et al., 2018). A typical immune system contains a series of defense mechanisms to protect hosts against various pathogenic microorganisms, such as bacteria, viruses, and parasites (Thakur et al., 2019).

Antioxidants have a crucial role in strengthening our immune system, as the World Health Organization suggests we should consume more immune boosting foods. Some micronutrients provide antioxidants, such as vitamin E, vitamin C and beta-carotene. Beta-carotene is most abundant in sweet potatoes, carrots and leafy vegetables (Muscogiuri et al., 2016).

A study research has been conducted and shows that sustainable intake of root crops such as sweet potato can lower total cholesterol level and play a significant role in the prevention for risk of cardiovascular diseases as well as obesity and diabetes mellitus (Trinidad et al., 2013).

Therefore, the author has chosen this as the focus point of research which is what will happen when an average cream cake that mainly contains cream cheese is substituted with a mixture of sweet potato cream to create another version of cream cake without cream cheese in it. Certainly, it will change the nutrient content and lower the cholesterol level, so that people who have high cholesterol levels can consume cream cake more freely while also keeping themselves healthy regarding the situation nowadays.

Corresponding with the main ingredient that will be used, Ipomoea batatas, or commonly known as sweet potato, belongs to the Convolvulaceae family. It is ranked as the most important food crop after rice, wheat, and cassava. Indonesia is one of the main sweet potato producers and it is cultivated for its nutritious and health-promoting values. Almost all of the sweet potato part can be consumed, like its roots, stems, and leaves are edible. Each part has various compositions of nutrients, and

is bioactive, which has been proven to help promote human health (Campos & Caligari, 2017)

According to BPS-Statistics Indonesia, the average consumption of sweet potatoes per capita from 2014-2018 remains constant with the average growth of 6,13%. Even though every year Indonesia produces around two million tons of sweet potatoes, there has been a decrease in its utilization as feed, and food until up to 3,75% which results in almost two hundred and two thousand tons of sweet potato becoming a waste in 2018 (Kementerian Pertanian, 2018)

Sweet potato is very versatile and can almost withstand all weather condition, so it is very tolerant, has a really short maturity period ranging from 3 to 5 month and should be considered as one of important crops (Motsa et al., 2015).

Therefore, it is recommended for people to apply sweet potato in their daily dietary intake or by making various product by using sweet potato as its main ingredient. Not only sweet potato is very healthy and nutritious, sweet potato is very easy to find across Indonesia.

Thus, this research aims to create a new food product and new ideas for the community, namely by processing sweet potato into a sweet potato cream and using it as a substitute for cream cheese in the making of cream cake.

B. Purpose

The purpose of this seminar is:

1. To present the research result if cream cheese could be substituted with sweet potatoes in the making of cream cake.
2. To present the research result of the taste, texture, color and aroma of the cream cake by using sweet potatoes to substitute the cheese

C. Benefits

1. For Society

For our society to provide a new innovative way of using sweet potato to reduce the overly produced and unused sweet potato in our country. For people with medical issues such as high cholesterol and high blood pressure now have more options to consume cream cake due to the substitution of the cream cheese into sweet potatoes that have low cholesterol content and higher nutrients. Also, for people who don't have diet limitations due to medical conditions now also have an option to reduce the consumption of cream cheese and substitute it with sweet potato which has more health benefits than cream cheese to keep themselves healthy regarding the situation nowadays.

2. For Academic

The academic benefits from this research are that this research can be used as a new and innovative creation of cream cake and this research can act as a reference for other researchers in making a new and innovative profitable business opportunity.

D. Research Description

This research on making cream cake replaces the cream cheese with processed sweet potato paste with many benefits and nutrients contained in the sweet potato. The testing of sweet potato cream cake will be tested through an organoleptic test by using hedonic test to measure the effect of sweet potato cream cake. Before doing the organoleptic test, which is the hedonic test, several experiments will be carried out to see what effect sweet potato makes if it became a substitute for cream cheese in the making of cream cake. When several experiments have been done and the researcher felt it can be continued to the next step, then the researcher will conduct the hedonic test and the result will be processed by using the SPSS program (Statistical Product and Service Solution).

According to the research conducted, it shows that sweet potato can fully substitute cream cheese in the making of sweet potato cream cake without having a significant change in taste, appearance, aroma, and texture as cream cake in general. Although, there is a hint of sweet potato aftertaste that will be noticed after consumed and with a darker and brown-ish color caused by the sweet potato.